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Los Alamos
NATIONAL LABORATORY
EST 1943

Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
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National Nuclear Security Administration
Los Alamos Field Office, A316
3747 West Jemez Road
Los Alamos, New Mexico, 87545
(505) 667-5794/Fax (505) 667-5948

Date: OCT 2 7 2014
Symbol: ENV-DO-14-0290
LAUR: 14-27386
Locates Action No.: Not Applicable

RECEIVED
OCT 2 7 2014
NMED
Hazardous Waste Bureau

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

Dear Mr. Kieling:

Subject: Transmittal of Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 19

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

The June 10, 2014, email received from Tim Hall, NMED, included a request for additional information for 267 original nitrate salt-bearing waste containers generated by the Permittees and all resulting repackaged/remediated containers. This submittal includes remediation and repackaging documentation for daughter containers resulting from the repackaging and remediation of the 267 original nitrate salt-bearing waste containers and is the nineteenth submittal in response to comment 5 in the June 10, 2014 email request. Because documentation to fulfill the request is still being compiled, the response to comment 5 of the email request will be transmitted in packages as they become available.

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Enclosure 1 includes the pertinent documentation for nine 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,

A R Grieggs for

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

Sincerely,

Gene E Turner

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

AMD:GET:MPH:LVH/kt

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 19

Cy: Ryan Flynn, NMED, Santa Fe, NM, (E-File)
Tom Blaine, NMED, Santa Fe, NM, (E-File)
Steve Pullen, NMED/HWB, Santa Fe, NM, (E-File)
Timothy Hall, NMED/HWB, Santa Fe, NM, (E-File)
Trais Kliphuis, NMED, Santa Fe, NM, (E-File)
Peter Maggiore, NA-LA, (E-File)
Lisa Cummings, NA-LA, (E-File)
Gene E. Turner, NA-LA, (E-File)
Kirsten M. Laskey, NA-LA, (E-File)
Carl A. Beard, PADOPS, (E-File to aosburn@lanl.gov)
Michael T. Brandt, ADESH, (E-File)
Raeanna R. Sharp-Geiger, ADESH, (E-File)
Alison M. Dorries, ENV-DO, (E-File)
Enrique Torres, ADEP, (E-File)
James S. Clemmons, LTP, (E-File)
Donald L. Allen, LTP, (E-File)
Scott A. Miller, LTP-SSS, (E-File)

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 19
ENV-DO-14-0290
LA-UR-14-27386

October 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 19

ENV-DO-14-0290

LA-UR-14-27386

Date: OCT 2 7 2014

ParentID	Intermediate Daughters	PKG_ID	Overpacked Into
S881607		94148	
S881607		94149	
S883130	90966	92152	
S883130	90968	92204	SB01966
S883130	90965	92235	
S883130	90969	92676	
S891279	68724	68656	SB02206
S891387	68973	69014	SB50095
S891387	68973	69491	SB50448
S891387	68973	69493	SB50081
S891513		68327	
S891513		68328	
S891513		68340	
S892963	68966	69361	SB50451
S892963	68966	69430	SB50034
S892963	68966	69490	SB50522
S900215	68758	69074	SB50087
S900215	68758	69080	SB50100
S900215	68758	69081	SB50052
S901114	68826	69079	SB50073
S901114	68826	69094	SB50424
S901114	68826	69187	SB50020
S910172	90323	92917	
S910172	90324	92466	

S881607

S881607

Container Pi 760936

File Options Reports Help

S881607

760936	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

S881607

S881607
- 94150 - EMPTY
- 94148
- 94149

Task History

Transfer Details

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

Working Copy
Date: 8-8-13 JZ

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S881607

6.2[4] Date Processed: 8-8-13

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

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

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

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

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

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

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

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

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

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

Performed By: Brandon Chavez / [signature] D04742 / 8-8-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S881607

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 181.9 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 181.9 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.: S881607

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94148	94149		
10.1[4]	Daughter Drum Filter No.	KL-475	KL-459	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6675	L-6682	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.	N	N	N	
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	A	A		
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 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead	Lead		
10.3[9][A]	PCB-contaminated Waste Description	N	N	N	
10.3[9][B]	PCB Item ID No.	A	A		
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 (%)	80%	90%		
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.: S881607

Comments: plastic, salts, kitty litter, lead, PH-2

11.1[1] Performed By: Brandon Chavez / Brandon Chavez 1201742 / 8-8-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: [illegible] / [illegible] 149235 / 8/12/13 1020
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 8·8·13 MZ

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: EK-1130
Manufacture Date: 5-10

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

5. [11] Performed By: Brandon Chaez / Brandon Chaez 204742 8-8-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon Chaez / Brandon Chaez 204742 8-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gmk / [signature] 149275 8/12/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 8-8-13 MZ

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94150

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-1-13
Range in ft-lb: 10-80
Tolerance: ±3%cw ±6%ccw

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

Performed By: Brandon Chavez / Brandon Chavez 1204742 / 8-8-13
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): 147.0 lb

Comments: N/A

8.1[1] Performed By: Brandon Chavez / Brandon Chavez 1204742 / 8-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Wh / 149275 8/12/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 9418

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 02347666
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: GC DVL 1.5 75 DVL
Serial #: ~~L-5792~~ L-66675
Date of Manufacture: 8/13

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 #: 019 D3
Serial #: KL 473
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):	16-80
Tolerance:	+/- 4% cw +/- 6% ccw	Tolerance:	+/- 3% cw +/- 6% ccw

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

☑ Yes ☐ No

Print Name: Ian Marquez Signature: [signature] Z#: 276708

5. Weigh Drum Assembly

RECORD weight information 8-8-13

Tare witght (lbs) 76.2

File ID #: 019065

☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: Ian Marquez Operator Sign: [signature] Z#: 276708 Date: 8-1-13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204742 Date: 8-8-13

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

DRUM ID#: 94148

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 8-1-13

Range/ Value (ft-lbs): 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

8-8-13 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.): 318.2

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 8-8-13

Verifier Print/Sign: [illegible] Date: 8-8-13

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

Drum ID#: 94149

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 #: 0238766
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 #: 6GPUC1.525PVC
Serial #: 4b8-240 8746 L-6693
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: NUKFIL
Model #: 01905
Serial #: KL959
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:	±3%OCW ±6%OCW	Tolerance:	±3%OCW ±6%OCW

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

[x] Yes [ ] No

Print Name: IAN MARQUEZ Signature: [signature] Z#: 276708

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: IAN MARQUEZ Operator Sign: [signature] Z#: 276708 Date: 8-5-13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204742 Date: 8-8-13

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

DRUM ID#: 94149

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): 385.2

Scale ID#: 018065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 8-8-13

Verifier Print/Sign: [illegible] Date: 8/8/13

Working Copy
Date: 8/8/13 [illegible]

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5881607

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): 181.9

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [illegible] / 1047421 / 8-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk / [illegible] / 1492251 / 8/12/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: G Mk / [illegible] / 1492251 / 8/12/13 / 1015
SOS/SOM or designee (print) Signature Z # Date / Time

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S881607 Container Type: 85-GAL Gross Weight (lbs): 385

Inner Seal #: 023773 Filter Prefix: LAS Filter Serial #: 02679; 03534

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

TWSR Comments: LEACHED SOLIDS MST12 SEAL# A05609

Total PE-Ci Activity: 2.40E+01 Equivalent Combustible PE-Ci: 8.99E+00 AM-241 PE-Ci: 4.32E+00

Total Fissile Gram Equivalents: 166.5 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 1/29/2007 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 10/31/12 ☐ PID ☐ Split ☑ Repack

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

TRUCON Code: LA125M Production Control Comments: Ensure GPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litty/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones / R. W. Jones / 117434 / 10.28.10
Production Control (Print) Signature Z Number Date

SUSAN S. RAMSEY / Susan S. Ramsey / 100681 / 10/31/12

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Solid waste record indicates leached solids in form of nitrate salts. 8 items of salts, heaviest is 23 kg (51 lbs), net weight of 8 items is 112 kg (246 lbs). May require 12WP for >10,000 mrem/hr @ 30-cm. Note also that drum is lead shielded inside.

Performed By: Michael Garcia / Michael Garcia / 099143 / 11/11/10
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 Heavy duty 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

Performed By: [illegible] / [illegible] / 199235 / 4/15/13
TRU Remediation Operations (Print) Signature Z Number Date

[illegible] / [illegible] / 234079 / 10/[illegible]

Jose Jorge / Jose Jorge / 221452 / 2-20-12

IAS Review - [illegible] Small Quant CSP, may contain Pb, Hg 11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 023773

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	6LR9ES1B		20.200	NITRATE SALTS	R00	123.1	55	1/13	G468	
2	6DS14ES1		23.000	NITRATE SALTS	R00	18.88	52	1/13	G468	
3	6OX23WS1		10.300	NITRATE SALTS	R00	2.62	52	1/13	G468	
4	6LR24ES1		9.800	NITRATE SALTS	R00	9.61	53	1/13	G468	
5	7LR1ES1		21.900	NITRATE SALTS	R00	15.28	52	1/13	G468	
6	6LR21ES1		13.700	NITRATE SALTS	R00	9.86	53	1/13	G468	
7	7OX11WS1		8.000	NITRATE SALTS	R00	5.96	52	1/13	G468	
8	7RR12ES1		4.900	NITRATE SALTS	R00	3.02	52	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 174.7

Material Type	SNM (grams)	Items Net Wt (kg)
52	45.76	68.10
53	19.47	23.50
55	123.12	20.20
Totals	188.35	111.80

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 11.9.10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Gabe Romero	[signature]	036973	11-8-10
	/	/	/

Container No. (7.[1]):	S881607	S871875	S881558
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	2.54		
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]):	2.54	Ø	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S881607	S871875	S881558
Hydrogen Reading (ppm) (7.[10]):	799645 ppm	Ø ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	2.54 ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

Comments:
All 55 gallon drums were sampled from inside an 85 gallon overpack.

11.1[1] Performed By: Alicia Herrera [signature] 198450 / 12-7-10
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] 111886 / 12.15.10
Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\101109c\
Data File : S881607.D
Acq On : 9 Nov 2010 12:22 pm (#1); 09-Nov-10, 12:22:12 (#2)
Operator : GR
Sample :
Misc : 55 GAL LFL DRUM FROM INSIDE 85 GAL OVERPACK
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 09 12:31:58 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Fri Oct 22 10:16:32 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.720	96	10768757	206.75	ppmv	-0.02
15) Chlorobenzene-d5	6.043	117	8072913	183.50	ppmv	-0.02
Target Compounds						Qvalue
1) Hydrogen	1.661	GC1	60637	7996.45	ppmv	100
12) Benzene	3.394	78	121724	2.54	ppmv	99

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

vocgas.m Tue Nov 09 13:25:04 2010

8-8-13
0600 Assuming WCRRF Operations center ~~[illegible]~~
0609 Assuming WCRRF operations center in training Randy Roybal
0615 Prejob being conducted by SOS.
0707 Starting movement from transportainer to transport vehicle.
0715 permission granted to Drop vehicle acces gates.
0759 Starting to denest 2 Drums
0800 Starting work package 00455566-01 in TA 50-84 (Heating unit)
0812 vehicle acces gate have been Restored and shipment is complete.
0830 Badge Reader is Down. Have contacted Badge Reader support
0845 Denesting complete Bagging on S881607
0853 Bag on Complete.
0910 Elevated Cam operators still in Resporators
0915 Notified by RCT that cam's will have to go through one more count cycle before releasing operators to come out of Resperators and deposting.
0928 Cams are back in normal Range operators are ~~back~~ RR 08/08/13 out of Respirators. Room has been deposted.
0930 Starting movement from transport vehicle to transportainer.
0935 permission granted to Drop vehicle acces gates.
0955 Notified by operator of possible loss of integrity of a bung.
0957 Notified RCT's of possible loss of integrity of bung. SOS and OM have been notified. Entering EP WCRR-RM-AOP-0203.
1000 RCT's and IH preparing plane RR 08/08/13 for ~~reentry~~ RR 08/08/13 ~~reentry~~ reentry
1005 RCT's Briefing operator's to RWP 2011-0014.
1037 RCT's, IH, and operator are entering WCRRF YARD to perform Smears and VOC's.
1049 Notified by IH that NO VOC's were detected. on compromised Drum S802959.
1053 Notified by RCT's Smears are being counted on drum S802959
1054 Late Entry at 103B operator will be placeing a plastic sleeve over Drum S802959.
1109 Notified By RCT that smears are NDA.
1114 Exiting EP-WCRR-RM-AOP-0203 SOS has been notified WCRRF is Resuming normal operations.
1137 Bagging off 1 Daughter Bagging on 1 Daughter continueing to process

Continued on Next page Randy Roybal

08/08/13 Continued from previous page Randy Roybal
1154 Bag off Complete. Bag on complete.
1240 Entered EP-WCRR-RM-AOP-0207 Due to Lightning and Thu
Starting 30 min waiting period.
1250 Restarting 30 min wait due to lightning
1321 Exiting Ep WCRR-RM-AOP-0207 OK to resume
outside operations.
1450 Baging ~~on~~ RR 08/08/13 OFF Bagging on SB42528
1520 movement into Transportainer complete and vehicle access
gates have been Restored.
1521 Bag off Complete.
1524 Starting inside Rounds.
1540 Starting outside Rounds.
1541 Item #63 is OOS POD in place ok to proceed.
1543 Item #3 is unSAT FSR in place ok to proceed.
1558 Outside Rounds Complete.
1632 Starting movement out of 50-69 to transportainer.
1654 Bagging off 1 daughter and continuing to process
1656 movement to transportainer complete
1708 Bag off Complete.
1746 Bagging off last Drum of the day.
1804 Bag off complete.
JJ 1824 Performed Shift turnover with CCO gerald Espinoza -Orlando

No further entries this page. -Orlando

8

8-8-13 Dayshift

0611 Reviewed the turnover checklist and assumed the dayshift SOM position John Andagnoli

0614 Reviewed and approved the dayshift watchbill.

0638 Completed attending the pre-job brief conducted by the SOS (Gilbert) The SOS discussed the prepping and inspection of bag off bags and the storage of inspected bags on the back wall shelf vs the cabinet. Discussed shift Orders and standing Orders in effect. There are two transfers out and one transfer scheduled in.

0708 Completed daily POD phone call with AREA G-SOM.

0802 Released work order # 45556601 to place furnace back into position. All 20/20 requirements are in place.

0825 Requested inspection protocol from CCP on bags received and ask for information on availability on extra bags from another R.O. on LOT.

0830 OCO notifies personnel, that the badge reader is down. P&T completed the transfer out of 17 drums with Operations

0838 all safety and compliance requirements were adhered

0843 Inside Operations notify the Ops Center, that denesting is completed and Parent drum 5881607 SP-72 - is bagged on.

0910 Due to elevated CAM, Operators remain in respirators.

0928 RCTs report CAMs in Normal RANGE, Operators are able to come off respirators since 0800hrs, (1½ hrs in respirators.)

0955 Outside Operators report possible loss of integrity of a Bung-dove to the gasket on Drum 5802959 within the transfer vehicle,

0957 Operations entered EP-WCRR-RM-AOP-0203 - Unanticipated loss of Waste Container Integrity.

1000 ES/IH, Operators and RCT brief on RWP 2011-0014

1037 ES/IH, Operators and RCT Enter to perform smears and VOCs and upon tailgate survey operators placed a sleeve over the drum

1049 ES/IH provide information, that NO VOCs are detected.

1107 Smears are noted NDA and operations are released to resume and personnel may exit 50/69 facility

1114 Operations Center exited EP-WCRR-RM-AOP-0203

1137 Inside Operations bagged off 1 daughter and bagged on 1 daughter and continue to process.

8-8-13

1154 Inside operations completed the bag on and off -

1239 Operations Center entered AOP-0207 for Severe Weather - Outdoor Operations are suspended and the transfer vehicle requires unloading.

1321 Operations exited AOP-0207 for Severe Weather, lightning has ceased

1357 Due to rain delays P+T suggested the second transfer out be rescheduled till Monday. Per discussion with Operations and RP-1, there will be enough space available in the transportainers till Monday.

1410 Outside Operations initiate movement from the transfer vehicle to the transportainer. SOM observed the same 3 operators working the WCG are the same noted in the AM working the WCG. One operator exited the WCG to conduct respirator fit. (i.e there were 4 operators on WCG in am now there are 3) same operators.

1450 Bagging off a daughter, and Bagging on 5842528

1520 Movement into transportainers were completed by operators

1521 Operators inside completed the bag off of a daughter and bagged on another and continued processing.

1654 Inside Operations complet bagging off a daughter and bagging on another

1656 Movement out of 50/69 to the transportainer (7) drums were completed.

1804 Operation completed bag off and did not have time to de-nest. Two parent drums remain in the 50/69 Facility ready to bag off. The drum lift fort was placed

1816 Conducted shift turnover with Night shift SOM and reviewed checklist.

1821 Secured the day shift SOM position [signature]

8-13-13

No further Entries this page
[signature]

9-8-13 WCRR SOS LOG BOOK

0600 Assuming SOS Position [signature]
0615 Conducted shift brief discussed shavings in box use of proper PPE In and out of box. Also briefed to decesting needed and be very carefull while pulling bag up on drum.
0640 Concluded shift brief
0707 starting shipment out of 50-69
0759 stating denesting process
0800 starting work on Heater In SD-84
0812 shipment completed.
0845 Denesting Complete
0910 RCt's notified of Elevated Cam's.
0915 RCt's notified that cams will need to cycle. Prior to doffing Respirators
0928 Cams are back to normal
0930 Starting movement From transport vehicle to transportainers
0955 notified by operator's of possible loose bung.
0957 notified 'OM, SOM Entering EP-WCRR-RM-AOP-0203
1000 RCts And IH Preparing for reentry
1005 RCts briefing operators to RWP.
1037 RCts, IH and operator entering yard to perform smears and VOC's.
1049 Notified by IH that no VOC's were detected.
1058 Smears are being counted on drum.
1109 Notified By RCt that smears are NDA GM 9-8-13
1114 Exiting EP-WCRR-RM-AOP-0203 ~~Resum~~ Resuming normal operations in yard
1137 bagging off 1 daughter bagging on Another.
1154 Bag on/off complete.
1240 entering 30-30 Floor lightning.
1250 restarting 30-30
1321 Exiting EP-WCRR-RM-AOP-0207 OK to resume outside operations
1450 Bagging off bagging on 584258.
1520 Movement into transportainer Complete from G.
1521 Bag off Complete
1524 Starting Rounds.
1637 Starting Movement out of 50-69 To transportainers.

8/8/15 Continuing From next Page
1654 Bagging off & Daughter Continuing to Process
1708 Bag off complete
1746 Bagging off last drum of day
1804 Bag off Complete
1817 Shift Turnover with Clayton Mullins

no

Further

entries

on

this

Page

CCP Radiography Data Sheet

5881607

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0100
Examination Date:	8/14/2013
Waste Container ID:	94148
Video/Audio Recorded Media Number:	LA-RTR2-13-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 144.0 kg Tare Wt.: 33.4 kg Net Wt.: 110.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

CCP Radiography Data Sheet

Waste Container ID: 94148

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	102.5
Soils (S):	
Total WMP Weight:	110.6

CCP Radiography Data Sheet

Waste Container ID: 94148

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

Comments: N/A

RTR Operator:

Eric Lyles		8/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94148	Count Sequence Number:	16381
Operator:	DCLTD231\Operator		
Assay Start:	8/14/2013 2:00:00 PM		
Description 1:	2LANDA1211		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 111.0 kg	Net:	111.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.630 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16381	Batch Number:	2LANDA1211
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94148	Analysis Date:	8/14/2013

Net Weight	111000.0 g		
Pu mass	5.93E+001	+- 1.04E+001	g
TRU Alpha Activity	1.49E+001	+- 1.85E+000	Ci
TRU Activity Concentration	1.35E+005	+- 1.67E+004	nCi/g
Pu-239 Equivalent Activity	1.58E+001	+- 1.87E+000	Ci
Pu-239 FGE	5.51E+001	+- 1.03E+001	g
Decay heat	4.88E-001	+- 6.09E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.24E-006
U233	<LLD	<LLD	0.00E+000	1.41E-002
U234	4.99E-002	3.10E-004	1.06E-004	0.00E+000
U235	3.55E+000	7.68E-006	2.61E-006	7.18E-006
NP237	2.14E-001	1.51E-004	2.61E-005	3.57E-006
PU238	2.65E-002	4.53E-001	1.11E-001	8.09E-003
U238	<LLD	<LLD	0.00E+000	2.09E-005
PU239	5.16E+001	3.20E+000	6.37E-001	5.71E-002
PU240	7.09E+000	1.61E+000	3.91E-001	2.87E-002
AM241	2.82E+000	9.68E+000	1.69E+000	1.44E-001
PU241	4.50E-001	4.64E+001	1.15E+001	8.29E-001
PU242	1.25E-001	4.94E-004	1.22E-004	0.00E+000
AM243	5.37E-003	1.07E-003	1.87E-004	2.22E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 8-15-13

ITR: [signature] Date: 8/19/13

Automated Independent Technical Review

Count Sequence Number: 16381 Batch Number: 2LANDA1211
Counter ID: HENC #2
Container ID: 94148
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,55.
Section 5 - Gamma Analysis Analysis Status: No errors. MCA Deadtime greater than the upper limit of 50.0%.	OK No spectral distortion observed. Deadtime = 57.85%

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

Expert Review by: [signature] Date: 8/15/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94148**

BDR Number: **LA13FG12083**

Sampling Date: **8/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	746.61	
74-82-8	Methane	9.63	U
67-56-1	Methanol	71.39	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	3.31	
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\130822c\
Data File : 94148.D
Acq On : 22 Aug 2013 1:37 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 22 13:47:41 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	7682670	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6034979	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.910	GC1	212970m	746.61	ppmv	
4) Methanol	0.821	31	28980m	71.39	ppmv	
17) Toluene	5.577	92	80798	3.31	ppmv	95

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

CCP Radiography Data Sheet

588/607

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0100
Examination Date:	8/14/2013
Waste Container ID:	94149
Video/Audio Recorded Media Number:	LA-RTR2-13-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 174.5 kg Tare Wt.: 33.4 kg Net Wt.: 141.1 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: 94149

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	131.1
Soils (S):	
Total WMP Weight:	141.1

CCP Radiography Data Sheet

Waste Container ID: 94149

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

Comments: N/A

RTR Operator:

Eric Lyles		8/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94149	Count Sequence Number:	16383
Operator:	DCLTD231\Operator		
Assay Start:	8/14/2013 3:24:46 PM		
Description 1:	2LANDA1211		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 141.0 kg	Net:	141.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.800 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:	16383	Batch Number:	2LANDA1211
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94149	Analysis Date:	8/14/2013

Net Weight	141000.0 g		
Pu mass	1.14E+002	+-	2.34E+001 g
TRU Alpha Activity	2.14E+001	+-	6.80E+000 Ci
TRU Activity Concentration	1.52E+005	+-	4.82E+004 nCi/g
Pu-239 Equivalent Activity	2.19E+001	+-	6.80E+000 Ci
Pu-239 FGE	1.06E+002	+-	2.33E+001 g
Decay heat	6.95E-001	+-	2.25E-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	1.21E-006
U233	<LLD	<LLD	0.00E+000	1.34E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.94E-006
NP237	1.78E-001	1.25E-004	2.51E-005	3.12E-006
PU238	4.62E-002	7.90E-001	2.85E-001	6.36E-003
U238	<LLD	<LLD	0.00E+000	2.52E-005
PU239	1.05E+002	6.50E+000	1.44E+000	5.24E-002
PU240	8.97E+000	2.04E+000	4.65E-001	1.64E-002
AM241	3.52E+000	1.21E+001	6.63E+000	9.54E-002
PU241	2.76E-001	2.84E+001	6.35E+000	2.29E-001
PU242	2.00E-001	7.91E-004	2.12E-004	0.00E+000
AM243	4.40E-003	8.80E-004	1.77E-004	1.89E-005

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 8-15-13

ITR: [illegible] Date: 8/19/13

Automated Independent Technical Review

Count Sequence Number: 16383 Batch Number: 2LANDA1211
Counter ID: HENC #2
Container ID: 94149
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors. Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50	OK After EA review, results valid.

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

Expert Review by: _____ Date: 8/15/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94149**

BDR Number: **LA13FG2098**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	676.54	
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\130909c\
Data File : 94149.D
Acq On : 9 Sep 2013 1:37 pm (#1); 09-Sep-13, 13:36:46 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 13:45:36 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	4887023	205.75	ppmv	0.05
15) Chlorobenzene-d5	5.868	117	3782037	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.620	GC1	5087m	676.54	ppmv	

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

S883130

S883130

Container Profile 765091

File Options Reports Help

S883130

765091	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

S883130

- S883130
  - 90970 – EMPTY
  - 90969
    - 92677 – EMPTY
    - 92676
  - 90968
    - 92205 – EMPTY
    - 92204
      - SB01966
  - 90966
    - 92153 – EMPTY
    - 92152
  - 90965
    - 92235
    - 92236 – EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.0010445	%			

Working Copy
Date: UET 2-22-12

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S883/30

6.2[4] Date Processed: 2/22/12

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

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

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

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

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

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

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

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

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

Performed By: Michael Romero [signature] 182723 2/22/12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 486.0 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 80 lb

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: S883130

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 566.0 lb

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	90965			
10.1[4]	Daughter Drum Filter No.	CL-1390		N/A	
10.1[4]	Daughter Drum Bag Filter No.	LL-216			
10.1[4]	Daughter Drum Purchase Order No.	415090			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	NUCFil	NUCFil	NUCFil	
	Model No.	036-DA	036-DA	036-DA	
	Serial No.	LL-164	LL-227	LL-165	
	Date of Manufacture	12/11	12/11	12/11	
10.2[5]	POC ID No	50566	50568	50569	
10.2[7][B]/10.2[6]	POC Item Description	Salts plastic	Salts plastics	Salts plastic	
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	N/A	N/A	N/A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	MR 182723	MR 182723	MR 182723	
10.2[14]	POC Assembly Gross Weight (lb)	404.6	415.8	398.4	
10.2[15]	POC Rad. Survey Results (mrem/hr)	75	60	30	N/A
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead shielding			
10.3[5][A]	Free Liquid Volume/Units	10-15 gallons			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comments		N/A	
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)	50%			
10.5[4]	Description Waste Added During Processing	Plastic			

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: S883130

Comments: plastic, Liquids pH was an acid. added acid Neutralizer, Lead shielding

11.1[1] Performed By: Michael Romero Michael Romero 182723 2/22/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Anthony Vigil Anthony Vigil 189864 2-23-12 0800
SOS/SOM (print) Signature Z # Date/Time

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

85-Gallon Overpack ID Number 90570

RECORD Drum Filter information:	NUCFILO13
Filter ID Number:	DJ-623
Date of Manufacture:	4/09

TORQUE WRENCH INFORMATION			
Filter Torque Wrench		**Drum Lid Ring Bolt**	
M&TE ID#		M&TE ID#	038373
Cal Expiration Date		Cal Expiration Date	5-30-12
	N/A		±3% cw
Tolerance		Tolerance	±6% ccw
Torque wrench is within acceptable range as displayed on Calibration Certificate	☐ Yes ☐ No ☐ N/A	Torque wrench is within acceptable range as displayed on Calibration Certificate	☐ Yes ☐ No
		Bung Torque Wrench	
		M&TE ID#	
		Cal Expiration Date N/A	
		Tolerance	
		Torque wrench is within acceptable range as displayed on Calibration Certificate	☐ Yes ☐ No ☐ N/A

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

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

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

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

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

Drum lid ring ends touching: ☐ YES ☑ NO

Technician Name (print)	Signature	Initials	Z#	Date
Timmy Romero	TR	TR	234253	2-22-12
Michael Romero	MR	MR	182723	2/22/12

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

Drum ID#: 90965

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 #: 415090
- Lot #: 0220644
- Date of Manufacture: 11

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

- Manufacturer: NucFil
- Model #: 036-DA
- Serial #: LL-216
- Date of Manufacture: 12-11

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

- Manufacturer: NucFil
- Model #: 019DS
- Serial #: CL-1390
- Date of Manufacture: 3/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040695	M&TE ID #:	040691
Cal Expiration Date:	9-12-12	Cal Expiration Date:	8-2-12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	+/-38 cw +/-68 ccw	Tolerance:	+/-38 cw +/-68 ccw

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

☑ Yes ☐ No

Print Name: Timmy Romero Signature: [signature] Z#: 234253

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 76.0

File ID #: 019065

☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: Timmy Romero Operator Sign: [signature] Z#: 234253 Date: 2-16-12

Verifier Print: Michael Romero Verifier Sign: [signature] Z#: 182723 Date: 2/22/12

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

DRUM ID#: 90965

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions.

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 5-30-12

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

--- Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 312.6

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: [signature] Date: 2/22/12

Verifier Print/Sign: [signature] Date: 2/22/12

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S883130 Container Type: 85-GAL Gross Weight (lbs): 418
Inner Seal #: 023752 Filter Prefix: LAS Filter Serial #: 03336
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST12 SEAL# A04450
Total PE-Ci Activity: 4.53E+00 Equivalent Combustible PE-Ci: 1.70E+00 AM-241 PE-Ci: 3.68E-01
Total Fissile Gram Equivalents: 50.0 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 1/29/2007 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:

Performed By: R. W. Jones / R. W. Jones / 117434 / 10.28.10
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: Solid waste record indicates leached solids in form of nitrate salts. 10 items of salts, heaviest is 22 kg (48 lbs), net weight of 10 items of salt is 112 kg (246 lbs). Estimated dose of >100 and <1,000 mrem/hr may require RCWP.

Performed By: Michael Garcia / Michael Garcia / 099143 / 11/11/10
WDP Engineering (Print) / Signature / Z Number / Date

TRU Remediation Operations

☐ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns:

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

Performed By: / / / /
TRU Remediation Operations (Print) / Signature / Z Number / Date

Noncertified TRU Waste Drum Item Information

DrumID: 023752

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	10OX2WS1		8.000	NITRATE SALTS	R00	5.2	52	1/13	G468	
2	9LR29ES1		5.000	NITRATE SALTS	R00	5.85	52	1/13	G468	
3	10LR7ES1		5.800	NITRATE SALTS	R00	3.4	52	1/13	G468	
4	10LR14ES1		10.700	NITRATE SALTS	R00	3.82	52	1/13	G468	
5	10LR8ES1		10.700	NITRATE SALTS	R00	4.1	52	1/13	G468	
6	10DS15ES1		17.920	NITRATE SALTS	R00	10.59	52	1/13	G468	
7	10OX14WS1		6.200	NITRATE SALTS	R00	10.23	52	1/13	G468	
8	10LR2OWS1		17.400	NITRATE SALTS	R00	3.31	52	1/13	G468	
9	10LR21ES1		22.000	NITRATE SALTS	R00	3.94	52	1/13	G468	
10	10OX28WS1		8.200	NITRATE SALTS	R00	2.71	52	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 189.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	53.15	111.92
Totals	53.15	111.92

1941 0906

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 11-9-10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Gabe Romero	[signature]	286973	12-8-10
	/	/	/

Container No. (7.[1]):	S883130	S881562	S873553
Container Type (SWB, 110/85/55-gal) (7.[1]):	55 gal	55 gal	55 gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S883130	S881562	S873553
Hydrogen Reading (ppm) (7.[10]):	2612.03 ppm	Ø ppm	163.52 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

Comments:
All 55 gallon drums were sampled from inside an 85 gallon overpack.
Drum # S873553 is a 55 gallon drum sampled from under drum lid.

11.1[1] Performed By: Alicia Herrera / [signature] 198650 / 12-7-10
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ Reviewed By: Kenny Romero Kenny Romero 1117881 12.15.10
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\101109c\
Data File : S883130.D
Acq On : 9 Nov 2010 12:57 pm (#1); 09-Nov-10, 12:57:09 (#2)
Operator : GR
Sample :
Misc : 55 GAL LFL DRUM FROM INSIDE 85 GAL OVERPACK
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 09 13:06:06 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Fri Oct 22 10:16:32 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.697	96	9253561	206.75	ppmv	-0.05
15) Chlorobenzene-d5	6.020	117	7226389	183.50	ppmv	-0.05
Target Compounds						Qvalue
1) Hydrogen	1.647	GC1	19807	2612.03	ppmv	100

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

vocgas.m Tue Nov 09 13:27:26 2010

PROJECT NAME _____ NOTEBOOK NO. _____

2-22-12

0000 Assuming WCRRF Operations center - CKelande.
0001 late entry 0535 Outside rounds started - CV.
0020 Starting inside rounds and finished outside rounds.
0021 Item #60 on rounds is OOS per CSE documentation OK to proceed.
0030 Completed inside rounds
0910 mode change performed we are now in operations
0912 late entry 0700 inside and outside rounds signed off by SOS. CV.
0936 Operators processing drum 3824065
1050 bagging off 3824065 and bagging ~~[illegible]~~ on 3851250
1137 Bagging off 3851250 and PDC, bagging on 3883130
1346 Operators inside stating that they have encountered a acid with a pH of 3 they will be neutralizing it.
1408 preparing to introduce a boombart thru introductory port.
1410 Starting movement out of 50-69.
1430 Use of introductory port is complete.
1437 movement out of 50-69 is complete.
1449 Starting outside rounds.
1453 Item 60 on rounds is OOS, per CSE documentation OK to proceed.
1457 Completed inside rounds.
1523 Starting movement into 50-69
1524 bagging off 3883130 and 3 PDCS
1551 movement complete into 50-69.
1620 bagging off complete.
1639 mode change performed we are now in warm.
1640 end of day WCRRF operations center secure - CKelande

No further entries this page

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

PROJECT NAME 2/22/13 NOTEBOOK NO.

0600 Assumed the WCRR SOM position. Dominique D. Mercado
0615 Attended the pre-job briefing conducted by the SOD. Discussed contamination control with incoming crew and discussed shipment coming up with 9 drums all weighing over 500 lbs. Discussed no climbing and the importance of ensuring drums don't exceed 624 drum lift limit.
0640 JOD call in.
0700 Call in with TA54 SOM to status WCRR operations. Safety topic be cautious with slick surfaces.
0740 Mode change complete. WCRR YARD/50-69 from WARM/WARM to OPERATIONS/OPERATIONS.
0825 Released WO# 449794-01 50-54 Electrical Shop Support (outage). Will be returning if a key to shop is obtained.
1025 Work completed inside 50-54. All electrical equipment has been restored. Breakers were changed out, and equipment is operational. The interlocks checked, and locks returned to OCD.
1149 Briefed project manager on status of WCRR. Operations working in drum #1 requiring multiple PPCs. An outgoing shipment took place and an incoming shipment is in process. Safety issues heavy drums > 500 lbs on incoming shipment.
1735 Rate Centray copier hard drive was removed. From R. Axtell requested a new machine that will be coming in next week. R. Axtell needs to get a hold of IT to dispose of drive. 1330 hrs.
1740 Operations briefed 2/22/13 completed 3 patients resulting in 3 daughters and 4 PCs.
1745 Mode change complete. WCRR YARD/50-69 from OPERATIONS/OPERATIONS to WARM/WARM.
1800 Briefed on to work performed for the day.
1815 Ending the watch. Dominique D. Mercado

3-14-13

no further entries this page

SIGNATURE Dominique D. Mercado DATE 2/22 2013
READ AND UNDERSTOOD DATE 20

2-22-13 WCRR SOS Log Book

0600 Assuming SOS position for the day. Reviewed previous day log entries and rounds. [illegible]

0615 Starting pre-job briefing. Safety Topic on Icy Roads. One shipment in and one shipment out. One drum to process has bolt that can not be opened need to develop a plan for processing. Another drum for processing weighing 559 pounds. Will need to evaluate total weight if blankets need to be added on beause of dose. If adding the blankets exceeds the TSR weight limit then it will not be bagged on and will be rejected. Other parents inside to process, 2 of them from SP#72 that will be the last priority.

0640 Pre-Job completed

0738 Inside and outside rounds signed off

0740 Mode Change, WCRR yard and 50-69 in Operations.

0823 ~~0803~~ Bagging on first drum for the day.

0832 Bag on Complete

1039 Bagging off first drum with 3 POC's, Bagging on second drum.

1526 Bagging off drum number two with 1 POC and 1 daughter. Bagging on drum numbe three.

1704 Bagging off last drum for the day.

1743 Signed off on inside rounds

1745 Mode Change Complete. WCRR Yard and 50-69 in warm. Processed 3 Parents. Generated 4 POC's, 4 Daughters.

HG 1810 Securing SOS position for the day. [illegible]

No further entries on this page

Reviewed [illegible] 2/23/13

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.: 90965

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

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

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

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

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

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

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

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

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

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

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

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

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90965

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 317.4 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 123.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 440.4 lb

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

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

EWMO-FOD (print)	Signature	Z #	Date
	NA		

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90965

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92235			
10.1[4]	Daughter Drum Filter No.	AM850		NA	
10.1[4]	Daughter Drum Bag Filter No.	L3682			
10.1[4]	Daughter Drum Purchase Order No.	416265			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	NA			
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)			NA	
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			
10.3[9][A]	PCB-contaminated Waste Description	NA			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90965

Comments: PLASTIC, LEAD, KITTY LITTER, SALTS, HEX ARMOR GLOVES, BAG OUT STUBS.

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 1267129 / 10-23-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [signature] / 122452 / 10-24-12 / 1044
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
Purchase Order No.: 413954
Lot No.: 211426
Manufacture Date: 10

5.[8] Overpack filtered vent information:
Manufacturer: NUCFIL
Model No.: 013
Serial No.: HL-802
Manufacture Date: 8-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040654	021115-1
Cal. Expiration Date:	6-26-13	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Michael Romero [signature] 188723 10-16-12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Michael Romero [signature] 188723 10-16-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Jerez [signature] 224521 10-24-12
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 10-23-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: ~~92235~~ 92236 10-24-12

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 640329
Cal. Expiration Date: 03-15-2013
Range in ft-lb: 16-80
Tolerance: ±3% CW ±6% CCW

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

Performed By: Brandon Chavez / [signature] Z# Date 10-23-12
Waste Handling Technician (print) Signature

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

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

7.[36][B] Platform scale serial number: 018065
Platform scale calibration expiration date: 10-23-12 ~~7-19~~ 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 159.0 lb

Comments: N/C

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

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

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

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

Drum ID#: 92235

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: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BAP
Model #: LCQVCL15-2SPVC
Serial #: L-31682
Date of Manufacture: 06-2012

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 #: AL7DS
Serial #: AM-850
Date of Manufacture: 01-2012

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 ±6% CCW

Jam Nut / Bung torque wrench:
M&TE ID #: 021151
Cal Expiration Date: 06-11-13
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: BRIAN GALLEGOS Signature: B. Gallegos Z#: 267129

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (lbs) 76.2
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: BRIAN GALLEGOS Operator Sign: B. Gallegos Z#: 267129 Date: 10-18-12

Verifier Print: Steve Mondragon Verifier Sign: Steve Mondragon Z#: 104741 Date: 10-23-12

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

DRUM ID#: 92235

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 + - 8% 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): 3858

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 10-23-12

Verifier Print/Sign: [illegible] Date: 10-23-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

72

Production Control

Container ID: 90965 Container Type: 55-GAL Gross Weight (lbs): 313
Liner Seal #: None Filter Prefix: None Filter Serial #: CL-1390
RCRA Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S883130
Total PE-Ci Activity: 1.13E+00 Equivalent Combustible PE-Ci: 4.25E-01 AM-241 PE-Ci: 9.19E-02
Total Fissile Gram Equivalents: 12.5 Total Surface Dose Rate (mrem/hr): 33
EPA Code(s): D008 D007 D009 VE 10/9/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/27/2012 Comment: Impenetrable, S3000
Certified RTR Comment: None

Prohibited Items:	☐ Sealed > 4 Liters	☐ Liquid	☐ Pressurized Container	☑ Impenetrable Item ☐ Other
Security Determination:				☑ Green ☐ Yellow
Remediation Determination:		☐ VE	☐ PID	Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr):		☐ <100	☒ >100 and <1,000	>1,000 and <10,000 >10,000

TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D008
Nitrate salts mixed with Vermiculite 770® from previous repack campaign. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.
Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan S. Ramsey Z Number: 100681 Date: 9/4/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts/debris
Net Wt 244 lb
Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign. This resulting daughter 55-gal drum may contain nitrate salts or a combination of nitrate salts and debris. RTR PS identifies impenetrable item(s) (likely homogeneous nitrate salts or debris such as lead). Nitrate salts may contain undocumented liquids (requiring adjustment to the admixture/nitrate salt ratio). Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 100 & < 1000 mrem/hr
Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112409 Date: 10/10/12

TRU Remediation Operations

Valerie Rhodes
☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Use proper PPE when processing waste. Do not push or press on waste. Use Heavyhouse gloves when processing
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter & waste in accordance with the procedure
Performed By: Jose Juarez (TRU Remediation Operations (Print)) Signature: Jose Juarez Z Number: 222452 Date: 10-11-12
LR Z# 249750 10/15/12

IHS Review: RS 206362 10.11.12

Noncertified TRU Waste Drum Item Information

DrumID: 022782

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	RT	Auth (Pg/Lv)		Comments
1	10OX2N01		8.000	NITRATE SALTS	R00	5.2	52	1/13	0468	
2	9LR29E01		5.000	NITRATE SALTS	R00	5.85	52	1/13	0468	
3	10LR7E01		5.800	NITRATE SALTS	R00	3.4	52	1/13	0468	
4	10LR14E01		10.700	NITRATE SALTS	R00	3.02	52	1/13	0468	
5	10LR8E01		10.700	NITRATE SALTS	R00	4.1	52	1/13	0468	
6	10OX15E01		17.920	NITRATE SALTS	R00	10.99	52	1/13	0468	
7	10OX14E01		6.200	NITRATE SALTS	R00	10.23	52	1/13	0468	
8	10LR20E01		17.400	NITRATE SALTS	R00	3.31	52	1/13	0468	
9	10LR21E01		22.000	NITRATE SALTS	R00	3.94	52	1/13	0468	
10	10OX26E01		8.200	NITRATE SALTS	R00	2.71	52	1/13	0468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 189.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	53.15	111.92
Totals	53.15	111.92

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])	900965					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-gal					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician

Performed By: SARA ARAGON — 237975
CCP (Print) — I.D.

Reviewed By: NATHAN WALES — 238866
CCP (Print) — I.D.

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 — Susan J. Ramsey — 000681 — 10/10/12
Waste Handling Operator (print) — Signature — I.D. — Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\madchem\1\DATA\121005c\
Data File : 90965.D
Acq On : 5 Oct 2012 2:48 pm (#1); 05-Oct-12, 14:47:26 (#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 14:56:13 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Sep 05 10:53:25 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.561	96	6073313	201.25 ppmv	0.02
15) Chlorobenzene-d5	5.887	117	5383078	177.00 ppmv	0.00
Target Compounds					Qvalue

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

10-23-12 PROJECT NAME _____ NOTEBOOK NO. _____

0100 Assuming WRRF operations center-Cleveland
0105 Starting outside and inside rounds.
0115 Pre-job being conducted by SOS.
0134 Inside rounds complete.
0130 Outside rounds complete
0150 Inside and outside rounds signed off by SOS
0745 CSE completed 151691 TA5069 building structure integrity.
0800 Mode change performed TA5069 and WRRF gas now in operations
0802 bagging on 90888
0806 bag on to complete.
0814 notified by lead RCT they will not be able to support lunch coverage due to training.
0913 Bagging off 90888 and bagging on 90993
0910/0924 90888 Bagging off complete.
1001 bagging off 90993 and bagging on 90939
1013 starting movement lists 5b-69
1020 bag on and bag off is complete.
1115 bagging off 90939 and bagging on 90965
1134 bag on bag off complete.
1149 Operators writing TA5069 for lunch no RCT coverage.
1150 Operators entering TA5069 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
1646 bag off/on complete
1630 mode change performed TA5069 and WRRF gas now in warm mode
1631 End of day WRRF operators center secure-Cleveland

No further entries this page

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

10-23-12 WXRR 505 Log Book

0400 Assuming 505 position for the day. [illegible]

0405 Starting Pre Job brief. Engineering performing Building integrity inspection. Should take about 30 minutes. No shipments in or out today. Processing daughter drums from 5[illegible].

0630 Concluded Pre-Job brief

0650 Inside and outside rounds signed off

0742 Engineer completed building integrity ~~[illegible]~~ inspection 10-23-12

0754 Waiting for SSW to be awake 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 that loaded on RCT's due to wounds.

0830 Late Entry. At 0806 first drum was bagged on

1145 First Crew breaking for lunch. Second Crew on standby waiting for RCT's so that they can go into 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 59-69.

10-23-12 1634 Securing 505 position for the day.

1149

No further entries on this page.

PROJECT NAME 10.23.17 NOTEBOOK NO.

0100 Assumed the work SOM position. [signature]
0105 The day building conducted by SOS. Necessary supplies needed such as Kitty litter. Also the building integrity TSI 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 report SOM notified Jack Vigil who will get with MSS on a path forward.
0800 Made change complete WCC4HRD/50.69 from WARM/WARM to OPERATIONS/OPERATIONS.
0820 Notified by RPI supervisor that they will not be able to support operations through lunch due to being short staffed due to training.
1129 SOM and SSW worked on updating an LWD is available for DVS steps DOS testing. OIM was notified and is helping in getting proper approvals for NFT to use existing LANS LWDS to allow changing of parts.
1300 Met with Jack Vigil PTB for over maintenance for the upcoming month. Offered weekends in November. Jack Vigil will work with MSS on maintenance.
1535 Notified by Inventory control that he is having problems with printing labels through oracle database. A request to work help has been sent. SOM requested Inventory control to try using the operation center computer.
1547 Signed off on WCCF Quarterly Combustible Loading Surveillance 7.4.1. Requested Operation center to update status board and TSE/BI compliance tracking database. The total combustible quantity equaled to 0.56 lb/ft² which meets the 9.60 lb/ft² requirement.
1630 Made change complete WCC4HRD/50.69 from OPERATIONS/OPERATIONS to WARM/WARM.
1645 Securing the SOM watch. [signature]

No further entries this page

SIGNATURE [signature] DATE 10.23 2017
READ AND UNDERSTOOD DATE 20

S 883130

CCP Radiography Data Sheet

Section 1 General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0042
Examination Date:	3/11/2013
Waste Container ID:	92235
Video/Audio Recorded Media Number:	LA-RTR2-13-0042 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	~~[X] No~~ BM 8.28.13 [X] Yes BM 8.28.13 NCR No.: ~~N/A~~ NCR-LANL-0593-13 BM 8.28.13 NCR No.: N/A

Section 2 Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 175.0 kg Tare Wt.: 33.4 kg Net Wt.: 141.6 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: 92235

Section 3: Container Inventory and Comments

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 ~~(Inside POC)~~ BM 8-28-13	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	12.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	123.6
Soils (S):	
Total WMP Weight:	141.6

CCP Radiography Data Sheet

Waste Container ID: 92235

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

Comments: ~~N/A~~ BM 8.28.13

NCR-LANL-0593-13

RTR Operator:

Benito Maestas		3/11/2013
Print Name	Signature	Date 8.28.13

NDA 2000 Assay Report

Item Information

Item ID:	92235	Count Sequence Number:	15264
Operator:	DCLTD231\Operator		
Assay Start:	3/13/2013 10:43:54 AM		
Description 1:	2LANDA1117		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 142.0 kg	Net:	142.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.760 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	15264	Batch Number:	2LANDA1117
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92235	Analysis Date:	3/13/2013

Net Weight	142000.0 g		
Pu mass	1.43E+002	+- 3.20E+001	g
TRU Alpha Activity	2.22E+001	+- 6.61E+000	Ci
TRU Activity Concentration	1.56E+005	+- 4.66E+004	nCi/g
Pu-239 Equivalent Activity	2.25E+001	+- 6.62E+000	Ci
Pu-239 FGE	1.34E+002	+- 3.01E+001	g
Decay heat	7.17E-001	+- 2.20E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.58E-001	1.13E-004	2.19E-005	2.68E-006
PU238	1.31E-002	2.27E-001	5.09E-002	3.61E-005
PU239	1.34E+002	8.41E+000	1.89E+000	1.34E-003
PU240	8.55E+000	1.97E+000	4.42E-001	3.14E-004
AM241	3.34E+000	1.16E+001	6.32E+000	9.12E-002
PU241	1.69E-001	1.75E+001	3.94E+000	2.80E-003
PU242	2.85E-002	1.13E-004	2.55E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.26E-006
U233	<LLD	<LLD	0.00E+000	1.17E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.52E-006
U238	<LLD	<LLD	0.00E+000	2.30E-005
AM243	4.33E-003	8.74E-004	1.70E-004	1.71E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-15-13

ITR: _____ Date: 3/18/13

Automated Independent Technical Review

Count Sequence Number: 15264 Batch Number: 2LANDA1117
Counter ID: HENC #2
Container ID: 92235
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/13/2013

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: 3-14-13

Waste Container ID: **92235**

BDR Number: **LA13FG2029**

Sampling Date: **3/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	461.35	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130322c\
Data File : 92235.D
Acq On : 22 Mar 2013 1:11 pm (#1); 22-Mar-13, 13:11:15 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 22 13:36:12 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.506	96	3559733	201.25	ppmv	-0.06
15) Chlorobenzene-d5	5.852	117	3133883	177.00	ppmv	-0.05
Target Compounds						Qvalue
1) Hydrogen	1.605	GC1	3279m	461.35	ppmv	

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

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ATTACHMENT 1
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Working Copy

Date: 10-3-12

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90966

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

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

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

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

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

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

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

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

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

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

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

Performed By: Clayton Millikin, CJT 240092 10/3/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
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4.1[6][B]	Parent Waste Container No.:	90966
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	404.2 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)	409.2 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:	

NA

EWMO-FOD (print) Signature Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90966

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92152			
10.1[4]	Daughter Drum Filter No.	AM-753		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-3664			
10.1[4]	Daughter Drum Purchase Order No.	416265			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)	N/A			
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:			N/A	
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	bag-out stubs			

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 90966

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

11.1[1] Performed By: Clayta Willis / [signature] 240041 10/3/12
Waste Handling Tech (print) Signature Z # Date

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

Working Copy
Date: 10-2-12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 414945
Lot No.: 217366
Manufacture Date: N/A 2011
E.Rios 10-2-12

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: E.Rios 10-2-12 014-05 013
Serial No.: E.Rios 10-2-12 HC-755 HC-955
Manufacture Date: 1/12

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

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

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

Performed By: Eddie Rios [signature] [illegible] 10-2-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments:

8.1[1] Performed By: Eddie Rios [signature] [illegible] 10-2-12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Joe Jerez [signature] 221452 10-3-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-3-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92153

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

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

Performed By: Clayton Mullins / [signature] / 240082 10/3/12
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[36][D] 85-gal overpack drum gross weight (lb): 324.6 lb

Comments: N/C

8.1[1] Performed By: Clayton Mullins / [signature] 240082 10/3/12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] 221452 10-3-12
Supervisor or designee (print) Signature Z # Date

Working Copy

Date: 10-2-12

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

Drum ID#: 92152

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 #: 4116269
Lot #: 229825
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 #: GEDVC 1.9-25PVC
Serial #: L-3664
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: NUCFI
Model #: 019DS
Serial #: AM-755
Date of Manufacture: 1/12

RECORD torque wrench information:

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

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

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

[x] Yes [ ] No

Print Name: Michael Romero Signature: Michael Romero ZR: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 76.4
File ID #: 014006

- [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 ZR: 182723 Date: 10-2-12

Verifier Print: Clayte Mullins Verifier Sign: CM ZR: 140091 Date: 10/3/12

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

DRUM ID#: 92152

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 040329

Cal expiration date: 3/15/13

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

Tolerance -3% cw/ ± 6% [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:

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.) 269.6

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

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

JOE QUINTANA

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

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90966 Container Type: POC Gross Weight (lbs): 405
Liner Seal #: None Filter Prefix: None Filter Serial #: EL-344; EL-377
RCRA Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S883130 WTS-12STD-815
Total PE-Ci Activity: 1.13E+00 Equivalent Combustible PE-Ci: 4.25E-01 AM-241 PE-Ci: 9.15E-02
Total Fissile Gram Equivalents: 12.5 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D008 D007 D009 VE 9/25/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: None Comment: None
Certified RTR Comment: None
Prohibited Items: ☒ Sealed > 4 Liters ☒ Liquid ☒ Pressurized Container ☒ Impenetrable Item ☒ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009
Nitrate salts mixed with Wastelock 770 from previous repack campaign. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts
Performed By: Susan Ramsey / Susan Ramsey / 100681 / Date 9/10/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts - POC
Net Wt: 95lb. Parent drum was part of WCRR nitrate salt repack campaign using Wastelock 770 (SEDs attached). This resulting daughter POC is being repacked to adjust admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium (D007), lead (D008) and mercury (D009). No key chemicals present.
May require RWP for >100 and <1000 mrem/hr.
Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 9/25/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs RTR Video Available
Other Specific Safety Concerns:
Processing Determination: ☒ Accept ☐ Reject
TRU Remediation Operations Comments: need to use kitty litter
Performed By: Gilbert Martinez / Gilbert Martinez / 149235 / 9-26-12
TRU Remediation Operations (Print) Signature Z Number Date

IHS Review [illegible] CSP, Contains Chromium, lead, and Hg
9-26-12

JJ - 221452 - 9-26-12

Noncertified TRU Waste Drum Item Information

DrumID: 023752

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	AMM (g)	MT	Auth (Pg/Ln)		Comments
1	100X2WS1		8.000	NITRATE SALTS	R00	5.2	52	1/13	G468	
2	91LR29ES1		5.000	NITRATE SALTS	R00	5.85	52	1/13	G468	
3	101R7ES1		5.800	NITRATE SALTS	R00	3.4	52	1/13	G468	
4	101LR14ES1		10.700	NITRATE SALTS	R00	3.82	52	1/13	G468	
5	101LR8ES1		10.700	NITRATE SALTS	R00	4.1	52	1/13	G468	
6	100S15ES1		17.920	NITRATE SALTS	R00	10.59	52	1/13	G468	
7	100X14WS1		6.200	NITRATE SALTS	R00	10.23	52	1/13	G468	
8	101LR20WS1		17.400	NITRATE SALTS	R00	3.31	52	1/13	G468	
9	101LR21ES1		33.000	NITRATE SALTS	R00	3.94	52	1/13	G468	
10	100X18WS1		8.200	NITRATE SALTS	R00	3.71	52	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 189.6

Material Type	AMM (grams)	Items Net Wt (kg)
52	53.15	111.92
Totals	53.15	111.92

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9.21.12

Container No. (5.[1])	90966					
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])	353.7 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

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

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

Comments: N/A

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

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

6.1[3] Performed By: Colleen Martinez (Waste Handling Operator (print)) Colleen Martinez (Signature) 140298 (Z #) 9.24.12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120921c\
Data File : 90966.D
Acq On : 21 Sep 2012 2:28 pm (#1); 21-Sep-12, 14:27:44 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 14:36:20 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	3.630	96	6925604	201.25 ppmv	0.09
15) Chlorobenzene-d5	5.946	117	6205928	177.00 ppmv	0.07
Target Compounds					Qvalue
1) Hydrogen	1.611	GC1	2501m	353.77 ppmv	

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

243 PROJECT NAME _____ NOTEBOOK NO. _____

10-31-2

0600 Assuming WCR operations after - T. Coleman
0615 Morning stand down to address issues.
0652 All issues regarding procedural compliance, etc. have been addressed. SOS performing the pre-job for today.
0711 Beginning outside rounds.
0714 Inside rounds complete.
0742 Outside rounds complete.
0743 Rounds reviewed by SOS.
0754 Mode change complete. We are now in operations.
0803 RCT's performing a CAM check. An audible alarm will sound
0819 Bagging on 90820.
0823 Permission granted to lower vehicle access gates to perform radiological survey for the shipment to Area G.
0831 Bag on complete.
0902 Bagging off 90820, bagging on 90966.
0903 Dave Rebel received an okay from the Som to seal the furnace.
0920 Vehicle access gates restored. Transportainers secured.
0928 Bag on complete.
0929 Initiating a drum movement from 50-69 to a transportainer.
0934 Drum movement out of facility complete.
1013 Bagging off 90966, bagging on 90760.
1035 Bag on complete.
1058 Bagging off 90760, bagging on 90822
1109 Initiating a drum movement from transportainer to 50-69.
1133 Drum movement into facility complete.
1146 Late entry - 1118, bag on complete. (JC)
1150 Bagging off 90822, bagging on 90755.
1217 Bag off complete.
1352 Bagging off 90755, bagging on 90806.
1412 Bag on complete.
1436 Beginning outside rounds.
1450 Bagging off 90806, bagging on 90759.
1505 Outside rounds complete.
1506 Initiating a drum movement from transportainer to 50-69
1507 Bag on complete.
1517 Drum movement into facility complete.
1518 Late entry - at 1515, began inside rounds (JC)
1527 Bagging off 90759.
1550 Bag off complete.
1553 Initiating a drum movement from 50-69 to a transportain
1600 Inside rounds complete.
1601 Drum movement out of facility complete.
1607 Rounds reviewed by SOS.
Continued on next page T. Coleman

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

PROJECT NAME L NOTEBOOK NO.

continued from previous page

1413 Mode change complete - We are now in warm standby.

1430 End of day. operations secure. - Koerner

No further entries this page

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

0600 Assumed SOM position.
0615 Attended pre job brief conducted by SOS. Conduct of Ops brief given by OM and ES Field OM to all WCRR personnel. Covered Procedure compliance, complacency in operations, management expectations
0715 Pre job brief completed - rounds and RP-1 RMI's are commencing.
0754 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations.
0827 Released W.O # 445656-01 50-54(n) Wet Auto Sprinkler Sys.
1000 Engineering / MSS onsite to walkdown furnace replacement in Bldg 50-84.
1015 Characterization team onsite to gamma spec LLW containers. RP-1 supervision stated he cannot support due to reduced staffing. Talked w/ characterization and scheduling and rescheduled for Wed 10/10/12.
1130 Inventory Control identified that w/ tomorrows shipment (incoming) space will be tight in the transportainers. To correct problem rescheduled tomorrows incoming to Tues 10/9/12. Will have sufficient inventory on hand to process.
1400 MSS proposed working 10/13/12 (Saturday) to perform light relamping inside 50-69. Issue is decanting area in Room 102 has 1 light out and another dim. Would like to replace these ASAP but electricians need a full day to perform. No OCO's available for that day.
1530 Discussed lighting issue w/ OM and ~~SOS and~~ 10/13/12 SOM (Gen) and since current run of SP 72 drums are 55 gal DM's (no decanting required) that maint. can probably be put off until 10/26/12.
1545 Request from result of ALARA meeting was to touch up paint on floor in 50-69. Have OM permission to secure processing early tomorrow to perform.
1613 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm.
10-2-2012 1630 Secured SOM position

No further entries this page

SIGNATURE 10/3 20 12
READ AND UNDERSTOOD DATE 20

10-3-12 WCRR SOS Log Book

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

No Further Entries on this Page.

5883130

CCP Radiography Data Sheet

Section 1: General Information

[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation

Site ID:	LANL
Batch Number:	LA-RTR2-13-0042
Examination Date:	3/11/2013
Waste Container ID:	92152
Video/Audio Recorded Media Number:	LA-RTR2-13-0042 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.: 122.0 kg Tare Wt.: 33.4 kg Net Wt.: 88.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 92152

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	8.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	3.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	70.6
Soils (S):	
Total WMP Weight:	88.6

CCP Radiography Data Sheet

Waste Container ID: 92152

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		3/11/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID: 92152 Count Sequence Number: 15265
Operator: DCLTD231\Operator
Assay Start: 3/13/2013 11:30:04 AM
Description 1: 2LANDA1117
Description 2: N/A
Location: LANL TA-54
Comment: AK-6
Matrix Type: Homo Sol. S3000
Container Type: 55 gal Drum
Weight: Net: 88.6 kg Net: 88.6 kg
Container: Volume: 208.0 l Full: 75.0 %
Density: 0.570 kg /l

System Configuration

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

Errors quoted at 1.000 sigma

012
CS 6/17/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 15265
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 92152

Batch Number: 2LANDA1117
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 3/13/2013

Net Weight	88600.0 g		
Pu mass	1.08E+002	+-	2.12E+001 g
TRU Alpha Activity	1.87E+001	+-	2.48E+000 Ci
TRU Activity Concentration	2.11E+005	+-	2.80E+004 nCi/g
Pu-239 Equivalent Activity	1.90E+001	+-	2.48E+000 Ci
Pu-239 FGE	1.01E+002	+-	1.99E+001 g
Decay heat	6.06E-001	+-	8.11E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.64E-001	1.17E-004	1.91E-005	2.99E-006
PU238	9.88E-003	1.69E-001	3.33E-002	3.48E-005
PU239	1.01E+002	6.26E+000	1.23E+000	1.29E-003
PU240	6.46E+000	1.47E+000	2.89E-001	3.02E-004
AM241	3.15E+000	1.08E+001	2.13E+000	2.23E-003
PU241	1.27E-001	1.31E+001	2.59E+000	2.70E-003
PU242	2.15E-002	8.51E-005	1.68E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.33E-006
U233	<LLD	<LLD	0.00E+000	1.30E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.01E-006
U238	<LLD	<LLD	0.00E+000	2.57E-005
AM243	5.15E-003	1.03E-003	1.69E-004	1.87E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 6-5-14

ITR: [signature] Date: 6/9/14

013
CS 6/17/14

Automated Independent Technical Review

Count Sequence Number: 15265 Batch Number: 2LANDA1117
Counter ID: HENC #2
Container ID: 92152
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/13/2013

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

14
PJ 6/17/14

Comments	Disposition
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.
Section 5 - Gamma Analysis Analysis Status: No errors. MCA Deadtime greater than the upper limit of 50.0%.	Ok No spectral distortion observed. 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. Marsh Date: 6/3/14

015
CS 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: **92152**

BDR Number: **LA13FG2029**

Sampling Date: **3/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	489.21	
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\130322c\
Data File : 92152.D
Acq On : 22 Mar 2013 12:33 pm (#1); 22-Mar-13, 12:32:29 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 22 12:41:14 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	4408026	201.25 ppmv	-0.06
15) Chlorobenzene-d5	5.851	117	3764778	177.00 ppmv	-0.05
Target Compounds					Qvalue
1) Hydrogen	1.615	GC1	3477m	489.21 ppmv	

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

20

Working ~~MET~~ Copy
Date: 10-15-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

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

6.2[4] Date Processed: [illegible]

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

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

4.1[6][B] Parent Waste Container RCRA Designations: [illegible]

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

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

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

4.3[5][B] ($) 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) [illegible]
(Initial and Date)

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

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

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

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 91968

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 419.4 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) 419.4 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.: [illegible]

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

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90968

Comments: metal lids, metal bolts, plastic lid, cardboard liner, Dry, wet sticks, bolts, glass lid

11.1[1] Performed By: [illegible] / [illegible] / [illegible] / 16-15-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [illegible] / 1221452 / 16 17-12 1302
SOS or designee (print) Signature Z # Date/Time

UET Working Copy
Date: 10-9-12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: HL-731
Manufacture Date: 8/11

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

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

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

Performed By: Steven Mondragón / Steven Mondragón 1125271 10-09-12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mondragón / Steven Mondragón 1125271 10-09-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Perez / [signature] 021452 10-17-12
Supervisor or designee (print) Signature Z# Date

Working Copy

Date: 10-15-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

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

7.[25] Overpack drum closure ring torque wrench information:

M&TE No.: [illegible]
Cal. Expiration Date: [illegible]
Range in ft-lb: [illegible]
Tolerance: [illegible]

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

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

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

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

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

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

Comments: n/a

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

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

8.1[7] Reviewed By: Jose Perez [illegible] 1221452 10-17-12
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: [illegible]

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 416265
Lot #: 0224225
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 #: LCPVC 1.5-2.5 CPVC
Serial #: L-1551
Date of Manufacture: 06-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: A27-769
Date of Manufacture: 01-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	020614	M&TE ID #:	021151
Cal Expiration Date:	10-14-12	Cal Expiration Date:	06-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±4% cw ±6% ccw	Tolerance:	±3% cw ±6% ccw

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

[x] Yes [ ] No

Print Name: Don Pacheco Signature: Don Pacheco ZR: 240012

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.4
File ID #: [illegible]

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

6. Label Drum Assembly

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

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

Operator Print: Don Pacheco Operator Sign: Don Pacheco ZR: 240012 Date: 10-03-12

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

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

DRUM ID#: 92204

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 #: 040525

Cal expiration date: 3-15-13

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

Tolerance +/-3% or +/-6% or

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 313.2

Scale ID#: 01906S

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

4. FINALIZE DOCUMENTATION

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

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

✓Complete TWSR.

Operator Print/Sign: [signature] Date 10-15-12

Verifier Print/Sign: Brandon Chavez [signature] Date: 10-15-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90968 Container Type: POC Gross Weight (lbs): 416

Container Seal #: None Filter Prefix: None Filter Serial #: EL-419; EL-422

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

TWSR Comments: PARENT #S883130 WTS-12STD-824

Total PE-Ci Activity: 1.13E+00 Equivalent Combustible PE-Ci: 4.25E-01 AM-241 PE-Ci: 9.19E-02

Total Fissile Gram Equivalents: 12.5 Total Surface Dose Rate (mrem/hr): 2

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ✓ Green Yellow

Remediation Determination: VE ☐ PID Split ☑ Repack

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

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

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

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan Ramsey 100681 (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 – POC

Net Wt. 1061b. Parent drum (SEDs attached) was part of WCRR nitrate salt repack campaign using Waste Loc 770. This resulting daughter POC is being repackaged to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, & mercury. No chemicals present.

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

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes 1109 (Z Number) 9/27/12 (Date)

TRU Remediation Operations

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

Other Specific Safety Concerns: Use kevlar gloves when processing. Do not press or push on waste. Use tools to manipulate waste.

Processing Determination: ✓ Accept ☐ Reject

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

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

IHS Review [signature] CSD, Contains lead, chromium & Hg 9-27-12.

Document No: EP-DIV-AP-0107

tj 221452 10-1-12

Noncertified TRU Waste Drum Item Information

DrumID: 023752

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	RT	Auth (Pg/Ln)	Comments
1	100X2NS1		8.000	NITRATE SALTS	R00	5.2	S2	1/13	G468
2	91LR29ES1		9.000	NITRATE SALTS	R00	8.88	S2	1/13	G468
3	101LR7ES1		5.800	NITRATE SALTS	R00	2.4	S2	1/13	G468
4	101LR14ES1		16.700	NITRATE SALTS	R00	3.02	S2	1/13	G468
5	101LR8ES1		10.700	NITRATE SALTS	R00	4.1	S2	1/13	G468
6	100X15NS1		17.920	NITRATE SALTS	R00	10.59	S2	1/13	G468
7	100X14NS1		6.200	NITRATE SALTS	R00	10.35	S2	1/13	G468
8	101LR20NS1		17.400	NITRATE SALTS	R00	3.31	S2	1/13	G468
9	101LR21NS1		22.000	NITRATE SALTS	R00	3.04	S2	1/13	G468
10	100X26NS1		8.200	NITRATE SALTS	R00	3.71	S2	1/13	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 189.6

Material Type	SNM (grams)	Items Net Wt (kg)
S2	53.15	111.92
Totals	53.15	111.92

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9.21.12

Container No. (5.[1])	909168					
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])	3090.92 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: N/A

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

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

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120921c\
Data File : 90968.D
Acq On : 21 Sep 2012 1:37 pm (#1); 21 Sep 2012 1:36 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 13:45:16 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.259	96	2654083	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2331576	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.779	GC1	961379m	3890.92 ppm	

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

Vocgas.m Fri Sep 21 13:45:23 2012

10-15-12

0600 Assuming WCRRF operations center - Orlando
0603 starting outside rounds.
0615 pre job being conducted by SIS.
0630 completed Outside rounds.
0650 Starting inside rounds.
0744 Inside and outside rounds signed off by SIS
0815 Mode change performed TASL-69 and WCRRF yard now in operations.
0808 Starting movement into 50-69.
0817 Movement into 50-69 is complete.
0835 bagging on 90877
0842 Permission granted to lower vehicle access gates for loading of transport vehicle.
0844 bag on complete.
0919 vehicle access gates have been restored, loading of transport vehicle is complete
0957 bagging off 90877 and will bagging on 90968.
1023 bag on complete.
1114 bagging off 90968 and will be bagging on 91000.
1200 bag on complete.
1230 Operators writing for lunch.
1324 Operators intending for operations
1428 Starting inside rounds
1450 Starting outside rounds.
1458 bagging off last drum of the day will not be bagging on another one due to not having any more straps.
1533 bag off complete.
1549 Starting movement out of 50-69
~~1632 End~~ CW 10-15-12
1613 Completed movement out of 50-69.
1635 end of day WCRRF Operations center secure - Orlando.

no further entries this page.

10-15-12 WCRR SOS LOG BOOK

0600 Assuming SOS position for the day. Jan J.y

0615 Conducting Pre-Job brief. Continuing to process solution package 72 and having to use slings to load into 85 gal empty drums. Reviewed procedure WCRRF Hydrant Flow Test EP-WCRR-FP-DOP-0301, R-8

0744 SOS Signed off on rounds

0805 Mode Change In Operations in 50-69 and Yard.

1023 PIC from Inside of 50-69 reporting that the straps being used are thick and when they start to place the parent POC inside of the empty 85 gallon drum the area where they are chocked at are rubbing against the sides and sometimes catching causing the straps to rub against the tape and possibly tearing and causing contamination. Also the first drum caught on the side and the drum fell to the bottom of the 85 gallon drum.

1128 I went into 50-69 to observe the loading of the Parent POC into an empty 85 gallon drum along with the RCT supervisor. We watched them lower the POC into the 85 gallon drum and observed the straps catching on the lip of the 85 and pushing against the tape and the POC. The POC was able to be lowered into the 85 by moving it around. Also witnessed the bolt being pressed against.

1215 RCT supervisor and myself reported the findings to the SOM and explained what we saw. SOM notified the Op. Manager of the situation also so that he understands and to make sure the correct straps are ordered.

1230 Operators exiting for lunch. Unable to run second crew due to two operators with wounds and unable to process waste

1324 Operators returning from lunch.

1458 Bagging off last drum for the day. Three total processed. No more slings available that are thin for nesting operations.

1533 Bag off Complete

Continued on Next Page.

10-15-12 WXRR 505 Log Book

Continued from Previous page.

10-15-12 1628 Securing 505 position for the day. [illegible]

No further entries on this page.

10/15/12

0600 Assumed SOM position.

0615 Attended prejob brief conducted by SOS. Discussed RPO issue from Friday maintenance work and need to reschedule w/ workers available this Friday. OM has requested a formal post job review to be conducted.

0805 Completed mode change: WCRR yard/Bldg 50-69 from Warm/~~Cold~~ 10/15/12 Cold to Operations/Operations.

0810 (Late Entry - 0715) CSE Leonard Moore ons to conduct measurements of FSS sprinkler heads w/ Design Engineering. Got verbal OK w/ scheduling to emerge work. Engineers delayed and rescheduling for this PM after mode change.

0830 Attended Post Job Review w/ OM, RP-1, MSS, Operations. OM will send out findings.

0945 Released W.O 446624-01 50-84 Repair Deficiency (Insulation install).

1500 Notified by SOS that all lifting straps for reseating POC's into 85 gal DM's have been used => Will not bag on any additional drums. Processing will be on hold until new straps obtained or shipment of non-POC 55's are received to process. OM notified.

1505 (Late Entry - 1400) Operators conducted lift demonstration of an empty 55 gal DM to reseat into 85 using forklift and straps. Due to drum being light the choke slipped up one chime and when coming off the ground swung back & forth excessively — would require workers to get under forklift forks to steady drum.

1558 Mode change completed: WCRR yard / Bldg 50-69 from Operations/Operations to Warm/Warm.

1600 Design engineers entered facility to obtain measurements of sprinkler heads. RP-1 supervisor would not allow CSE entry into CA due to wound even though covered w/ occlusion bandaid. CSE refused to produce exception from Occ Med.

1640 Secured SOM position

10-16-12

No further entries this date

10/15 12

S883130

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0007
Examination Date:	1/17/2013
Waste Container ID:	92204
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)	[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.: 142.0 kg Tare Wt.: 33.4 kg Net Wt.: 108.6 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: 92204

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal lid, metal hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard material, fiberboard insert sleeve, cardboard

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	10.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	60.6
Soils (S):	
Total WMP Weight:	108.6

CCP Radiography Data Sheet

Waste Container ID: 92204

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

NDA 2000 Assay Report

Item Information

Item ID:	92204	Count Sequence Number:	14869
Operator:	DCLTD231\Operator		
Assay Start:	1/18/2013 2:59:18 PM		
Description 1:	2LANDA1081		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 109.0 kg	Net:	109.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.580 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	14869	Batch Number:	2LANDA1081
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92204	Analysis Date:	1/18/2013

Net Weight	109000.0 g		
Pu mass	2.91E+001	+-	5.20E+000 g
TRU Alpha Activity	2.45E+000	+-	3.20E-001 Ci
TRU Activity Concentration	2.24E+004	+-	2.93E+003 nCi/g
Pu-239 Equivalent Activity	2.51E+000	+-	3.20E-001 Ci
Pu-239 FGE	2.74E+001	+-	4.88E+000 g
Decay heat	7.68E-002	+-	9.93E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	7.85E-002	5.61E-005	9.27E-006	1.45E-006
PU238	2.68E-003	4.63E-002	8.28E-003	3.48E-005
PU239	2.73E+001	1.72E+000	3.07E-001	1.29E-003
PU240	1.75E+000	4.02E-001	7.18E-002	3.02E-004
AM241	8.07E-002	2.80E-001	5.01E-002	2.10E-004
PU241	3.47E-002	3.61E+000	6.45E-001	2.71E-003
PU242	5.83E-003	2.31E-005	4.14E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.32E-007
U233	<LLD	<LLD	0.00E+000	6.76E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.03E-006
U238	<LLD	<LLD	0.00E+000	1.30E-005
AM243	2.29E-003	4.62E-004	7.67E-005	9.42E-006

Errors quoted at 1.000 sigma

Operator: Marla Zu Date: 1.23.13

ITR: [illegible] Date: 1-24-13

Automated Independent Technical Review

Count Sequence Number: 14869
Batch Number: 2LANDA1081
Counter ID: HENC #2
Container ID: 92204
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/18/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than 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; 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
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: Sherri Chambers Date: 1-21-13

Waste Container ID: **92204**

BDR Number: **LA13FG8008**

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

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

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130201c\
Data File : 92204.D
Acq On : 1 Feb 2013 3:06 pm (#1); 1 Feb 2013 3:05 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 15:13:28 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	3.250	96	1986214	206.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	1794614	179.50 ppm	0.00

Target Compounds Qvalue

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

Working Copy
Date: 1-23-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90969

6.2[4] Date Processed: 1-23-13

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

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

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

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

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

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

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

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

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

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

Performed By: BRIAN GALLEGOS / B. Gallegos / 2607129 / 1-23-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 909169

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 402.4 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) 402.4 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-POD (print) Signature Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 909169

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92676			
10.1[4]	Daughter Drum Filter No.	BH-357		N	
10.1[4]	Daughter Drum Bag Filter No.	L-6126			
10.1[4]	Daughter Drum Purchase Order No.	501011			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units			N	
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	N			
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 98969

Comments: ROOM TRASH, POC LIDS, PLASTICS, CARDBOARD, SALTS, KITTY LITTER

11.1[1] Performed By: BRIAN GALLEGOS / Brian Gallegos / 208329 / 1-23-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: GMtz / [illegible] / 149235 / 1-24-13 0830
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.: 413059
Lot No.: 208849
Manufacture Date: 2010

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: IL-42
Manufacture Date: 9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038369
Cal. Expiration Date:	9-26-13	12-18-13
Tolerance:	+/- 4% cw +/- 6% ccw	+/- 3% cw +/- 6% ccw

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

Performed By: Steven Mondragon / Steven Mondragon / 104724 / 1-22-13
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mondragon / Steven Mondragon / 104724 / 1-22-13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: G Mh / G M / 148275 / 1-24-13
Supervisor or designee (print) Signature Z# Date

UEI Working Copy
Date: 1-23-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92677

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 038567
Cal. Expiration Date: 3-26-13
Range in ft-lb: 10-80
Tolerance: ±3% CW ±6% CCW

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

Performed By: BRIAN GALLEGOS / [signature] / 267129 1-23-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[36][D] 85-gal overpack drum gross weight (lb): 325.2 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] / 267129 1-23-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: G Martinez / [signature] / 148938 1-24-13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 926710

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 50101
Lot #: 233370
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPUC1.5-2 SPVC
Serial #: L-6126
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 #: 014-09
Serial #: B07397
Date of Manufacture: 2-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	046794	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 ±4% ccw	Tolerance:	±3% cw 3% ccw

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

[x] Yes [ ] No

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

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs): 75.6 BG 1-23-13
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: [signature] ZI: 182723 Date: 1-16-13

Verifier Print: Brian Gallegos Verifier Sign: [signature] ZI: 267129 Date: 1-23-13

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

DRUM ID#: 92676

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038367

Cal expiration date: 3-16-13

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

Tolerance ±3% CW ±6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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): 263.8

Scale ID#: 08065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [signature] Date 1-23-13

Verifier Print/Sign: [signature] Date: 01-23-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90969 Container Type: POC Gross Weight (lbs): 398

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-448; EL-491

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

TWSR Comments: PARENT #S883130 WTS-12STD-898

Total PE-Ci Activity: 1.13E+00 Equivalent Combustible PE-Ci: 4.25E-01 AM-241 PE-Ci: 9.19E-02

Total Fissile Gram Equivalents: 12.5 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008 D007 D009 VK 10/4/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ✓ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

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

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

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

Performed By: Susan Ramsey / Signature: Susan S. Ramsey / 100681 / Date: 9/11/12

Production Control (Print) Z Number

WDP Engineering

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt: 88 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes / Signature: Valerie Rhodes / 112609 / 10/4/12

WDP Engineering (Print) Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns: Use proper PPE when processing waste. Do not push or press on waste with hands. Utilize hexarmor gloves & tools to handle waste.

Processing Determination: ✓ Accept ☐ Reject

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

Performed By: Jose Perez / Signature: Jose Perez / 221452 / 10-11-12

TRU Remediation Operations (Print) Z Number Date

OK Z# 249750 10/19/12

HS REVIEW: AB 286362 10.9.12

Noncertified TRU Waste Drum Item Information

DrumID: 023752

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	NT	Auth (Pg/Ln)		Comments
1	100X2WS1		8.000	NITRATE SALTS	R00	5.2	S2	1/13	G468	
2	9LR19ES1		5.000	NITRATE SALTS	R00	5.85	S2	1/13	G468	
3	10LR7ES1		5.800	NITRATE SALTS	R00	3.4	S2	1/13	G468	
4	10LR14ES1		10.700	NITRATE SALTS	R00	3.82	S2	1/13	G468	
5	10LR8ES1		10.700	NITRATE SALTS	R00	4.1	S2	1/13	G468	
6	100615ES1		17.920	NITRATE SALTS	R00	10.39	S2	1/13	G468	
7	100X14WS1		6.200	NITRATE SALTS	R00	10.23	S2	1/13	G468	
8	10LR20WS1		17.400	NITRATE SALTS	R00	3.31	S2	1/13	G468	
9	10LR21ES1		32.009	NITRATE SALTS	R00	3.94	S2	1/13	G468	
10	100X18WS1		8.209	NITRATE SALTS	R00	2.71	S2	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 189.6

Material Type	SNM (grams)	Items Net Wt (kg)
S2	53.15	111.92
Totals	53.15	111.92

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 10·3·12

Container No. (5.[1])	90969					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: 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: Colleen Martinez (Waste Handling Operator (print)) Colleen Martinez (Signature) 190298 (Z #) 10·4·12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121003c\
Data File : 90969.D
Acq On : 3 Oct 2012 4:55 pm (#1); 03-Oct-12, 16:55:09 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 03 17:03:27 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	3.558	96	6821015	201.25	ppmv	0.02
15) Chlorobenzene-d5	5.884	117	5938912	177.00	ppmv	0.00

Target Compounds	Qvalue

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

1-23-13 Continued from previous page - CKelands

1330 Vehicle access gates have been restored, transport vehicle has been unloaded, movement is complete.

1-23-13

1400 operators continuing with operations. PPE check is sat.

1500 bagging off 90929, bagging on 90969

1507 Starting movement into 50-69

1514 movement into 50-69 is complete

1520 bagon, bag off complete.

1524 starting inside rounds.

1528 PPE check is sat

1538 Item 11 OOS, POD in Place, OK to continue with rounds

1551 Starting outside rounds

1555 Completed inside rounds, PPE check is sat.

1605 Outside rounds complete.

1609 bagging off 90969, bagging on 90957.

1610 ~~1611~~ 1-23-13 Inside and outside rounds signed off by SOS.

1625 bagon, bag off complete. PPE check is sat

1704 bagging off 90957

1738 bag off is complete.

1740 Starting movement out of 50-69

1755 Mode change performed TASD 69 and WCRRF 4 and now in warm standby.

1-23-13 ~~1756~~ 1-23-13 Completed movement out of 50-69.

1-23-13 1830 end of day WCRRF operations center secure - CKelands

1/1/19

no further entries this page

1-23-13 WCKK SOS LOG Book

0630 Assuming SOS Position [illegible]

0615 Conducted Shift Brief EP-WCKR-RM-ACP-0202, R3 And EP DIV-DOP-20086, R1 Also talked About Fatigue.

0645 Concluded Shift Brief Operators Attending, All Hand Meeting

0710 Reviewed Inside And outside Rounds

0955 Personal back from All Hand meeting

1000 Mode Change Complete WCKRF In operations.

1005 Inventory Control noticed that they are having Issues with label maker (Shortings) Contacted waste half on Issue

1126 bagging on first drum of day labels will be printed to TA 46 Drum # 90886 PPE check sat.

1-23-13 1137 PPE Check

1158 RCT have paused work In facility Drum 90886 has Potential chrystalization ES TA making Determination

1205 OK to Proceed Per TA

1225 bagging off and bagging on 90925

1300 Operators breaking for lunch

1400 Operators entering facility From lunch

1500 Bagging off and bagging on ~~90966~~ 90965 GM 1-23-13

1528 PPE Check

1600 Bagging on And bagging off. Bagged on 90957

1606 Inside And outside Rounds Reviewed ~~90957~~ GM 1.23.13

1704 Bagging off last drum of day.

1755 mode Change Complete WCKRF In warm.

1-25-13 1830 end of shift Securing SOS Position [illegible] off

RG No further entries on this Page

1/23/13

0000 Assumed the WCRR SOM position and reviewed the previous shift turnover. (Signature of Manager)

0015 Attended the pre-job briefing conducted by SOS Son discussed importance of SOS being punctual not allowing employees to exceed work hours plus conduct of operations.

0015 SOM attended mandatory all hands meeting at the OSSB auditorium.

0950 SOM arrived back from meeting

1000 Mode change complete. WCRR YARD/50 LB from WARM/WARM to OPERATIONS/OPERATIONS

1002 Drill in with TA54-100. Status to JCR and LPS was started as well.

1115 Notified by SOS that unauthorized contact is causing problems during shifting events. A request to WCATS will be submitted

1158 Notified by OCO that RP-1 caused work inside due to a patient again containing crystal like substance. Energy Solutions EM en route to investigate.

1300 Energy Solutions EM deemed crystal like substance to be frozen salts. Drum had been re-mediate at WCRR before and is now SF #72. EM deemed drum safe to work. Operations resumed.

1255 CSE S. West going into 50 LB to head drum lift.

1745 Operations preceded 4 patients resulting in 4 daughters and TPOC

1755 Mode change complete. WCRR YARD/50 LB from OPERATIONS/OPERATIONS to WARM/WARM.

1830 Securing the WCRR SOM position. (Signature of Manager)

No further entries this page

(Signature of Manager) 1/23 13

S88 3130

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0021
Examination Date:	2/7/2013
Waste Container ID:	92676
Video/Audio Recorded Media Number:	LA-RTR2-13-0021 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 119.5 kg Tare Wt.: 33.4 kg Net Wt.: 86.1 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: 92676

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard packing material

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	10.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	57.1
Soils (S):	
Total WMP Weight:	86.1

CCP Radiography Data Sheet

Waste Container ID: 92676

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

Comments: N/A

RTR Operator:

Aaron Elliott		2/7/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92676	Count Sequence Number:	22067
Operator:	D3PW2DK1\operator		
Assay Start:	2/13/2013 3:25:12 PM		
Description 1:	1LANDA1714		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 86.1 kg	Net:	86.1 kg
Container:	Volume: 208.0 l	Full:	90.0 %
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:	22067	Batch Number:	1LANDA1714
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:	92676	Analysis Date:	2/13/2013

Net Weight	86100.0 g			
Pu mass	1.18E+001	+-	2.75E+000	g
TRU Alpha Activity	4.78E+000	+-	2.08E+000	Ci
TRU Activity Concentration	5.55E+004	+-	2.41E+004	nCi/g
Pu-239 Equivalent Activity	4.81E+000	+-	2.08E+000	Ci
Pu-239 FGE	1.12E+001	+-	2.58E+000	g
Decay heat	1.58E-001	+-	6.94E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.27E-002	4.48E-005	6.54E-006	2.24E-006
PU238	1.09E-003	1.88E-002	4.37E-003	3.50E-005
PU239	1.11E+001	6.97E-001	1.62E-001	1.30E-003
PU240	7.08E-001	1.63E-001	3.80E-002	3.03E-004
AM241	1.12E+000	3.90E+000	2.07E+000	5.47E-002
PU241	1.40E-002	1.46E+000	3.40E-001	2.72E-003
PU242	2.36E-003	9.38E-006	2.19E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.91E-007
U233	<LLD	<LLD	0.00E+000	5.17E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.48E-006
U238	<LLD	<LLD	0.00E+000	1.17E-005
AM243	2.02E-003	4.09E-004	6.05E-005	7.14E-006

Errors quoted at 1.000 sigma

Operator: Dan R Ouch Date: 2-19-13

ITR: Martha Gr Date: 2-19-13

Automated Independent Technical Review

Count Sequence Number: 22067 Batch Number: 1LANDA1714
Counter ID: MCS HENC #1
Container ID: 92676
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/13/2013

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: 2-14-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92676**

BDR Number: **LA13FG8015**

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

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

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130301c\
Data File : 92676.D
Acq On : 1 Mar 2013 10:45 am
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 10:54:27 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	2621514	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2291876	179.50 ppm	0.00

Target Compounds	Qvalue

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

S891279

S891279

Container F... 774720

File Options Reports Help

S891279

774720	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

S891279

- S891279
  - LA00000068724
    - LA00000069100 – EMPTY
    - LA00000068656
      - LASB02206
  - W798032 – EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	LA00000068656	0.0	kg

Working Copy
Date: 11-19-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: ~~[illegible]~~ Gemstar/68724

6.2[4] Date Processed: 11-19-13

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

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

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

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

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

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

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

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

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

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

Performed By: James Sanchez / [signature] / 116662 / 11-19-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: S891279 68724	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	368.2 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	83.0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	451.2 lb
6.2[7]	($) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[17][D]	Drum lift hinge pin retaining clip replaced.	/ N/A / (Initials Z# Date)

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S891279

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68656			
10.1[4]	Daughter Drum Filter No.	L-10350			
10.1[4]	Daughter Drum Bag Filter No.	LM-854			
10.1[4]	Daughter Drum Purchase Order No.	501578			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[5][A]	Free Liquid Volume/Units	2 gallons			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic Kitty Litter			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5891279

Comments: Liquids Kitty Litter, Nitrate Salts
Lead Shielding, Poly Liner Lid, ~~Fe~~ Glove box gloves.

11.1[1] Performed By: Melinda Stewart Melinda Stewart 1277265 11-20-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez 1149235 11/25/13 1012
SOS or designee (print) Signature Z # Date/Time

UET Working Copy Date: 11-20-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69100

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

M&TE No.: 038369
Cal. Expiration Date: 11-6-13 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: MICHAEL MONTOYA / [signature] 191352 11/20/13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 168.0 lb

Comments: N/C

8.1[1] Performed By: MICHAEL MONTOYA [signature] 191352 / 11/20/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez [signature] 149825 11/25/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 11/12/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68656

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.: 6C PVC 1.5-2 SPVC
Serial No.: L-10350
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:	12-19-13	8-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	± 4% cw ± 6% ccw	± 3% cw ± 6% ccw

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

Performed By: Brian Cordova (Operator (print)) — Signature — Z# 287544 — Date 11/12/13

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-854
Manufacture Date: 12/12

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68656

Comments: n/c

5.[35] Performed By: Frederick Rehnlock / Brian Cordova — Operator (print) — Signature — 220306 / 11/12/13 — Z # — Date 11-12-13

7.1[4] Reviewed By: Gilbert Martinez — Supervisor or designee (print) — Signature — 149251 — Z # — Date 11/25/13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68656

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

M&TE No.: 038364
Cal. Expiration Date: 12-18-13
Range: 16 80 ft-lb
Tolerance (+/-): +-3% cw & +-6% ccw

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

Performed By: Melinda Stewart / Melinda Stewart / 1277268 / 11-20-13
Operator (print) Signature Z # Date

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036345
Cal. Expiration Date:	12-18-13	8-5 14
Range:	40 200 in-lb	16 80 ft-lb
Tolerance (+/-):	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Michael Morgan / [signature] / 1913572 / 11/20/13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68656 ~~019065~~ 11-19-13 SR

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 461.4 11/20/13 MM ~~368.2~~ lbs

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

Comments: N/C

6.[32] Performed By: James Smith (Operator (print)) [signature] (Signature) 1176662 (Z #) 11-19-13 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) [signature] (Signature) 1492351 (Z #) 11/25/13 (Date)

Working Copy
Date: 11-19-13a

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S891279

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): 368.2

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: James Sa[illegible] [signature] 116662 / 11-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez [signature] 149235 11/25/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Gilbert M[illegible] [signature] 149235 11/25/13 1614
SOS/SOM or designee (print) Signature Z # Date / Time

Salvage Drum SP72 72 HC 6.10.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control Daughter Continuous re-labeled & given new number B. Trujillo 11/12/13

Container ID: S891279 / 108724 (Parent) Container Type: 85-GAL Gross Weight (lbs): 378

Inner Seal #: 023609 Filter Prefix: LAS Filter Serial #: 03498

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

TWSR Comments: LEACHED SOLIDS W/LEAD NITRATED SALTS A06439

Total PE-Ci Activity: 1.47E+01 Equivalent Combustible PE-Ci: 5.53E+00 AM-241 PE-Ci: 1.20E+00

Total Fissile Gram Equivalents: 162.9 Total Surface Dose Rate (mrem/hr): 4

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 7/28/2007 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 10/31/12 ☐ PID ☐ Split ☑ Repack

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

TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litty zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones — Production Control (Print) — Signature — 117434 Z Number — 12.1.11 Date

SUSAN S. RAMSEY — Signature — 100681 Z Number — 10/31/12 Date

WDP Engineering

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Leached solids- nitrate salts
Net Wt: 315 lb. Nine items; heaviest item weighs ~34lb while others range from 15lb to 28lb.
55 gal drum overpacked in 85 gal drum

May require RWP for >1000 and <10000 mrem/hr @ 30 cm

Drums w/ nitrate salts may have undocumented liquids
Total SNM mass is 173 g; one item has 88 g

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

TRU Remediation Operations

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

Other Specific Safety Concerns: VE Process PPE Avoid Kitty Litter Entrie

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments:

Performed By: Vanessa Valdez — TRU Remediation Operations (Print) — Signature — 143235 Z Number — 11/13/13 Date

Darrel L. Blain — Darrel L. Blain — 218669 — 11/14/13

HS REVIEW: RBS 206362 11.26.12 NOTES: D007 = chromium D008 = lead ~~D009~~ HS

Document No: EP-DIV-AP-0107

Noncertified TRU Waste Drum Item Information

DrumID: 023609

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	20X1ES1		15.240	NITRATE SALTS	R04	87.78	52	8/13	G468	
2	2LR3ES1		11.330	NITRATE SALTS	R04	23.45	52	8/13	G468	
3	2LR13ES1		7.610	NITRATE SALTS	R04	7.99	52	8/13	G468	
4	2LR14WS1BA		[redacted]	NITRATE SALTS	R04	12.64	52	8/13	G468	
5	2LR14WS1B		6.830	NITRATE SALTS	R04	8.4	52	8/13	G468	
6	20X14WS1		12.800	NITRATE SALTS	R04	8.7	52	8/13	G468	
7	20X27ES1		9.570	NITRATE SALTS	R04	3.1	52	8/13	G468	
8	20X22WS1		9.860	NITRATE SALTS	R04	15.48	52	8/13	G468	
9	3DS3ES1		9.810	NITRATE SALTS	R04	5.49	52	8/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 171.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	173.03	89.88
Totals	173.03	89.88

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 1/19/11

Container No. (5.[1])	SS*11279					
Container type sampled (e.g., 55-gal. 85-gal, 110-gal, or SWB) (5.[1])	55-gal overpacked in 85-gal					
Filtered Vent Type (5.[1])	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])	471.39 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: NATHAN WALES — 235866
CCP (Print) — Z #

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

Comments:

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

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

6.1[3] Performed By: SUSAN S RAMSEY / [signature] / 10464 / 11/27/12
Waste Handling Operator (print) — Signature — Z # — Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110119c\
Data File : S891279.D
Acq On : 19 Jan 2011 2:10 pm
Operator : EL
Sample :
Inst Name : Unit 8
Misc : 55 GAL LFL DRUM FROM 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 19 14:18:39 2011
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.249	96	4219575	209.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	3476054	184.00 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.341	GC1	119364	471.39 ppm	100

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

Vocgas.m Wed Jan 19 14:18:45 2011

11-19-13

0605 accuring WCRRF operations center - Orlando

0616 Pre job being conducted by SOS. Evening SOS advised that gloves will need to be changed, Station 3, 7.

0635 Pre job concluded.

0655 Operators entering 50-69.

0832 Operators will be bagging off daughter then modes will be changed to change gloves.

0834 Operators notifying Ops center the RCT's have smears coming up warms

0832 Operators will be dunning 2 drums then will be performing bag on, bag off's.

0833 RCT's have notified that smears ~~have~~ are 11-19-13 in normal range.

0954 Dunning and bag on, bag off is complete, Bagged on 48724, Operators stating that only one drum dunstia 48734 lid and Band were cracked and degraded.

1000 mode change performed TA50-69 and WCRRF yard is warm standby for glove changes.

1015 Operators notifying ops center that Operators are coming out not during HFM sunrise SOS and SOM have been notified, RCTS are finding contamination on floor and operator booties. RCTS are performing a controlled egress out of 50-69 and will perform survey and will perform radals for precautions.

1050 RCT's notified that 1500 dpm on right bottles on one

RCT ~~operator. 2nd~~ Will 11-19-13 Operator left bootie at 1333 dpm alpha RCTs will brief to reentry RWP.

1140 RCTS have notified ops center LAS is showing 500dpm to 1000 dpm on floor from ~~decon an~~ dunning area to step off pad. RCT's and operators will perform decon from step off to dunning area, will perform 300 smears.

1200 RCT's and Operators ~~heading~~ Will 11-19-13 to RWP for decon.

1210 RWP is ~~expired soon~~ expired will need to update RWP.

1300 Operators entering 50-69 to start decon.

1446 First rounds of decon complete, LAS still showing

-Continued on next page Orlando

256

~~11-13~~ 11-13-13 1449 Continued from previous page - Orlando

1449 500 dpm through 1200 dpm by denoting area and the back of the ~~CBE~~ 11-13-13 WCG.

1500 Operators listening to perform 2nd round of decon.

1510 Starting outside rounds.

1530 outside rounds complete

1703 2nd round of Decon is complete. RCT's performing 300 smears and will turnover to night shift.

11-19-13 1805 Being relieved by CRO Terri Coleman - Orlando

JJ RCT

No further entries this page.

11-20-13 Continued from previous page. JColeman continue to process drum #S891279 (68724) so that when the bagoff occurs, the drip pan will be fully accessible for thorough decon.

0410 Both rounds have been reviewed by the SOS.

11-20-13 0400 Being relieved by CO Clarissa Velarde - JColeman

No further entries this page

11-20-13

0600 Assuming WCRRF operations center - CFd rde
0615 pre job Being ~~contacted~~ GV 11-20-13 performed by SOS. Briefed on Attachment A and HOO's.
0751 Permission granted to lower vehicle access gates for shipment out of WCRRF
0828 Bagging off 3891279 and will be putting on port cover to decon and retape catch pan.
0839 Vehicle access gates have been restored shipment out of WCRRF on 11-20-13 50-69 is complete.
0905 Bag off is complete, starting decon of catch pan
0935 Bagging on 3811692. Decon of catch pan is complete.
1206 Bagging off 3811692 and will denest after lunch.
1229 Bag off is complete.
1232 RCT's requesting operators use hand and foot monitor before exiting for lunch.
1245 Operators exiting for lunch.
1416 Starting movement into 50-69
1500 Starting inside rounds, completed movement into 50-69.
1512 operator notified ops center that while slipping out of 50-194 he hyperextended left knee.
1515 entering EP-WCRR-RM-EDP-0309, SOS and SOM have been notified and operator being taken to 1H mission blue
1520 Item 43 is DOS, PPD in place, OK to proceed per CSE documentation.
1522 OM has been notified and will make other notifications.
1532 Work Care has notified operator to place ice on left knee
1536 Inside rounds complete; starting movement out of 50-69.
1548 Starting to denest 2 drums and will bag on 3863789 after denesting is complete.
1601 Operator has been advised to ice every 15 mins, keep elevated and take ibuprofen.
- Continued on next page -Chelande

11-19-2013 DAYSHIFT

0558 Reviewed the shift turnover checklist and logs and assumed the SOM duties John Gonzalez

0640 Completed attending the pre-job brief conducted by the SOS (Gilbert) The safety topic was respirator use and cleaning respirators. There are no scheduled transfers scheduled for today. During shift turnover, night shift indicated stations 7 and 3 right hand require checking. Shift orders in affect were discussed. Operators are requesting a T handle tool to tighten bands for prepping drums and the request additional attachments for the Eddie fabricated tool. Energy Solutions will follow up. Operators requested the fork truck tire replacements status of roll-up doors, and lead glass window replacement. Updates were provided and it was discussed that DOE assessment will take place and QA will visit Level B storage.

0709 Completed daily POD call in with AREA 4 SOM.

0812 Completed review and monthly sign off of LOGBOOK #17 IWD LOG.

0830 Operators report initiating bag off and bag on, however during weekly surveys, RM I, RCTs report smears may be elevated.

0836 RP-1 reports area for weekly cars re-swiped and bag offs will continue, only after denesting. De-nesting will take place first. RP-1 also reports surveys were NDA - normal.

0905 Completed walk thru with DOE Eng and CSE (B Gustis) observed transportainer, and de-nesting thru the window.

0955 Inside operations report bag off complete Parent drum 568 5891279 was bagged on. Operations request to change station 7 both pair and 3.

1000 Mode change: 50-69 and yard transition from Operation/Operation to Warm/Warm

1015 RCTs report that two operators booties were identified with contamination which alarmed at the Hand and Foot monitor. Respirators had been checked and were NDA, CAMs were normal, a controlled egress is being conducted. Nasal swipes will be taken as precautionary and RCTs will initiate floor surveys.

1055 All personnel completed exiting facility and nasals completed. Currently removable contamination is noted within RWP limits. Levels are unavailable by RP-1.

1050 Update provided by RCTs 15000 dpm on right bootie on one operator and one RCT left bootie noted at 1333 dpm alpha removable. RCTs will brief to re-entry RWP. Notification made to OM.

1140 RCTs indicate LAS is noted from floor at 500 dpm to 1000 dpm

11-19-2013 DAY SHIFT cont.

1140 cont. on the floor. Area is a step off PAD & de-nest area. RCTs and operators will perform decon from step off pad TO the denesting area and RCTs will perform 300 surveys.

1141 OM and SOM provide courtesy phone call to DOE facility representative.

1200 RCTs initiate briefing on DECON RWP # 2011-0014 which expires on 2-10-14. In addition, the ES:IH tech briefed on the DECON JHD.

1300 Upon obtaining supplies, knee pads, hex cameras for decon, etc., operators and RCTs conducted entry into 50/69.

1357 A debrief was conducted from the walk through performed by QA - R. Trujillo and the Level B custodian. Surveillance follow up issues were:

- Doors entering Level B- were not showing WCRRF custodians - this was fixed within the brief timing.
- PO# were spot checked from box id to paperwork in OCD office - HEPA Filter Serial # requires paperwork - OCD will conduct follow up.
- Shelflife of items can be determined from the ID of boxes. All boxes require ID info to be facing out towards center aisle - custodian will initiate
- An opportunity for improvement, management of paperwork in the OCDs office should be controlled by Level B custodian.
- Inventory spreadsheet should be updated from inventory logs more timely - perhaps once per week. D. Blaine will support this effort.

1440 First team of decon was noted complete with second team going in to continue effort. LAS are showing 500 dpm to 1200 dpm alpha removable. located by the denesting area, and the backside of the WCG.

1605 Obtained guidance/direction from management to transfer 5870213 identified with cracked and crooked ring/hot surface to AREA G to allow 412 to work.

1709 Decon update provided by RP-1 - • Decon efforts are completed. The floor has been mopped and dried. LAS were noted acceptable. RCTs are taking 300 POST Surveys to ensure contamination is contained. Samples of beams are submitted to NTAL for isotopics. Surveys will go into Nightshift ~1.5 hours from now. If issues arise RP-1 (Ken) will be notified.

1715 late entry for 1505 - ANC conducts inspection monthly of LLW staging area. No issues.

1806 During shift turnover with oncoming SOM, noted prior to going into Ops mode pending surveys, stations 3+7 both pair require changing due to wear and the de-nesting plastic requires placement on floor and inside rounds require completion.

1810 Relieved by R. Axtel as SOM [signature]

no further entries this page

[signature]

11/19/13 Night Shift

1810 Reviewed shift turnover checklist and assumed WCRR SOM position.

1815 Approved and posted the night shift Warm watchbill.

1830 Dayshift crew completed face to face turnover w/ nightshift operators and RCT's. Night shift SOS and prod. manager are offsite at an ES meeting. Will conduct prejob when on site. RP-1 reported still counting smears (about 200 left to count) from decon efforts.

1940 Prejob brief conducted by SOS (J. Serra) was completed. Safety topics covered were make sure path is cleared prior to backing up vehicles - clear windows of frost/ice if needed. Discussed head injury start safe message. ES IH briefed workers to ~~mod~~ 11/19/13 new IWD ES-WCRRF-2013-003 R.0 Consolidation and Repackaging of LLW and revised IWD ES-WCCRF-DD Drum Prep - 2011-08-18-1002 R.1 Daughter Drum Prep. Released the IWD's w/ Part 3 signature. SOS gave Conduct of Operations brief covering UET procedures per PFITS issue # 2013-3829

2015 Notified by OCO that RP-1 has released 50-69 R-102. Mode will remain as Warm to allow WCG glove changes for stations 3 & 7 both R & L hand gloves.

2120 Reviewed inside round sheets.

2215 Operators reported glove changes are completed. Stations 3 & 7 both R & L gloves changed. RCT's performing daily RMI's and post glove change surveys.

2307 RP-1 reported RMI's have been completed

2316 Completed Mode change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations

11/20/13 0009 Operators breaking for lunch

0139 Resuming operations

0214 Completed a transfer of 2 drums from transportainer into 50-69 for processing.

0249 OCO notified of contamination found on catch pan below parent drum bagged on drum lift. Level reported to be 29 dpm alpha removable. Decon and resurvey in progress.

0331 Operators performing 2nd decon ~~op~~ 11/20/13 attempt of catch pan - Smears were still elevated. Highest reading this time

continued on next page →

11/19/13 Night Shift continued

11/20/13 0331 cont. - was @ 40 dpm/100cm². Area is proving difficult to decon due to parent drum being in the way.

0353 RP-1 lead contacted Night Shift On-call supervisor regarding drum lift contamination - noting latest smear results @ 35 dpm alpha removable. Supervisor recommended since well within RWP limits ~~[illegible]~~ LCG 11/20/13 given difficult area to decon to finish processing drum and when parent is bagged off perform a thorough decon of catch pan. Also recommended placing damp wipe alls over area on drip pan showing contamination to hold in place. SOS is notifying operators of path forward. Notified OM.

0518 Reviewed both inside and outside round sheets for AM entries.

0520 Completed surveillance tracking worksheet and verified status board updated.

11/20/13 0604 Relieved by J. Gundagnoli as SOM. [illegible]

No further entries this page [illegible]

11-20-13 DAY SHIFT

0607 Reviewed shift turnover checklist and assumed WCRR SOM position John Gurdagul

0658 Completed attending the prejob brief conducted by the SOS (Gilbert) Safety topic was Good Practices for Contamination Control. Check hands and feet regularly. The SOS provided an update for the facility with drum bagged on, and down of pan required after bag off. Brief conducted on current shift orders, briefed on IWODs, briefed on UET requirements for PFITs item. There is one transfer scheduled out to AREA G

0715 Completed the daily phone call to AREA G SOM statusing POD

0828 Operators complete processing 5891279 from night shift which generated 1 daughter. The port cover will be placed on the Bagged, and operators will wipe down the catch pan upon being accessable.

0905 The transfer of 13 drums from WCRRF to AREA G is completed with operators observed with proper PPE being worn.

0935 Inside operators report bagging on Parent drum 5811692.

0943 Bagon is noted complete and operators will continue to process

1204 Completed attending the scheduled 1100 Contamination review meeting list of actions/follow up, will be shared with Operators.

1206 Operators Bag Off 5811692 and indicate they will de-nest after lunch.

1229 The bag off was noted completed and the port cover was put in place

1232 RCTs request all operators to utilize the hand foot monitor prior to exiting.

1245 Operators exit for lunch

1300 EP-DIV-AP-20059 IPC-1 - EWMO Watchbill Administration was reviewed and the OCD logbook was updated.

1512 Notification was made to the Operations Center that an operator was supporting the movement from 50-194 transportainer to 52/69 and when stepping out of the transportainer took one large step to the asphalt instead of onto cement then asphalt and hyper extended the Knee on twisted it. Notification was made to management / SOM

1518 OCD entered EP-WCRR-RM-EOP-0309 - Injured person at WCRR minor injury - there were no open cuts and ES/EM will evaluate and support transfer of operator to their own primary care physician.

1525 Notified OM and OM will notify DOE

1600 Information from the ES/PM (DB) indicates Workcare requests the operator to ice the area - report to work in the am. If unable, then notify supervisor

1606 OCD exits EOP-0309 - Injured person at WCRRF

25

PROJECT NAME WCCR SOI LOG Book NOTEBOOK NO.

11/6/13

0600 Assuming SOI Position Mark M

0640 OCS Conducted shift brief discussed current status of Glovebox Operator's need to Inspect Gloves Per off going shift.

0648 Conducted shift Brief

0655 Operators entering 5-65

0832 Operators will be begining at chamber.

0834 operators entered at high smears

0832 operators describing 7 drums they will be on left

0877 All entered that issues normal

0934 Discussing and begining on operators only denested 1 drum other one rings [illegible]

1000 Mark Orange complete work on operators warm suits due to Glove Changes

1015 entered by operators [illegible] describing HFM Gray off on 1 operator Neck & RCT. operators Right body Head RCT's Left RCT's with Perform smears and due Further Investigation

1050 RCTs entered 1500 dpm in Right boots [illegible] was RCTs back

1111 1146 Operators back 1333 dpm Alpha All exited RCTs need to 1112 head to RCR.

1115 RCTs entered was under LAS Is 500 dpm to 1000 on Floor from dececting Area to step of pad will need to decon All this area. Need Perform 30% smears.

1200 RCTs and operators heading to RCT's

1215 RCR exposed will need to update

1230 operators entering gloves To start decon efforts

1246 first round of decon complete has still showing 500 dpm through 1000 dpm need to continue decon efforts

1308 Now [illegible] set all operators entering facility to continue

1320 started Floods

1337 Second decon shift Complete RCTs will perform 30% smears.

1400 still working on smear surveys

11/8/13 1526 Relieved by Clayton Mathis [signature]

AG9

[illegible]

Best Available Copy

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

PROJECT NAME WCRR 505 Log Book NOTEBOOK NO.

11/19/13

1900 Assuming 505 position for the evening.

1910 Starting Pre Job Brief. RCT's counting smears, waiting to here from them on path forward. Once cleared from the RCT will be changing gloves on stations 2 and 3, Then RCT's will need to perform their RWI's, and inside rounds will need to be performed. Plastic will need to be laid down also. Once all complete then processing can commence on the Parent that is bagged on. Safety Topic discussed was paying attention to your surroundings prior to moving a vehicle or forklift. Also briefed to IWP 2011-08-18100 2 and ES-WCRRE-2013-003, and briefed to Conduct of Ops for Fire Extinguisher inspections.

1940 Pre-Job concluded.

2010 RCT's releasing the building back to Operations, one spot on the Roto Grip reading below 20, will need to wipe it down Operators can start the pm inside rounds

2034 Starting inside rounds. Operators wiping down Roto Grip.

2053 Rounds inside complete, Wipe down and counting of smears on the Roto Grip have also been complete. Preparing for glove changes on stations 3 and 2.

2104 Reviewed and signed inside rounds.

2113 Starting glove changes on stations 2 and 3 both right and left hand.

2215 Glove changes complete. RCT's will be performing RWI's to start operations. Approximately 1 hour. Operators coming out while RCT's complete RWI's

2310 RCT's notifying that RWI's have been completed. Operators headed to the back to start dressing out.

2316 Mode Change. WCRR Yard and Facility are in Operations.

0015 Operator breaking for lunch.

0115 Operators returning from lunch to continue processing.

0249 Operators pausing work due to contamination found on the catch pan. RCT smears reading 29 dpm alpha, work paused until contamination has been cleaned up and RCT's releasing work back to Operations.

0318 Reviewed and signed outside rounds.

0400 After further discussions and a couple of wipe downs on the catch pan. Further direction was given to the lead RCT from the on-call Supervisor to place wet wipes on the catch pan so that the Parent can continue to be processed. Once completed processing while in respirators the operators can perform a more thorough decon and retape the catch pan. Parent has about 60% of waste material needing to be processed.

Continued on next page

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PROJECT NAME WCRR SOS Log Book NOTEBOOK NO.

11/19/13

0410 Inside rounds were reviewed and signed.

0610 Operators finalizing processing of Parent, on coming crew to bag off.

0615 Securing SOS position. Turning over to Gilbert Martinez.

No further entries on this page

SIGNATURE _____ DATE _____ 20

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PROJECT NAME WWK SOS Log Book NOTEBOOK NO.

11/20/13

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief work over states of Glove box also went over EWDs and hot work bonding. Operators will need to bag off and decon catch pan. Drain contamination Found. This must be done prior to bagging on Another Drum.

0700 Shift brief Concluded.

0751 Started shipment out of work.

0826 Bagging off 5891279 and will be adding on port cover to decon catch pan.

0839 Vehicle access Gate Restored Shipment complete.

0905 Bag off Complete starting Decon

0935 Decon complete Bagging on 5811692

1200 Bagging off 5811692 will Breast after lunch.

1229 Bag off Complete

1245 Crawlers exiting for lunch

1345 Crawlers resuming operations

1416 Starting Movement Tab 5065.

1500 Started Loads. Movement to complete.

1512 notified by crawler outside while tipping out of Transfer he twisted his knee

1515 entering ECP-0309 Sam notified Technical Taken to [illegible] and called work Care.

1511 Sam notified of knee Injury.

1537 work care was notified. needs to place Ice on knee

1545 starting to Accept 7 drums. and bag on 5863784

1601 Operator Advised to Ice every 15 min. and keep Elevated like Tourbrakes

1606 Exiting ECP-0309

1626 Reviewed Transfer and outside Rounds.

1655 Demasting and bag on Complete

11/20/13 1809 Relieved by Clayton Mathis [illegible]

He [illegible] entering on this Page

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SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0132
Examination Date:	12/2/2013
Waste Container ID:	68656
Video/Audio Recorded Media Number:	LA-RTR2-13-0132 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.: 209.5 kg Tare Wt.: 33.4 kg Net Wt.: 176.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68656

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R: Leaded 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):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	15.0
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	150.1
Soils (S):	
Total WMP Weight:	176.1

CCP Radiography Data Sheet

Waste Container ID: 68656

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]	12/2/2013
Print Name	Signature	Date

S891279

NDA 2000 Assay Report

Item Information

Item ID:	68656	Count Sequence Number:	16793
Operator:	DCLTD231\Operator		
Assay Start:	12/3/2013 11:49:47 AM		
Description 1:	2LANDA1248		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 176.0 kg	Net:	176.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.890 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:	16793	Batch Number:	2LANDA1248
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68656	Analysis Date:	12/3/2013

Net Weight	176000.0 g		
Pu mass	1.70E+002	+- 5.02E+001	g
TRU Alpha Activity	3.36E+001	+- 1.51E+001	Ci
TRU Activity Concentration	1.91E+005	+- 8.57E+004	nCi/g
Pu-239 Equivalent Activity	3.40E+001	+- 1.51E+001	Ci
Pu-239 FGE	1.60E+002	+- 5.01E+001	g
Decay heat	1.09E+000	+- 5.00E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.09E-006
U233	<LLD	<LLD	0.00E+000	2.10E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.68E-006
NP237	4.55E-001	3.21E-004	6.84E-005	5.35E-006
PU238	1.55E-002	2.65E-001	9.14E-002	2.37E-003
U238	<LLD	<LLD	0.00E+000	4.67E-005
PU239	1.59E+002	9.89E+000	3.10E+000	8.84E-002
PU240	1.02E+001	2.31E+000	7.97E-001	2.07E-002
AM241	6.17E+000	2.12E+001	1.47E+001	2.64E-001
PU241	1.94E-001	2.00E+001	6.89E+000	1.79E-001
PU242	3.40E-002	1.34E-004	4.63E-005	0.00E+000
AM243	3.87E-003	7.73E-004	1.66E-004	3.24E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 12·4·13

ITR: Ami Barton Date: 12/9/13

Automated Independent Technical Review

Count Sequence Number: 16793 Batch Number: 2LANDA1248
Counter ID: HENC #2
Container ID: 68656
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
NCC Pu mass was above calibration range.	Multiplication in drum. Neutron results rejected. Gamma results applied.
FGE is greater than the upper limit of 200.00	
The Standard NCC Pu effective mass exceeds the Upper Calibration Limit.	
No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Analysis Status: Override enabled; data marked not available but were used.	
Results taken from Quantitative Gamma data.	
Results comparison test passed.	

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
MCA Deadtime greater than the upper limit of 50.0%.	MCA deadtime =51.95%. No spectral distortion observed.
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: 12-3-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68656**

BDR Number: **LA13FG2124**

Sampling Date: **12/6/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131206C\
Data File : 68656.D
Acq On : 6 Dec 2013 3:04 pm (#1); 06-Dec-13, 15:03:30 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 10 16:04:35 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.578	96	3858873	205.75 ppmv	0.06
15) Chlorobenzene-d5	5.881	117	3059443	177.50 ppmv	0.02

Target Compounds	Qvalue

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

S891387

S891387

Container 760609

File Options Reports Help

S891387

760609	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

S891387

- S891387
  - LA00000068973
    - LA00000069014 - LANL
      - LASB50095
    - LA00000069491 - LANL
      - LASB50448
    - LA00000069493 - WCS
      - LASB50081
    - LA00000069504 - EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	LA00000069014	0.0	kg

UET

Working Copy
Date: 2-28-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68973

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, Jr 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.:	68973
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	418.0 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)	501.0 lb
6.2[7]	($) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[16]	Retaining clips in place	☑ SAT ☐ UNSAT
6.2[18][D]	Drum lift hinge pin retaining clip replaced. Initials / Z# / Date	☑ N/A

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68973

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69491	69493		
10.1[4]	Daughter Drum Filter No.	KM358	KM-364	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L10155	L-10167		
10.1[4]	Daughter Drum Purchase Order No.	501210	501210		
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 2/28/14			
	Model No.	~~L-10117 (cm-66~~			
	Serial No.	L-10117			
	Date of Manufacture	5/12			
10.2[5]	POC ID No	69014			
10.2[6]/10.2[7][B]	POC Item Description	NITRATE SALTS & PLASTIC		N/A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	MM 191352			
10.2[14]	POC Assembly Gross Weight (lb)	352.2			
10.2[15]	POC Rad. Survey Results (mrem/hr)	2100.5 mrem/hr			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A		
10.3[5][A]	Free Liquid Volume/Units	N/A	2 oz		
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	lead shielding		
10.3[9][A]	PCB-contaminated Waste Description		N/A		
10.3[9][B]	PCB Item ID No.			N/A	
10.3[10]	Remaining Waste Description	see COMMENTS	see comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITER	plastic, kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68973

Comments: LEAD, PLASTICS, STUBOUTS, NITRATE SALTS,

11.1[1] Performed By: JOE QUINTANA Joe Q 239587, 2/28/14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Jerez, Jose Jerez R21452, 2/28/14 0855
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 2 28 14 JL

ATTACHMENT 1
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238367
Manufacture Date: 2013
SERIAL # 030

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN 429
Manufacture Date: 1/13

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 WCCRF / /
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/L

8.1[1] Performed By: JOE QUINTANA, Joe Q 234987, 2/28/14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Jerez, [signature] 221452 2/28/14
Supervisor or designee (print) Signature Z # Date

2-28-14

ATTACHMENT 4
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69504

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, [signature] 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): 198.6 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA, [signature] 239987, 2/28/14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez, [signature] 221452, 2/28/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 2/27/14 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 19491

5.[3] Drum information:
Purchase Order No.: 501210
Lot No.: 0237179
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6C PVC-1.5-25PVC
Serial No.: 6-10155
Manufacture Date: 5/13

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

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

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

Performed By: Brian Cordova [signature] 2/27/14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM-358
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.: 69491

Comments: N/C

5.[35] Performed By: Brian Gordon | [signature] | 2875441 | 2/22/14
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Jose Jorez | [signature] | Z214521 | 2/28/14
Supervisor or designee (print) | Signature | Z # | Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69491

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 Z5 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 PREPPED 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.: 69491

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 329.8 lbs

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

Comments: N/C

6.[32] Performed By: JOE QUINTANA (Operator (print)) [signature] (Signature) 239987 (Z #) 2/28/14 (Date)

7.1[4] Reviewed By: Jose Juarez (Supervisor or designee (print)) [signature] (Signature) 221452 (Z #) 2/28/14 (Date)

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 2/27/14 HW

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69493

5.[3] Drum information:
Purchase Order No.: 501210
Lot No.: 0237179
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPX-1.5-25POC
Serial No.: L-10167
Manufacture Date: 5/13

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

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

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

Performed By: Brian Lordan / [signature] [illegible] / 2/27/14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: MICFIL
Model No.: OIGAS
Serial No.: KM-364
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.: 69493

Comments: N/C

5.[35] Performed By: Brian Lordan [signature] 287544, 2/27/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jara [signature] 221452, 2/28/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 6949

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

M&TE No.: C38370
Cal. Expiration Date: 08/02/14
Range: 16 50 ft-lb
Tolerance (+/-): ±3%/cc ± 6%/cc

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

Performed By: MICHAEL MONTOYA / [signature] 191352 / 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.:	N/A	N/A
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: NOT PREPPED IN WCCRF / /
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.: 69493

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 374.8 lbs

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

Comments: N/C

6.[32] Performed By: MICHAEL MONTOYA / [signature] 191357 2/28/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jerez / [signature] 722452 2/28/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 2/27/14 HB

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68973

6.3[15] (S) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 418.0

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

Comments: N/C

8.1[1] Performed By: Bryan Gallegos, [signature] 2-27-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jarec, [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, CA 240096 3/5/14 0836
SOS/SOM or designee (print) Signature Z # Date Time

1941

SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

(32) 167341 85 2

Planning and Technical Solutions 412 GAP workid changed due to placing in compliant

Container ID: S891387 \ 69973 Container Type: 85 GAL DRUM Gross Weight (lbs): 422.2575
Total PE-Ci Activity: 1.07E+01 Equivalent Combustible PE-Ci: 4.01E+00
Total Fissile Gram Equivalents: 1.18E+02 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 3/6/13 and Attachment 3 of DOP-1030 is attached
RTR pre-screen indicates liquids in 90 mil liner, lead liner, and rigid liner in the drum.
Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~276 lbs. and generator data shows 11 items of nitrate salts with weight ranging from ~10-42 lbs.

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

IHS Representative

Potential IHS Safety Risks: Many contain D007, D008 and D009 contains free liquids, No other hazards noted

Performed By: Johnny Smallwood / [signature] / 241659 / 8-21-13
IHS Representative (Print) / Signature / Z# / Date

LTP Engineering

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

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

TRU Remediation Operations

Potential Safety Risks: Use proper tools and proper PPE when processing.

Performed By: Clayton Mullins / CM / 240092 / 2/25/14
TRU Operations (Print) / Signature / Z# / Date

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject
OM or designee Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.

Approved By: Jose Jerez / [signature] / 221452 / 2/24/14
OM or designee (Print) / Signature / Z# / Date

Noncertified TRU Waste Drum Item Information

DrumID: 023607

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	9LR9ES1		16.090	NITRATE SALTS	R04	24.78	52	8/13	G468	
2	94228ES1		11.170	NITRATE SALTS	R04	4.23	52	8/13	G468	
3	9LR29ES1		10.440	NITRATE SALTS	R04	2.56	53	8/13	G468	
4	9DS29WS1A		10.570	NITRATE SALTS	R04	11.84	52	8/13	G468	
5	9DS29WS1B		9.120	NITRATE SALTS	R04	10.21	52	8/13	G468	
6	9DS29WS1C		10.850	NITRATE SALTS	R04	12.15	52	8/13	G468	
7	9DS29ES1		10.570	NITRATE SALTS	R04	8.89	52	8/13	G468	
8	10LR27ES1		19.230	NITRATE SALTS	R04	19.42	52	8/13	G468	
9	11OX2WS1		4.740	NITRATE SALTS	R04	9.62	52	8/13	G468	
10	11OX15WS1		7.150	NITRATE SALTS	R04	14.44	52	8/13	G468	
11	11RR29ES1		15.430	NITRATE SALTS	R04	7.04	52	8/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 191.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	122.62	114.92
53	2.56	10.44
Totals	125.18	125.36

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: 3891387

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	____ %	0.433605 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	3.19 ppm
Filter Vent Unique Identifier No.:	____	AN-357
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: S891387

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	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: 8891387

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~~ 1/14/14

- 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 3-6-13
LTP-DDP Supervisor/designee (Print) Signature / # Date

10.1[3] Overhead space heaters ON and thermostat set. ☑ SAT ☐ UNSAT

10.1[4] Reviewed by Chris Vigil [signature] 163082 3-6-13
LTP-DDP Supervisor/designee (print) Signature / # Date

DVS Gas Determination Results Report

Date: 3/6/2013

Waste Container Number: S891387

Batch Number: DVS2130306

Filter Type Installed: 08DS

Number of Filters Installed: 1

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	0	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	1.81	1502.00	N	N/A
1,1-Dichloroethane	0	400.80	N	N/A
Cis 1,2-Dichloroethene	0	400.20	N	N/A
Methyl Ethyl Ketone	0	1503.00	N	N/A
Cyclohexane	0	497.30	N	N/A
Benzene	1.38	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	3.19	I.V.R. Intial and Date	JAB 3.6.13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.43365	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-357

Doug Eisele
DVS Operator/Print Name

Signature

03-06-13
Date

2-28-14
0958 Assuming WCRR operation center - [illegible]
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 [illegible] [illegible]
0716 ~~0~~ 2-28-14 inside rounds completed
0723 Both rounds reviewed by SOS
0740 WCRRF is now in operation
0742 Bagging on drum 68962
0755 Bag on complete PPE check SAT
0800 ~~Made~~ 2-28-14 Permission granted to move drums from 50/69 to transportainers
0814 Permission granted to move the vehicle access gates to load the transfer vehicle for a shipment to Area G. Drum movement out of 50-69 to transportainer complete.
0920 ~~0958~~ 2-28-14 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 services
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 heading out for lunch.
1341 Permission granted to move drums into 50/69
1357 Movement into 50/69 complete
1416 ~~1416~~ 2-28-14 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~~ 2-28-14 Next Page [illegible]

2-28-14 CONTINUED FROM PREVIOUS PAGE
1601 BAGOFF/ON COMPLETE
1620 STARTED INSIDE ROUNDS
1625 ~~STARTED~~ 0X 2-28-14 STARTED OUTSIDE ROUNDS
1628 SUBMITTED FSR # 118268 FOR FABRICATING NEW CATCH PAN FOR NEW DRUM LIFT
1633 ITEM #63 ON INSIDE ROUNDS OGS 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

WCRRF SOS Log Book

2/28/14
0600 Assuming SOS position. CA
0615 Starting Pre-Job, went over IPC ~~change~~ cm 2-28-14 for our processing procedure 1198, discussed schedule change for next 2 weeks while processing tritium and ~~beryllium~~ cm 2-28-14 beryllium.
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 Fy
1156 Bagging off one daughter Bagging on second daughter
1446 Starting to D-Nest 2 parents.
1531 D Nesting Complete, Bagging off one daughter and one Poc 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 CM 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 WCRRF yard and 50-69 are in WRRF
2-28-14 1810 Securing SOS position for the evening. Jim Fy

No further entries on this page

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 1598 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: SO/EP 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 operations 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 OCO to lower gates to receive transfer from AREA G.

1028 Inside operations report bagging off one daughter, bag on another and Parent 68973

1058 Bag on and Bag off were completed

1100 Completed obtaining SEDs and LFLs 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 085 filter is the long filter which was not on the drum. The SOM approved the transfer to the trans portainer.

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.
[illegible]

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 ~~WCG~~ 2-28-14 drum bagged on was put in place and the WCG was placed in a safe configuration.

1802 Mode Change: 50/59 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 Gaudagnoli

No further Entries this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0027
Examination Date:	3/6/2014
Waste Container ID:	69014
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.: 159.5 kg Tare Wt.: 145.1 kg Net Wt.: 14.4 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:	70 %

CCP Radiography Data Sheet

Waste Container ID: 69014

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid, Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	12.4
Soils (S):	
Total WMP Weight:	14.4

CCP Radiography Data Sheet

Waste Container ID: 69014

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	3/6/2014
Print Name	Signature	Date

S891387

NDA 2000 Assay Report

Item Information

Item ID:	69014	Count Sequence Number:	24496
Operator:	D3PW2DK1\operator		
Assay Start:	3/7/2014 2:13:55 PM		
Description 1:	1LANDA1924		
Description 2:	POC, 159.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 14.4 kg	Net:	14.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.667 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:	24496	Batch Number:	1LANDA1924
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:	69014	Analysis Date:	3/7/2014

Net Weight	14400.0 g			
Pu mass	1.32E+001	+-	2.22E+000	g
TRU Alpha Activity	3.48E+000	+-	1.27E+000	Ci
TRU Activity Concentration	2.41E+005	+-	8.83E+004	nCi/g
Pu-239 Equivalent Activity	3.60E+000	+-	1.27E+000	Ci
Pu-239 FGE	1.18E+001	+-	1.96E+000	g
Decay heat	1.14E-001	+-	4.22E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.32E-002	3.75E-005	6.77E-006	2.01E-006
PU238	5.32E-003	9.10E-002	1.53E-002	8.10E-005
PU239	1.16E+001	7.20E-001	1.21E-001	6.41E-004
PU240	1.46E+000	3.31E-001	5.57E-002	2.94E-004
AM241	6.80E-001	2.33E+000	1.26E+000	4.84E-002
PU241	6.73E-002	6.94E+000	1.17E+000	6.17E-003
PU242	2.68E-002	1.06E-004	1.79E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.69E-007
U233	<LLD	<LLD	0.00E+000	4.67E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.38E-006
U238	<LLD	<LLD	0.00E+000	9.99E-006
AM243	1.12E-003	2.24E-004	4.08E-005	6.16E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 3·11·14

ITR: _____ Date: 3·12·14

Automated Independent Technical Review

Count Sequence Number: 24496 Batch Number: 1LANDA1924
Counter ID: MCS HENC #1
Container ID: 69014
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/7/2014

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-54,52.
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 Chamber Date: 3-11-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69014**

BDR Number: **LA14FG2042**

Sampling Date: **3/19/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	712.71	
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\140319C\
Data File : 69014.D
Acq On : 19 Mar 2014 10:49 am (#1); 19-Mar-14, 10:48:18 (#2)
Operator : RJ
Sample :
Misc : POC through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 19 10:56:34 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	3.529	96	3794173	205.75 ppmv	0.00
15) Chlorobenzene-d5	5.845	117	2962807	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.610	GC1	5359	712.71 ppmv	100

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0027
Examination Date:	3/6/2014
Waste Container ID:	69491
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.: 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 2 layers
Volume Utilization Percentage:	85 %

CCP Radiography Data Sheet

Waste Container ID: 69491

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware

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):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	105.0
Soils (S):	
Total WMP Weight:	116.1

CCP Radiography Data Sheet

Waste Container ID: 69491

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

S891387

NDA 2000 Assay Report

Item Information

Item ID:	69491	Count Sequence Number:	24508
Operator:	D3PW2DK1\operator		
Assay Start:	3/10/2014 12:55:38 PM		
Description 1:	1LANDA1925		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 116.0 kg	Net:	116.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.660 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24508	Batch Number:	1LANDA1925
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:	69491	Analysis Date:	3/10/2014

Net Weight	116000.0 g		
Pu mass	1.52E+001	+-	1.01E+001 g
TRU Alpha Activity	1.18E+001	+-	7.39E+000 Ci
TRU Activity Concentration	1.02E+005	+-	6.37E+004 nCi/g
Pu-239 Equivalent Activity	1.19E+001	+-	7.39E+000 Ci
Pu-239 FGE	1.44E+001	+-	1.01E+001 g
Decay heat	3.91E-001	+-	2.46E-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	1.28E-006
U233	<LLD	<LLD	0.00E+000	1.35E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.96E-006
NP237	1.36E-001	9.59E-005	1.73E-005	5.89E-006
PU238	1.38E-003	2.37E-002	1.71E-002	1.69E-003
U238	<LLD	<LLD	0.00E+000	2.17E-005
PU239	1.43E+001	8.84E-001	6.27E-001	6.32E-002
PU240	9.19E-001	2.09E-001	1.51E-001	1.49E-002
AM241	3.12E+000	1.07E+001	7.36E+000	2.91E-001
PU241	1.72E-002	1.77E+000	1.28E+000	1.26E-001
PU242	3.04E-003	1.20E-005	8.70E-006	0.00E+000
AM243	5.16E-003	1.03E-003	1.87E-004	1.93E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 3/11/14

ITR: Bert Stephens Date: 3-12-14

Automated Independent Technical Review

Count Sequence Number: 24508 Batch Number: 1LANDA1925
Counter ID: MCS HENC #1
Container ID: 69491
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/10/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
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 = 61.73%. No spectral distortion observed. After EA review, spectrum valid.

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

Expert Review by: Sheri Chamberlin Date: 3-11-14

Waste Container ID: **69491**

BDR Number: **LA14FG2039**

Sampling Date: **3/14/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	117.43	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140314C\
Data File : 69491.D
Acq On : 14 Mar 2014 11:04 am (#1); 14-Mar-14, 11:03:51 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 14 11:12:25 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	3.532	96	3132640	205.75 ppmv	0.01
15) Chlorobenzene-d5	5.842	117	2498729	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.589	GC1	883m	117.43 ppmv	

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-14-0030
Examination Date:	3/6/2014
Waste Container ID:	69493
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.: 169.5 kg Tare Wt.: 33.4 kg Net Wt.: 136.1 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: 69493

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):	12.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	116.1
Soils (S):	
Total WMP Weight:	136.1

CCP Radiography Data Sheet

Waste Container ID: 69493

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

S891387

NDA 2000 Assay Report

Item Information

Item ID:	69493	Count Sequence Number:	24490
Operator:	D3PW2DK1\operator		
Assay Start:	3/7/2014 9:13:54 AM		
Description 1:	1LANDA1924		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 136.0 kg	Net:	136.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.820 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:	24490	Batch Number:	1LANDA1924
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:	69493	Analysis Date:	3/7/2014

Net Weight	136000.0 g		
Pu mass	6.69E+001	+-	1.39E+001 g
TRU Alpha Activity	1.80E+001	+-	7.25E+000 Ci
TRU Activity Concentration	1.32E+005	+-	5.33E+004 nCi/g
Pu-239 Equivalent Activity	1.82E+001	+-	7.25E+000 Ci
Pu-239 FGE	6.31E+001	+-	1.38E+001 g
Decay heat	5.89E-001	+-	2.41E-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	1.32E-006
U233	<LLD	<LLD	0.00E+000	1.37E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.63E-006
NP237	3.10E-001	2.19E-004	4.44E-005	6.10E-006
PU238	6.10E-003	1.04E-001	2.73E-002	1.70E-003
U238	<LLD	<LLD	0.00E+000	2.98E-005
PU239	6.28E+001	3.89E+000	8.58E-001	6.34E-002
PU240	4.05E+000	9.19E-001	2.41E-001	1.50E-002
AM241	3.82E+000	1.31E+001	7.19E+000	1.26E-001
PU241	7.56E-002	7.79E+000	2.04E+000	1.27E-001
PU242	1.34E-002	5.29E-005	1.39E-005	0.00E+000
AM243	5.41E-003	1.08E-003	2.22E-004	1.80E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 3·11·14

ITR: D=RC Date: 3·12·14

Automated Independent Technical Review

Count Sequence Number: 24490 Batch Number: 1LANDA1924
Counter ID: MCS HENC #1
Container ID: 69493
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/7/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52, 53.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok

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

Expert Review by: Sheri Chamberlin Date: 3-11-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69493**

BDR Number: **LA14FG2038**

Sampling Date: **3/13/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	596.21	
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\140313c\
Data File : 69493.D
Acq On : 13 Mar 2014 2:46 pm (#1); 13-Mar-14, 14:45:27 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 13 14:54:45 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.558	96	3232555	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.864	117	2593119	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.615	GC1	4483m	596.21 ppmv	

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

S891513

S891513

Container Profile 761326

File Options Reports Help

S891513

761326	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

Genealogy

S891513

- S891513
  - LA00000068327
  - LA00000068340
  - LA00000068328
  - LA00000068358 – EMPTY

Working Copy
Date: 9-6-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S891513

6.2[4] Date Processed: 9-6-13

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

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

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

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

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

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

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

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

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

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

Performed By: GERALD ESPINA / [signature] / 1237720 / 9-6-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S 891513

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 418.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 160.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 578.6 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5891513

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68327	68328	N/A	
10.1[4]	Daughter Drum Filter No.	KL-531	KL-535		
10.1[4]	Daughter Drum Bag Filter No.	L-61633	L-69017		
10.1[4]	Daughter Drum Purchase Order No.	501321	501321		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	UCPVCL5-23PPC			
	Serial No.	L-6907			
	Date of Manufacture	1-13			
10.2[5]	POC ID No	02440/68540			
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS		N/A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	GE 237720			
10.2[14]	POC Assembly Gross Weight (lb)	558.4			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1500.5			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	1 GALLON			
10.3[5][A]	Free Liquid Volume/Units	4 GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	60 %	90 %	N/A	
10.5[3]/10.6[2]	Description Waste Added During Processing	PLASTIC GLOVEBOX GLOVES	PLASTIC		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5891513

Comments: LEAD SHIELDING, NITRATE SALTS, PLASTIC, TAPE,

11.1[1] Performed By: GERARDO ESPINOZA / [signature] 1233172019 7-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins / [signature] 1240092 9/7/13 0640
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 8/27/13 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 414113
Lot No.: 212078
Manufacture Date: 2011

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-1810
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 / Bri Gallegos / 267129 8-27-13
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 / Bri Gallegos 267129 8-27-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] 240091 9/7/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-6-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68358

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: Gerardo Espinoza [signature] R37720 9-7-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 171.8 lb

Comments: N/A

8.1[1] Performed By: Gerardo Espinoza [signature] R37720 / 9.7.13
Waste Handling Technician (print) Signature Z # Date

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

Date: 8/15/13 HSO

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

Drum ID#: 683277

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 #: 501321
Lot #: 10237720
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BCP
Model #: 6CPVL 1.5 - 25 PVC
Serial #: 1-6653
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: NALFIL
Model #: 029 03
Serial #: KL 531
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	160216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% CW ±6% CCW	Tolerance:	±3% CW ±6% CCW

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

☑ Yes ☐ No

Print Name: Ian Marquez Signature: [signature] Z#: 276278

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 74.6
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: Ian Marquez Operator Sign: [signature] Z#: 276278 Date: 8-15-13

Verifier Print: Gerald Fitzpatrick Verifier Sign: [signature] Z#: 237720 Date: 9-6-13

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

DRUM ID#: 68327

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 GE 9-7-13

✓ 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): 172.4

Scale ID#: 0190105

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

GERARDO ESPINOZA

Operator Print/Sign: G. Espinoza Date: 9.7.13

Verifier Print/Sign: Clyde Mullins CM Date: 9/7/13

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

Drum ID#: 608328

1. Drum/Lid Assembly

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

RECORD drum information:
Purchase Request #: 501321
Lot #: 0237720
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: 6CPVL-1.5-2.5PVC
Serial #: L6617
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 #: KL535
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 180216
Cal Expiration Date: 12/18/13
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/- 4% CW
+/- 6% CCW

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

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: JOE QUINTANA Signature: Joe Q Z#: 239987

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 76.4
File ID #: 019005

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

6. Label Drum Assembly

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

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

Operator Print: JOE QUINTANA Operator Sign: Joe Q Z#: 239987 Date: 8/19/13
Verifier Print: GERALD ESPINOZA Verifier Sign: [signature] Z#: 237720 Date: 9-6-13

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

DRUM ID#: 108328

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

GE 9-7-13 ✓ 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): 434.8

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: Gerardo Espinoza Date: 9-7-13

Verifier Print/Sign: Clayton Walkins Date: 9/7/13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S891513 Container Type: 55-GAL Gross Weight (lbs): 441

Inner Seal #: 023626 Filter Prefix: LAS Filter Serial #: 03177

AK Waste Stream: LA-MHD01.001 Certified RTR BDR: LA-RTR2-11-0147

TWSR Comments: LEACHED SOLIDS W/LEAD NITRATED SALTS A06422

Total PE-Ci Activity: 1.47E+01 Equivalent Combustible PE-Ci: 5.50E+00 AM-241 PE-Ci: 1.19E+00

Total Fissile Gram Equivalents: 162.1 Total Surface Dose Rate (mrem/hr): 10

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 7/31/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured, Liquid Location: 23

Certified RTR Comment: Unvented Liner, 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 10/31/12 ☑ PID ☐ Split ☑ Repack

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

TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones — Production Control (Print) — Signature — Z Number 117434 — Date 1.24.12

SUEAN S. RAMSEY — Signature — Z Number 100681 — Date 10/31/12

WDP Engineering

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

Processing Determination: ☐ Accept ☐ Reject

WDP Engineering Comments: Nitrate salts

Net Wt: 381 lb. Historical info shows 13 items of nitrate salts in plastic bags, ranging in weight from 6 lb to 37 lb. RTR inventory shows 90 mil lined 55 gal drum contains scrap lead, plastic + solid homogeneous material. Nitrate salts may contain undocumented liquids.

May require RWP for >1000 and <10,000 mrem/hr.

Performed By: Valerie Rhodes — WDP Engineering (Print) — Signature — Z Number 112609 — Date 2/7/12

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste.

Performed By: Vanessa Velarde — TRU Remediation Operations (Print) — Signature — Z Number 234079 — Date 2/8/12

Jose Jerez — Signature — Z Number 221452 — Date 4-21-13

HS Review. CSR, may contain Pb, Cr, Hg 11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 023626

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	10LR5ES1		2.590	NITRATE SALTS	R04	0.28	52	8/13	G468	
2	10LR12ES1		8.840	NITRATE SALTS	R04	3.39	52	8/13	G468	
3	11LR18ES1		7.550	NITRATE SALTS	R04	2.94	52	8/13	G468	
4	11OX30WS1		5.100	NITRATE SALTS	R04	0.8	52	8/13	G468	
5	11LR30ES1		9.430	NITRATE SALTS	R04	14.43	52	8/13	G468	
6	12LR1ES1		15.510	NITRATE SALTS	R04	87.63	52	8/13	G468	
7	12OX14WS1		8.210	NITRATE SALTS	R04	2.5	52	8/13	G468	
8	12OX6WS1		8.510	NITRATE SALTS	R04	4.69	52	8/13	G468	
9	12LR16ES1		16.400	NITRATE SALTS	R04	14.33	52	8/13	G468	
10	12RR14ES1		7.360	NITRATE SALTS	R04	21.56	52	8/13	G468	
11	1LR4ES1		10.000	NITRATE SALTS	R04	10.5	52	8/13	G468	
12	14213ES1		5.300	NITRATE SALTS	R04	4.08	52	8/13	G468	
13	12OX21ES1		9.900	NITRATE SALTS	R04	5.08	52	8/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 200.1

Material Type	SNM (grams)	Items Net Wt (kg)
52	172.21	114.70
Totals	172.21	114.70

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:	S891513
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-3836-11 NCR No.: NCR-LANL-3837-11 NCR-LANL-3839-11

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: 188.0 kg. Tare Wt: 35.1 kg. Net Wt: 152.9 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 1 layer~~ Can not Verify PD 12/1/11 PD 12/1/11
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: S891513

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):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	75.5
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	75.4
Soils (S):	
Total WMP Weight:	152.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: S891513

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 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-3836-11
NCR-LANL-3837-11
NCR-LANL-3839-11

RTR Operator:

Print Name	Signature	Date
Philip Dillard		11/15/11

12/1/11

SP1

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 Further Entries 1/30/12 SP
No Further Entries 1/30/12 SP
No Further Entries 1/30/12 SP

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

- Hydrogen – less than or equal to 3 2% (32,000 ppm)
- VOC less than or equal to 7,000 ppm

6.1[2][B]/ 6.1[3] Performed By: Alicia Herrera (Waste Handling Operator (print)) Alicia Herrera (Signature) 198450 (Z#) 1/30/12. (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120126c\
Data File : S891513.D
Acq On : 26 Jan 2012 4:32 pm (#1); 26-Jan-12, 16:32:15 (#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 16:42:27 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	7553174	209.00 ppmv	0.07
15) Chlorobenzene-d5	6.016	117	6125907	185.50 ppmv	0.07

Target Compounds	Qvalue

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

vocgas.m Thu Jan 26 16:42:37 2012

9/5/13 WCRR SOS Log Book

1801 Assuming SOS position.

1818 Starting Pre-Job, discussed shoulder strains and fatigue.

1850 Pre-Job complete.

1940 Operators perform glove inspection, all gloves ok.

2150 Liquid taking a while to neutralize, took over an hour to go from a pH of 0 to a pH of 6.

2200 Bagging off 1st daughter, bagging on a 2nd.

2216 Bag off/on complete.

0305 Bagging off 2nd daughter and 1 POC, bagging on a 3rd daughter.

0332 Bag off/on complete

0448 Bagging off 3rd daughter, bagging on 589151

0515 Bag off/on complete.

0527 Signed off on the rounds.

0610 Turning over SOS position to Gilbert Martinez. CA

No Further Entries on this Page

9/6/13 WCRR SOS Log Book

1800 Assuming SOS position.
1930 Starting Pre-Job, discussed watching out for fatigue.
1939 Pre-Job complete.
1940 Mode change complete. WCRRF yard and 50-69 are now in Operations.
2120 Bagging off 1 daughter, bagging on 2nd daughter.
2132 Bag off/on complete.
0305 Bagging off 2nd daughter and 1 POC.
0342 Notified by outside RCT that a CAM was alarming in 50-69. Bag off had just been completed and everything is in a safe configuration. Operators and RCT's were in respirator and everyone is following RCT instruction. Entering EP-WCRR-RM-ARP-0407.
0405 RCT's will be re-entering 50-69 to perform 10 smears in change out room, where all personnel performed a controlled exit to. Also 30 smears will be taken around the alarming CAM, which was in the back corner away from processing and bag off/on activities. Lastly RCT's will performance test the CAM's to ensure all CAM's are working properly.
0415 Notified by RCT's that the alarming CAM was 6.9 DAC/hr and 77 dpm.
0434 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.
0522 RCT's cleared the room.
0610 Signed off on the rounds.
0614 Starting movement out of 50-69.
0637 Move out complete.
0730 Having difficulties completeing move out on WCATS, attempting to contact waste help.
NG 074 Securing SOS position.

No Further Entries on this Page

9-5-13 Nightshift WCRR-SOM

1813 Reviewed the shift turnover checklist with the dayshift SOM and assumed the SOM position. John Gaudagnoli

1837 Completed attending the pre-job brief conducted by the SOS (Clayton). The PM-Jose was in attendance and ES/IH. The safety topic discussed by the ES/IH person. It was safety shoulder strains and glovebox operations. Operators are to take frequent breaks when performing strenuous activities and support each other in moving items. Facility update was provided, and status of current drums.

1925 Operations entered the 50/64 facility to process Parent drum 5845031

2125 ~~0325~~ SOM worked with WCATS support person to load JAVA on the computer then work a couple of reports. Currently there is one LLW container showing in WCATS DRUM L-12226673. Additional discussion will be required on the management of LLW in WCATS and the management of empty Parents and movement from WCRR to AREA G. (LLW vs TRU)

2145 ~~0345~~ Operators were having trouble with the liquid being neutralized. Approximately 4-5 gallons of liquid noted with a pH of 0 when starting - initiated foaming when neutralizing agent was added - then went to pH of 2. After 45 minutes went to a pH of 6 - and solidified with Kitty litter. The bag containing the salt also requires neutralization and contains ~2-3 gallons of liquid.

2200 Inside Operations report initiating bagging off 1 daughter drum, and bagging on another and continue to process. Outside support provides additional Kitty litter.

2218 Bag off and Bag On - Completed.

2310 Completed updating LLW inventory spreadsheet

0010 Inside Operations break for lunch

0130 Operations personnel re-enter 50/64 to continue processing.

0159 Requested scheduling of the gamma spectrometer to assay 5 drums LLW - noted in the 50/75 transportainer. Scheduling for next work is sufficient.

0304 Operations initiated bagging off 1 daughter, 1 POC and bagging on 1 Daughter and continue to process.

0331 Bag off and Bag On evolution is noted completed

0448 Inside Operations bagging off 1 Daughter and bagging on Parent 5891573

0519 Late Entry for 0325 Implemented Posting 055 for: Beware of Cord Rm 102 near desk.

0595 Bag offs and Bag On's completed. Parent 5845031 generated 3 daughters and 1 POC

0622 Reviewed the shift turnover checklist with the dayshift SOM.

0625 Secured the Night-shift SOM position. - John Gaudagnoli

No Further Entries this page

9.6.13 Day Shift WCRR SOM

0615 0625 Reviewed the shift turnover checklist and assumed the WCRR SOM position. [illegible]

0620 Mode change complete. WCRR 4RD/50-69 from OPERATIONS/OPERATIONS to WARM/WARM. Operations didn't have enough personnel to support OPERATIONS watchbill.

0625 Pre-job briefing conducted by SOS. Discussed the watchbill. Operations will work in ARTIC prepping empty containers and housekeeping inside 50-69, and cleaning the glovebox and replacing tape on ports

0900 Upon further discussion with the SOS, CSE, OM it was agreed on that the OCO is not a # position on the watchbill and therefore could serve as a Waste Handling Technician if qualified.

0910 Notified by SOS that another Waste Handling Technician had requested to leave at noon (planned in advance), therefore the watchbill (OPERATIONS) will need to go back to WARM mode at noon.

1000 SOS reported that during the cleanup of glovebox, RP-1 noted gloves that need to be changed out due to wear and tear.

1010 Notified by SOS that she needs to leave WCRR site, but will be back shortly to support going into OPERATIONS. T450-69 is in WARM mode. Watchbill requirements SOS on call 2 hrs.

1100 Notified by OCO that the glovebox cleanup and re-placing tape on the ports is complete. Starting glovechanges on stations 2 (R) and 8 (R).

1118 WCATS personnel on-site addressing issues with TWSR's not printing all information being input into system.

1125 SOM obtained list of outgoing shipment scheduled for Monday, September 9, 2013 and provided it to Inventory Control and OCO. A total of 20 drums OUT.

1127 Reviewed WO #416287-01 50-84 Refueling and Maintenance of Light Stations.

1136 Notified by OCO that glove changeout is complete. Unable to go into OPERATIONS due to operator leaving at

9-6-13 Day Shift WCRR SOM continued

noon.

1300 SOM at otawi building picking up new badge.

1355 SOM back at TA50.

1607 SOM reviewed round sheets.

1620 notified by an operator that operations has no certified rigging equipment (straps) in the event they have to re-heat due to not meeting a watchbill during the night shift. SOM looking for straps (certified) at Area G.

1710 notified OM of issue identified.

1800 Reviewed the Shift turnover checklist with the night shift SOM.

1810 Per SDS. Clayton Mullens, states he will have a watchbill, but not until an hour because two operators are running late. Watchbill is still reflecting WARM standby mode.

1818 Securing the day shift SOM position. [signature]

no further entries this page.

4-6-13 Nightshift WCRR-SOM

1803 Reviewed the shift turnover checklist and assumed the SOM position follow Quadgraph.

1825 Two operators on night shift have been called to support in filling the watchbill. The pre job brief will be initiated when they arrive.

1935 Attended the pre-job brief conducted by the SOS (Clayton) - Safety topic was pay attention to detail, be aware of surroundings, take frequent breaks and stay hydrated. End of the week and all personnel on shift had worked all week on the WCG, no relief available to switch personnel out. Roles and responsibilities were discussed and precautions discussed - sharps, bag on/bagg offs, securing drums etc. Discussed movement of drums.

1940 Reviewed and approved the Night shift watchbill.
Mode change: 50/69 and yard transition to Operations / Operations.

2000 Operators changed out and entered 50/69 to initiate processing. The CAM was provided a status of the facility.

2120 Operations initiate bag off of 1 daughter and bagging on an additional daughter with Kitty litter. Additional Kitty litter is required due to liquid. Currently ~3 gallons.

2132 Bag off and Bag On was noted completed.

2240 Operations exit 50/69 for a break. Currently there are 3 POC items that have been generated, noted as .9R, 1.5R, and 1R. additional liquid is noted in bags requiring solidification. The ph is noted ~2-3. The lead liner was partially disentigrated

2317 Operators return to 50/69 to continue processing.

0015 Operators exit 50/69 to initiate lunch break

0123 Operators enter to continue processing 5891513

0305 Operators initiate bag off of 1 daughter and 1 POC - Total generated are 2 daughters and 1 POC.

0342 The Operations Center was notified by RCTs that a CAM alarmed A-6 - located in the back corner of the BGE. Operations had just completed bag offs. Operators were in full face respirators. The glovebox WCG is in a safe configuration.
EP-WCRR-RM-ARP-0407 - CAM ALARM was entered. Operations are performing a controlled evacuation.

(Continued on Next Page)

9-5-13

1804 Assuming WCRR operations center - Coleman
1818 Pre-job being conducted by SOS.
1925 Operators entering 50-69 to begin operations on drum #5845031.
9-5-13 1942200 Bagging off 1 daughter, bagging on another daughter.
2218 Bag off/on complete.
0008 Operators out for lunch.
0129 Operators entering 50-69 to resume operations.
0200 Beginning outside rounds.
0219 Item #19 on the rounds is unsat, okay to proceed, FSR in place.
0228 Outside rounds complete.
0305 Bagging off 1 daughter and 1 POC, bagging on another daughter.
0325 Posting #055 prepared for being aware of the cords to the computer inside 50-69.
0332 Bag off/on complete.
0400 Beginning inside rounds.
0418 Item #63 on the rounds is OOS, okay to proceed, POD in place.
0419 Inside rounds complete.
0448 Bagging off 1 daughter and bagging on drum #891513.
0515 Bag off/bag on complete.
0527 Both rounds reviewed by SOS.
9-6-13 0600 Shift turnover brief with CCO Clarissa Velarde-Coleman

No further entries this page

09-06-13

0600 Assuming WCRRF Operations Center - Chelander

Assuming WCRRF OPERATIONS CENTER IN TRAINING HSMITH

~~9/6/13 HS 0610~~ ~~PRE JOB CONDUCTED BY SOS~~ 9/6/13 HS

0620 MODE CHANGE DECREASE WCRRF YARD, TA50-69 TO WARM STANDBY

0625 PRE-JOB BRIEFING CONDUCTED BY SOS

0700 PRE-JOB BRIEFING CONCLUDED

0750 BEGIN MOVEMENT FROM TA50-69 TO TRANSPORTAINERS

0850 MOVEMENT COMPLETED

1045 OPERATORS CHANGE OUT STATION #2 AND STATION 8 RIGHT HAND GLOVEBOX GLOVES

1136 GLOVE CHANGE COMPLETE

1410 STARTING INSIDE ROUNDS

1411 STARTING OUTSIDE ROUNDS

1436 ITEM #63 INSIDE ROUNDS DDS, POD IN PLACE, OK TO PROCEED PER ~~ENGINEERING~~ 9/6/13 HS CSE ~~ENGIN DOCUMENTATION~~ 9/6/13 HS DOCUMENTATION

1442 INSIDE ROUNDS COMPLETE

1454 ITEM #19 OUTSIDE ROUNDS UNSAT, FSA IN PLACE, OK TO PROCEED PER CSE DOCUMENTATION

1500 OUTSIDE ROUNDS COMPLETE

1607 SDM REVIEWED BOTH INSIDE AND OUTSIDE ROUNDS SHEET

1808 PERFORMING TURNOVER ~~OCO WITH TEE~~ 9/6/13 HS WITH OCO

9/6/13 TERRI COLEMAN, HASMITH Chelander

HS

HS

NO FURTHER ENTRIES THIS PAGE HSMITH

9-6-13

1809 assuming WCRR operations center - JColeman
1935 Pre-job being conducted by SOS.
1939 Pre-job concluded.
1940 Mode change complete. We are now in operations.
2000 Operators entering 5069 to continue operations on S891513.
2120 Bagging off 1 daughter, bagging on another daughter.
2132 Bag off/on complete.
0015 Operators out for lunch.
0123 Operators back from lunch.
0200 Beginning outside rounds.
0242 Item #19 on the rounds is unsat, Okay to proceed, FSR in place.
0244 Outside rounds complete.
0305 Bagging off 1 daughter, 1 POC, and covering port.
0312 Notified by RCT that A CAM was alarming in 5069-102. He states they had just completed the bag off and everything is in a safe configuration. All operators and RCTS were in respirators. Operators following RCT instructions and performing a controlled exit. Entering EP-WCRR-Rm-ARP-0407. SOS has been notified as well as SOM.
0405 RCTS report all respirators are good. RCTS will allow the CAM (AL) to cycle for 15 minutes, then evaluate the results.
0411 RCTS state they will be performing 30 smears back in the corner of the GBE and 10 smears in the change room.
0434 Mode change complete. We are now in warm standby in WCRRF yard and 5069.
0523 RCTS state all smears NDA except for 1 smear reading 6 Dpm alpha. Exiting EP-WCRR-Rm-ARP-0407.
0535 Beginning inside rounds.
0545 Item #63 on the rounds is OOS, okay to proceed, POD in place.
0555 Inside rounds complete.
0610 Both rounds reviewed by SOS.
0614 Beginning Drum movement from 5069 to transportainer.
0637 Movement out of 5069 complete. All inventory has continued on next page. - JColeman

S891513

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0109
Examination Date:	9/13/2013
Waste Container ID:	68327
Video/Audio Recorded Media Number:	LA-RTR2-13-0109 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 78.0 kg Tare Wt.: 33.4 kg Net Wt.: 44.6 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:	35 %

CCP Radiography Data Sheet

Waste Container ID: 68327

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R: Leaded 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):	
Rubber (R):	5.0
Plastics (waste materials) (XPM):	3.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	36.1
Soils (S):	
Total WMP Weight:	44.6

CCP Radiography Data Sheet

Waste Container ID: 68327

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		9/13/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68327	Count Sequence Number:	16587
Operator:	DCLTD231\Operator		
Assay Start:	10/2/2013 1:59:20 PM		
Description 1:	2LANDA1229		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 44.6 kg	Net:	44.6 kg
Container:	Volume: 208.0 l	Full:	35.0 %
Density:	0.610 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:	16587	Batch Number:	2LANDA1229
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68327	Analysis Date:	10/2/2013

Net Weight	44600.0 g		
Pu mass	1.04E+001	+-	2.03E+000 g
TRU Alpha Activity	3.52E+000	+-	4.16E-001 Ci
TRU Activity Concentration	7.89E+004	+-	9.32E+003 nCi/g
Pu-239 Equivalent Activity	3.63E+000	+-	4.15E-001 Ci
Pu-239 FGE	9.48E+000	+-	1.81E+000 g
Decay heat	1.16E-001	+-	1.37E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.05E-002	3.56E-005	6.06E-006	9.46E-007
PU238	2.81E-002	4.80E-001	9.38E-002	5.97E-004
PU239	9.27E+000	5.75E-001	1.12E-001	7.15E-004
PU240	9.25E-001	2.10E-001	4.10E-002	2.61E-004
AM241	6.57E-001	2.25E+000	3.87E-001	8.00E-002
PU241	7.73E-002	7.96E+000	1.56E+000	9.91E-003
PU242	7.75E-002	3.06E-004	5.98E-005	0.00E+000
SR90	5.87E-009	8.09E-007	3.72E-007	0.00E+000
CS137	9.31E-009	8.09E-007	3.72E-007	3.38E-007
U233	<LLD	<LLD	0.00E+000	3.81E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.23E-006
U238	<LLD	<LLD	0.00E+000	8.04E-006
AM243	7.72E-004	1.54E-004	2.64E-005	5.54E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10.3.13

ITR: _____ Date: 10.4.13

Automated Independent Technical Review

Count Sequence Number: 16587 Batch Number: 2LANDA1229
Counter ID: HENC #2
Container ID: 68327
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 10-3-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68327**

BDR Number: **LA13FG2106**

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

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\131024c\
Data File : 68327.D
Acq On : 24 Oct 2013 1:33 pm (#1); 24-Oct-13, 13:32:52 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 24 13:41:15 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	3.591	96	5493574	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.888	117	4267464	177.50 ppmv	0.03

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0110
Examination Date:	9/16/2013
Waste Container ID:	68328
Video/Audio Recorded Media Number:	LA-RTR2-13-0110 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.: 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: 68328

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):	152.1
Soils (S):	
Total WMP Weight:	164.1

CCP Radiography Data Sheet

Waste Container ID: 68328

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]	9/16/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68328	Count Sequence Number:	23592
Operator:	D3PW2DK1\operator		
Assay Start:	9/17/2013 1:41:31 PM		
Description 1:	1LANDA1842		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon 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:	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:	23592	Batch Number:	1LANDA1842
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:	68328	Analysis Date:	9/17/2013

Net Weight	164000.0 g		
Pu mass	1.26E+002	+- 2.81E+001	g
TRU Alpha Activity	2.38E+001	+- 8.27E+000	Ci
TRU Activity Concentration	1.45E+005	+- 5.04E+004	nCi/g
Pu-239 Equivalent Activity	2.40E+001	+- 8.27E+000	Ci
Pu-239 FGE	1.19E+002	+- 2.80E+001	g
Decay heat	7.71E-001	+- 2.74E-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	1.62E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.36E-006
NP237	4.24E-001	2.99E-004	6.53E-005	7.73E-006
PU238	1.15E-002	1.97E-001	5.44E-002	1.77E-003
U238	<LLD	<LLD	0.00E+000	3.73E-005
PU239	1.18E+002	7.32E+000	1.74E+000	6.58E-002
PU240	7.56E+000	1.72E+000	4.74E-001	1.54E-002
AM241	4.23E+000	1.45E+001	8.07E+000	1.57E-001
PU241	1.45E-001	1.50E+001	4.14E+000	1.35E-001
PU242	2.52E-002	9.95E-005	2.75E-005	0.00E+000
AM243	3.86E-003	7.72E-004	1.71E-004	2.15E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 9.19.13

ITR: _____ Date: 9/20/13

Automated Independent Technical Review

Count Sequence Number: 23592 Batch Number: 1LANDA1842
Counter ID: MCS HENC #1
Container ID: 68328
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/17/2013

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 is less than n-sigma * the correction factor error.	OK
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	OK
NCC Pu mass was above calibration range. FGE is greater than the upper limit of 200.00	The measured Pu-240 eff. mass exceeds the 16.28g calibration limit of the neutron instrument. Neutron data show multiplication. Neutron results not applied. Gamma results applied. Gamma results consistent with AK.
The Standard NCC Pu effective mass exceeds the Upper Calibration Limit.	
No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.

Comments	Disposition
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	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 & MT-53.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Bart B. Mann Date: 9/18/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68328**

BDR Number: **LA13FG12133**

Sampling Date: **12/20/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	303.40	
74-82-8	Methane	6.56	U
67-56-1	Methanol	7.64	
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	0.23	
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131220c\
Data File : 68328.D
Acq On : 20 Dec 2013 10:45 am (#1); 20 Dec 2013 10:44 am (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 20 10:56:29 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	7258274	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5862864	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.913	GC1	86544m	303.40	ppmv	
4) Methanol	0.831	31	2931	7.64	ppmv	100
12) Benzene	3.720	78	6855	0.23	ppmv #	90

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

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~~32~~ EL 1-15-14

S891513

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0110
Examination Date:	9/16/2013
Waste Container ID:	68340
Video/Audio Recorded Media Number:	LA-RTR2-13-0110 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.: 162.5 kg Tare Wt.: 145.1 kg Net Wt.: 17.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68340

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):	109.0
Plastics (PP): Rigid Liner/Lid; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); Fiberboard Liner Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	14.4
Soils (S):	
Total WMP Weight:	17.4

CCP Radiography Data Sheet

Waste Container ID: 68340

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, liner is vented.

RTR Operator:

Benito Maestas		9/16/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68340	Count Sequence Number:	23593
Operator:	D3PW2DK1\operator		
Assay Start:	9/17/2013 2:31:57 PM		
Description 1:	1LANDA1842		
Description 2:	POC - Gross Wt. = 162.5 Kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 17.4 kg	Net:	17.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.682 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:	23593	Batch Number:	1LANDA1842
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:	68340	Analysis Date:	9/17/2013

Net Weight	17400.0 g			
Pu mass	4.78E+001	+-	1.41E+001	g
TRU Alpha Activity	6.93E+000	+-	2.52E+000	Ci
TRU Activity Concentration	3.98E+005	+-	1.45E+005	nCi/g
Pu-239 Equivalent Activity	7.03E+000	+-	2.52E+000	Ci
Pu-239 FGE	4.51E+001	+-	1.40E+001	g
Decay heat	2.23E-001	+-	8.31E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.86E-007
U233	<LLD	<LLD	0.00E+000	5.66E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.68E-006
NP237	9.69E-002	6.83E-005	1.25E-005	2.82E-006
PU238	4.37E-003	7.48E-002	2.57E-002	5.94E-004
U238	<LLD	<LLD	0.00E+000	1.47E-005
PU239	4.49E+001	2.78E+000	8.70E-001	2.21E-002
PU240	2.87E+000	6.52E-001	2.24E-001	5.18E-003
AM241	9.97E-001	3.42E+000	2.35E+000	1.56E-001
PU241	5.52E-002	5.69E+000	1.95E+000	4.52E-002
PU242	9.57E-003	3.78E-005	1.30E-005	0.00E+000
AM243	5.44E-004	1.09E-004	2.02E-005	7.93E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 9-19-13

ITR: _____ Date: 9/20/13

Automated Independent Technical Review

Count Sequence Number: 23593 Batch Number: 1LANDA1842
Counter ID: MCS HENC #1
Container ID: 68340
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/17/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	OK
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	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 & MT-53.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Bart B. Marak Date: 9/18/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68340**

BDR Number: **LA13FG2113**

Sampling Date: **11/5/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	675.34	
74-82-8	Methane	142.14	U
67-56-1	Methanol	52.46	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131105C\
Data File : 68340.D
Acq On : 5 Nov 2013 1:31 pm (#1); 05-Nov-13, 13:31:14 (#2)
Operator : SA
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 13:44:29 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	4678104	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.858	117	3659866	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.616	GC1	5078m	675.34	ppmv	
4) Methanol	0.877	31	19609	52.46	ppmv	100

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

VOCGAS.M Wed Nov 06 12:32:21 2013

S892963

S892963

Container Profile 761184

File Options Reports Help

S892963

761184	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added

Genealogy

S892963

- S892963
  - LA00000068966
    - LA00000069361
    - LA00000069430
    - LA00000069490
    - LA00000069529 – empty

Working Copy
Date: 2-28-14 JK

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68966

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) MM 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: Michael Montoya / [signature] 191552 2/28/14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68966

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 528.0 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) 611.0 lb

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

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

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

6.2[26] 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.: 68966

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69490	69361	69430	
10.1[4]	Daughter Drum Filter No.	Km-352	AN591	KM 398	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-10180	L17390	L17419	
10.1[4]	Daughter Drum Purchase Order No.	501210	501210	501210	
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	N/A		N/A	
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				
10.3[5][A]	Free Liquid Volume/Units	1 GAL			
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A			
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See COMMENTS	See COMMENTS	See COMMENTS	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	65%	100%	N/A
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTYLITTER	KITTY LITTER	KITTY LITTER	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 63966

Comments: POLY LINER LID, PLASTIC KNIVES, HEXARMOR GLOVES STUBOUTS, NITRATE SALTS, LEAD, CUT UP 1 ANTASTIK BOTTLE

11.1[1] Performed By: JOE QUINTANA, [signature] 23775, 3/1/14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: JOSE JUREZ, [signature] 122142 1/14 0715
SOS or designee (print) Signature Z # Date Time

Working Copy
Date: 2/28/14

ATTACHMENT 1
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 414113
Lot No.: 212078
Manufacture Date: 2013
SERIAL # 053

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: AC 522
Manufacture Date: 1/11

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

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

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

5. [18] 2-in. bung plug torque value: N/A ft-lb

Comments: NOT PREPPED IN WCCRF

8.1[1] Performed By: JOE QUINTANA / Joe Q 2799817 / 3/1/14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Perez / [signature] 2214521 / 3/2/14
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.: 69529

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%

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

Performed By: JOE QUINTANA, [signature] 239987, 8/1/14
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): 176.4 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA, [signature] 239987, 8/1/14
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Jose Sanez, [signature] 221452, 8/2/14
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 1-31-14 JK

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69341

5.[3] Drum information:
Purchase Order No.: 0512101
Lot No.: 0237179
Manufacture Date: 13

5,[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1-5 2CPVC
Serial No.: L-17390
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	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: ERNESTO SENA (Operator (print)) [signature] (Signature) 1291398 (Z #) 1/31/14 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN-591
Manufacture Date: 1/13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

5.[32] Drum tare weight (lbs): 71.6 lbs

5.[34][E] Drum ID No.: 693361

Comments: N/C

5.[35] Performed By: BRIAN GALLEGOS / [signature] / 267179 / 1-31-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: JOSE JUAREZ / [signature] / 224021 / 3/2/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69361

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

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

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

Performed By: JOE QUINTANA | Joe Q | 239987 | 3/1/14
Operator (print) | Signature | Z # | Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69361

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 170.0 lbs

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

Comments: NIL

6.[32] Performed By: JOE QUINTANA, Joe Q, 239987, 5/1/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jerez, [signature], 2214521, 5/2/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 2/27/14 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69490

5.[3] Drum information:
Purchase Order No.: 501210
Lot No.: 0237179
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6C9UC-1.5-25PUC
Serial No.: 610180
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:	11/12/2014	08/05/2014
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/-4% CW +/-6% UCW	+/-3% CW +/-6% UCW

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

Performed By: Brian Cardenas [signature] [illegible] 2/27/14
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM-352
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: 019DS

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.: 69490

Comments: n/c

5.[35] Performed By: Brian Gordon / [signature] 28[illegible] / 2/27/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jorge / [signature] 221452 / 3/2/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69490

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

M&TE No.: 038370
Cal. Expiration Date: 08/02/14
Range: 16 80 ft-lb
Tolerance (+/-): ±3% ±6%

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

Performed By: [illegible] [illegible] 1413221 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.:	N/A	N/A
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: NOT PREPPED IN WCRF /
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.: 69490

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 371.0 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: MICHAEL MONTOYA / [signature] / 191338 / 2/28/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Perez / [signature] / 321452 / 3/2/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 21414

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69439

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.: bcPVC 1.5-2 sPVC
Serial No.: L-17419
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	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: James Schl [signature] 1116662 02-14-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 PS
Serial No.: KM-398
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.: 69436

Comments: N/C

5.[35] Performed By: Jimmy Sabol / Mark Rivera — Operator (print) — Signature — 116662 / 092428 — Z # — 02-14-14 / 2-14-14 — Date

7.1[4] Reviewed By: Jose Perez — Supervisor or designee (print) — Signature — 221521 — Z # — 3/2/14 — Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69432

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

M&TE No.: 035370
Cal. Expiration Date: 8/2/14
Range: 16 - 80 ft-lb
Tolerance (+/-): +/- 3%, CW
+/- 6%, CCW

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

Performed By: JOE QUINTANA / Joe Q 239,47, 3/1/14
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 (+/-):		

NOT PREPPED IN WCRRF

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69430

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 419.0 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 (Operator (print)) | Joe Q (Signature) | 239987 (Z #) | 3/1/14 (Date)

7.1[4] Reviewed By: Jose Juarez (Supervisor or designee (print)) | (Signature) | 221452 (Z #) | 3/2/14 (Date)

WDP TRU Waste Container Management Operations

UET

Document No: EP-DIV-AP-0107 03
Attachment: 1
Revision: 1
Effective Date: 12/22/2009

SP MR 6-10-12

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

117344 2/24/14

Production Control 412 Gas work changed id when placed in Compliant 85 for transport to WCRRF

Container ID: S892963 \ 18966 Container Type: 85-GAL Gross Weight (lbs): 529

Inner Seal #: 023608 Filter Prefix: None Filter Serial #: None

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

TWSR Comments: LEACHED SOLIDS MST12 VIA MST10 #A05599

Total PE-Ci Activity: 1.17E+01 Equivalent Combustible PE-Ci: 4.40E+00 AM-241 PE-Ci: 1.01E+00

Total Fissile Gram Equivalents: 124.8 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 1/23/2007 Comment: 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: 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 the volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature 117434 Z Number 10.28.10 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: Solid waste records indicate leached solids in form of nitrate salts. 12 items of salts, heaviest is 26 kg (57 lbs), net weight of 12 items is 150 kg (330 lbs). Note drum is lead shielded. Estimated dose is >1,000 and <10,000 mrem/hr @ 30-cm.

Performed By: Michael Garcia (WDP Engineering (Print)) Signature 099142 Z Number 11/11/10 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: TRU Remediation Operations (Print) Signature Z Number Date

145 Reuben. John Amalland, 241659 may contain lead. Mercury, Chromium. 7-31-13

Clayton Mullins CA 240092 2/25/14

Jose Jerez 221452 2/24/14

Noncertified TRU Waste Drum Item Information

DrumID: 023608

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	8LR22WS1		12.000	NITRATE SALTS	R04	16.56	52	1/13	G468	
2	8DS22ES1		26.140	NITRATE SALTS	R04	14.51	52	1/13	G468	
3	8LRS6ES1		16.800	NITRATE SALTS	R04	10.48	52	1/13	G468	
4	9DS1ES1		10.500	NITRATE SALT	R04	4.51	52	1/13	G468	
5	90X7WS1		10.100	NITRATE SALTS	R04	4.45	52	1/13	G468	
6	9DS8ES1		7.400	NITRATE SALTS	R04	8.88	52	1/13	G468	
7	9LR10WS1B		10.260	NITRATE SALTS	R04	11.49	52	1/13	G468	
8	9L410W1SB		15.400	[redacted] Nitrate Salts	R04	17.25	52	1/13	G468	
9	9DS12ES1		19.100	NITRATE SALTS	R04	18.27	52	1/13	G468	
11	9LR1WS1A		9.100	NITRATE SALTS	R04	10.74	53	1/13	G468	
12	9LR1WS1B		13.600	NITRATE SALTS	R04	16.05	53	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 240.

Material Type	SNM (grams)	Items Net Wt (kg)
52	106.4	127.70
53	26.79	22.70
Totals	133.19	150.40

2-28-14
0558 Assuming WCRR operations center - McCleary
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 ~~John Sager~~ in McCleary
0716 ~~0~~ 8 inside rounds completed
0723 Both rounds reviewed by SOS
0740 WCRRF is now in operation
0742 BAGGING ON DRUM 68962
0755 BAG ON complete PPE check SAT
0800 ~~AA~~ Permission granted to move drums from 50/69 to transportainers
0814 Permission granted to lower the vehicle access gates to load the transfer vehicle prior to shipment to Area G. Drum movement out of 50-69 to transportainers complete.
0910 ~~0958~~ 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 services
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 shutting out for lunch.
1341 Permission granted to move drums into 50/69
1357 Movement into 50/69 complete
1416 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 J Segovia

2-28-14 CONTINUED FROM PREVIOUS PAGE
1601 BAG OFF/ON COMPLETE
1620 STARTED INSIDE ROUNDS
1625 ~~STARTED~~ BY 2-28-14 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 / DAYSHIFT
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 [illegible]

NO FURTHER ENTRYS THIS PAGE [illegible]

3-1-14

0600 Assuming WCRR operations center - TC Coleman.
0617 Pre-job being conducted by SOS. Briefing to EP WCRR-WO-DOP-1198 R.1, also monthly RWP's.
0700 Pre-job concluded.
0705 Beginning outside rounds.
0725 Beginning inside rounds. Outside rounds complete.
0735 Assuming OPS center under tcri colman (in training) [illegible] TC Coleman
0748 [illegible] 3-1-14 inside Rounds complete
0759 Permission Granted to move waste from transportainer into 50/69
0810 Rounds Reviewed By SOS
0815 Mode changed to operation in WCRR yard and 50/69
0839 Movement of drums into 50/69 complete permission Granted to move drums from 50/69 into transportainer
0900 Movement out of 50/69 complete, transportainers secure
0922 Bagging off 1 daughter, bagging on another daughter.
0931 Bag off/on complete.
1044 Bag off/on 1 daughter and bagging on parent 5870213
1100 Bag off/on complet
1200 Notified by inside pic they are requesting IH to evaluate yellow liquid found in drum
1230 IH informed operators to neutralize liquid
1237 Operators out for lunch
1320 [illegible] 3-1-14 operations put on hold tech's need to fix instrument
1410 Started inside Rounds
1454 Item 6306S OK to proceed pod in place
1459 Completed inside Rounds
1500 Ressuming operations
1524 Bagging off/on 1 daughter
1630 Bagg on/off complete
1565 Operators noticed a drip of water on scale
1643 Started outside Rounds
1646 Starting bag off 1 daughter and 1 poc puting on port cover
1702 Bag off complete
1750 Rounds ~~[illegible]~~ [illegible] 3-1-14 Reviewed By SOS
1808 End of day operation center secured [illegible]

-No further entrys this page [illegible]

WCRRF SOS Log Book

2/28/14
0600 Assuming SOS position. CA
0615 Starting Pre-Job, went over IPC ~~change~~ cm 2-28-14 for our processing procedure, 1198, discussed schedule change for next 2 weeks while processing tritium and ~~beryllium~~ cm 2-28-14 beryllium.
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-West 2 Parents.
1531 D Nesting Complete, Bagging off one daughter and one Poc. 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 WRRF
2-28-14 1810 Securing SOS position for the evening. Jim Jy

No further entries on this page

133

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

3/1/14

0600 Assuming SOS position. CA

0615 Starting Pre-Job, discussed keeping up with good PPE practices, as far as wearing proper PPE and performing PPE checks. Went over new revision for glovebox operations procedure, WO-DOP-1198. Briefed to processing and radiation area RWP's.

0705 Pre-Job complete.

0810 Signed off on the rounds.

0815 Mode change complete, WCRRF yard and 50-69 are now in Operations.

0818 Starting movement into 50-69.

0839 Movement in complete, starting movement out of 50-69.

0900 Movement out complete.

0922 Bagging off 2nd daughter, bagging on a 3rd.

0931 Bag off/on complete.

1044 Bagging off 3rd daughter, bagging on 5870213.

1100 Bag off/on complete.

1200 Notified by operators inside requesting IH to observe reaction from liquid (pH 0-1) SOM notified as well.

1230 IH observed liquid, ok to continue.

1420 Processing paused to allow RCT's to fix equipment used for dosing items in WCG.

1500 Instrumentation working properly again, resuming operation.

1524 Bagging off 1st daughter, bagging on a 2nd

1530 Bag off/on complete.

1555 Operators oberserve a slow leak from the roof above the scale, will keep an eye on leak and place bucket to catch water if necessary.

3-1-14 1600 Turning over SOS position to Jose Jerez. CA

1600 Assuming SOS position for the remainder of shift. Jw Jg

1645 Starting to Bag off one daughter and 1 POC

1702 Bag off complete. Placing Port Cover on WCG. Prepping area for D-Nesting tomorrow morning.

1750 Reviewed and signed inside rounds.

1808 Operators exited facility. Will need to change gloves in the morning on station 7, 8 and 1 right hand and left hand on station 3. Will also need 4 55's, 2 POC's, 3 Dnesting bags and Rad Trash bags.

1808 Mode Change Complete WCRR yard and 50-69 are in WARM.

3-1-14 1815 Securing SOS position for the evening. Jw Jg

No further entries.

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ 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 SDS (Clayton). The safety topic was pay attention to detail, perform work mythodically. 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 OCO 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 LFLs 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 trans portainer.

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 ~~WCG~~ 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 Guadagnoli

No further Entries this Page

3-1-14 WCRR SOM

0558 Reviewed logs and assumed the WCRR SOM position John Guadagnoli

0655 Completed attending the pre-job brief conducted by the SDS (Clayton) the Safety Topic was inspect PPE, and monitor each other. Discussion focused on movements in and out and staging drums, due to a planned WCATs outage scheduled from noon till 2000 hrs (800 PM) - Requested the SDS to review micro-calibration equipment and ensure availability and charging. The RCT lead briefed operators on the Monthly RWP-2012-0015 and Quarterly RWP-2012-0069. Procedure DOP-119B was briefed on and operators signed the roster. The procedure will be posted on Monday. Parent drum 68966 is currently bagged on

0701 Completed updating the AREA G SOM of WCRRF and 412 POD activities.

0708 Outside operations initiate a movement from the transportainers to 50/69 facility, 4 drums total, solution packages 3, 17, and 69 - all priority 2's. Also a movement out will be initiated.

0815 Mode Change: 50/69 and 412 transition from WARM/WARM to Operations/Operations.

0900 All movements to the transportainer were noted completed, also movements to 50/69.

0922 Inside operators initiate bagging off a daughter drum and bagging on another. Also the operators noted all of the SP-72's - were noted upon opening to release 6-7 gallons of liquid, - which was neutralized and Kitty litter added - 3-1 ratio

0931 Bag off and Bag on is noted completed by inside operations

1045 Inside operators report bagging of 1 daughter and bag on of another daughter, Bagging off Parent (EMPTY) and initiate bag on of Parent S870213 SP72

1101 Inside operators report the bag offs and bag ons are completed.

1235 Operators break for lunch, and report this drum was noted to have 4-5 gallons of liquid (acidic) requiring neutralizing and is currently ~2/3 full.

1340 Operators enter 50/69 to continue processing. The PIC noted a PH of 1 before neutralizing.

1523 1530 Observed operators working on the drum on the WCG and asked how it was going, they indicated they were ready to bag off and will discuss with the SDS de-nesting.

Inside operators initiate bag off of 1 daughter and bag on of another

1531 Bag off and Bag On was completed

1555 Operators notified the Operations Center of 1 drip from the ceiling on to the scale they will wipe and monitor - Outside conditions noted as drizzle

1640 Inside operators initiate bag off of daughter and parent drum and will initiate denesting. Dependent on time, they will bag on another parent. Also a POC is being bagged off.

1702 Bag off is noted completed, and operators placed the port cover on the WCG Operations will prep for de-nesting.

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:	69361
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.: 77.0 kg Tare Wt.: 33.4 kg Net Wt.: 43.6 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:	35 %

CCP Radiography Data Sheet

Waste Container ID: 69361

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware

AM:

OM:

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	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):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	41.5
Soils (S):	
Total WMP Weight:	43.6

CCP Radiography Data Sheet

Waste Container ID: 69361

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

S892963

NDA 2000 Assay Report

Item Information

Item ID:	69361	Count Sequence Number:	24493
Operator:	D3PW2DK1\operator		
Assay Start:	3/7/2014 11:31:56 AM		
Description 1:	1LANDA1924		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 43.6 kg	Net:	43.6 kg
Container:	Volume: 208.0 l	Full:	35.0 %
Density:	0.600 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 24493
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 69361

Batch Number: 1LANDA1924
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 3/7/2014

Net Weight	43600.0 g		
Pu mass	1.84E+001	+-	3.64E+000 g
TRU Alpha Activity	4.82E+000	+-	1.87E+000 Ci
TRU Activity Concentration	1.10E+005	+-	4.29E+004 nCi/g
Pu-239 Equivalent Activity	4.86E+000	+-	1.87E+000 Ci
Pu-239 FGE	1.73E+001	+-	3.63E+000 g
Decay heat	1.57E-001	+-	6.21E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.56E-007
U233	<LLD	<LLD	0.00E+000	8.32E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.22E-006
NP237	7.67E-002	5.41E-005	9.18E-006	2.85E-006
PU238	1.68E-003	2.88E-002	7.29E-003	7.58E-004
U238	<LLD	<LLD	0.00E+000	1.11E-005
PU239	1.72E+001	1.07E+000	2.25E-001	2.81E-002
PU240	1.20E+000	2.72E-001	6.88E-002	7.16E-003
AM241	1.00E+000	3.45E+000	1.85E+000	8.03E-002
PU241	2.40E-002	2.47E+000	6.26E-001	6.51E-002
PU242	5.54E-003	2.19E-005	5.55E-006	0.00E+000
AM243	6.32E-003	1.26E-003	2.16E-004	1.06E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-11-14

ITR: _____ Date: 3-12-14

Automated Independent Technical Review

Count Sequence Number: 24493 Batch Number: 1LANDA1924
Counter ID: MCS HENC #1
Container ID: 69361
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/7/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
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: 3-11-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69361**

BDR Number: **LA14FG12036**

Sampling Date: **4/8/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	231.21	
74-82-8	Methane	6.56	U
67-56-1	Methanol	4.20	
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	0.62	
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	1.06	
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140408C\
Data File : 69361.D
Acq On : 8 Apr 2014 9:43 am (#1); 8 Apr 2014 9:42 am (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 08 09:52:42 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	4.057	96	8995236	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6954522	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.920	GC1	65954	231.21	ppmv	100
4) Methanol	0.824	31	1997m	4.20	ppmv	
12) Benzene	3.720	78	22866	0.62	ppmv #	94
17) Toluene	5.580	92	29674	1.06	ppmv	95

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-14-0030
Examination Date:	3/6/2014
Waste Container ID:	69430
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.: 190.0 kg Tare Wt.: 33.4 kg Net Wt.: 156.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 69430

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):	1.5
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:	156.6

Waste Container ID: 69430

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

S8929163

NDA 2000 Assay Report

Item Information

Item ID:	69430	Count Sequence Number:	24481
Operator:	D3PW2DK1\operator		
Assay Start:	3/6/2014 2:06:14 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: 157.0 kg	Net:	157.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.840 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24481	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:	69430	Analysis Date:	3/6/2014

Net Weight	157000.0 g		
Pu mass	1.39E+002	+- 5.00E+001	g
TRU Alpha Activity	2.07E+001	+- 6.52E+000	Ci
TRU Activity Concentration	1.32E+005	+- 4.15E+004	nCi/g
Pu-239 Equivalent Activity	2.10E+001	+- 6.52E+000	Ci
Pu-239 FGE	1.30E+002	+- 4.98E+001	g
Decay heat	6.67E-001	+- 2.13E-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	1.10E-006
U233	<LLD	<LLD	0.00E+000	1.69E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.09E-006
NP237	2.45E-001	1.73E-004	3.56E-005	6.06E-006
PU238	1.77E-002	3.03E-001	1.24E-001	2.95E-003
U238	<LLD	<LLD	0.00E+000	2.42E-005
PU239	1.29E+002	8.03E+000	3.09E+000	7.82E-002
PU240	9.00E+000	2.04E+000	8.37E-001	1.99E-002
AM241	3.01E+000	1.03E+001	5.68E+000	1.42E-001
PU241	1.80E-001	1.86E+001	7.61E+000	1.81E-001
PU242	4.17E-002	1.65E-004	6.75E-005	0.00E+000
AM243	1.50E-002	3.01E-003	6.27E-004	1.93E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 3/10/14

ITR: Marla Gr Date: 3/12/14

Automated Independent Technical Review

Count Sequence Number: 24481 Batch Number: 1LANDA1923
Counter ID: MCS HENC #1
Container ID: 69430
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-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Pu239 FGE >200g with 2*TMU but <325g.

Expert Review by: Sheri Chamber Date: 3-10-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69430**

BDR Number: **LA14FG2039**

Sampling Date: **3/14/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	600.33	
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\140314C\
Data File : 69430.D
Acq On : 14 Mar 2014 10:42 am (#1); 14-Mar-14, 10:41:54 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 14 10:50:28 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.545	96	3182615	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.851	117	2518499	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.613	GC1	4514m	600.33 ppmv	

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-14-0030
Examination Date:	3/6/2014
Waste Container ID:	69490
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.: 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:	95 %

CCP Radiography Data Sheet

Waste Container ID: 69490

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

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):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.4
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	123.2
Soils (S):	
Total WMP Weight:	134.6

Waste Container ID: 69490

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

S892963

NDA 2000 Assay Report

Item Information

Item ID:	69490	Count Sequence Number:	24489
Operator:	D3PW2DK1\operator		
Assay Start:	3/7/2014 8:31:50 AM		
Description 1:	1LANDA1924		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 135.0 kg	Net:	135.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.680 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

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QA 3-12-14

~~08~~

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24489	Batch Number:	1LANDA1924
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:	69490	Analysis Date:	3/7/2014

Net Weight	135000.0 g		
Pu mass	8.10E+001	+- 3.41E+001	g
TRU Alpha Activity	1.85E+001	+- 8.84E+000	Ci
TRU Activity Concentration	1.37E+005	+- 6.55E+004	nCi/g
Pu-239 Equivalent Activity	1.87E+001	+- 8.84E+000	Ci
Pu-239 FGE	7.60E+001	+- 3.40E+001	g
Decay heat	6.03E-001	+- 2.93E-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	1.66E-006
U233	<LLD	<LLD	0.00E+000	2.46E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.13E-006
NP237	2.28E-001	1.61E-004	2.95E-005	9.85E-006
PU238	1.03E-002	1.77E-001	8.33E-002	3.85E-003
U238	<LLD	<LLD	0.00E+000	2.93E-005
PU239	7.56E+001	4.69E+000	2.11E+000	1.02E-001
PU240	5.26E+000	1.19E+000	5.62E-001	2.60E-002
AM241	3.63E+000	1.24E+001	8.56E+000	5.09E-001
PU241	1.05E-001	1.08E+001	5.11E+000	2.36E-001
PU242	2.43E-002	9.61E-005	4.53E-005	0.00E+000
AM243	2.01E-002	4.02E-003	7.41E-004	3.84E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-11-14

ITR: _____ Date: 3-12-14

Automated Independent Technical Review

Count Sequence Number: 24489 Batch Number: 1LANDA1924
Counter ID: MCS HENC #1
Container ID: 69490
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/7/2014

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. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
MCA Deadtime greater than the upper limit of 50.0%.	MCA deadtime = 68.69%. No spectral distortion observed.
Spectrum Validity Check engine has suggested data review.	After EA review spectrum valid.

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

Expert Review by: Sheri Chamber Date: 3-11-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69490**

BDR Number: **LA14FG2039**

Sampling Date: **3/14/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	273.70	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140314C\
Data File : 69490.D
Acq On : 14 Mar 2014 10:31 am (#1); 14-Mar-14, 10:31:04 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 14 10:39:39 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	3.532	96	3209452	205.75	ppmv	0.01
15) Chlorobenzene-d5	5.848	117	2555935	177.50	ppmv	-0.01
Target Compounds						Qvalue
1) Hydrogen	1.612	GC1	2058m	273.70	ppmv	

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

S900215

S900215

Container 761311

File Options Reports Help

S900215

761311	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

Genealogy

S900215
- S900215
  - LA00000068758
    - LA00000069080 – LANL
      - LASB50100
    - LA00000069081 – WCS
      - LASB50052
    - LA00000069074 – LANL
      - LASB50087
    - LA00000069152 – EMPTY
  - W798265 – EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weight Unit
0.001	%			

ATTACHMENT 1
Page 1 of 4

12-22-13

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68758

6.2[4] Date Processed: 12-22-13

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

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

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

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

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

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

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

4.3[6] ($) Stationary Fire Watch has been established: ☑ N/A
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) _____ (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] 276762 12-22-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68758

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 418.2 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 501.2 lb

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

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

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

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68758

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69080	69081	69074	N/A
10.1[4]	Daughter Drum Filter No.	JL-861	JL-851	JL-874	
10.1[4]	Daughter Drum Bag Filter No.	L-11522	L-11518	L-11520	
10.1[4]	Daughter Drum Purchase Order No.	501892	501892	501892	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☐ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No			N/A	
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A	N/A	N/A
10.3[5][A]	Free Liquid Volume/Units	5 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead	Degraded Lead	Degraded Lead	N/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	See Comments	N/A
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	<100%	100%	50%	
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Plastic	Kitty litter Plastic	Kitty Litter Plastic Stuffouts	

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 68758

Comments: Kitty litter, Nitrate salts, plastic, Liquids, Lead, 1 Poly liner lid

11.1[1] Performed By: Adam Segovia [signature] 276702 11/22/13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, CA 124009L, 11/22/13 1606
SQS or designee (print) Signature Z # Date/Time

12-22-13

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
Manufacture Date: 2013

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

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

Overpack filtered vent information:

Manufacturer:
Model No.:
Serial No.: N/A
Manufacture Date:

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ Yes 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: prepped at TA-54

8.1[1] Performed By: Brandon Chaez
Waste Handling Technician (print) Signature Z # Date 12-22-13

8.1[6] Reviewed By: Clayton Mullins
Supervisor or designee (print) Signature Z # Date 12/22/13

Working Copy 12-22-13

ATTACHMENT 5
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WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69152

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: Adam Scopia [signature] 276702 12-22-13
Waste Handling Technician (print) Signature Z # Date

7.[26] Overpack drum closure ring torque value: [illegible] 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): 234.8 lb

Comments: n/c

8.1[1] Performed By: Brandon Chacez [signature] 247192 12-22-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins [signature] 240092 12/22/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
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WCRRF DRUM PREPARATION DATA SHEET 12/18/13 45

5.[34][E] Drum ID No.: 69074

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 024449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC-15-25NC
Serial No.: 12-18-13 ~~L-11520~~ L-11520
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100246	036245
Cal. Expiration Date:	12-18-13	12-18-13
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/-4% rdg +/-6% rdg	+/-3% rdg +/-6% rdg

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

Performed By: Frederick Robledo / [signature] 12-18-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 DS
Serial No.: 0L-874
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69074

Comments: N/C

5.[35] Performed By: Federico Robledo | [signature] | 1228826 | 12-18-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins | [signature] | 1240071 | 12/22/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69674

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

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

Performed By: Adam Sesso [signature] 1/6/2014
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
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6.[3] Drum ID No.: 69074

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 12-22-13 229.4 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: Brandon Chavez / [signature] R0571R / 12-22-13
Operator (print) Signature Z.# Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 24C29L / 12/22/13
Supervisor or designee (print) Signature Z.# Date

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET 12/R/13 HS

5.[34][E] Drum ID No.: 69080

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6 CAUC 1.5-2 SAUC
Serial No.: 6-11522
Manufacture Date: 6-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/- 4% cal +/- 6% cal	+/- 3% cal +/- 6% cal

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

Performed By: Frederick [illegible] / [signature] 122[illegible]6 / 12-18-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 DS
Serial No.: JL-8641
Manufacture Date: 10-11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
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5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

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

5.[34][E] Drum ID No.: 690080

Comments: N/C

5.[35] Performed By: Frederick [illegible] | [illegible] 1328024 12-18-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins | [illegible] 1240092 12/22/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69C3C

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%rdg ±6%rdg

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

Performed By: Brandon Chavez / [signature] [illegible] 12-22 13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
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6.[3] Drum ID No.: 69080

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 294.6 lbs

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

Comments: N/C

6.[32] Performed By: Brandon Chaez / [signature] 1294740 12-22-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 1240094 12/22/13
Supervisor or designee (print) Signature Z # Date

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12/18/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69081

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CMC 1.5-25PVC
Serial No.: L-11518
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12.18.13	~~12-18-13~~ 8-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/-4% cw +/-6% ccw	+/-3% cw +/-6% ccw

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

Performed By: Frederico Rebolledo / [signature] 1238026 12-18-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: JL-851
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69081

Comments: N/C

5.[35] Performed By: [illegible] / [signature] [illegible] / 12-[illegible]
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 241091 / 12/22/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 6405 1

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

M&TE No.: 035370
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: [illegible] / [illegible] / [illegible] / 11/14/2013
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
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6.[3] Drum ID No.: 69081

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 191.4 lbs

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

Comments: N/C

6.[32] Performed By: Adam Segovia (Operator (print)) [signature] (Signature) 276102 (Z #) 12-22-13 (Date)

7.1[4] Reviewed By: Clayton Miller (Supervisor or designee (print)) [signature] (Signature) 240092 (Z #) 12/22/13 (Date)

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12-20-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68758

6.3[15] (S) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10/14/14

6.3[18] Prepared parent 55-gal drum weight (lb): 418.2

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

Comments: N/e

8.1[1] Performed By: Clayta Mullins / CM 1240096 12/21/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Darrel L. Blair / [signature] 1200691 12/23/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Randy Axtell / [signature] 1109185 12/23/13 0648
SOS/SOM or designee (print) Signature Z # Date Time

1941 SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

New container used @ 412. New id given in WCATS B. Myrles 12/2/13

Planning and Technical Solutions

Container ID: S900215\68758 Container Type: 85 GAL DRUM Gross Weight (lbs): 422.6985
Total PE-Ci Activity: 1.17E+01 Equivalent Combustible PE-Ci: 4.38E+00
Total Fissile Gram Equivalents: 1.29E+02 Total Surface Dose Rate (mrem/hr): 37
EPA Code(s): D007; D008; D009

Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 3/5/13. Attachment 3 of DOP-1030 is attache
RTR pre-screen indicates liquid in 90 mil liner, lead liner, and rigid liner in the drum

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~259 lbs. and generator data shows 8 items of nitrate salts with weights ranging from ~22 – 401 lbs.

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

IHS Representative

Potential IHS Safety Risks: Heavy Container, UN1-7 Drum and DOT Contains free liquids, No other hazards noted

Performed By: Jerry Smallwood (IHS Representative (Print)) | Signature | 241659 (Z#) | 10-21-13 (Date)

LTP Engineering

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

Engineering Comments: NA

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

TRU Remediation Operations

Potential Safety Risks: USE Proper PPE and Kitty Litter Ratio

Performed By: Gilbert Martinez (TRU Operations (Print)) | Signature | 149235 (Z#) | 12/6/13 (Date)

Operations Manager or designee

Processing Determination: ☐ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with hands. Use hexamour gloves during processing. Use proper tool for the job.

Approved By: Jose Torres (OM or designee (Print)) | Signature | 221452 (Z#) | 2/6/13 (Date)

Noncertified TRU Waste Drum Item Information

DrumID: 023748

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	11DS6WS2A		✓18.000	NITRATE SALTS	R00	29.88	52	1/13	
2	11DS6WS2B		17.000	NITRATE SALTS	R00	28.22	52	1/13	
3	11DS6WS1A		✓10.100	NITRATE SALTS	R00	11.8	52	1/13	
4	11DS6WS1B		16.200	NITRATE SALTS	R00	20.54	52	1/13	
5	11LR9ES1		14.900	NITRATE SALTS	R00	15.34	52	1/13	
6	110X12WS1		16.500	NITRATE SALTS	R00	12.14	52	1/13	
7	11DS13ES1		11.700	NITRATE SALTS	R00	6.75	52	1/13	
8	11LR18ES1		13.400	NITRATE SALTS	R00	12.52	52	1/13	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 191.7

Material Type	SNM (grams)	Items Net Wt (kg)
52	137.19	117.80
Totals	137.19	117.80

LET

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: S900215

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	_____ %	0.095486 %
Methane	_____ ppm	0.000 ppm
VOC	_____ ppm	1.47 ppm
Filter Vent Unique Identifier No.:	_____	AN-348
Filter Vent Installed:		
Stub Stem (e.g., NucFil-007S)	☐ (☑ N A)	☐ (☑ N A)
Short Stem (e.g., NucFil-7DS)	☐ (☑ N A)	☐ (☑ N A)
Long Stem (e.g., NucFil-08DS)	☐ (☑ N A)	☑ (☐ N A)

ATTACHMENT 3
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7.[2] Waste Container Unique Identifier: S900215

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: S900215

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

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

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

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

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

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

(BD) 12/6/13

Comments: N/A

7.[11][M] 7.[23] Performed By Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor/designee (Print) Signature / # Date

10.1[3] Overhead space heaters ON and thermostat set. ☐ SAT ☑ UNSAT

10.1[4] Reviewed by Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor designee (print) Signature / # Date

ATTACHMENT 2
Page 1 of 2

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

5.[3]/6.[3] Waste Container Unique Identifier: 5900215
PE-Ci Content: 11.68603682
PE-Ci Equivalent Combustible content: 10.2837124
FGE content: 129.0667539
Weight (lb): 422.6985
Outermost Waste Container configuration:
☑ Vented 85-gal ☐ Unvented 85-gal ☐ Unvented 55-gal

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

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

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

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

ATTACHMENT 2
Page 2 of 2

5.[3]/6.[3] Waste Container Unique Identifier: S900215

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

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

CS

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

Comments: N/A

5.[19]/6.[28] Performed By: Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor/designee (Print) Signature Z# Date

10.1[3] Reviewed by: Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor/designee (print) Signature Z# Date

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

10.1[8] Approved by: Chris Vigil [signature] 163082 3-5-13 1053
SOS SOM or designee (print) Signature Z# Date Time

DVS Gas Determination Results Report

Date: 3/5/2013

Waste Container Number: S900215

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	0	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	1.47	1502.00	N	N/A
1,1-Dichloroethane	0	400.80	N	N/A
Cis 1,2-Dichloroethene	0	400.20	N	N/A
Methyl Ethyl Ketone	0	1503.00	N	N/A
Cyclohexane	0	497.30	N	N/A
Benzene	0	1492.00	N	N/A
1,2-Dichloroethane	0	400.80	N	N/A
N-Butyl Alcohol	0	200.20	N	N/A
Methyl Isobutyl Ketone	0	501.90	N	N/A
Toluene	0	1491.00	N	N/A
Chlorobenzene	0	186.60	N	N/A
Ethylbenzene	0	100.00	N	N/A
m,p-Xylene	0	100.09	N	N/A
o-Xylene	0	100.30	N	N/A
1,3,5-Trimethylbenzene	0	50.64	N	N/A
1,2,4-Trimethylbenzene	0	50.17	N	N/A

Flammable Tentative Identified Compounds (TIC)

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

Total Flammable VOCs	1.47	I.V.R. Intial and Date	TAB 3/5/13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.095486	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-348

Doug Eisele
DVS Operator Print Name

Signature

03-05-13
Date

12-22-13

0550 Assuming WCRR operations center - JColeman
0615 Pre-job being conducted by SOS.
0623 Current temp inside 50-69 is 67°.
0641 Pre-job concluded. Will need to perform snow removal.
0708 Mode change complete. We are now in operations in WCRRF yard and 50-69.
0710 Beginning outside rounds.
0730 Operators entering 50-69 to begin operations.
0745 Outside rounds complete.
0755 Snow removal personnel ~~arrive~~ JC 12-22-13 arrived to perform snow removal in WCRRF yard.
0800 Beginning inside rounds.
0830 Item #63 is OOS, okay to proceed per CSE documentation
0832 Inside rounds complete.
0839 Both rounds reviewed by SOS.
0850 Bagging on 68758.
0905 Bag on complete.
0931 Operators requested to lower 50-69 thermostat to 68°. Permission granted.
1011 Bagging off 1 daughter, bagging on another daughter.
1032 Bag off/on complete. PPE check is SAT.
1037 Initiating a drum movement from 50-69 to a transportainer.
1045 Notified by lead RCT that an RCT was checking under the WCG on the 6 + 15 inch bag out ports and found contamination. The direct reading was 1000 DPM alpha. RCT's will check for JC 12-22-13 removable, then contain it with tape.

unexpected condition

1111 Per lead RCT, RCT's checked and there was no removable contamination and on this check the direct reading was 2000 DPM alpha (direct). Smears were taken and the RCT's will mark area with this reading on the tape.
1118 Drum movement ~~out~~ JC 12-22-13 out of 50-69 complete.
1140 Bagging off 1 daughter, bagging on another daughter.
1155 Bag on/off complete. PPE check is Sat.

Continued on next page - JColeman

WCRR SOM - 12-22-13

0555 Reviewed conditions and assumed the WCRR-SOM position from [illegible]
0600 Called snow removal supervison Steve Trujillo at 500-5398 - and he will call in support to remove snow ~1hr.
0611 Completed attending the prejob brief conducted by the SOS (Clayton) he assigned 3 personnel to work inside on the WCG - The Safety topic was to watch your step and slip hazards - Discussed snow removal - placement of ice melt in walkways and clearing forktrck to move inside Truck bay - shift orders in effect were discussed, Operations will perform a walkout when snow is removed.
0706 made change: 50/65 and Yard transfer from ~~Operations to operating~~ warm room warm room [illegible] 12-22-13 to Operations/Operations current temperature inside facility is 67°F
0730 Ensured walkway was cleared for rounds also laborer team arrived to remove snow, they utilized a small polaris to remove snow in the parking lot.
0735 Notified by 412 operations (J. Cassel) that at 0652 RCTs were responding to a CAM alarm. Currently the operators and supervison are in the pre-job brief. The supervison will notify me when the CAM is cleared
0757 Laborers arrive at 50/64 to remove snow between the facility 50/65 and transportainer they completed removal from the parking lot and walkways.
0801 (Juan Cassel) supervison from 412 reports the CAM was cleared for operators to enter 412, RCTs report no contamination detected.
0857 Inside PIC reports bagging on SP-72-68758. (Noted inside PIC - James, did not enter facility until 0730, Also noted that inside rounds were not completed until 0832 hrs. SOS had requested PIC to complete rounds and perform bag on upon entry. Also at 0830 two overtime operators arrived to support inside Op's The SOS provided a pre-job brief and they entered 50/64 to support BAG ON
0905 inside operators report bag on completed, and request additional supplies.
0930 Inside operator request to turn down heat to 68°F, also noted, upon opening parent lid, ~5 gallons of water entered the glovebox - pk- 4-5.
1011 Operators initiate bag off of 1 daughter and bag on another and continue processing.
1032 Inside Operators report bag on completed
1102 Outside Operator initiates drum movement out of 50/64 to the transportainer - 8 total.
1.16 Transfer completed to the transportainers.
1130 412 Supervison reported, upon removing and opening 55 Drum, S 802723 - (55 gallon), ~~from 55 gallon~~ [illegible] 12-22-13 was noted to be not vented. The drum was removed from SB 10130 The supervison ~~instructed the~~ [illegible] 12-22-13 discussed with operators to place the 55 drum lid back on (which is vented) I instructed the supervison to notify the AREA 67 Operations Center.

WCRR SOM - 12-22-13 (cont.)

(cont.) 1130 and upon notification ~~notify~~ 12-22-13 follow direction and provide update to WCRR SOM.

1140 Inside operations report bagging off daughter and bagging on another daughter and continue working.

1201 412 Supervisor was called to obtain an update. Per supervisor's procedure utilized and Operations Center (AREAG) they followed procedure with 15 ft clearance and lid was secured on the 85 gallon, once sealed, the drum could be moved to a staging storage area (the 85 is vented). - WCRR SOM - will send Email to production control and production inventory AREAG - and request drum 5808723 be moved to DOME 33 for eventual DVS venting. Notification made to OM

1207 Inside Operators exit for lunch break from WCRR.

1305 Operators return from lunch and enter SOPES to initiate processing.

1356 Inside Operators report completion of 3rd daughter and prior to bag off will initiate denesting of 2 - SP 72's.

1437 Completed assisting Production Inventory in performing a verification of all Parent containers in transportainers and SOPES - All TRU drums SAT noted one 440 drum container number W 798343

1441 412 supervisor reports WCATS will not allow movement of containers from process area to storage area" OM recommended call waste help off hours line and submit waste help @ Lani request. Sent Email to OM

1505 Inside Operators report denesting completed and initiate bag on of SP 72 containers ~~68755~~ 12-22-13 68756 and 68755 is also denested

1515 Obtained Report from 412 supervisor, that waste help is supporting to resolve.

1533 Inside Operators report bag off and bag on completed 68756 Parent is ON

1545 Operators report Parent drum was noted with hole ~1" diameter on lid next to bolt. This drum was sleeved and bagged on - precaution taken, no contamination released. Photos were taken, also SP 72 5844253 was opened, re-sealed - photos also taken, drum ring is noted cracked and bent, partially off, but SOS believes it can be denested currently the lid was placed back on 5844253 and 68755 is currently denested.

1701 Inside operations report bagging off 1 daughter and bagging on another and will continue ~~processing~~ 12-22-13 with maintenance of glovebox - Parent noted 6 gallons - ph 4-5

1722 Operators complete the bag off of daughter, no liquid present currently 50% full, Kitty litter placed inside Parent ~~Drum~~ 12-22-13 requested to be left on by SOS.

1733 Obtained approval from OM to leave parent drum SP 72 68756.

1745 Operations include inspection for any free liquids prior to placing lid on drum

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO

12/22/13
0600 Assuming SOS position. CA
0615 Starting Pre-Job, discussed being short handed, inside as well as extra precautions on ladders and while driving during the holidays.
~~0700~~ 12-22-13 Pre-Job complete
0708 Mode change complete, WCRRF yard and SC 69 are now in Operations.
0839 Signed off on the rounds.
0850 Bagging on 68758.
0905 Bag on complete.
1011 Bagging off 1st daughter, bagging on a 2nd.
1032 Bag off/on complete
1037 Starting a movement out of SC-69.
1045 Notified by lead RCT that another RCT was checking under the WCG on the tape are the 6" and 15" bag out ports and he found some contamination. The direct was 1000 DPM Alpha. RCT's will check for removeable, then contain it with tape
unexpected condition
1111 Per lead RCT, no removeable contamination was found, and the direct was actually 2000 DPM Alpha. RCT's took smears and they will mark that reading on the tape that was used to contain the contamination.
1118 Movement out complete.
1140 Bagging off 2nd daughter, bagging on a 3rd
1155 Bag off/on complete.
1356 Starting to Denest 2 drums, then will be bagging off 3rd daughter and bagging on a new parent.
1502 Denesting complete, bagging ~~on~~ 12-22-13 on ~~68755~~ 12-22-13 68756.
1534 ~~1434~~ 12-22-13 Bag off/on complete.
1625 ~~1420~~ Signed off on the rounds.
1701 Bagging off 1st daughter, bagging on a 2nd.
1724 Bag off/on complete.
1733 SOM recieved permission from OM to leave parent, 68756, on WCG overnight.
1750 Mode change complete, WCRRF yard and SC-69 are now in Warm Standby.
12-22-13 1805 Securing SOS position. CA
HG

~~AA~~ 12-22-13

No Further Entries on this Page

SIGNATURE
READ AND UNDERSTOOD

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69074
Video/Audio Recorded Media Number:	LA-RTR2-14-0002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 104.0 kg Tare Wt.: 33.4 kg Net Wt.: 70.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 69074

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

R:

XPM: Plastic bag, plastic sheeting

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	3.0
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):	65.6
Soils (S):	
Total WMP Weight:	70.6

CCP Radiography Data Sheet

Waste Container ID: 69074

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

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

RTR Operator:

Aaron Elliott/Eddie Rios		1/6/2014
Print Name	Signature	Date

S900215

NDA 2000 Assay Report

Item Information

Item ID:	69074	Count Sequence Number:	16853
Operator:	DCLTD231\Operator		
Assay Start:	1/22/2014 11:54:29 AM		
Description 1:	2LANDA1254		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 70.6 kg	Net:	70.6 kg
Container:	Volume: 208.0 l	Full:	55.0 %
Density:	0.620 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: 16853
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 69074

Batch Number: 2LANDA1254
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/22/2014

Net Weight	70600.0 g		
Pu mass	1.02E+002	+-	3.11E+001 g
TRU Alpha Activity	1.09E+001	+-	3.09E+000 Ci
TRU Activity Concentration	1.55E+005	+-	4.37E+004 nCi/g
Pu-239 Equivalent Activity	1.11E+001	+-	3.09E+000 Ci
Pu-239 FGE	9.59E+001	+-	3.10E+001 g
Decay heat	3.48E-001	+-	1.00E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	9.47E-011	1.07E-007	2.42E-008	5.61E-008
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.19E-007
U233	<LLD	<LLD	0.00E+000	8.96E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.58E-006
NP237	7.82E-002	5.52E-005	9.48E-006	1.88E-006
PU238	9.28E-003	1.59E-001	5.63E-002	7.94E-004
U238	<LLD	<LLD	0.00E+000	1.71E-005
PU239	9.55E+001	5.92E+000	1.92E+000	2.96E-002
PU240	6.11E+000	1.39E+000	4.91E-001	6.94E-003
AM241	1.01E+000	3.45E+000	2.36E+000	5.44E-002
PU241	1.16E-001	1.19E+001	4.22E+000	5.96E-002
PU242	2.04E-002	8.05E-005	2.85E-005	0.00E+000
AM243	4.41E-003	8.82E-004	1.52E-004	1.20E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 1/24/14

ITR: D=R Date: 1-24-14

Automated Independent Technical Review

Count Sequence Number: 16853 Batch Number: 2LANDA1254
Counter ID: HENC #2
Container ID: 69074
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/22/2014

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

Comments	Disposition
Section 5 - Gamma Analysis Analysis Status: No errors. Spectrum Validity Check engine has suggested data review.	Ok After EA review, spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 1-23-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69074**

BDR Number: **LA14FG2009**

Sampling Date: **1/24/2014**

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\140124c\
Data File : 69074.D
Acq On : 24 Jan 2014 12:55 pm (#1); 24-Jan-14, 12:54:37 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH ~~FITTER~~ FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1 1-24-14 SA

Quant Time: Jan 24 14:26:01 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.555	96	2823520	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.865	117	2272743	177.50 ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69080
Video/Audio Recorded Media Number:	LA-RTR2-14-0002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 133.5 kg Tare Wt.: 33.4 kg Net Wt.: 100.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 69080

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic liner lid, plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	4.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	12.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	81.1
Soils (S):	
Total WMP Weight:	100.1

CCP Radiography Data Sheet

Waste Container ID: 69080

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

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

RTR Operator:

Aaron Elliott/Eddie Rios		1/6/2014
Print Name	Signature	Date

S 900215

NDA 2000 Assay Report

Item Information

Item ID:	69080	Count Sequence Number:	16852
Operator:	DCLTD231\Operator		
Assay Start:	1/22/2014 11:06:34 AM		
Description 1:	2LANDA1254		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 100.0 kg	Net:	100.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.640 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: 16852
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 69080

Batch Number: 2LANDA1254
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/22/2014

Net Weight	100000.0 g		
Pu mass	2.11E+001	+- 3.84E+000	g
TRU Alpha Activity	5.98E+000	+- 2.40E+000	Ci
TRU Activity Concentration	5.98E+004	+- 2.40E+004	nCi/g
Pu-239 Equivalent Activity	6.02E+000	+- 2.40E+000	Ci
Pu-239 FGE	1.99E+001	+- 3.83E+000	g
Decay heat	1.96E-001	+- 7.98E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	2.32E-010	2.62E-007	7.86E-008	2.02E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.61E-007
U233	<LLD	<LLD	0.00E+000	1.01E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.09E-006
NP237	1.06E-001	7.45E-005	1.30E-005	1.84E-006
PU238	1.92E-003	3.29E-002	7.89E-003	7.30E-004
U238	<LLD	<LLD	0.00E+000	1.23E-005
PU239	1.98E+001	1.23E+000	2.38E-001	2.72E-002
PU240	1.27E+000	2.87E-001	6.89E-002	6.38E-003
AM241	1.29E+000	4.43E+000	2.39E+000	8.39E-002
PU241	2.40E-002	2.47E+000	5.92E-001	5.48E-002
PU242	4.22E-003	1.67E-005	4.00E-006	0.00E+000
AM243	7.72E-003	1.54E-003	2.71E-004	1.33E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 1/24/14

ITR: [illegible] Date: 1.24.14

Automated Independent Technical Review

Count Sequence Number: 16852 Batch Number: 2LANDA1254
Counter ID: HENC #2
Container ID: 69080
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/22/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors. Spectrum Validity Check engine has suggested data review.	Ok After EA review, spectrum valid.

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

Expert Review by: Sherri Chamb Date: 1-23-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69080**

BDR Number: **LA14FG2009**

Sampling Date: **1/24/2014**

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\140124c\
Data File : 69080.D
Acq On : 24 Jan 2014 1:34 pm (#1); 24-Jan-14, 13:33:33 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH ~~FITLER~~ FILTER (Sig #1); (Sig #2) 1-24-14
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 24 13:43:33 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	3.591	96	2880832	205.75	ppmv	0.07
15) Chlorobenzene-d5	5.888	117	2343500	177.50	ppmv	0.03

Target Compounds	Qvalue

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69081
Video/Audio Recorded Media Number:	LA-RTR2-14-0002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 87.0 kg Tare Wt.: 33.4 kg Net Wt.: 53.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 69081

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	5.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	46.6
Soils (S):	
Total WMP Weight:	53.6

CCP Radiography Data Sheet

Waste Container ID: 69081

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

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

RTR Operator:

Aaron Elliott/Eddie Rios		1/6/2014
Print Name	Signature	Date

S900215

NDA 2000 Assay Report

Item Information

Item ID:	69081	Count Sequence Number:	16845
Operator:	DCLTD231\Operator		
Assay Start:	1/21/2014 2:37:12 PM		
Description 1:	2LANDA1253		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 53.6 kg	Net:	53.6 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.520 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: 16845
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 69081

Batch Number: 2LANDA1253
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/21/2014

Net Weight	53600.0 g		
Pu mass	1.26E+002	+-	3.20E+001 g
TRU Alpha Activity	1.78E+001	+-	2.45E+000 Ci
TRU Activity Concentration	3.32E+005	+-	4.57E+004 nCi/g
Pu-239 Equivalent Activity	1.81E+001	+-	2.45E+000 Ci
Pu-239 FGE	1.19E+002	+-	3.19E+001 g
Decay heat	5.73E-001	+-	7.78E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	2.61E-010	2.95E-007	8.48E-008	2.22E-007
SR90.	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.19E-006
U233	<LLD	<LLD	0.00E+000	1.49E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.24E-006
NP237	2.21E-001	1.55E-004	2.41E-005	3.78E-006
PU238	1.15E-002	1.97E-001	5.99E-002	1.99E-003
U238	<LLD	<LLD	0.00E+000	3.00E-005
PU239	1.18E+002	7.33E+000	1.98E+000	7.40E-002
PU240	7.56E+000	1.72E+000	5.23E-001	1.73E-002
AM241	2.49E+000	8.53E+000	1.34E+000	2.71E-001
PU241	1.43E-001	1.48E+001	4.49E+000	1.49E-001
PU242	2.52E-002	9.97E-005	3.04E-005	0.00E+000
AM243	1.59E-002	3.19E-003	4.93E-004	2.50E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 1/23/14

ITR: Date: 1-24-14

Automated Independent Technical Review

Count Sequence Number: 16845 Batch Number: 2LANDA1253
Counter ID: HENC #2
Container ID: 69081
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/21/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	Ok
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	
NCC Pu mass was above calibration range.	Multiplication in drum. Neutron results rejected. Gamma results applied.
FGE is greater than the upper limit of 200.00	
The Standard NCC Pu effective mass exceeds the Upper Calibration Limit.	
No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.

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.	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
MCA Deadtime greater than the upper limit of 50.0%.	MCA deadtime=57.28%. No spectral distortion observed.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamb Date: 1-22-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69081**

BDR Number: **LA14FG2009**

Sampling Date: **1/24/2014**

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\140124c\
Data File : 69081.D
Acq On : 24 Jan 2014 12:32 pm (#1); 24-Jan-14, 12:31:29 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH ~~FITLER~~ FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 24 14:24:51 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	3.539	96	2876152	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.852	117	2276981	177.50 ppmv	0.00

Target Compounds Qvalue

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

VOCGAS.M Fri Jan 24 14:25:02 2014

S901114

S901114

Containe... e 761323

File Options Reports Help

S901114

761323	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

S901114

- S901114
  - LA00000068826
    - LA00000069220 - EMPTY
    - LA00000069094
      - LASB50424
    - LA00000069187
      - LASB50020
    - LA00000069079
      - LASB50073
  - W798324 - EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.001	%			

ATTACHMENT 1
Page 1 of 4

1-11-14 ω

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68826

6.2[4] Date Processed: 1-11-14

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

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

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

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

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

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

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

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

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

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

Performed By: Brian Gallegos / B. Gallegos / 2607129 / 1-11-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 688826

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 415.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 415.8 lb

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

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

Initials Z# Date

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

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: ~~69094~~ 68826 1-11-19

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69094	69079		
10.1[4]	Daughter Drum Filter No.	JL-870	JL-856	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10063	L-10060		A
10.1[4]	Daughter Drum Purchase Order No.	501892	501892		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOB			
	Model No.	6CPVC1.5-25NC			
	Serial No.	L-10185			
	Date of Manufacture	5/13			
10.2[5]	POC ID No	69187			
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS	N	N	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BG 267129			A
10.2[14]	POC Assembly Gross Weight (lb)	377.6			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1200			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A			
10.3[5][A]	Free Liquid Volume/Units	15 GALLONS	4 GALLONS		
10.3[7][A]	Opaque/Non-penetrable Item Description:	N	LEAD SHIELDING		
10.3[9][A]	PCB-contaminated Waste Description	A	N A		
10.3[9][B]	PCB Item ID No.			N	
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		A
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	80%	70%		
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS, KITTY LITTER	BAG OUT STUBS, KITTY LITTER		

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 68826

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, KITTY LITTER, LEAD SHIELDING

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 1267129 / 1-11-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [signature] / 1149235 / 1/10/14 0986
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 5
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1-11-14 CV

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69220

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8-02-14
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: Brian Gallegos / [signature] / 267129 1-11-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 166.8 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / [signature] / 267129 1-11-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] / [illegible] 1/12/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
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1/2/14 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69079

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.: 60PVC1.5-2SPVC
Serial No.: L-60060
Manufacture Date:

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	8-05-14
Range in ft-lb:	40-200	16-80
Tolerance:	±4% cw/cccw	±3% cw/cccw

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

Performed By: Brian Gutierrez / [signature] 1067129 / 1-02-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NucFil
Model No.: 019DS
Serial No.: JL-856
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
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5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

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

5.[34][E] Drum ID No.: 69079

Comments: N/C

5.[35] Performed By: Brian Gallegos / [signature] / 2467128 1-02-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 1492371 1/02/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69079

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

M&TE No.: 038370
Cal. Expiration Date: 8-02-14
Range in ft-lb: 16-80
Tolerance: ±4% cw ± 6% ccw

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

Performed By: BRIAN GALLEGOS / Brian Gallegos / 267129 / 1-11-14
Operator (print) / Signature / # / 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 / # / 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.: 69079

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 401.8 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: Brian Gallegos / [signature] / 267129 / 1-11-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Mart / [signature] / 142275 / 1/12/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
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WCRRF DRUM PREPARATION DATA SHEET

1/4/14 HC

5.[34][E] Drum ID No.: 69094

5.[3] Drum information:
Purchase Order No.: 501895 ~~501882~~ 1/4/14
Lot No.: 0244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5-2SPVC
Serial No.: L10063
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	8/05/14
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: Jo Romero ERNESTO SENA (Operator (print)) (Signature) 109702 291398 (Z #) 1/4/14 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: JL8370
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69094

Comments: N/C

5.[35] Performed By: Joe Romero ERNESTO SENA (Operator (print)) [signature] (Signature) 109702 (Z #) 1/4/14 (Date)

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

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69094

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

M&TE No.: 038370
Cal. Expiration Date: 8-02-14
Range: 16-80 ft-lb
Tolerance (+/-): ±3% CW ±6% CCW

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

Performed By: Brian GALLEGOS / [signature] / 267129 / 1-11-14
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69094

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 415.8 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: BRIAN GALLEGOS / [signature] 216729 1-11-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 14-2557 1/12/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 3
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1-14-14

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68826

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): 415.8

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

Comments: N/C

8.1[1] Performed By: Brian Gallegos [signature] 1267129 1-11-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez [signature] [illegible] 1/12/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Gilbert Martinez [signature] [illegible] 1/14/14 0955
SOS/SOM or designee (print) Signature Z # Date Time

1941 SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

New drum used @ 4/2 Prep.

Planning and Technical Solutions New id given in WCATS B Ramplla 12/2/13

Container ID: S901114 \ 68826 Container Type: 85 GAL DRUM Gross Weight (lbs) 437.913
Total PE-Ci Activity: 7.32E+00 Equivalent Combustible PE-Ci: 2.74E+00
Total Fissile Gram Equivalents: 8.08E+01 Total Surface Dose Rate (mrem/hr): 35
EPA Code(s): D007; D008; D009

Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 3/5/13 and Attachment 3 of DOP-1030 is attached. RTR pre-screen indicates liquid in 90 mil liner, lead liner, and rigid liner in the drum.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~273 lbs. and generator data shows 10 items of nitrate salts with weights ranging from ~21 – 35 lbs.

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

IHS Representative

Potential IHS Safety Risks: May Contain D007, D008 and D009 Contain free liquids, use other hazards [illegible]

Performed By: [illegible] | [illegible] | 241659 | 8-22-08
IHS Representative (Print) | Signature | Z# | Date

LTP Engineering

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

Engineering Comments: NA

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

TRU Remediation Operations

Potential Safety Risks: USE Proper PPE

Performed By: Gilbert Martinez | [illegible] | 149255 | 12/6/13
TRU Operations (Print) | Signature | Z# | Date

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with hands. Use heavy duty gloves during processing.

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

Noncertified TRU Waste Drum Item Information

DrumID: 023762

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	NT	Auth (Pg/Ln)	Comments
1	1OX12WS1A		12.600	NITRATE SALTS	R00	5.54	52	1/13	
2	1OX12WS1B		12.100	NITRATE SALTS	R00	5.32	52	1/13	
3	1LR11ES1		12.800	NITRATE SALTS	R00	4.47	52	1/13	
4	1LR12ES1		12.300	NITRATE SALTS	R00	13.03	52	1/13	
5	1OX20WS1A		10.800	NITRATE SALTS	R00	8.86	52	1/13	
6	1OX20WS1B		9.700	NITRATE SALTS	R00	7.95	52	1/13	
7	1LR56ES1		12.400	NITRATE SALTS	R00	14.51	52	1/13	
8	1LR28ES1A		15.800	NITRATE SALTS	R00	7.43	52	1/13	
9	1LR28ES1B		13.900	NITRATE SALTS	R00	6.53	52	1/13	
10	2OX8WS1		11.500	NITRATE SALTS	R00	12.19	52	1/13	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	85.83	123.90
Totals	85.83	123.90

19 11 0 9 7 8

ATTACHMENT 3
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TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: S901114

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	____ %	0.188713 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	1.44 ppm
Filter Vent Unique Identifier No.	____	AN-358
Filter Vent Installed:		
Stub Stem (e.g., NucFil-007S)	☐ (☑ N/A)	☐ (☑ N/A)
Short Stem (e.g., NucFil-7DS)	☐ (☑ N/A)	☐ (☑ N/A)
Long Stem (e.g., NucFil-08DS)	☐ (☑ N/A)	☑ (☐ N/A)

ATTACHMENT 3
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7.[2] Waste Container Unique Identifier: 89D1114

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

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

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

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

- 85-gal Waste Container ____ ☑ N/A
- 55-gal Waste Container ____ ☐ N/A

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

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

ATTACHMENT 3
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7.[2] Waste Container Unique Identifier: S901114

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					N/A			
	Unique Identifier No.								
55-gal	Type								
	Unique Identifier No.								

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

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

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

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

(BS) 12/6/13

Comments: N/A

7.[11][M] 7.[23] Performed By: Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor/designee (Print) Signature / # Date

10.1[3] Overhead space heaters ON and thermostat set. ☐ SAT ☑ UNSAT

10.1[4] Reviewed by: Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor designee (print) Signature / Date

ATTACHMENT 2
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TA-54 AREA G DRUM VENTING PROCESS DRUM RECEIPT DATA SHEET

5.[3]/6.[3] Waste Container Unique Identifier: 990114
PE-Ci Content: 7.315919332
PE-Ci Equivalent Combustible content: 6.438009012
FGE content 80.80087152
Weight (lb) 437.913
Outermost Waste Container configuration:
☑ Vented 85-gal ☐ Unvented 85-gal ☐ Unvented 55-gal

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

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

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

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

ATTACHMENT 2
Page 2 of 2

5.[3]/6.[3] Waste Container Unique Identifier: S901114

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

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

CS

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

Comments: N/A

5.[19]/6.[28] Performed By: Chris Vigil [signature] 163082 / 3-5-13
LTP-DDP Supervisor/designee (Print) Signature Z # Date

10.1[3] Reviewed by Chris Vigil [signature] 163082 / 3-5-13
LTP-DDP Supervisor/designee (print) Signature Z # Date

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

10.1[8] Approved by: Chris Vigil [signature] 163082 3-5-13 1145
SOS SOM or designee (print) Signature Z # Date Time

DVS Gas Determination Results Report

Date: 3/5/2013

Waste Container Number: S901114

Batch Number: DVS2130305

Filter Type Installed: 08DS

Number of Filters Installed: 1

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	0	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	1.44	1502.00	N	N/A
1 1-Dichloroethane	0	400.80	N	N/A
Cis 1,2-Dichloroethene	0	400.20	N	N/A
Methyl Ethyl Ketone	0	1503.00	N	N/A
Cyclohexane	0	497.30	N	N/A
Benzene	0	1492.00	N	N/A
1 2-Dichloroethane	0	400.80	N	N/A
N-Butyl Alcohol	0	200.20	N	N/A
Methyl Isobutyl Ketone	0	501.90	N	N/A
Toluene	0	1491.00	N	N/A
Chlorobenzene	0	186.60	N	N/A
Ethylbenzene	0	100.00	N	N/A
m,p-Xylene	0	100.09	N	N/A
o-Xylene	0	100.30	N	N/A
1,3,5-Trimethylbenzene	0	50.64	N	N/A
1 2,4-Trimethylbenzene	0	50.17	N	N/A

Flammable Tentative Identified Compounds (TIC)

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

Total Flammable VOCs	1.44	I.V.R. Intial and Date	RT 3-5-13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.188713	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-358

Doug Eisele
DVS Operator Print Name

Signature

03-05-13
Date

50-69
Wanda

1-11-14
0555 Assuming WCRRF operations center - Cleland.
0615 Pre job being conducted by SOS.
0630 Pre job concluded by SOS.
0635 Starting outside rounds.
0650 Starting inside rounds.
0701 ~~Inside~~ Outside 1-11-14 rounds completed
0712 inside rounds complete.
0718 Rounds signed off by SOS.
0730 mode change to operations, TRU-69 and WCRRF yard.
0755 moving out of 50-69
0804 Starting to denest 4 drums.
0819 movement out of 50-69 is complete
0930 Denesting complete, Bagging on U8742
0937 Bag on complete.
1102 Bagging off 2 daughters, Bagging on U8818.
1138 Bag off and Bag on complete
1327 Bagging off 1 daughter bagging on another daughter
1339 Bag on, Bag off complete
1420 Bagging off, Bagging on U8826
1442 Bag on, Bag off complete
1443 Starting outside rounds
1452 noticed by operators that drum U8826 is full of water and glovebox has water in ports. RCT's monitoring and operators cleaning up
1514 Starting inside rounds. Outside rounds complete.
1520 Starting movement into 50-69 4 drums
1525 Bagging off 1 daughter, Bagging on 1 daughter
1539 Item U3 is OOS, PCB in place okay to proceed per CST documentation
1542 Bag off is complete. movement into 50-69 complete
1553 Starting movement out 50-69.
1600 Inside rounds complete.
1620 movement out of 50-69 complete.
1651 Bagging off 1 daughter and POC, will put on port cover.
- Continued on next page - Cleland

Int. Douglas 68815

1-11-14 -Continued from previous page - Roland

1730 ~~Begin~~ @ 1-11-14 Bay 77 complete.

1735 stacking more out of 50-69

1755 mode change to Warm Standby 50-69 and WCRRF yard,

1758 movement out of 50-69 complete.

1-11-14 1850 end of day WCRRF Operations center secure - Roland

HA9

no further entries this page

1/11/14 WCRR SOM

0600 Assumed the WCRR SOM position.

0630 Completed attending the pre job brief conducted by SOS (G. Martinez). Discussed attention to detail in all things - not just processing/operations but support functions as well. Work for today to include denesting and prep of 4 drums first thing (SP-72's). Station 2 inner lead window was broken yesterday - operators are using steel plate instead of lead window for shielding (lower window)

0730 Completed Mode Change: WCRR Yard/Bldg 50-69 from Warm/Warm to Operations/Operations.

0731 Operators reset thermostat in 50-69 to 68°F.

0734 Late Entry @ 0725 - Contacted ES Lead working @ Dome 412 regarding RWP for processing in glovebag. RP-1 does not have it yet however work is continuing without - Localized ventilation is being used which is acceptable under current RWP being worked to. J. Cassel cleared w/ RP-1 that this is an acceptable path forward for this drum.

0819 Completed move out of 5 drums from 50-69 to transportainers.

0930 Denesting operations completed of 4 drums - bagging on drum #68742.

0937 Bag on completed.

1000 SOM going to TA-54 to see 412 operations

1100 Meeting w/ J. Cassel at Bldg 412 noted the following - 1st drum was completed under the drum fume hood - pump was drained of all liquids w/ 2 daughters being generated. Operators were in process of moving in second drum to work. Certification of Glove bag proposed to take place in afternoon after completion of second drum.

1215 SOM back on site @ WCRR.

1220 Late Entry @ 1138 - Completed all bag offs for parent #68742 (2 daughters total), bagged on drum #68818.

1442 Completed all bag offs for parent #68818 (2 daughters total), bagged on drum #68826.

1452 Ops center notified that drum on WCG when opened was full of liquid - enough to flow into drum ports along bottom of WCG. RCT's are monitoring for dose - operators taking steps to absorb and clean up.

continued on next page →

11/11/14 WCRR SOM continued.

1542 Completed bag off of 1 daughter. Continuing to process

1620 Completed move in of 4 drums to process and move out of 6 drums to transportainers.

1700 ES SOS for 412 operations reported completing processing operations for day - finishing up housekeeping and WCATS updates. Completed drill and drain on 2 parents producing 4 daughters total. Certification of glovebag was also completed.

1730 Completed all bag offs for parent # 68824 (2 daughters and 1 POC total). Port Cover is in place.

1740 Verified thermostat in 50-69 set to 77°F.

1755 Completed Mode Change: WCRR Yard / Blds 50-69 from Operations / Operations to Warm / Warm.

1758 Completed move out of 4 drums to transportainers.

1815 Secured the SOM position.

No further entries this page

NO. 77

PROJECT NAME WCRR SOS LOG Book NOTEBOOK NO.

1/11/14

0600 Assuming SOS Position [illegible]

0615 Conducted Shift brief discussed drums Inside need denesting. also discussed replacement of Lead Lined Glass on station 2 was replaced with steel Plate Per operator's makes more sense to have Plate Vs. Glass on this station.

0630 Pre Job concluded

0728 Reviewed inside and outside Rounds.

0730 Mode Change Complete WCRRF In operations.

0755 moving out of 50-69

0804 Starting to denest 2 drums.

0818 Move out complete

0930 Denesting Complete bagging on 68742

0937 Bag on Complete

1102 Bagging off 2 daughters Bagging on 68818

1138 Bag on/off Complete

1327 Bagging off 1 dauter, Bagging on mother

1339 Bag on/off Complete

1420 Bagging off 1 on 68826

1442 Bag on/off complete

1442 starting Rounds

1452 notified by operators that drum 68826 is full of water and Glovebox has water in Pads RCT's will monitor and operators will clean up.

1520 starting movement In to 50-69 4 drums

1525 Bagging off 1 daughter Bagging on mother

1547 Bag off/on Complete movement In Complete

1553 starting Move out

1620 Move out complete

1651 Bagging off 1 daughter and POC last drum for day

1730 Bag off Complete

1735 Starting Move out of 50-69

1755 Mode Change Complete WCRRF In Warm

1758 Move out complete

1-11-14 1830 end of day solving SOS Position [illegible]

HM

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-RTR2-14-0006
Examination Date:	1/16/2014
Waste Container ID:	69079
Video/Audio Recorded Media Number:	LA-RTR2-14-0006 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 182.0 kg Tare Wt.: 33.4 kg Net Wt.: 148.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 69079

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Pipe cutter

AM:

OM: Scrap lead

OI:

C: Tape roll

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	3.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	4.3
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	134.7
Soils (S):	
Total WMP Weight:	148.6

CCP Radiography Data Sheet

Waste Container ID: 69079

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

Comments: N/A

RTR Operator:

Michael Simmons		1/16/2014
Print Name	Signature	Date

S900-fu
S901114

NDA 2000 Assay Report

Item Information

Item ID:	69079	Count Sequence Number:	24146
Operator:	D3PW2DK1\operator		
Assay Start:	1/18/2014 9:19:52 AM		
Description 1:	1LANDA1893		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 149.0 kg	Net:	149.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.960 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

DS 1.23.14
~~10~~
9

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24146	Batch Number:	1LANDA1893
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:	69079	Analysis Date:	1/18/2014

Net Weight	149000.0 g		
Pu mass	6.18E+001	+- 2.41E+001	g
TRU Alpha Activity	2.06E+001	+- 1.14E+001	Ci
TRU Activity Concentration	1.38E+005	+- 7.62E+004	nCi/g
Pu-239 Equivalent Activity	2.07E+001	+- 1.14E+001	Ci
Pu-239 FGE	5.84E+001	+- 2.41E+001	g
Decay heat	6.76E-001	+- 3.77E-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	1.74E-006
U233	<LLD	<LLD	0.00E+000	1.68E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.78E-006
NP237	3.00E-001	2.12E-004	4.73E-005	7.66E-006
PU238	5.64E-003	9.65E-002	4.19E-002	2.11E-003
U238	<LLD	<LLD	0.00E+000	3.10E-005
PU239	5.80E+001	3.60E+000	1.49E+000	7.88E-002
PU240	3.71E+000	8.42E-001	3.69E-001	1.85E-002
AM241	4.68E+000	1.61E+001	1.12E+001	3.47E-001
PU241	7.03E-002	7.24E+000	3.17E+000	1.59E-001
PU242	1.24E-002	4.89E-005	2.14E-005	0.00E+000
AM243	9.75E-003	1.95E-003	4.39E-004	2.40E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1·22·14

ITR: _____ Date: 1·23·14

DS 1·23·14

~~11~~ 10

Automated Independent Technical Review

Count Sequence Number: 24146 Batch Number: 1LANDA1893
Counter ID: MCS HENC #1
Container ID: 69079
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/18/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors. 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 C Chamberlin Date: 1-21-14

DS 1-23-14
~~12~~
11

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69079**

BDR Number: **LA14FG2009**

Sampling Date: **1/24/2014**

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\140124c\
Data File : 69079.D
Acq On : 24 Jan 2014 2:10 pm (#1); 24-Jan-14, 14:09:53 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH ~~PITTLER~~ FILTER (Sig #1); (Sig #2) 1-24-14 SA
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 24 14:19:19 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.548	96	2810295	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.858	117	2273780	177.50	ppmv	0.00

Target Compounds	Qvalue

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	69094
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 121.0 kg Tare Wt.: 33.4 kg Net Wt.: 87.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 69094

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags, 90 mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	81.6
Soils (S):	
Total WMP Weight:	87.6

CCP Radiography Data Sheet

Waste Container ID: 69094

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

RTR Operator:

Michael Simmons		1/17/2014
Print Name	Signature	Date

S901114

NDA 2000 Assay Report

Item Information

Item ID:	69094	Count Sequence Number:	24151
Operator:	D3PW2DK1\operator		
Assay Start:	1/18/2014 12:58:19 PM		
Description 1:	1LANDA1893		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 87.6 kg	Net:	87.6 kg
Container:	Volume: 208.0 l	Full:	55.0 %
Density:	0.770 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

DS 1-23-14
~~20~~
25

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24151	Batch Number:	1LANDA1893
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:	69094	Analysis Date:	1/18/2014

Net Weight	87600.0 g			
Pu mass	7.74E+000	+-	2.02E+000	g
TRU Alpha Activity	9.46E+000	+-	4.87E+000	Ci
TRU Activity Concentration	1.08E+005	+-	5.55E+004	nCi/g
Pu-239 Equivalent Activity	9.48E+000	+-	4.87E+000	Ci
Pu-239 FGE	7.34E+000	+-	2.02E+000	g
Decay heat	3.13E-001	+-	1.62E-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	1.35E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.18E-006
NP237	1.82E-001	1.28E-004	2.52E-005	6.04E-006
PU238	7.06E-004	1.21E-002	3.69E-003	1.52E-003
U238	<LLD	<LLD	0.00E+000	2.17E-005
PU239	7.26E+000	4.50E-001	1.25E-001	5.68E-002
PU240	4.64E-001	1.05E-001	3.28E-002	1.33E-002
AM241	2.59E+000	8.89E+000	4.86E+000	1.71E-001
PU241	8.79E-003	9.06E-001	2.82E-001	1.14E-001
PU242	1.55E-003	6.12E-006	1.91E-006	0.00E+000
AM243	7.00E-003	1.40E-003	2.77E-004	2.03E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1·22·14

ITR: _____ Date: 1·23·14

DS 1·23·14

~~27~~ 26

Automated Independent Technical Review

Count Sequence Number: 24151 Batch Number: 1LANDA1893
Counter ID: MCS HENC #1
Container ID: 69094
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/18/2014

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. 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.	Ok
MCA Deadtime greater than the upper limit of 50.0%.	MCA deadtime = 58.51%. No spectral distortion observed.
Spectrum Validity Check engine has suggested data review.	Spectrum valid.

DS 1-23-14
~~28~~
27

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

Expert Review by: Sherri Chandler Date: 1-21-14

DS 1-23-14
~~29~~
28

Waste Container ID: **69094**

BDR Number: **LA14FG2027**

Sampling Date: **2/26/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	323.84	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140226c\
Data File : 69094.D
Acq On : 26 Feb 2014 1:21 pm (#1); 26-Feb-14, 13:20:35 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 26 13:29:14 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.535	96	3398471	205.75	ppmv	0.02
15) Chlorobenzene-d5	5.848	117	2653850	177.50	ppmv	-0.01
Target Compounds						Qvalue
1) Hydrogen	1.612	GC1	2435m	323.84	ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	69187
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 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 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: 69187

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); Fiberboard Liner Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	23.9
Soils (S):	
Total WMP Weight:	25.9

CCP Radiography Data Sheet

Waste Container ID: 69187

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Michael Simmons		1/17/2014
Print Name	Signature	Date

S901114

NDA 2000 Assay Report

Item Information

Item ID:	69187	Count Sequence Number:	1233
Operator:	CLREMO67292\User		
Assay Start:	1/27/2014 12:00:23 PM		
Description 1:	4LANDA0041		
Description 2:	POC 171.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal 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:	MILCC		
Efficiency Description:	208 Drum Near 1_01_13		
Segments:	Number: 2	Offset:	0
Count Type:	Item Assay		
Collimator/Geometry Setting:	Near - 1		

Errors quoted at 1.000 sigma

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.4

Count Sequence Number:	1233	Batch Number:	4LANDA0041
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 0	Software Version:	NDA 2000 V.4.0
Item ID:	69187	Analysis Date:	1/27/2014

Net Weight	25900.0 g			
Pu mass	2.13E+001	+-	7.97E+000	g
TRU Alpha Activity	5.97E+000	+-	1.64E+000	Ci
TRU Activity Concentration	2.31E+005	+-	6.32E+004	nCi/g
Pu-239 Equivalent Activity	6.05E+000	+-	1.64E+000	Ci
Pu-239 FGE	2.01E+001	+-	7.95E+000	g
Decay heat	1.95E-001	+-	5.41E-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	3.14E-007
U233	<LLD	<LLD	0.00E+000	4.24E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.09E-007
NP237	4.80E-002	3.39E-005	1.08E-005	7.40E-007
PU238	2.11E-003	3.61E-002	1.53E-002	4.39E-004
U238	<LLD	<LLD	0.00E+000	1.10E-005
PU239	1.99E+001	1.24E+000	4.93E-001	1.51E-002
PU240	1.28E+000	2.90E-001	1.23E-001	3.53E-003
AM241	1.29E+000	4.41E+000	1.56E+000	1.12E-002
PU241	4.04E-002	4.16E+000	1.76E+000	5.07E-002
PU242	4.25E-003	1.68E-005	7.11E-006	0.00E+000
AM243	1.43E-003	2.87E-004	9.13E-005	2.81E-006
CM243	9.90E-007	4.85E-005	1.77E-005	2.86E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 1-31-14

ITR: [signature] Date: 2/3/14

Automated Independent Technical Review

Count Sequence Number: 1233
Counter ID: MILCC
Container ID: 69187
Waste Matrix Code: S3000
Sequence Type:

Batch Number: 4LANDA0041
Count Type:
Assay Date: 1/27/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Gamma Analysis Analysis Status: No errors. 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: [signature] Date: ~~1/31/31~~ 1/31/14 1/31/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69187**

BDR Number: **LA14FG12018**

Sampling Date: **2/4/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1031.80	
74-82-8	Methane	6.56	U
67-56-1	Methanol	7.27	
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	4.15	
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140204c\
Data File : 69187.D
Acq On : 4 Feb 2014 1:52 pm (#1); 4 Feb 2014 1:51 pm (#2)
Operator : DE
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 04 14:50:31 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	9839439	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7475109	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.917	GC1	294321	1031.80	ppmv	100
4) Methanol	0.834	31	3779m	7.27	ppmv	
17) Toluene	5.580	92	125450	4.15	ppmv	95

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

23

S910172

S910172

Container Profile 766489

File Options Reports Help

S910172

766489	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

S910172

- S910172
  - 90325 - EMPTY
  - 90324
    - 92467 EMPTY
    - 92466 – WIPP
  - 90323
    - W92918 - EMPTY
      - W800044
    - 92917 – WIPP

Task History

Transfer Details

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

Working Copy
Date: 10-20-11

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S910172.

6.2[4] Date Processed: 10-20-11

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

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

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

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

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

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

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

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

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

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

Performed By: Brandon Garcia / [signature] / 123785 / 10-20-11
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 216.6 lb

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

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: 5910172

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 2166 lb

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	90323			
10.1[4]	Daughter Drum Filter No.	HK-815			
10.1[4]	Daughter Drum Bag Filter No.	WO-1012			
10.1[4]	Daughter Drum Purchase Order No.	414944			
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	30P			
	Model No.	30P 35PVC			
	Serial No.	WO 1047			
	Date of Manufacture	5-11			
10.2[5]	POC ID No	90324			
10.2[7][B]/10.2[6]	POC Item Description	Plastic absorbant Nitrated salt, oil			
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	WO 1047			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	3b 237895			
10.2[14]	POC Assembly Gross Weight (lb)	393.2.			
10.2[15]	POC Rad. Survey Results (mrem/hr)	280 MR			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	9 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A			
10.3[5][A]	Free Liquid Volume/Units	3.5 gal			
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			
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)	95%			
10.5[4]	Description Waste Added During Processing	Plastic			

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: 5910172

Comments: plastic, metal cans > 4L, plastic, poly liner, absorbent, absorbed oil, nitrated salts

11.1[1] Performed By: Brandon Brown [signature] [illegible] 10-20-11
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Anthony Vigil Anthony Vigil [illegible] 10-20-11
SOS/SOM (print) Signature Z # Date

Working Copy
Date: 10-11-11 CW

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

85-Gallon Overpack ID Number 90325

RECORD Drum Filter information:	Nucf:1-013
Filter ID Number:	AL-597
Date of Manufacture:	1/11

TORQUE WRENCH INFORMATION			
Filter Torque Wrench		**Drum Lid Ring Bolt**	
M&TE ID#	040335	M&TE ID#	038369
Cal Expiration Date	5-25-12	Cal Expiration Date	5-23-12
Tolerance	+/- 3% cw +/- 6% ccw	Tolerance	+/- 3% cw +/- 6% ccw
Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A	Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No
		Bung Torque Wrench	
		M&TE ID#	038372
		Cal Expiration Date	4-28-12
		Tolerance	+/- 3% cw +/- 6% ccw
		Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A

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

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

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

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

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

Drum lid ring ends touching: ☐ YES ☒ NO

Technician Name (print)	Signature	Initials	Z#	Date
Steven Mondragon	Steven Mondragon	SM	1047411	10-27-11
Brandon Garcia	[illegible]	BG	1237895	10-20-11

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

DRUM ID#: 90323

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions.

X Mount lid with filter directly over drum seam.

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

X 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.

X Tighten jam nut.

Record torque wrench information:

MT&E # : 038369

Cal expiration date: 5-23-12

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

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

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 266.0

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

X Complete TWSR.

Operator Print/Sign: Gerald Eggmann Date: 10-20-11

Verifier Print/Sign: Brandon Larson Date: 10-20-11

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

Drum ID#: 90323

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 #: 414444
Lot #: 217306
Date of Manufacture: 11

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 3cpv1.5-2spvc
Serial #: WO 1012
Date of Manufacture: 5-11

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: HK-815
Date of Manufacture: 8/10

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040695	M&TE ID #:	038369
Cal Expiration Date:	9-12-12	Cal Expiration Date:	5-23-12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	110-80
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 witght (lbs) 76.0
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: Michael Romero Z#: 182723 Date: 10-18-11

Verifier Print: Brandon Garcia Verifier Sign: [illegible] Z#: 237895 Date: 10-20-11

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S910172 Container Type: 85-GAL Gross Weight (lbs): 210

Inner Seal #: 024957 Filter Prefix: LAS Filter Serial #: 02542

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

TWSR Comments: NITRATED SALTS SEAL B13864

Total PE-Ci Activity: 6.84E+00 Equivalent Combustible PE-Ci: 2.56E+00 AM-241 PE-Ci: 5.02E+00

Total Fissile Gram Equivalents: 20.7 Total Surface Dose Rate (mrem/hr): 32

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 1/25/2007 Comment: Sealed Ctr > 4L, Impenetrable Obj, Liner Not Punctured,

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☑ VE ☐ PID ☐ Split ☐ Repack

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

TRUCON Code: LA125M Production Control Comments:

Performed By: R. W. Jones / R. W. Jones / 117434 / 1-19-11
Production Control (Print) Signature Z Number Date

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Solid waste disposal record indicates nitrated salts, 16 items identified as leached solids, heaviest item is 14 kg (31 lbs). Net weight 66 kg (145 lbs). May require RWP for >10,000 mrem/hr @ 30-cm. Container S910172 is identified as both a "high dose campaign" and "leached solids" container. Attached are 2 e-mails dated 5 Jan 2011 and 26 Jan 2011 which provide handling instructions. RTR indicates impenetrable object and liner not punctured.

Performed By: Michael D. Garcia / Michael D. Garcia / 099143 / 2/9/11
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments:

Performed By: Clarissa Velarde / C. Velarde / 2310A / 2/10/11
TRU Remediation Operations (Print) Signature Z Number Date

Noncertified TRU Waste Drum Item Information

DrumID: 024957

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
0	12LR6ES1			LEACHED SOLIDS	R04	0.67	52	8/13	
1	12LR6ES1			LEACHED SOLIDS	R04	0.11	44	8/13	
2	SALTSEV7			LEACHED SOLIDS	R04	6.77	52	8/13	
3	SALTSEV7			LEACHED SOLIDS	R04	0.4	44	8/13	
4	SALTSEV12			LEACHED SOLIDS	R04	2.69	52	8/13	
5	SALTSEV12			LEACHED SOLIDS	R04	0.23	44	8/13	
6	10LR27WS1			LEACHED SOLIDS	R04	0.26	52	8/13	
7	10LR27WS1			LEACHED SOLIDS	R04	0.01	44	8/13	
8	11LR28ES1			LEACHED SOLIDS	R04	1.68	52	8/13	
9	11LR28ES1			LEACHED SOLIDS	R04	0.16	44	8/13	
10	12OX18ES1			LEACHED SOLIDS	R04	7.55	52	8/13	
11	12OX18ES1			LEACHED SOLIDS	R04	0.34	44	8/13	
12	10OX20ES1			LEACHED SOLIDS	R04	1.69	52	8/13	
13	10OX20ES1			LEACHED SOLIDS	R04	0.023	44	8/13	
14	10LR25WS1			LEACHED SOLIDS	R04	0.69	52	8/13	
15	10LR25WS1			LEACHED SOLIDS	R04	0.13	44	8/13	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 95.2

Material Type	SNM (grams)	Items Net Wt (kg)
44	1.403	0.00
52	22.	0.00
Totals	23.403	0.00

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/19/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date

CCP (Print)	Signature	Z #	Date

Container No. (7.[1]):	S851739	S910172	S852894
Container Type (SWB, 110/85/55-gal) (7.[1]):	55 gal	55 gal	55 gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S851739	S910172	S852894
Hydrogen Reading (ppm) (7.[10]):	750.40 ppm	Ø ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

Comments:
All 55 gallon drums were sampled from inside an 85 gallon overpack.

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 1/24/11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ Reviewed By: _____ / _____ / ____ / ____
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110119c\
Data File : S910172.D
Acq On : 19 Jan 2011 2:55 pm (#1); 19 Jan 2011 2:54 pm (#2)
Operator : EL
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM FROM 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 19 15:03:26 2011
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.246	96	4143359	209.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	3460994	184.00 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Wed Jan 19 15:03:31 2011

230

PROJECT NAME _____ NOTEBOOK NO. _____

10-20-11

0600 Assuming WCRR operations center. (Coleman).
0610 Beginning inside and outside rounds.
0620 Pre-job being conducted by SOS.
0629 Item #61 on the rounds is unsat. Per CSE, we are okay to proceed.
0640 Outside rounds complete.
0641 Inside rounds complete.
0643 Rounds complete and reviewed by SOS.
0728 Mode change complete. We are now in operations.
0755 Initiating a drum movement from 5069 to a transportainer.
0805 Bagging on drum #5910171.
0817 Movement out of facility complete.
0819 Initiating a drum movement from transportainer to the transfer vehicle for shipment to Area G.
0825 Lowering vehicle access gates to load transfer vehicle.
0840 Vehicle access gates restored. Transfer vehicle loaded. Transportainers secured. 30 JC 10-20-11
0841 Operators have encountered a sealed 50 gallon poly-liner with a metal ring. Stopped and grounded container
0844 Beginning 30-minute wait time.
0914 30 minute wait time has elapsed. Resuming operations.
1130 Bagging off with 3 PCC's and bagging on drum #5862901.
1142 Lowering vehicle barriers to begin receipt of drums from Area G. More absorbent being introduced into WCG.
1220 Shipment from Area G accepted. Transportainers closed and latched. Vehicle access gates restored.
1408 Bagging off and bagging on drum #5910172
1455 Operator report drum #5910172 is another wet drum and they will be requiring more absorbent to introduce into the WCG.
1510 Initiating a drum movement from 5069 to a transportainer.
1511 Introducing 100 lbs of absorbent into the WCG.
1520 Drum movement out of facility complete.
1535 Beginning outside rounds and inside rounds.
1555 Item #61 is unsat on the rounds. Per CSE documentation we are okay to proceed.
1610 Outside rounds and inside rounds complete.
1613 Bagging off drum #5910172.
1614 Rounds reviewed by SOS.
1709 Initiating a drum movement from 5069 to a transportainer.
1710 Drum movement out of facility complete.
1711 Mode change complete. We are now in CAP mode in 5069 and warm standby in the yard.
1730 End of day. Operations secure. (Coleman)
No further entries this page.

GMD 10/25/11

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD

8

PROJECT NAME WCRR SOM Logbook NOTEBOOK NO.

10-20-11

0600 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. Janiece S. Merrick

0615 observed pre-job briefing. Briefed all operators to shift date WCRR-SHI-11-007 and Criticality Briefing.

0728 mode change complete WCRR YARD from WARM to OPERATIONS and 50-109 from WARM to OPERATIONS.

1300 Weekly staff meeting held at TA50-196.

1711 Mode change complete WCRR YARD from OPERATIONS to WARM and 50-109 from OPERATIONS to COLD.

1730 Securing the WCRR SOM POSITION. Janiece S. Merrick

No further entries

SIGNATURE Janiece S. Merrick DATE 10-20 20 11

READ AND UNDERSTOOD DATE 20

8

PROJECT NAME WCRR SOM Logbook NOTEBOOK NO.

10-20-11

0600 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. Jennifer S. Merrick

0615 observed pre-job briefing. Briefed all operators to shift above WCRR-SHF-11-007 and Criticality Briefing.

0728 Mode change complete WCRR YARD from WARM to OPERATIONS and 50-109 from WARM to OPERATIONS.

1300 Weekly Staff meeting held at TA50-196.

1711 Mode change complete WCRR YARD from OPERATIONS to WARM and 50-109 from OPERATIONS to COLD.

1730 Securing the WCRR SOM POSITION. Jennifer S. Merrick

No further entries

SIGNATURE Jennifer S. Merrick DATE 10-20 20 11

READ AND UNDERSTOOD DATE 20

ATTACHMENT 1
Page 1 of 4

2-11-13

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90363

6.2[4] Date Processed: 2-11-13

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, D008, D009

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

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

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

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

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

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

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

Performed By: [illegible], [illegible] 187823 2-11-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 9C323

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 266.0 lb

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

6.2[5][B] Total Parent Drum Weight (lb) 266.0 lb
6.2[6]

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

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

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90323

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92917			
10.1[4]	Daughter Drum Filter No.	KL-403		N	
10.1[4]	Daughter Drum Bag Filter No.	L-6206			N
10.1[4]	Daughter Drum Purchase Order No.	50/011			
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	N	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	none			
10.3[9][A]	PCB-contaminated Waste Description	none			N
10.3[9][B]	PCB Item ID No.	none			
10.3[10]	Remaining Waste Description	See Comment		N	
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	See Comment			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 9C323

Comments: salts, cans, kitty litter and lead, etc

11.1[1] Performed By: Edgar Rios / [signature] 182022 2-11-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [signature] 122452 / 2-12-13 0919
SOS or designee (print) Signature Z # Date/Time

Date. 2-10-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 415525
Lot No.: 0220688
Manufacture Date: 2011

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1923
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:	1% 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] 12-10-13
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: Brandon Chavez / [signature] [illegible] 12-10-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jorez / [signature] 221521 2-12-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 2-11-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92918

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 038367
Cal. Expiration Date: 3-16-13
Range in ft-lb: 10-80
Tolerance: +3% cur / +6% cur

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

Performed By: Eddie Rios / Eddie Rios 188822 2-11-13
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: 2-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 168.0 lb

Comments: N/A

8.1[1] Performed By: Eddie Rios / Eddie Rios 188822 2-11-13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Jerez / Jose Jerez 221452 / 2-12-13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92917

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501011
Lot #: 0233413
Date of Manufacture: 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 #: GCPVC-1.5 2 SPVC
Serial #: L-6206
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: NUCFIL
Model #: 019DS
Serial #: KL-403
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038384
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: Brandon Chavez Signature: [signature] Z#: 204722

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.0
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Brandon Chavez Operator Sign: [signature] Z#: 204722 Date: 2-10-13

Verifier Print: [illegible] Verifier Sign: [signature] Z#: 188222 Date: 2-11-13

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

DRUM ID#: 92917

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038367

Cal expiration date: 3-16-13

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

Tolerance +-3% or +-6 ft-lbs

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

R/ ☐ 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) 296.0

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 2-11-13

Verifier Print/Sign: [illegible] Date: 2-11-13

Daughter Drum 8P72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

2716

Production Control

Container ID: 90323 Container Type: 55-GAL Gross Weight (lbs): 266

Inner Seal #: None Filter Prefix: None Filter Serial #: HK-815

AK Waste Stream: LA-MIN02-V.001 Certified RTR BDR: LA-RTR2-11-0140

TWSR Comments: PARENT #S910172 → 24957

Total PE-Ci Activity: 4.26E+00 Equivalent Combustible PE-Ci: 1.60E+00 AM-241 PE-Ci: 2.09E+00

Total Fissile Gram Equivalents: 26.1 Total Surface Dose Rate (mrem/hr): 20

EPA Code(s): D007, D008, D009

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: Greater than 50% homogeneous solid

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack

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

TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan G. Ramsey Z Number: 100681 Date: 1/16/13

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: 197#. Drum contains all or part of parent drum S910172; SEDS for parent drum attached for review. Part of drum contained 15 items of nitrate salts. RTR BDR for #90323 shows metal cans w/ material, metal lids, metal hardware, plastic bags, horsetails & homogeneous solids. It also shows absorbable liquid & inconsistent waste stream description. No chemicals identified. Applicable waste codes are for chromium, lead, & mercury. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 1/24/13

TRU Remediation Operations

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

Other Specific Safety Concerns: Do not push or press on waste with hands. Use Heavy duty gloves 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: Joe Jerez (TRU Remediation Operations (Print)) Signature: Joe Jerez Z Number: 221452 Date: 2-5-13

XR Z# 249750 2/6/13

IHS Review. [illegible] CSP, may [illegible] Pb, Hg, Cr

No other IH concerns 1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 024957

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
0	12LR6ES1			LEACHED SOLIDS	R04	0.67	52	8/13	
1	12LR6ES1			LEACHED SOLIDS	R04	0.11	44	8/13	
2	SALTSEV7			LEACHED SOLIDS	R04	6.77	52	8/13	
3	SALTSEV7			LEACHED SOLIDS	R04	0.4	44	8/13	
4	SALTSEV12			LEACHED SOLIDS	R04	2.69	52	8/13	
5	SALTSEV12			LEACHED SOLIDS	R04	0.23	44	8/13	
6	10LR27WS1			LEACHED SOLIDS	R04	0.26	52	8/13	
7	10LR27WS1			LEACHED SOLIDS	R04	0.01	44	8/13	
8	11LR28ES1			LEACHED SOLIDS	R04	1.68	52	8/13	
9	11LR28ES1			LEACHED SOLIDS	R04	0.16	44	8/13	
10	12OX18ES1			LEACHED SOLIDS	R04	7.55	52	8/13	
11	12OX18ES1			LEACHED SOLIDS	R04	0.34	44	8/13	
12	10OX20ES1			LEACHED SOLIDS	R04	1.69	52	8/13	
13	10OX20ES1			LEACHED SOLIDS	R04	0.023	44	8/13	
14	10LR25WS1			LEACHED SOLIDS	R04	0.69	52	8/13	
15	10LR25WS1			LEACHED SOLIDS	R04	0.13	44	8/13	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 95.2

Material Type	SNM (grams)	Items Net Wt (kg)
44	1.403	0.00
52	22.	0.00
Totals	23.403	0.00

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-11-0140
Examination Date:	11/02/2011
Waste Container ID:	90323
Video/Audio Recorded Media Number:	LA-RTR2-11-0140 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-3827-11 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: 121.5 kg. Tare Wt: 33.4 kg. Net Wt: 88.1 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	Fiberboard Liner - No Liner Lid
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 90323

Section 3: Container Inventory and Comments (Detailed descriptions)
Metal cans w/material, metal lids, metal hardware
Plastic bags, horsetails
Homogeneous solid material

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP): Liner Bag	2.0
Others: Fiberboard (C)	3.7
Total Packaging Weight:	33.4
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	20.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	66.1
Soils (S):	
Total WMP Weight:	88.1

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 90323

Section 3: RTR Summary (Continued) YES will be explained in the Comments block, unless otherwise noted	Yes	No
	11/8/11	11/8/11
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: This drum contains metal cans with material, which may require additional Project Office review.

NCR-LANL-3827-11

RTR Operator:

Print Name	Signature	Date
Philip Dillard		11/2/11

11/8/11

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9/7/11

Container No. (5.[1])	90323					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal (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: Gabe Romero / 236973
CCP (Print) Z #

Reviewed By: Rick Jagielski / 266088
CCP (Print) Z #

Comments:

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

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

6.1[3] Performed By: SUSAN S. RAMSEY / [signature] / 100161 / 1/30/13
Waste Handling Operator (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\111107c\
Data File : 90323.D
Acq On : 7 Nov 2011 1:54 pm (#1); 7 Nov 2011 1:53 pm (#2)
Operator : GR
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 07 14:02:02 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	3.266	96	4299543	208.25 ppm	0.00
15) Chlorobenzene-d5	5.936	117	3535233	185.50 ppm	0.00

Target Compounds Qvalue

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

29

2-11-13 Continued from previous page - JColeman
0948 Bag on complete. PPE check is Sat.
1058 Bagging off 91007, bagging on 90995.
1120 Initiating a drum movement from S to 2-11-13 transport to Site 9.
1129 Bag on completed. PPE check is Sat.
1145 Drum movement into the facility complete.
1320 Bagging off 90995, bagging on 90989.
1342 Permission granted to lower the vehicle access gates to begin receipt of drums from Area 6.
1348 Bag on completed. PPE check is Sat.
1442 Bagging off 90989, bagging on 91003.
1508 Bag on completed. PPE check is Sat.
1540 notified by operator that the 85 gallon ~~grappler~~ JC 2-11-13 drum grabber attachment is currently broken. The operators were using it to off load the transport vehicle when they noticed that the drum was not situated correctly. Upon further inspection they found a weld was broken SOS notified as well as SOM.
1621 Bagging off 91003, bagging on 90323.
1625 Initiating a Caution Tag #50-13-0003 for the ~~grabber~~ JC 2-11-13 grabbers.
1652 Bag on completed. PPE check is Sat.
1653 Late entry at 1650, inside rounds began. (JC)
1700 Item # 6P is COS. POD in place, continuing rounds. Beginning outside rounds.
1701 Late entry at 1630, the mechanics arrived to adjust the 2nd grabber that we have for the 85 gallon drums. Continuing to off load transport vehicle. (JC) ~~Inside rounds complete~~. JC 2-11-13
1716 The shipment from Area has been accepted. Vehicle access gates restored. Inside rounds completed.
1725 Outside rounds completed.
1752 Bagging off 90323.
1830 Both rounds reviewed by SOS.
1831 Late entry at 1815, bag off complete. (JC)
continued on next page - JColeman

PROJECT NAME 2/11/13 NOTEBOOK NO.

0600 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. [illegible]
0615 Attended the prejob briefing conducted by SS. Discussed bad times discovered on 2/8/13 with team (incoming new shift).
0700 Call in with TA54 SOM. Statused WCRR work for the day. Will be emerging receipt from Area G.
0730 Notified by the operator that the drum lift clip has a piece of tape on it. Per CSE clear packing tape was placed on clips to prevent knocking them off pins. SOM and SSO concurred and questioning if a temp mod should be in place on the drum lift needs tape removed.
0740 SOM attempting to speak with CSE and OM. No answer.
0755 Engineer Manager called back SOM. Concerns of SOM and SSO were discussed with her. She will call back with further recommendation after she speaks to CSE.
0830 Received an e-mail from CSE on permission to use clear tape on WCRR drum lift hinge pin clip.
0910 Permission granted to proceed per CSE and OM.
0915 Gate entry 0820 - SOM Phase II gate
0916 Gate entry 0910 - SOM back from Phase II
0920 Mod checklist complete WCRR GAD/50-69 from WAEM/WAEM to OPERATIONS/OPERATIONS.
0938 Bagging on first drum of the day.
1040 SOM going to attend Drum Venting meeting at Pueblo Complex for WCATS.
1145 SOM returning from Drum Venting meeting
1200 Call in meeting with OM and project manager.
1300 SOM attending training at WRTC.
1420 SOM back from training.
1538 Notified by SOS that while the operators were receiving an incoming shipment upon inspection of the 85 gallon drum grapper they noticed a cracked weld. Operations immediately stopped and made notifications. A caution tag was being initiated by OCO or SOM.
1600 Area G has a certified drum hauler to lend operations at WCRR. An operator is in route to pick up.
1628 Per telecon with LANL IH the homebuilt drum hauler/grapper is rated for 1500 lbs however the maximum weight to be moved will not exceed 1000 lbs. Per IH OK to proceed in using drum hauler/grabber.
1630 Mechanics came by to adjust 55/85 drum hauler/grapper that WCRR had on site but didn't know how to adjust. SOS confirmed that it is certified and approved for use.

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

PROJECT NAME 2/11/13 continued NOTEBOOK NO. 1

1832 Mode change complete. WCRR YARD 150-69 from
1845 OPERATIONS to WARM/WARM securing the SDM position.

No further entries this pg

SIGNATURE [signature] DATE 2/11 20 12
READ AND UNDERSTOOD DATE 20

2-11-13 WCRR SOS Log Book

0600 Assuming SOS position for the day. [illegible]

0615 Starting Pre-Job brief. Talked about turnover from the weekend, maintenance on the drum lift and other delays. Three drums inside from Solution Package 72 for processing. Empty drums prepped. One shipment in and one shipment out today. Safety Topic discussed on Space Heaters, and dressing in Layers. Also needing to stay Hydrated.

0640 Pre-Job brief complete.

0730 Operator performing rounds reported that the drum lift has tape on it over the clips to ~~prev~~ prevent the clips from being knocked off. SOM and SSW questioning if a temp mod should be in place.

0751 SOM spoke with engineering manager regarding the tape. She will get back in touch with the SOM after she speaks with the CSE.

At 0828 Received e-mail from CSE stating "A thin layer of tape may be used on the drum lift Hinge pin clips to mitigate the potential for "snagging" clips with operator PPE or otherwise. The clips must remain visible under the tape for inspection purposes. This tape does not perform a structural function and does not require a design change." Tape used was not clear and inspection can not be performed. Tape will be changed out with clear tape so that inspection can be performed.

0916 Signed off on both rounds, inside and outside.

0920 Mode Change. WCRR Yard and 50-69 in Operations.

0938 Bagging on first drum for the day. PPE check SAT

1058 Bagging off first drum, bagging on second

1320 Bagging off second drum, Bagging on number three PPE Check is SAT

1442 Bagging off drum number three, Bagging on number four

1540 Notified by operators that the 85 gallon drum grabber being used has a broken weld and is

Continued on following Page.

being tagged out. The operators observed it happen while unloading an 85 gallon

1621 Bagging off drum number four and bagging on drum number five

1625 Caution Tag placed on 85 gallon drum grabber that is broken

1700 Operator notifying that Parent drum that is bagged on is frozen on the bottom and may take longer to process. Operators were able to pull all of the material out, Operators are breaking it ~~up~~ up into smaller pieces to add kitty litter to.

1745 Starting Bag off, last drum for the day

1830 Signed off on inside and outside rounds.

1833 Mode Change. WKR 50-69 and Yard are in WARM.

1845 Securing 505 position for the day. Processed 5 parents generated 5 daughters. No PCC's, all from SP#72

No further entries on this page

S910172

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0029
Examination Date:	2/20/2013
Waste Container ID:	92917
Video/Audio Recorded Media Number:	LA-RTR2-13-0029 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:	~~83120~~ 53110 ms 2.21.13 ms 2.21.13
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 134.5 kg Tare Wt.: 33.4 kg Net Wt.: 101.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 3 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 92917

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal cans with material, metal lids, 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 Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	12.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	81.1
Soils (S):	
Total WMP Weight:	101.1

CCP Radiography Data Sheet

Waste Container ID: 92917

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		2/20/2013
Print Name	Signature	Date 2/21/13

NDA 2000 Assay Report

Item Information

Item ID:	92917	Count Sequence Number:	22176
Operator:	D3PW2DK1\operator		
Assay Start:	3/4/2013 9:11:26 AM		
Description 1:	1LANDA1723		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 101.0 kg	Net:	101.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.510 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

006 AG 3-8-13
~~003~~

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 22176
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92917

Batch Number: 1LANDA1723
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 3/4/2013

Net Weight	101000.0 g	
Pu mass	3.03E+001 +-	4.96E+000 g
TRU Alpha Activity	4.16E+000 +-	1.06E+000 Ci
TRU Activity Concentration	4.12E+004 +-	1.05E+004 nCi/g
Pu-239 Equivalent Activity	4.23E+000 +-	1.06E+000 Ci
Pu-239 FGE	2.85E+001 +-	4.66E+000 g
Decay heat	1.34E-001 +-	3.53E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.86E-002	4.18E-005	6.44E-006	1.88E-006
PU238	2.78E-003	4.81E-002	7.89E-003	3.59E-005
PU239	2.84E+001	1.79E+000	2.93E-001	1.33E-003
PU240	1.82E+000	4.17E-001	6.84E-002	3.12E-004
AM241	5.50E-001	1.91E+000	1.02E+000	4.65E-002
PU241	3.59E-002	3.73E+000	6.11E-001	2.78E-003
PU242	6.06E-003	2.40E-005	3.94E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.23E-007
U233	<LLD	<LLD	0.00E+000	4.20E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.26E-006
U238	<LLD	<LLD	0.00E+000	9.70E-006
AM243	1.03E-003	2.08E-004	3.25E-005	5.40E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 3.7.13

ITR: _____ Date: 3/8/13

Automated Independent Technical Review

Count Sequence Number: 22176 Batch Number: 1LANDA1723
Counter ID: MCS HENC #1
Container ID: 92917
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/4/2013

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

Expert Review by: Sheri Chamberlin Date: 3-7-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92917**

BDR Number: **LA13FG8016**

Sampling Date: **3/8/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.10	U
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.67	
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\130308c\
Data File : 92917.D
Acq On : 8 Mar 2013 1:09 pm (#1); 8 Mar 2013 1:08 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 08 13:17:29 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.253	96	2345016	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2103334	179.50 ppm	0.00
Target Compounds					Qvalue
17) Toluene	4.776	92	17862	3.67 ppm	96

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

WET Copy
Date 12-17-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90324

6.2[4] Date Processed: 12/17/12

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

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

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

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

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

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

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

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

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

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

Performed By: B. Forsyham / B. Forsyham / 235635 12/17/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90324

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 378.4 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): Ø lb
BF 12/12/12

6.2[5][B] Total Parent Drum Weight (lb) 378.4 ~~Ø~~ 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:

EWMO-FOD (print)	Signature	Z #	Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90324

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92466			
10.1[4]	Daughter Drum Filter No.	AM-1043			
10.1[4]	Daughter Drum Bag Filter No.	L-4547			
10.1[4]	Daughter Drum Purchase Order No.	416184			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.	N			
	Serial No.				
	Date of Manufacture	A			
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	N		N	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)	A		A	
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	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			
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	Plastic, Kitty Litter Cardboard			

ATTACHMENT I
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90324

Comments: PLASTIC, POC LID, FIBERBOARD, SALTS, KITTY LITTER CARDBOARD,

11.1[1] Performed By: B. FORDHAM B. Fordham 235635 12/17/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: [illegible] [illegible] 14733 1.31.12 1C
SOS or designee (print) Signature Z # Date Time

11-29-12 cw

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

5.[8] Overpack filtered vent information:

Manufacturer: NucFil
Model No.: 013
Serial No.: 1L-285
Manufacture Date: 9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	041009 9	021151
Cal. Expiration Date:	09/26/2013	06/11/2013
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] 124001 11/29/12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Clayton Mullins [signature] 124001 11/29/12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: [signature] [signature] 149251 1.2.13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 12-17-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92467

7.[25] Overpack drum closure ring torque wrench information: B.F 12/17/12

M&TE No.: ~~038367~~ 021151
Cal. Expiration Date: ~~3/16/13~~ 6/11/13
Range in ft-lb: 16 - 50 ft lbs
Tolerance: +/- 3% cw +/- 6% ccw

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

Performed By: B. Fordham (Waste Handling Technician (print)) B. Fo L (Signature) 235635 (Z #) 12/17/12 (Date)

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

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

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

7.[36][D] 85-gal overpack drum gross weight (lb): 318 lb

Comments: N/C

8.1[1] Performed By: B. Fordham (Waste Handling Technician (print)) B. Fo L (Signature) 235635 (Z #) 12/17/12 (Date)

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

8.1[7] Reviewed By: GMh (Supervisor or designee (print)) DMf (Signature) 119235 (Z #) 1.3.13 (Date)

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

Drum ID#: 92466

1. Drum/Lid Assembly

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

RECORD drum information:
Purchase Request #: 416184
Lot #: 0222934
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 #: 6CAC-1.5-2 SRC
Serial #: L-4347
Date of Manufacture: 7-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: NUCFIL
Model #: 0405
Serial #: AM-1043
Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038367
Cal Expiration Date:	7-26-13	Cal Expiration Date:	3-12-13
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: Eddie Rios Signature: [signature] Z#: 187822

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 76.0165
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Eddie Rios Operator Sign: [signature] Z#: 187822 Date: 12-7-12
Verifier Print: B. Fordham Verifier Sign: B. [signature] Z#: 235685 Date: 12/17/12

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

DRUM ID#: 92466

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: B.F. 12/18/12

MT&E #: ~~038367~~ 021151

Cal expiration date: ~~3/16/13~~ 4/11/13

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

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): 287.8

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: B. Fondum Date: 12/17/12

Verifier Print/Sign: Brandon Chavez Date: 12-17-12

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90324 Container Type: POC Gross Weight (lbs): 373
Container Seal #: None Filter Prefix: None Filter Serial #: EL-39; EL-43
RTR Waste Stream: LA-MIN04-S.001 Certified RTR BDR: LA-RTR2-11-0145
TWSR Comments: PARENT #S910172 WTS-12STD-636
Total PE-Ci Activity: 3.42E+00 Equivalent Combustible PE-Ci: 1.28E+00 AM-241 PE-Ci: 2.51E+00
Total Fissile Gram Equivalents: 10.4 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): ~~None~~ D007 D008 D009 VR 10/3/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: None Comment: None
Certified RTR Comment: Does not match waste stream description
Prohibited Items: ■ Sealed > 4 Liters ■ Liquid ■ Pressurized Container ■ Impenetrable Item ✓ Other
Security Determination: ✓ Green Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): <100 >100 and <1,000 ☑ >1,000 and <10,000 >10,000
TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007, D008, & D009. Nitrate salt mixed with Waste Lock 770® from previous repack campaign. A minimum of 1.2 volume of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.
Performed By: Susan Ramsey / Production Control (Print) / Signature: Susan B. Ramsey / 100681 / Date: 9/4/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): Yes ☒ No Unknown
Processing Determination: ☒ Accept Reject
WDP Engineering Comments: Nitrate Salts – POC
Net Wt: 631b 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 > 1000 & < 10,000 mrem/hr
RTR BDR inventory shows homogeneous solids + plastic bag

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

TRU Remediation Operations

✓ Waste Container Information Evaluated ☐ Less Than 170 lbs RTR Video Available
Other Specific Safety Concerns: Use proper PPE when processing waste. Do not push or press on waste with hands; Utilize hexarmor gloves & tools to handle waste.
Processing Determination: ✓ Accept Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.
Performed By: Jose Jerez / TRU Remediation Operations (Print) / Signature: Jose Jerez / 221452 / Date: 10-15-12
LB Z# 249750 10/19/12

HS REVIEW: RS 206362 10.4.12

Noncertified TRU Waste Drum Item Information

DrumID: 024957

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
0	12LR6ES1			LEACHED SOLIDS	R04	0.67	52	8/13	
1	12LR6ES1			LEACHED SOLIDS	R04	0.11	44	8/13	
2	SALTSEV7			LEACHED SOLIDS	R04	6.77	52	8/13	
3	SALTSEV7			LEACHED SOLIDS	R04	0.4	44	8/13	
4	SALTSEV12			LEACHED SOLIDS	R04	2.69	52	8/13	
5	SALTSEV12			LEACHED SOLIDS	R04	0.23	44	8/13	
6	10LR27WS1			LEACHED SOLIDS	R04	0.26	52	8/13	
7	10LR27WS1			LEACHED SOLIDS	R04	0.01	44	8/13	
8	11LR28ES1			LEACHED SOLIDS	R04	1.68	52	8/13	
9	11LR28ES1			LEACHED SOLIDS	R04	0.16	44	8/13	
10	12OX18ES1			LEACHED SOLIDS	R04	7.55	52	8/13	
11	12OX18ES1			LEACHED SOLIDS	R04	0.34	44	8/13	
12	10OX20ES1			LEACHED SOLIDS	R04	1.69	52	8/13	
13	10OX20ES1			LEACHED SOLIDS	R04	0.023	44	8/13	
14	10LR25WS1			LEACHED SOLIDS	R04	0.69	52	8/13	
15	10LR25WS1			LEACHED SOLIDS	R04	0.13	44	8/13	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 95.2

Material Type	SNM (grams)	Items Net Wt (kg)
44	1.403	0.00
52	22.	0.00
Totals	23.403	0.00

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-11-0145
Examination Date:	11/10/2011
Waste Container ID:	90324
Video/Audio Recorded Media Number:	LA-RTR2-11-0145 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-3835-11 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: 171.0 kg. Tare Wt: 145.1 kg. Net Wt: 25.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 90324

Section 3: Container Inventory and Comments (Detailed descriptions)
Plastic bag
Homogenous solids

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	109.0
Plastics (PP): Rigid Liner, Liner Bag (Inside POC)	8.1
Others: Fiberboard (C), Fiberboard Liner\Sleeve (inside POC)	28.0
Total Packaging Weight:	145.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	0.1
Organic Matrix (OR):	
Inorganic Matrix (IN):	25.8
Soils (S):	
Total WMP Weight:	25.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 90324

[redacted]	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?	☑	☐
[redacted]		
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: Standard Pipe Overpack Container (P.O.C.)

NCR-LANL-3835-11

RTR Operator:

Print Name	Signature	Date
Eric Lyles	[signature]	11/10/11

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])	96374					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PCC					
Filtered Vent Type (5.[1])	19 DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: Per attached email, container has been verified as PCC.

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

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

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90324.D
Acq On : 5 Oct 2012 1:54 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM THROUGH 19DS-UNOBSTRUCTED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 14:02:15 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	2371325	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2144144	179.50	ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Oct 05 14:02:15 2012

302 12-17-12
~~12-17-13~~ 12-17-12 PROJECT NAME _____ NOTEBOOK NO. _____

0000 Assuming WCRRF Operations center - Chelande
0005 Starting outside rounds, operator notifying ops center gal
0010 Starting inside rounds
0035 ~~0035~~ 12-17-12 Item 6 is OOS, CSE documentation OK to proceed.
outside rounds complete.
0700 Inside and outside rounds signed off by SOS
0745 Mode Change performed TA50-69 and WCRRF yard in operations
0747 Operators notifying operations center small forklift is proper.
0949 Starting movement into TA50-69.
1003 Completed movement 50-69.
1012 bagging on 90324
1017 PPE Check is SAT.
1043 PPE check is Sat.
1124 PPE Check is Sat.
1133 bagging off 90324, bagging on 90718
1204 bag on, bag off complete and PPE Check is sat.
1205 late entry 1023 bag on is complete - Chelande
1303 bagging off 90718 and 2 POI's, bagging on 90317, PPE Check is Sat.
1345 bag on, bag off complete.
1412 PPE Check is Sat
1415 Starting movement out of TA50-69.
1420 bagging off 90317, bagging on 85272
1428 movement out of 50-69 Complete.
1431 Starting movement into 50-69.
1437 bag on, bag off complete. PPE Check is Sat
1445 Starting outside rounds.
1502 Outside rounds complete
1503 Starting inside rounds, PPE Check is Sat
1515 Item 6 is OOS per CSE documentation OK to proceed.
1529 Inside and outside rounds signed off by SOS.
1604 Bag off is complete.
1622 mode change performed TA50-69 and WCRRF yard now in Warm standby.
12-17-12 1630 end of day WCRRF operations center secure - Chelande

no further entries this page

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

PROJECT NAME 12/17/12 NOTEBOOK NO.

0600 Reviewed shift turnover and assumed WCRR SOM.

0700 Called into TA-54 Daily Brief conducted by TA-54 SOM and status WCRR work for today.

0705 Late Entry - 0615 Attended pre job brief conducted by SOS - discussed lessons learned from last week included twice daily roundsheet requirements while in warm mode. Clearing of areas of snow and ice

0720 Met w/ OSPAT supervisor regarding transportation schedule for this week and first week back from break. Agreed to an In/Out tomorrow followed by Out only on Thurs 12/20. After the break will have an outgoing on Thurs 1/3/13 w/ possible incoming if needed - will assess this week based on production.

0745 Completed Mode Change: WCRR Yard / Bldg. 50-69 from Warm / Cold to Operations / Operations.

0746 Notified by operators that both forklifts were not working due to cold weather (hydraulics froze up => can't operate mast controls / up & down or tines, etc). Both forklifts in sunny area of yard to allow for warm up.

0949 Forklifts determined to be operable. Moving inventory into Bldg 50-69.

1012 Bagging on 1st drum onto WCG.

1030 Discussed maintenance schedule w/ MSS, OM and RP-1 supervisor. Goal is to complete all of last weeks PM's, this weeks and ISI 6.3.2 this Friday. Will require more than 2 RCT's and 3 operators currently scheduled

1200 Daily call in with PM and OM to status WCRR operation for the day.

1442 Notified by RP-1 supervisor that detector on PCM in Bldg 50-69 requires replacement. RP-2 onsite to repair and calibrate.

1458 PCM repairs complete.

1510 CCP Operator reported that one of the drums moved into 50-69 for processing #91805 should have went to Flam Gas instead of WCRR - Noticed by NCR tag on drum and reading notes in SED's packet on NCR documentation.

1600 Verified path forward of drum 91805 w/ CCP management. Will make arrangements to ship back to TA-54 for Flam Gas.

1622 Completed Mode Change: WCRR Yard / Bldg 50-69. from Operations / Operations to Warm / Warm.

1645 Secured SOM position

No further entries this page

SIGNATURE DATE 12/17 20 12

READ AND UNDERSTOOD DATE 20

12-17-12 WCRR SOS LOG BOOK

0600 Assuming SOS Position [signature]

0605 Shift brief started did Post Job Prior to Discussed window change that take place 12-13-12 reviewed new BWP

0655 Shift brief Concluded.

0700 reviewed Inside and outside Rounds

0745 Mode change Complete WCRRF IN operations.

0750 Late entry Unable to move drums out of transportainer due t Ice And snow operator's Spreading Ice melt needs to thaw or forklift will stay stuck 0715 GM.

0936 Ice has Melted of moving In drums From transportainer to SO-

1012 bag off First drum for Day 90324

1017 PPE Check sat

1043 PPE Check Sat

1124 PPE Check SAt

1133 bagging of And bagging on 90718

1204 bag off complete PPE check sat

1303 bagging off And bagging on 90317 PPE Check sat

1412 PPE Check sat

1420 bagging off and bagging on 85272

1526 Reviewed Inside And ~~SE~~ outside Rounds

1622 Mode Change Complete WCRRF IN Warm

12-17-12 1630 end of shift securing SOS Position [signature]

HA

No further entries on this Page

S910172

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0013
Examination Date:	1/28/2013
Waste Container ID:	92466
Video/Audio Recorded Media Number:	LA-RTR2-13-0013 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 130.5 kg Tare Wt.: 33.4 kg Net Wt.: 97.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

7JH 1-30-13

~~17~~

16 7JH 1-30-13

CCP Radiography Data Sheet

Waste Container ID: 92466

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid, metal can with ~~materia~~ material, scrap metal BM 1.30.13 BM 1.30.13

AM:

OM:

OI: Scrap lead

C: Fiberboard packing material, fiberboard insert sleeve, wooden wire brush

R:

XPM: Plastic lid, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	40.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	5.0
Cellulosics (C):	18.0
Rubber (R):	
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	24.1
Soils (S):	
Total WMP Weight:	97.1

7SH 1-30-13

~~18~~ 17 7SH 1-30-13

CCP Radiography Data Sheet

Waste Container ID: 92466

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

Comments: This drum contains metal cans with material, which may require additional Project Office review.

RTR Operator:

Benito Maestas		1/28/2013
Print Name	Signature	Date 1·30·13

TSH 1-30-13

~~19~~

18 TSH 1-30-13

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

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

Item ID:            92466              Count Sequence Number:  21947
Operator:           D3PW2DK1\operator
Assay Start:        1/30/2013   3:13:45 PM
Description 1:      1LANDA1704
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Debris S5000
Container Type:     55 gallon drum
Weight:             Net:        97.1   kg        Net:    97.1 kg
Container:          Volume:    208.0   l        Full:    90.0 %
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:	21947	Batch Number:	1LANDA1704
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:	92466	Analysis Date:	1/30/2013

Net Weight	97100.0 g		
Pu mass	1.08E+001	+-	2.27E+000 g
TRU Alpha Activity	2.40E+000	+-	8.61E-001 Ci
TRU Activity Concentration	2.47E+004	+-	8.86E+003 nCi/g
Pu-239 Equivalent Activity	2.42E+000	+-	8.61E-001 Ci
Pu-239 FGE	1.02E+001	+-	2.13E+000 g
Decay heat	7.82E-002	+-	2.87E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.99E-002	3.57E-005	5.57E-006	1.65E-006
PU238	9.96E-004	1.72E-002	3.60E-003	3.50E-005
PU239	1.02E+001	6.39E-001	1.34E-001	1.30E-003
PU240	6.50E-001	1.49E-001	3.12E-002	3.03E-004
AM241	4.58E-001	1.59E+000	8.50E-001	4.39E-002
PU241	1.29E-002	1.34E+000	2.80E-001	2.72E-003
PU242	2.17E-003	8.61E-006	1.80E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.70E-007
U233	<LLD	<LLD	0.00E+000	3.71E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.14E-006
U238	<LLD	<LLD	0.00E+000	1.08E-005
AM243	1.34E-003	2.70E-004	4.27E-005	5.33E-006

Errors quoted at 1.000 sigma

Operator: Dan R Ard Date: 2/1/13

ITR: Ann Barton Date: 2/1/13

Automated Independent Technical Review

Count Sequence Number: 21947
Batch Number: 1LANDA1704
Counter ID: MCS HENC #1
Container ID: 92466
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/30/2013

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

Expert Review by: Sherri Chamberlin Date: 1-31-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92466**

BDR Number: **LA13FG8009**

Sampling Date: **2/6/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	121.90	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	4.85	
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\130206C\
Data File : 92466.D
Acq On : 6 Feb 2013 2:23 pm (#1); 6 Feb 2013 2:22 pm (#2)
Operator : RJ
Sample :
InstName : Unit 8
Misc : 55 Gallon drum through filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 06 14:31:04 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.259	96	2611910	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2359500	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.301	GC1	30119m	121.90 ppm	
17) Toluene	4.776	92	26465	4.85 ppm	99

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

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