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

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

Date: SEP 2 3 2014
Symbol: ENV-DO-14-0261
LAUR: 14-27120
Locates Action No.: Not Applicable

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

Dear Mr. Kieling:

Subject: Transmittal of Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 15

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

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

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

Sincerely,

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

Sincerely,

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

AMD:GET:MPH:LVH/lm

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 15

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

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

COPY

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Date: SEP 2 3 2014
Symbol: ENV-DO-14-0261
LAUR: 14-27120
Locates Action No.: Not Applicable

RECEIVED
SEP 2 3 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 15

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 fifteenth 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.

Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 15
ENV-DO-14-0261
LA-UR-14-27120

September 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 15

ENV-DO-14-0261

LA-UR-14-27120

Date: SEP 2 3 2014

ParentID	Intermediate Daughters	PKG_ID	Overpacked Into
S852513		68335	SB02094
S852513		68336	
S852513		68341	SB50020
S852513		68344	
S852530	68755	69045	SB50071
S852530	68755	69076	SB50452
S852530	68755	69087	SB50018
S852590		68652	
S852590		68655	
S852592	68753	69282	SB50064
S852592	68753	69285	SB50416
S852593	68754	69179	SB50025
S852883		68513	
S852883		68542	
S852895		68549	
S852895		68555	
S852895		68609	
S852923		68393	
S852923		68410	
S852923		68446	
S852931	68743	69279	SB50421
S852931	68743	69295	SB50040
S852952		92616	SB01971
S852952		92618	
S853006	68817	69105	SB50045
S853006	68817	69177	SB50039
S853006	68817	69181	SB50033
S853006	68817	69182	SB50037
S853279		68507	
S853279		68659	
S853279		68672	
S853326		68629	
S853326		68654	
S853482		94215	SB02090
S853482		94216	
S853482		94217	
S853641		68300	
S853641		68310	
S853641		68321	
S853771		68612	
S853771		68616	SB02134
S853899		68375	
S853899		68409	

S852513

S852513

Container H 754211

File Options Reports Help

S852513

754211	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

S852513

S852513
- LA00000068335 – WIPP
  - LASB02094
- LA00000068388 – EMPTY
- LA00000068336
- LA00000068344
  } WIPP
- LA00000068341 – LANL
  - LASB50020

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	LA00000068341	0.0	kg

Working Copy
Date: 9-11-13 x

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 9852513

6.2[4] Date Processed: 9-11-13

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: 10-14-14

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

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

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

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

Performed By: Brandon Chavez / [signature] 1204192 9-11-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S852513

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 388.0 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 388.0 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5852513

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68335	68336		
10.1[4]	Daughter Drum Filter No.	KL-546	KL-445	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6693	L-8233		A
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	BOP	BOP	
	Model No.	6CPVC1.5-2SPVC	6CPVC1.5-2SPVC	6CPVC-1.5-2-SPVC	
	Serial No.	L-6855	L-8147	L-6619	
	Date of Manufacture	1-13	3-13	1/13	N
10.2[5]	POC ID No	2477-68344	2425-68341	D-2458/68323	A
10.2[7][B]/10.2[6]	POC Item Description	Kitty Litter Nitrate SALTS	Kitty Litter Nitrate SALTS	Kitty litter nitrate salts	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	220826	220826	N	
10.2[14]	POC Assembly Gross Weight (lb)	375.2	377.2	A	
10.2[15]	POC Rad. Survey Results (mrem/hr)	2,000 mrem	2,000 mrem	1700.8	
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A	N A		
10.3[5][A]	Free Liquid Volume/Units	5 GALLONS		A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead	Lead		
10.3[9][A]	PCB-contaminated Waste Description		N		
10.3[9][B]	PCB Item ID No.			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 (%)	40%	100%	N	A
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Shroud Bags	PLASTIC Kitty Litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S852513

Comments: Kitty Litter, Lead Shielding, PLASTIC, NITRATE SALTS

11.1[1] Performed By: Adam Segovia / [signature] / 1276/021 / 9-12-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martin / [signature] / 149235 / 9/16/13 0750
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 9/12/17 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68388

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: ±3% CW ±6%

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

Performed By: [signature] / [signature] 122036 19-12-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 156.8 lb

Comments: N/C

8.1[1] Performed By: [signature] / [signature] 122036 19-12-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martin / [signature] 145285 9/16/17
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 68335

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 #: 03377120
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 #: 6CBKL5-2SNC
Serial #: L-106093
Date of Manufacture: 1/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: NUCFIL
Model #: 019DS
Serial #: KL-546
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100246
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 #: 038349
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: ±3% CCW ±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: Bi Hallegos Z#: 267129

5. Weigh Drum Assembly

RECORD weight information
Tare wtight (lbs) 760
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Brian Gallegos Operator Sign: Bi Hallegos Z#: 267129 Date: 8-15-13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204772 Date: 9-11-13

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

DRUM ID#: 68335

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038370

Cal expiration date 8-2-14

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

Tolerance ±3%ccw ±6%ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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): 154.8

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 9-12-13

Verifier Print/Sign: Clayton Mullins [illegible] Date 9/12/13

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

Drum ID#: 68336

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 #: 02 37720
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: BOP
Model #: 6CDVC 15-25PVC
Serial #: C-8233
Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 019D5
Serial #: KL 445
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100276	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#: 276708

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (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: IAN MARQUEZ Operator Sign: [signature] Z#: 276708 Date: 8-15-13

Verifier Print: ADAM STOKES Verifier Sign: [signature] Z#: 276702 Date: 9-12-13

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

DRUM ID# 68336

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 #: 038320

Cal expiration date 8-2-14

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

--- Tolerance +/- 3% CW +/- 6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 379.8

Scale ID#: 012065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 9-12-13

Verifier Print/Sign: JOE QUINTANA Date: 9-12-13

ATTACHMENT 3
Page 1 of 1

Working Copy
Date: 9/11/13 HS

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S852513

6.3[15] ($) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 388.0

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] / [illegible] 9-11-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] / 149235 / 9/16/13
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] / 149235 / 9/16/13 / 0745
SOS/SOM or designee (print) Signature Z # Date Time

1947
SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S852513 Container Type: 55-GAL Gross Weight (lbs): 419
Inner Seal #: 019329 Filter Prefix: LAVC Filter Serial #: 01259
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS NITRATE SALT MST 12 #12457
Total PE-Ci Activity: 1.68E+01 Equivalent Combustible PE-Ci: 6.29E+00 AM-241 PE-Ci: 1.36E+00
Total Fissile Gram Equivalents: 185.3 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/25/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured Liquid Location: 25
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / Signature / 100681 / 12/20/12
Production Control (Print) Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 359#. Generator info shows 8 items of nitrate salts; weights range from 6-62# No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids &/or debris may be present. RTR PS shows prohibited liquids, impenetrable objects, & unpunctured liner. No chemicals identified. Nitrate salts require repack w/ admixture. Applicable waste codes are for chromium, lead, & mercury. Note elevated FGEs.

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 1/18/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE Mixo Rabi

Performed By: G Mh / G Mh / 149235 / 6/19/13
TRU Remediation Operations (Print) Signature Z Number Date
Jose Jarez / Jose Jarez / 221452 / 6/22/13

HG Reviewed Jaling Amalhal CSP, may contain Pb, Hg + Cr
1-29,13

Noncertified TRU Waste Drum Item Information

DrumID: 019329

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	MX258SW1		17.950	NITRATE SALTS		61.07	52	6/14	G468	
2	OX168260NE		16.590	NITRATE SALTS		49.7	52	6/14	G468	
3	OX170264NE		24.310	NITRATE SALTS		23.16	52	6/14	G468	
4	OX169262NE		27.950	NITRATE SALTS		27.15	52	6/14	G468	
5	RR265VRNW		2.950	NITRATE SALTS		6.	52	6/14	G468	
6	LR266NE1		7.730	NITRATE SALTS		5.23	52	6/14	G468	
7	LR267NW1		10.000	NITRATE SALTS		8.59	52	6/14	G468	
8	OX171268NW		20.000	NITRATE SALTS		15.86	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 190.

Material Type	SNM (grams)	Items Net Wt (kg)
52	196.76	127.48
Totals	196.76	127.48

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	3852513					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	073					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	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:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)) [signature] (Signature) 100164 (Z #) 5/20/13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S852513.D
Acq On : 11 Apr 2013 2:00 pm (#1); 11 Apr 2013 1:59 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 073 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 15:51:35 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	1982335	206.00 ppm	0.00
15) Chlorobenzene-d5	5.940	117	1776985	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Thu Apr 11 15:51:41 2013

9-11-13

0610 ~~0600~~	Assuming WCRRF OCO position - Cleland
0610 ~~0600~~	ASSUMING WCRRF OCO POSITION IN TRAINING HSMITH
0615	PRE-JOB CONDUCTED BY SDS
0635	PRE-JOB CONCLUDED
0655	OPERATORS ENTERING FACILITY
0750	MODE CHANGE TO WARM WCRRF AND TA50-69
0755	TECHNICIANS ENTER TA50-69 TO WORK ON PCM AND HFM, BOTH BACK IN SERVICE,
0830	TECHNICIANS EXIT BUILDING WORK COMPLETE
0832	MODE INCRENSE TO OPERATIONS FOR WCRRF YARD AND TA50-69
0833	BAGGING OFF, BAGGING ON S851682
0908	STARTING MONTHLY VALVE ALIGNMENT
0915	BAG OFF COMPLETE
0927	PERMISSION GRANTED TO LOWER ACCESS GATE FOR SHIPMENT OUT
1027	SHIPMENT COMPLETE, VEHICLE ACCESS GATE RESTORED.
1027	NOTIFIED BY RCT SUPERVISOR, RPD WILL BE ELECTED DUE TO EVENT ON PREVIOUS SHIFT.
1150	BAG OFF ONE DAUGHTER AND ONE POC AND CONTINUE THE PROCESS
1220	BAG ON BAG OFF COMPLETE
1230	OPERATORS EXIT BUILDING FOR LUNCH
1354	OPERATORS ENTER BUILDING TA50-69 TO CONTINUE PROCESSING.
1537	BEGIN OUTSIDE ROUNDS
1538	STARTING INSIDE ROUNDS
1550	ITEM #19 IS UNSAT. FSR IN PLACE, OKAY TO PROCEED PER CSE DOCUMENTATION
1551	ITEM #63 IS OOS. POD IN PLACE OKAY TO PROCEED PER CSE DOCUMENTATION
1609	COMPLETED INSIDE AND OUTSIDE ROUNDS
1625	STARTING TO DENEST 1 ~~2~~ DRUMS
1642	DENESTING COMPLETE AND BAGGING ON S852513
1645	OUTSIDE ROUNDS SIGNED OFF BY SDS

CONTINUED ON NEXT PAGE —HSMITH

9-11-13 CONTINUED FROM PREVIOUS PAGE HSMITH
1718 BAG OFF COMPLETE
1726 NOTIFIED BY OPERATORS, WHILE BAGGING OFF PARENT DRUM, HOLE DISCOVERED IN BAG, IMMEDIATELY TAPED OVER HOLE PERSONNEL RECIEVED WHOLE BODY FRISK RESULTS WERE NDA. NO DIRECT CONTAMINATION ~~DETECT~~ 9-11-13 HS DETECTED AND SMEARS ARE BEING COUNTED. PARENT IMMEDIATELY OVER PACKED.
1732 9/11/13 HS INSIDE ROUNDS REVIEWED BY SOS
1743 BEGINNING MOVE OUT OF TA 50-69 TO TA 50-194/75
1744 9/11/13 HS OPERATIONS NOTIFIED BY RCT'S ALL SMEARS ON DRUMS AND AREA ARE NDA.
1815 BEING RELIEVED BY OCD TERRI COLEMAN HSMITH--
9/11/13 Cla Velasc

no further entries this page.

.R

513

9-1-13

1816 Assuming WCRR operations center - K Coleman
1825 Pre-job being conducted by SOS.
1841 Pre-job concluded.
1922 Operators entering 5069 to begin processing.
2045 SOS States that upon performing glove inspections, stations 7 and 8 (L) gloves need to be changed.
2230 Updated operator aid for Torque Wrenches to show calibration due date.
2255 Bagging off 1 daughter, bagging on another daughter.
2310 Bag off/on complete.
0000 Operators out for lunch.
0030 Beginning outside rounds.
0044 Item #19 on the rounds is unsat, Okay to proceed, FSR in place.
0059 Outside rounds complete.
0122 Operators resuming after lunch.
0230 JH entering 50-69 to investigate the reaction of the waste with the lead liner.
0500 Beginning inside rounds.
0519 Item #63 is OOS, Okay to proceed per CSE documentation
0521 Inside rounds complete.
0522 Initiating a drum movement from 50-69 to a transportainer.
0540 Drum movement complete.
0541 Card reader not communicating with computer. Left a message with Stephen Lovato to contact the opscenter. Initiated the Temporary log until problem fixed.
0600 Both rounds reviewed by SOS.
0608 Relieved by OCO, Clarissa Velarde - K Coleman

No further entries this page

9-12-13

0700 Assuming WCRRF OCO position - Crelander

0608 Assuming ~~WCRRF~~ 9/12/13 HS WCRRF OCO POSITION IN TRAINING H SMITH

0615 PRE-JOB BRIEFING CONDUCTED BY SDS

0645 PREJOB CONCLUDED

0705 OPERATORS ENTERED BUILDING TA50-69 TO BEGIN GLOVEBOX GLOVE CHANGES 9/12/13 HS AND TO PROCESS

0805 BAGGING OFF 1 DAUGHTER, POSSIBLY 2 POC AND COVERING PARENT DRUM PORT

0815 VEHICLE ACCESS GATES LOWERED FOR SHIPMENT OUT

0910 BAG OFF COMPLETE

0941 ~~MODE~~ 9/12/13 HS MODE CHANGE PERFORMED, NOW IN WARM STANDBY

1000 VEHICLE ACCESS GATES HAS BEEN RESTORED, SHIPMENT COMPLETE

1050 BEGINNING GLOVE BOX GLOVE CHANGES STATIONS #4, #5, #7, #8, BOTH GLOVES PER STATION.

1200 OPERATORS NOTIFIED OPS CENTER THAT WHILE PERFORMING GLOVE CHANGES CONTAMINATION IS BEING DETECTED ON THE OUTSIDE OF THE GLOVE. ~~AFT~~ 9/12/13 HS NITRILE GLOVE COMING UP HOT. RCT'S BELIEVE THAT WHEN RING IS BEING WIPED DOWN CONTAMINATION IS BEING SPREAD TO GLOVEBOX GLOVE. STILL WITHIN RWP LIMITS AND ~~CONTAMINATION~~ 9/12/13 HS IS BEING CONTAINED ON STATION #8 LEFT HAND. RCT WILL PERFORM SURVEYS.

1224 CLEARED BY RCT'S TO FINISH GLOVE CHANGE ON LEFT HAND ~~AND~~ 9/12/13 HS, OPERATORS AND RCT'S WILL EXIT BUILDING FOR BRIEFING.

1232 GLOVE, GLOVE PORT, GLOVE PLUG, ARE CONTAMINATED, RCT'S SMEARING ~~FOR OPERATORS~~ 9/12/13 HS FLOOR. PERSONEL RECIEVE FULL BODY FRISK NO CONTAMINATION DETECTED. ON PAUSE TILL SURVEYS ARE COUNTED, CAMS ARE WITHIN NORMAL RANGE

1240 STATION #8 GLOVE CHANGES ARE COMPLETED, WILL NEED TO REPLACE STATION #8 LEFT HAND

1305 PER RCT, APPROXIMATELY 2000 CPM FOUND ON OPERATORS

CONTINUE ON NEXT PAGE H SMITH

DAYSHIFT WCRR - SOM 9-11-13

0610 Reviewed shift turnover checklist and assumed the SOM position John Bundagnali

0614 Reviewed and approved the dayshift watchbill.

0641 Completed attending the pre-job brief conducted by the SES (Gilbert) The safety message discussed was lifting techniques and if an unsafe condition is noted, stop and notify the supervisor and Operations Center. Transfers are scheduled today. The SOS provided a facility status with drums. The RPI supervisor indicated all surveys come back NDA. The plastic on the floor used for de-nesting was twisted, rolled up and thrown away. The parent drum currently needs weighing. Drum movements were discussed.

0805 Could not get thru on AM phone call to SOM - AREA - G

0806 Late entry for 0655 Operations entering 50-69 facility to

0730 Discussed with RPI the priorities to transfer out drums, then perform a transfer in to restock Parent drums.

0745 The PCM2 techs arrived and obtained a brief (R.P) to enter 50/69 As a result we requested operations to prep and obtain supplies prior to initiating bag out/bag off of Parent Drum.

0750 Mode change: 50/69 and yard Transition from Operations/Operations to WARM WARM.

0825 The PCM techs repaired the PCM-2 - it required a circuit board replacement and the foot probe replacement.

0832 Mode Change: 50/69 and yard transition from WARM/WARM to Operations/Operations.

0920 Discussed with WMC the need to get all LLW inventoried into WCATS Notification was made to WMC and OM was notified.

0923 Late entry for 0915, Operations completed bag off and Bag on of Parent Drum 58516B2

0927 Operations completed transfer of 20 drums onto the Transfer Vehicle.

1040 WO# 00054468-01 - 50/69 TSR (M) Valve Alignment Inspection 4.2.4 was completed and the status board updated. All valves were noted SAT. Thick wax was found in one valve. Also the valve box and cover required repair. A request was made to Utilities and phone call follow up was conducted. Also proper labeling required. Notification was made to the CSE.

1150 Inside operators report bagging off 1 dumpster and 1 PBC and will continue to process.

(Continued on next Page)

DAYSHIFT SOM LOG (cont) 9-11-13

1230 Completed daily update tele conference call with OM, PM, SOM and ES. Discussed WCATS and transfer out updates, also discussed Annual Drum Inspection

1415 Approved WO # 46316601 to replace the left cylinders on the wet Bind. Rad brief provide by RCT.

1457 Discussed with the OM and RP-1 the use of the TA-50-69-102-WCRRF facial wipes - Operations will obtain ES/IH approval signature and RP-1 approval signature on the form and brief operators with signature roster to implement.

1520 SOM exited WCRRF to attend interview at TA-46 for BIO implementation

1630 SOM returns to WCRRF [illegible]

1654 Due to torque wrenches - 1 out of calibration, Operator AID 50-10-01 R25 was removed and new operator AID Revision 26 was posted.

1655 Late entry for 1027hrs - RP-1 indicates an RPO will be written for prior shift incident with operator / walk across area of contamination.

1718 Operators complete Bag Off of 5851682 - which had generated 2 daughters and 1 POC. Parent drum 5852513 was bagged on.

1730 Production Inventory - completed closure of drums in WCATS, noting the new torque wrench information was entered into the WCATS and is working appropriately.
The delay in time in updating the status board is noted by WCATS technician that PIT is required to sign for the drums.

1807 Outside operations completed movement from 50/69 to the transportainer 4 drums were moved out. Currently two parent drums are in the facility ready to work.

1810 Completed review of turnover checklist with the Night shift SOM.

1815 Secured the dayshift SOM Position [illegible]

No further Entries this Page
[illegible]

9/11/13 Night Shift

1815 Reviewed shift turnover checklist assumed WCRR SOM position.

1818 Approved and posted Night shift operations notebook.
S. Montanzon expires @ 2400 for operator goals due to Lead Safety Exam - He will complete after pre job brief.

1820 Attended pre job brief conducted by SOS. Safety topics by IH - fire ant safety w/ heating season approaching, slip hazards w/ High potential of rains tonight. Discussed issues w/ RP-1 instrumentation problems and the RPO issued during last shift contamination events.

1850 SOM attending BIO/TSR exam and review @ TA-54.

2110 Notified by SOS that gloves on stations # 7 & 8 L-hand will need to be changed out at some point during shift. Operators are processing without using those stations.

2215 SOM back @ WCRR.

2230 Updated operator aid in 50-69 for torque wrenches w/ calibration due date vice calibration date.

2310 Bagged off 1 daughter and continuing processing.

9/12/13 0000 Operators breaking for lunch.

0122 Resuming operations.

0230 IH entered 50-69 to investigate reported ~~typical~~ per 9/12/13 reaction of liquid waste w/ lead liner. IH observed that the lead liner was degraded and flaking off and this is the material that the acidic liquid is reacting with. Plan forward per procedure is to neutralize and absorb w/ Kitty litter. IH and SOS entering facility to observe.

0400 SOS reported that neutralization went OK - slow process. Drum is packed full and so far have processed ≈ 5 gal of liquid over 3/4 way thru drum. Other bags are visible inside punch and estimate could be another gallon or so of liquid. SOS also reported that WCG has accumulated much waste debris from processing and operators will spend some time cleaning prior to shift turnover.

0525 OCO received report from operators that Stations #5 L&R, #4 R, 7L and 8L will require glove changes.

Continued next page. →

9/12/13 Night Shift continued.

0530 Late Entry for 0430 - Identified via WCATS that there are waste profiles current for all waste items in LLW storage area and transportainers. Checking w/ WMC to see if waste generator will need to be changed as D. Crockett is listed on a couple of the profile forms.

9/14/13 0609 Relieved by J. Guadagnoli for SOM shift turnover.

No further entries this page

9/12/13 WCRR SOS Log Book

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief

0645 shift brief Concluded need to Go In SO-69 Complete bag off And change gloves

0705 Operators Entering SO-69

0805 Bagging off (Daughter & POC)

0815 Started shipment out of SO-69

0910 Bag off complete

0911 Mode change WCRRF In warm.

1100 Vehicle Access Gates restored. shipment complete

1058 starting Glove changes. on station 4,5, 7, 8 both hands

1200 operators notified. off Contamination Detected on Glove within RWP Limits.

1276 Cleared By RCT to Finish Glove Changes need to change belt on & Again due to contamination

1232 RCT's smearing Floor All Personal had Full body Frisk

1240 Station 8 complete

1400 Beging Glove changes on 4, 5, 7 Both hands

1435 Started movement Into SO-69

1643 Glove changes Complete

1658 Starting rounds

1729 Vehicle gates restored.

1737 Mode change complete WCRRF In operations

1800 Operators Exitin For day

1815 Relieved by Clayton mullins [illegible]

no Further entries on This page

9/11/13 WCRR SOS LOG BOOK

0600 Assuming SOS Position [signature]

0615 Conducted shift brief went over Continuing Issues with operators also talked safe lifting techniques.

0635 Shift brief Concluded

0655 Operator entering Facility.

0756 Mode change Complete to warm

0758 Technicians Entering 50-69 To work on PCM And HFM

0830 Techs Exiting facility both back operational.

0832 Mode change WCRRF In operation

0833 Bagging off lot 5851682

0905 Starting monthly valve Alignment

0915 Bag off Complete.

0927 Permission Granted to lower Access Gates starting shipment out.

1027 Shipment Complete Vehicle Access Gate Restored. Notified by RT Initiating BPO due to Event on Prior shift.

1100 Bagging off one Daughter And one POC And Conitoing.

1220 Bag off lot Complete

1230 Operators Exiting For Lunch

1354 Operators Entering to continue Processing.

1537 Starting Rounds

1675 Starting Denesting

1610 Denesting complete bagging on 5852513

1712 Bag off/on complete

1726 Noticed by operators while bagging off parent bag was cut on bolt tape was placed and taken care off Immediately NDA smears were taken and need to be counted

1732 Received Inside And outside Rounds

1743 Moved out 4 drums from 50-69

1744 All smears NDA.

1815 Relieved by Clayton Mullins [signature]

No further entries on this Page

9/11/13 WCRR SOS Log Book

1817 Assuming SOS position. CA

1825 Starting Pre-Job, discussed watching for new leaks in 50-69.

1841 Pre-Job complete.

2045 After inspecting and cleaning gloves on stations 1-3 and 7-8, left hands on both station 7 and 8 need to be changed. Unable to clean and inspect stations 4-6 until wipe-alls can be bagged in.

2255 Bagging off 1st daughter, bagging on a 2nd daughter.

2310 Bag off/on complete.

2355 After wipe down of end of WCG and cleaning stations 4-6, station 4 right hand and both hands for station 5 need to be changed.

0528 Starting movement out of 50-69.

0541 Move out complete.

0600 Signed off on the rounds.

0615 Relieved by Gilbert Martinez. CA

No Further Entries on this Page

5852513

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0111
Examination Date:	9/17/2013
Waste Container ID:	68335
Video/Audio Recorded Media Number:	LA-RTR2-13-0111 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.: 70.5 kg Tare Wt.: 33.4 kg Net Wt.: 37.1 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:	35 %

CCP Radiography Data Sheet

Waste Container ID: 68335

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):	0.1
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	33.0
Soils (S):	
Total WMP Weight:	37.1

CCP Radiography Data Sheet

Waste Container ID: 68335

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

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	9/17/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68335	Count Sequence Number:	23612
Operator:	D3PW2DK1\operator		
Assay Start:	9/19/2013 3:04:51 PM		
Description 1:	1LANDA1844		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 37.1 kg	Net:	37.1 kg
Container:	Volume: 208.0 l	Full:	35.0 %
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

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23612
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68335

Batch Number: 1LANDA1844
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/19/2013

Net Weight	37100.0 g		
Pu mass	3.01E+000	+- 4.77E-001	g
TRU Alpha Activity	8.07E-001	+- 3.15E-001	Ci
TRU Activity Concentration	2.18E+004	+- 8.50E+003	nCi/g
Pu-239 Equivalent Activity	8.14E-001	+- 3.15E-001	Ci
Pu-239 FGE	2.84E+000	+- 4.48E-001	g
Decay heat	2.64E-002	+- 1.05E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.31E-002	2.33E-005	3.62E-006	1.69E-006
PU238	2.76E-004	4.71E-003	7.46E-004	3.36E-005
PU239	2.83E+000	1.75E-001	2.78E-002	1.25E-003
PU240	1.81E-001	4.10E-002	6.50E-003	2.93E-004
AM241	1.71E-001	5.86E-001	3.14E-001	3.07E-002
PU241	3.48E-003	3.58E-001	5.68E-002	2.56E-003
PU242	6.03E-004	2.38E-006	3.77E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.35E-007
U233	<LLD	<LLD	0.00E+000	2.88E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	8.54E-007
U238	<LLD	<LLD	0.00E+000	6.07E-006
AM243	1.21E-003	2.42E-004	3.79E-005	3.89E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 9-24-13

ITR: [signature] Date: 9-24-13

Automated Independent Technical Review

Count Sequence Number: 23612 Batch Number: 1LANDA1844
Counter ID: MCS HENC #1
Container ID: 68335
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/19/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	OK
Cosmic Ray Rejection Analysis complete with warnings. - The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	OK
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Bart B. Murak Date: 9/23/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68335**

BDR Number: **LA13FG2102**

Sampling Date: **9/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130925C\
Data File : 68335.D
Acq On : 25 Sep 2013 1:19 pm (#1); 25-Sep-13, 13:18:20 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 25 13:26:57 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.584	96	4684071	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.881	117	3599739	177.50 ppmv	0.02

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-HERTR-13-0102
Examination Date:	9/19/2013
Waste Container ID:	68336
Video/Audio Recorded Media Number:	LA-HERTR-13-0102 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.: 174.0 kg Tare Wt.: 33.4 kg Net Wt.: 140.6 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: 68336

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	5.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	125.6
Soils (S):	
Total WMP Weight:	140.6

CCP Radiography Data Sheet

Waste Container ID: 68336

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

Comments: N/A

RTR Operator:

Eric Lyles		9/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68336	Count Sequence Number:	23620
Operator:	D3PW2DK1\operator		
Assay Start:	9/20/2013 11:43:09 AM		
Description 1:	1LANDA1845		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 141.0 kg	Net:	141.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.750 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23620	Batch Number:	1LANDA1845
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:	68336	Analysis Date:	9/20/2013

Net Weight	141000.0 g			
Pu mass	9.91E+001	+-	1.72E+001	g
TRU Alpha Activity	1.23E+001	+-	3.65E+000	Ci
TRU Activity Concentration	8.76E+004	+-	2.59E+004	nCi/g
Pu-239 Equivalent Activity	1.26E+001	+-	3.65E+000	Ci
Pu-239 FGE	9.35E+001	+-	1.61E+001	g
Decay heat	3.96E-001	+-	1.21E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.62E-001	1.14E-004	2.20E-005	4.49E-006
PU238	9.07E-003	1.55E-001	2.68E-002	3.34E-005
PU239	9.31E+001	5.77E+000	9.99E-001	1.24E-003
PU240	5.95E+000	1.35E+000	2.34E-001	2.91E-004
AM241	1.48E+000	5.07E+000	3.50E+000	2.24E-001
PU241	1.14E-001	1.18E+001	2.04E+000	2.54E-003
PU242	1.99E-002	7.84E-005	1.36E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.46E-007
U233	<LLD	<LLD	0.00E+000	1.19E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.22E-006
U238	<LLD	<LLD	0.00E+000	2.01E-005
AM243	8.45E-003	1.69E-003	3.30E-004	1.55E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 9.24.13

ITR: _____ Date: 9/24/13

Automated Independent Technical Review

Count Sequence Number: 23620 Batch Number: 1LANDA1845
Counter ID: MCS HENC #1
Container ID: 68336
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/20/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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: 9-23-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68336**

BDR Number: **LA13FG2102**

Sampling Date: **9/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	377.17	
74-82-8	Methane	142.14	U
67-56-1	Methanol	57.76	
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\130925C\
Data File : 68336.D
Acq On : 25 Sep 2013 1:29 pm (#1); 25-Sep-13, 13:29:15 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 25 13:38:13 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.555	96	4622253	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.858	117	3514036	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.615	GC1	2836m	377.17 ppmv	
4) Methanol	0.873	31	21332	57.76 ppmv	100

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0111
Examination Date:	9/17/2013
Waste Container ID:	68341
Video/Audio Recorded Media Number:	LA-RTR2-13-0111 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.: 171.0 kg Tare Wt.: 145.1 kg Net Wt.: 25.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68341

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid, Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	25.4
Soils (S):	
Total WMP Weight:	25.9

CCP Radiography Data Sheet

Waste Container ID: 68341

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	9/17/2013
Print Name	Signature	Date

5852513

NDA 2000 Assay Report

Item Information

Item ID:	68341	Count Sequence Number:	23610
Operator:	D3PW2DK1\operator		
Assay Start:	9/19/2013 1:27:40 PM		
Description 1:	1LANDA1844		
Description 2:	POC - GW = 171.0 kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 25.9 kg	Net:	25.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.725 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23610
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68341

Batch Number: 1LANDA1844
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/19/2013

Net Weight	25900.0 g		
Pu mass	6.58E+001	+-	1.83E+001 g
TRU Alpha Activity	1.28E+001	+-	5.60E+000 Ci
TRU Activity Concentration	4.93E+005	+-	2.16E+005 nCi/g
Pu-239 Equivalent Activity	1.29E+001	+-	5.60E+000 Ci
Pu-239 FGE	6.20E+001	+-	1.83E+001 g
Decay heat	4.14E-001	+-	1.85E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.43E-007
U233	<LLD	<LLD	0.00E+000	1.40E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.02E-006
NP237	1.68E-001	1.18E-004	2.24E-005	5.57E-006
PU238	6.02E-003	1.03E-001	3.32E-002	1.34E-003
U238	<LLD	<LLD	0.00E+000	2.58E-005
PU239	6.17E+001	3.83E+000	1.13E+000	4.98E-002
PU240	3.95E+000	8.96E-001	2.94E-001	1.17E-002
AM241	2.31E+000	7.93E+000	5.47E+000	2.57E-001
PU241	7.60E-002	7.82E+000	2.57E+000	1.02E-001
PU242	1.32E-002	5.20E-005	1.71E-005	0.00E+000
AM243	1.07E-002	2.14E-003	4.09E-004	1.83E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 9-24-13

ITR: [signature] Date: 9.24.13

Automated Independent Technical Review

Count Sequence Number: 23610 Batch Number: 1LANDA1844
Counter ID: MCS HENC #1
Container ID: 68341
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/19/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor was set to one.	OK
Add-a-Source correction factor is less than n-sigma * the correction factor error.	OK
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	OK
NCC Pu mass was above calibration range. FGE is greater than the upper limit of 200.00 The Standard NCC Pu effective mass exceeds the Upper Calibration Limit.	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
No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	OK
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.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 9/24/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68341**

BDR Number: **LA14FG2008**

Sampling Date: **1/22/2014**

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\140122c\
Data File : 68341.D
Acq On : 22 Jan 2014 2:17 pm (#1); 22-Jan-14, 14:16:31 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 14:25:16 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.552	96	2836377	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.861	117	2303268	177.50 ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0111
Examination Date:	9/17/2013
Waste Container ID:	68344
Video/Audio Recorded Media Number:	LA-RTR2-13-0111 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.: 170.0 kg Tare Wt.: 145.1 kg Net Wt.: 24.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68344

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid, Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	24.9
Soils (S):	
Total WMP Weight:	24.9

CCP Radiography Data Sheet

Waste Container ID: 68344

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	9/17/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68344	Count Sequence Number:	23611
Operator:	D3PW2DK1\operator		
Assay Start:	9/19/2013 2:20:04 PM		
Description 1:	1LANDA1844		
Description 2:	POC - GW = 170.0 kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 24.9 kg	Net:	24.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.720 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:	23611	Batch Number:	1LANDA1844
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:	68344	Analysis Date:	9/19/2013

Net Weight	24900.0 g			
Pu mass	9.54E+001	+-	1.58E+001	g
TRU Alpha Activity	1.14E+001	+-	3.17E+000	Ci
TRU Activity Concentration	4.57E+005	+-	1.27E+005	nCi/g
Pu-239 Equivalent Activity	1.16E+001	+-	3.17E+000	Ci
Pu-239 FGE	9.00E+001	+-	1.49E+001	g
Decay heat	3.65E-001	+-	1.05E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.34E-002	4.47E-005	8.47E-006	3.41E-006
PU238	8.73E-003	1.49E-001	2.48E-002	3.33E-005
PU239	8.96E+001	5.55E+000	9.21E-001	1.24E-003
PU240	5.73E+000	1.30E+000	2.16E-001	2.90E-004
AM241	1.28E+000	4.39E+000	3.03E+000	1.81E-001
PU241	1.10E-001	1.14E+001	1.88E+000	2.54E-003
PU242	1.91E-002	7.55E-005	1.25E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.90E-007
U233	<LLD	<LLD	0.00E+000	9.21E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.62E-006
U238	<LLD	<LLD	0.00E+000	1.58E-005
AM243	6.08E-003	1.22E-003	2.32E-004	1.18E-005

Errors quoted at 1.000 sigma

Operator: Brit Hopkins Date: 9-24-13

ITR: [illegible] Date: 9-24-13

Automated Independent Technical Review

Count Sequence Number: 23611 Batch Number: 1LANDA1844
Counter ID: MCS HENC #1
Container ID: 68344
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/19/2013

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

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

Expert Review by: _____ Date: 9/24/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68344**

BDR Number: **LA13FG2113**

Sampling Date: **11/5/2013**

S852513

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	2037.19	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131105C\
Data File : 68344.D
Acq On : 5 Nov 2013 1:43 pm (#1); 05-Nov-13, 13:42:20 (#2)
Operator : SA
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 13:51:25 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.594	96	4838235	205.75	ppmv	0.08
15) Chlorobenzene-d5	5.891	117	3794745	177.50	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.617	GC1	15318m	2037.19	ppmv	

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

VOCGAS.M Wed Nov 06 12:32:41 2013

S852530

Container P 747410

File Options Reports Help

S852530

747410	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

S852530

- S852530
  - LA00000068755
    - LA00000069076 – LANL
      - LASB50452
    - LA00000069087 – WCS
      - LASB50018
    - LA00000069045
      - LASB50071 – WCS
    - LA00000068691 – EMPTY
  - W798209

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.001	%			

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET 12/23/13 JJS

4.1[6][B] Parent Waste Container No.: 68755

6.2[4] Date Processed: 12-23-13

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

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

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

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

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

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

Performed By: Brandon Chavez / [signature] 1204782 / 12-23-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68755

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 391.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 474.8 lb

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

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

Initials Z# Date

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

EWMO-FOD (print) Signature Z # Date

UET

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68755

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69076	69045		
10.1[4]	Daughter Drum Filter No.	JL-873	JL-889		N
10.1[4]	Daughter Drum Bag Filter No.	L-11808	L-10056		A
10.1[4]	Daughter Drum Purchase Order No.	501892	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	130P			
	Model No.	Equivistore			
	Serial No.	L-10035			
	Date of Manufacture	5-13			
10.2[5]	POC ID No	69087			
10.2[7][B]/10.2[6]	POC Item Description	Nitrate salts Kitty litter			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BC 204742			
10.2[14]	POC Assembly Gross Weight (lb)	381.8			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1000			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A	N A		
10.3[5][A]	Free Liquid Volume/Units	6 gal	N A		
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead	Lead		
10.3[9][A]	PCB-contaminated Waste Description	N A	N A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments	see comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	50%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic Kitty litter	Plastic Kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68755

Comments: poly liner, Lead, nitrate salts, liquid, fully lifted

11.1[1] Performed By: Brandon Chaez / [signature] 804742 / 12-23-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martin [signature] 1[illegible]2551 / 1/6/14 09:18
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11-19-13 CW

ATTACHMENT 2
Page 1 of 1

68691

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238366
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036243
Cal. Expiration Date:	12-18-13	8-5-14
Tolerance:	±4% CW ±6% CCW	±3% CW ±6% CCW

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1055
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: James Sandoval / HOWARD SMITH / [signature] / [signature] / 116662 / 11-19-13 / EXLT01 / 11/19/13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/A

8.1[1] Performed By: James Sandoval / [signature] / 116662 / 11-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: [signature] / [signature] / [signature] / 141251 / 11/10
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

12/23/13 BC

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68691

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8-2-13
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: Brandon Chavez [signature] 1047121 12-23-13
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): 230.6 lb

Comments: n/a

8.1[1] Performed By: Brandon Chavez [signature] 1047121 12-23-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez [signature] 1422351 1/10/14
Supervisor or designee (print) Signature Z # Date

UET

Working Copy
Date: 12-5-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69045

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc1.525pvc
Serial No.: L-100516
Manufacture Date: 5-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	±4%cw ±6%ccw	±3%cw ±6%ccw

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

Performed By: Brandon Chase / [signature] 2011921 / 12-5-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: JL-889
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.: 69045

Comments: N/A

5.[35] Performed By: Brandon Chavez / [signature] 149701 12-5-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 149335 1/6/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69045

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

M&TE No.: 038370
Cal. Expiration Date: 8 2 13
Range: 16-80 ft-lb
Tolerance (+/-): ±3%cm ±6%ccm

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

Performed By: Brandon Chavez / Signature / 204742 / 12-23-13
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: / Signature / Z # / Date
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.: 69045

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 288.0 lbs

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

Comments: N/C

6.[32] Performed By: Brandon Drake [signature] [illegible] 12-23-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 1483351 1/10/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET 12/18/13 15

5.[34][E] Drum ID No.: 69076

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.: 6CPUL 1.5-2 5PUC
Serial No.: L-11508
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:	pc 12/18/13 ~~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: Brian Cordova [signature] 1287549 12/18/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 019DS
Serial No.: JL-873
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69076

Comments: n/c

5.[35] Performed By: Brian Cordova [signature] 1287549 12/18/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 1492351 1/16/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 64676

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

M&TE No.: 038370
Cal. Expiration Date: 8 2 13
Range: 16-80 ft-lb
Tolerance (+/-): ±3%rdg ±6%rng

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

Performed By: Brandon Chavez / [signature] / 0047412 / 12-23-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69076

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 384.0 lbs

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

Comments: n/a

6.[32] Performed By: Brandon Chavez / [signature] 2142 12-23-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert [illegible] / [signature] 149239 1/10/14
Supervisor or designee (print) Signature Z # Date

Working Copy
12-22-13 JL

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68755

6.3[15] ($) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☐ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 391.8

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: Adam Segovia (Waste Handling Technician (print)) (Signature) 1276211 (Z #) 12-22-13 (Date)

8.1[7] Reviewed By: (Supervisor or designee (print)) (Signature) 1462351 (Z #) 1/10/14 (Date)

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

8.1[8][D] Approved by: (SOS/SOM or designee (print)) (Signature) 1462351 (Z #) 1/10/14 (Date) 0952 (Time)

1947 SP77

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions (Container re-labeled & new # given in WCATS Brittnyllo 12/6)

Container ID: S852530 \ 68755 Container Type: 85 GAL DRUM Gross Weight (lbs): 409.9095
Total PE-Ci Activity: 68755 1.61E+01 Equivalent Combustible PE-Ci: 6.05E+00
Total Fissile Gram Equivalents: 1.78E+02 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009

Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 3/4/13. Attachment 3 of DOP-1030 is attached. RTR pre-screen indicates impenetrable object most likely due to lead liner in the drum

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~ 271 lbs. and generator data shows 8 items of nitrate salts with weights ranging from ~ 15 – 42 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
May contain free liquid.

Performed By: John Sandlund | Signature | 124165 | 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 | Signature | 112609 | 9/30/13
LTP Engineering (Print) | Signature | Z# | Date

TRU Remediation Operations

Potential Safety Risks: USE Proper PPE And Kitty Litter Basin

Performed By: Gilbert Martinez | Signature | 149235 | 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 hexarmour gloves during processing. Use proper gloves for the task being performed.

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

Noncertified TRU Waste Drum Item Information

DrumID: 019341

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX171238NE		19.770	NITRATE SALTS		57.72	52	6/14	G468	
2	DSL269NE1		16.590	NITRATE SALTS		16.51	52	6/14	G468	
3	DSL269NW1		28.400	NITRATE SALTS		23.46	52	6/14	G468	
4	LR270NE1		10.680	NITRATE SALTS		11.41	52	6/14	G468	
5	OX172271NE		17.270	NITRATE SALTS		39.14	52	6/14	G468	
6	OX172271NW		15.230	NITRATE SALTS		22.69	52	6/14	G468	
7	LR272NE1		6.820	NITRATE SALTS		3.49	52	6/14	G468	
8	LR272NW1		8.640	NITRATE SALTS		15.16	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 185.9

Material Type	SNM (grams)	Items Net Wt (kg)
52	189.58	123.40
Totals	189.58	123.40

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: 9852530

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	____ %	0.108056 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	4.74 ppm
Filter Vent Unique Identifier No.:	____	AN-388
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: 9852530

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: S852530

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

12/6/13

Comments: N/A

7.[11][M] 7.[23] Performed By: Chris Vigil 163082 3-4-13
LTP-DDP Supervisor designee (Print) Signature ID # Date

10.1[3] Overhead space heaters ON and thermostat set. ☑ SAT ☐ UNSAT

10.1[4] Reviewed by Chris Vigil 163082 3-4-13
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: 9852530
PE-Ci Content: 16.12690129
PE-Ci Equivalent Combustible content: 14.19167313
FGE content 178.1140032
Weight (lb) 409.9095
Outermost Waste Container configuration:
☑ Vented 85-gal ☐ Unvented 85-gal ☐ Unvented 55-gal

5.[3]/6.[3] Performed By: Chris Vigil [signature] 1602082 3-4-13
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: 3852530

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 PF-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 — LTP-DDP Supervisor designee (Print) — Signature — 163082 — Date 3-4-13

30.1[3] Reviewed By: Chris Vigil — LTP-DDP Supervisor designee (print) — Signature — 163082 — Date 3-4-13

30.1[6] Acceptance criteria satisfied ☑ YES ☐ NO

30.1[8] Approved By: Chris Vigil — SO-SOM or designee (print) — Signature — 163082 — Date 3/4/13

DVS Gas Determination Results Report

Date: 3/4/2013

Waste Container Number: S852530

Batch Number: DVS2130413

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	3.09	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	1.65	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	4.74	I.V.R. Intial and Date	RP 3-4-13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.108056	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-388

Doug Eisele
DVS Operator Print Name

Signature

03-04-13
Date

12-23-13

0550 ASSUMMING WCRR OPS CENTER H SMITH
0614 STARTING OUTSIDE ROUNDS
0615 STARTING INSIDE ROUNDS
0615 STARTING PRE JOB BRIEFING
0638 PRE JOB COMPLETED
0640 ITEM #63 INSIDE ROUNDS OOS. POD IN PLACE PERMISSION TO PROCEED PER CSE DOCUMENTATION
0644 OUTSIDE ROUNDS COMPLETED
0706 INSIDE AND OUTSIDE ROUNDS SIGNED OFF BY SOS
0730 MODE CHANGE TO OPERATIONS IN TA50-69 AND WCRR YARD
0749 PERMISSION GRANTED TO LOWER ACCESS GATES FOR SHIPMENT OUT OF WCRR
0855 BAGGING OFF 2 DAUGHTERS, 1 POC BAGGING ON 68755
0906 STARTING MONTHLY VALVE ALIGNMENT
0912 VEHICLE ACCESS GATES RESTORED, TRANSPORTAINED DOORS SECURED & LATCHED SHIPMENT OUT OF TA50-69 IS COMPLETED
0950 BAGON-BAG OFF COMPLETE
1000 COMPLETED MONTHLY VALVE ALIGNMENT.
1022 STARTING MOVEMENT FROM TA50-69 TO TA50-75
1044 COMPLETED MOVEMENT FROM TA50-69 TO TA50-75
1058 BAG OFF-BAG ON ONE DAUGHTER
1117 BAG ON COMPLETED
1225 BAGGING OFF 1 DAUGHTER, POC, INSTALLING PORT COVERS, TO COMPLETE PROCESSING
1250 ~~1258~~ 12/23/13 HS BAG OFF COMPLETE
1252 MODE CHANGE TO WARM STANDBY IN WCRR YARD AND TA50-69.
1256 STARTING HEPA-FILTER CHANGE
1319 HEPA-FILTER CHANGE COMPLETED
1330 OPERATORS OUT FOR LUNCH.
1441 PERMISSION GRANTED TO MOVE WASTE FROM TA50-69 TO TA50-194.
1532 OPERATORS ~~WILL BE~~ WILL BE CHANGING STATIONS #1 & #4 LEFT HAND GLOVES

CONTINUED ON NEXT PAGE HSMITH

12/23/13 WCRR SOM

0600 Reviewed Shift Turnover Checklist and assumed WCRR SOM position.

0636 Prejob brief conducted by SOS (C. Valverde) concluded. Covered status of operations w/ 1 drum bagged onto WCG (50% complete) and another (52-32) denested and ready to process. Facility to be in cold @ ~~SOM~~ RG 12/23/13 COB, WCG maintenance including HEPA filter changeout, tool drum changeout, glove inspections etc. House keeping and preps for winter closure. Monthly valve alignment to be completed. Operators reviewed / signed off on work shift orders WCRR-SM-13-003, R2 Manual Drum Movements, WCRR-SM-13-005, R0 Precautions to prevent bag tears.

0705 Completed daily call in to TA-54 SOM and statused WCRR activity

0720 Notified by ES Prod. Manager that 412 operations will not be occurring due to watch bill issues - 2 called in sick and 2 w/ cuts - not allowing hot work.

0725 Completed reviewing round sheets.

0730 Completed mode change: WCRR Yard and Bldg 50-69 from Warm/Warm to Operations / Operations.

0912 Completed shipment out of 9 drums to TA-54.

0950 Completed all bag offs for parent drum # 68756 (3 daughters, 1 POC total) bagged on drum # 68755.

1045 Completed review of Attachment for completion of Monthly Fire Suppression Supply Valve Alignment Check per EP-WCRR-FP-DOP-0303 R5. Forwarded copy to CSE L. Moore.

1117 Completed bag off of 1 daughter - continuing to process.

1130 Extended IWD-ES-WCRRF-WCG Operations/Horizontal Port Processing 081911-1001 for 1 year to expire 12/31/14

1145 Received update from 412 SOS that operations have occurred w/ operators from 375 ~~obtained~~ MG 12/23/13 providing support. Drum # 5853836 after denesting from an SWB was determined to be non vented (inner 55 gal DM) - Ops center was notified and LCO 3.4.1 was entered/exited @ 1142

1250 ~~1258~~ MG 12/23/13 All bag offs complete for parent # 68755 (2 daughters total) Horiz. port cover in place.

1252 Mode Change Complete: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

continued on next page. →

66

PROJECT NAME _____ NOTEBOOK NO. _____

12-23-13

0600 Assuming WCRRF SOS position - Cleland
0614 Starting inside and outside rounds
0615 Pre job briefing conducted, discussed pre holiday shutdown on north facility.
0638 pre job concluded.
0644 Outside rounds completed.
0706 Rounds have been signed off.
0730 Mode change to operations inside TASC-69 and WCRRF yard.
0749 Vehicle access gates have been restored & dropped for loading of transport vehicle.
0855 Bagging off 2 daughters and 1 POC, Bagging on 68755
0906 Performing monthly valve alignment
0912 Vehicle access gates have been restored movement to transport vehicle complete.
0950 Bag on - Bag off complete
1000 Monthly valve alignment complete
1022 Starting movement out of SC-69
1044 Completed movement out of SC-69.
1058 Bagging off 1 daughter bagging on 1 daughter
1119 Bag on, Bag off complete
1225 Bagging off 1 daughter, POC
1250 Bag off complete.
1252 mode change to warm stand by in WCRRF and TASC-69
1257 Starting Hepa filter change.
1321 Hepa filter change out complete
1441 Starting movement out of SC-69
1515 movement out of SC-69 complete.
1529 Starting outside rounds
1535 Starting inside rounds
1545 Outside rounds complete.
1551 Inside rounds complete.
1602 Inside and outside rounds signed off.
1609 Glove changes ~~completed~~ 12-23-13 started on station 1 and station 4 left hand.
1639 Glove changes complete
1700 Mode change performed TASC-69 in cold and WCRRF yard in warm standby.
1720 end of day WCRRF operations SOS occurred Cleland

HA

no further entries 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-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69045
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.: 131.0 kg Tare Wt.: 33.4 kg Net Wt.: 97.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 69045

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	5.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	2.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	71.6
Soils (S):	
Total WMP Weight:	97.6

CCP Radiography Data Sheet

Waste Container ID: 69045

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

NDA 2000 Assay Report

Item Information

Item ID:	69045	Count Sequence Number:	16867
Operator:	DCLTD231\Operator		
Assay Start:	1/23/2014 2:59:12 PM		
Description 1:	2LANDA1255		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 97.6 kg	Net:	97.6 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.590 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 16867
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 69045

Batch Number: 2LANDA1255
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/23/2014

Net Weight	97600.0 g		
Pu mass	8.86E+001	+-	2.56E+001 g
TRU Alpha Activity	8.78E+000	+-	2.26E+000 Ci
TRU Activity Concentration	8.99E+004	+-	2.31E+004 nCi/g
Pu-239 Equivalent Activity	8.97E+000	+-	2.26E+000 Ci
Pu-239 FGE	8.35E+001	+-	2.55E+001 g
Decay heat	2.79E-001	+-	7.26E-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	1.64E-007
U233	<LLD	<LLD	0.00E+000	8.44E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.07E-006
NP237	5.21E-002	3.67E-005	6.13E-006	1.58E-006
PU238	8.08E-003	1.38E-001	4.67E-002	6.49E-004
U238	<LLD	<LLD	0.00E+000	1.31E-005
PU239	8.31E+001	5.15E+000	1.58E+000	2.42E-002
PU240	5.31E+000	1.21E+000	4.07E-001	5.66E-003
AM241	6.65E-001	2.28E+000	1.56E+000	3.87E-002
PU241	1.01E-001	1.04E+001	3.50E+000	4.86E-002
PU242	1.77E-002	7.00E-005	2.37E-005	0.00E+000
AM243	6.45E-003	1.29E-003	2.16E-004	1.12E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 1/27/14

ITR: [signature] Date: 1-28-14

Automated Independent Technical Review

Count Sequence Number: 16867 Batch Number: 2LANDA1255
Counter ID: HENC #2
Container ID: 69045
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/23/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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.

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: Sherri Chambers Date: 1-27-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69045**

BDR Number: **LA14FG12014**

Sampling Date: **1/29/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	213.60	
74-82-8	Methane	6.56	U
67-56-1	Methanol	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\MSDCHEM\1\DATA\140129C\
Data File : 69045.D
Acq On : 29 Jan 2014 3:01 pm (#1); 29 Jan 2014 3:00 pm (#2)
Operator : DE
Sample :
Misc : 55 GALLON ~~THROUGH FILTER~~ DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1 DE 1-30-14

Quant Time: Jan 29 15:09:40 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	9137049	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7114215	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.920	GC1	60930	213.60 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-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69076
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.: 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 2 layers
Volume Utilization Percentage:	100 %

CCP Radiography Data Sheet

Waste Container ID: 69076

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

R:

XPM: Plastic bags, plastic liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	5.0
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):	130.1
Soils (S):	
Total WMP Weight:	141.1

CCP Radiography Data Sheet

Waste Container ID: 69076

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

NDA 2000 Assay Report

Item Information

Item ID:	69076	Count Sequence Number:	16892
Operator:	DCLTD231\Operator		
Assay Start:	1/25/2014 2:47:50 PM		
Description 1:	2LANDA1257		
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:	100.0 %
Density:	0.680 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16892	Batch Number:	2LANDA1257
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69076	Analysis Date:	1/25/2014

Net Weight	141000.0 g			
Pu mass	5.94E+001	+-	2.10E+001	g
TRU Alpha Activity	9.73E+000	+-	3.93E+000	Ci
TRU Activity Concentration	6.90E+004	+-	2.79E+004	nCi/g
Pu-239 Equivalent Activity	9.86E+000	+-	3.93E+000	Ci
Pu-239 FGE	5.60E+001	+-	2.09E+001	g
Decay heat	3.15E-001	+-	1.30E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	1.71E-010	1.93E-007	4.32E-008	7.95E-008
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.67E-007
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	6.38E-006
NP237	1.18E-001	8.29E-005	1.51E-005	3.43E-006
PU238	5.42E-003	9.27E-002	3.72E-002	1.40E-003
U238	<LLD	<LLD	0.00E+000	1.80E-005
PU239	5.58E+001	3.46E+000	1.30E+000	5.23E-002
PU240	3.57E+000	8.09E-001	3.25E-001	1.22E-002
AM241	1.57E+000	5.37E+000	3.69E+000	1.59E-001
PU241	6.75E-002	6.95E+000	2.79E+000	1.05E-001
PU242	1.19E-002	4.70E-005	1.89E-005	0.00E+000
AM243	2.33E-002	4.66E-003	8.47E-004	2.40E-005
CM243	4.55E-006	2.23E-004	1.26E-004	2.44E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1·29·14

ITR: _____ Date: 1·30·14

Automated Independent Technical Review

Count Sequence Number: 16892 Batch Number: 2LANDA1257
Counter ID: HENC #2
Container ID: 69076
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/25/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
FGE is greater than the upper limit of 200.00	Neutron results suspect. Gamma results applied.
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Analysis Status: Override enabled; data marked not available but were used.	
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.

Comments	Disposition
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
MCA Deadtime greater than the upper limit of 50.0%.	MCA deadtime = 50.43%
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: Sheri Chandler Date: 1-29-14

5852530

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69076**

BDR Number: **LA14FG2052**

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

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\140404c\
Data File : 69076.D
Acq On : 4 Apr 2014 2:22 pm (#1); 04-Apr-14, 14:21:24 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 14:29:48 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.594	96	3551736	205.75	ppmv	0.08
15) Chlorobenzene-d5	5.891	117	2829332	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

CCP-TP-053 Attachment 2

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69087
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.: 173.5 kg Tare Wt.: 145.1 kg Net Wt.: 28.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 69087

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other:Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	3.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	25.4
Soils (S):	
Total WMP Weight:	28.4

CCP Radiography Data Sheet

Waste Container ID: 69087

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.
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

S852530

NDA 2000 Assay Report

Item Information

Item ID:	69087	Count Sequence Number:	16833
Operator:	DCLTD231\Operator		
Assay Start:	1/17/2014 1:48:38 PM		
Description 1:	2LANDA1252		
Description 2:	POC 173.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 28.4 kg	Net:	28.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.738 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:	16833	Batch Number:	2LANDA1252
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69087	Analysis Date:	1/17/2014

Net Weight	28400.0 g		
Pu mass	7.29E+001	+-	2.14E+001 g
TRU Alpha Activity	9.59E+000	+-	3.23E+000 Ci
TRU Activity Concentration	3.38E+005	+-	1.14E+005 nCi/g
Pu-239 Equivalent Activity	9.74E+000	+-	3.23E+000 Ci
Pu-239 FGE	6.88E+001	+-	2.14E+001 g
Decay heat	3.08E-001	+-	1.06E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.74E-007
U233	<LLD	<LLD	0.00E+000	1.39E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.43E-006
NP237	7.63E-002	5.38E-005	1.03E-005	2.34E-006
PU238	6.66E-003	1.14E-001	3.90E-002	9.11E-004
U238	<LLD	<LLD	0.00E+000	1.46E-005
PU239	6.85E+001	4.24E+000	1.32E+000	3.40E-002
PU240	4.38E+000	9.93E-001	3.40E-001	7.96E-003
AM241	1.23E+000	4.23E+000	2.92E+000	1.23E-001
PU241	8.29E-002	8.54E+000	2.93E+000	6.84E-002
PU242	1.46E-002	5.77E-005	1.98E-005	0.00E+000
AM243	1.30E-002	2.60E-003	4.97E-004	1.65E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1·21·14

ITR: _____ Date: 1·22·14

Automated Independent Technical Review

Count Sequence Number: 16833
Batch Number: 2LANDA1252
Counter ID: HENC #2
Container ID: 69087
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 1/17/2014

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

Expert Review by: Sheri Chandler Date: 1-21-14

Waste Container ID: **69087**

BDR Number: **LA14FG2011**

Sampling Date: **1/30/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	305.35	
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\140130c\
Data File : 69087.D
Acq On : 30 Jan 2014 3:04 pm (#1); 30-Jan-14, 15:03:22 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 30 15:11:57 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.561	96	3143497	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.871	117	2492593	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.621	GC1	2296m	305.35 ppmv	

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

S852590

S852590

Cont er Profile 753845

File Options Reports Help

S852590

753845	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

Genealogy

S852590

- S852590
  - LA00000069001 - EMPTY
  - LA00000068655
  - LA00000068652

Working Copy
Date: 11-18-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S852590

6.2[4] Date Processed: 11-18-13

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

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

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

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

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

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

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

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

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

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

Performed By: Frederick Schlotz / [signature] 122806 / 11-18-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S852598

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 413.2 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 496.2 lb

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

6.2[17][D] Drum lift hinge pin retaining clip replaced. [illegible] 128876 10/18/13
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.: S852590

Daughter Drums				MS 4/19/8	
10.1[4]/10.2[4]	Daughter Drum No.	68655	68652	68507	
10.1[4]	Daughter Drum Filter No.	LM-865	AN-671	N	A
10.1[4]	Daughter Drum Bag Filter No.	L-10323	L-10142		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No	N			
10.2[7][B]/10.2[6]	POC Item Description	A			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			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	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 (%)	80	70%	N	A
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastics, kitty litter, HEPA armor Gloves.	PLASTIC KITTY LITTER		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S852590

Comments: NITRATE SALTS, PLASTIC, LEAD SHIELDING, LIQUID.

11.1[1] Performed By: GERALD ESPINOZA / [signature] / 1231720 / 11-18-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Jerez / [signature] / R21452 / 11/20/13 0518
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11-18-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69001

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: ±3% CW ±6% CCW

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

Performed By: GERARD ESPINOZA [signature] 1237720 11-18-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 170.4 lb

Comments: N/C

8.1[1] Performed By: GERARD ESPINOZA [signature] 1237720 11-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez [signature] 1221421 11/20/13
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.: 68652

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5-25PVC
Serial No.: L-10142
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-05-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	±4% cw ± 6% ccw	±3% cw ± 6% ccw

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

Performed By: MICHAEL MONTOYA / [signature] 191352 / 11/12/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN-671
Manufacture Date: 1/13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68652

Comments: NC

5.[35] Performed By: Michael Montoya / [signature] / 191352 / 11/12/13
Operator (print) / Signature / Z # / Date

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

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68652

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range: 16 80 ft-lb
Tolerance (+/-): ±3 / cw ±6 / ccw

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

Performed By: GERALD ESPINOZA / [signature] / 1237720 / 11-18-13
Operator (print) Signature Z # Date

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:		
Range:	in-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: GERALD ESPINOZA / [signature] / 1237720 / 11-18-13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 686057

6.[26] Scale File ID number: 619065

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

6.[28] Drum gross weight: 413 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: GERALD ESPINOZA (Operator (print)) [signature] (Signature) 123772d (Z #) 11-18-13 (Date)

7.1[4] Reviewed By: Jose Jerez (Supervisor or designee (print)) [signature] (Signature) 221452 (Z #) 11/20/13 (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.: 68655

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.: 6CPUC1.5-25PUC
Serial No.: L-10323
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	±4% cw ± 6% aw	±5% cw ± 6% aw

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 | 726826 (Z #) | 11-12-13 / 11/12/13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 01905
Serial No.: LM-865
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.: 68655

Comments: N/C

5.[35] Performed By: Brian Cordova (Operator (print)) | Signature | 228824 / 11-12-13 (Z # / Date)

7.1[4] Reviewed By: Jose Jerez (Supervisor or designee (print)) | Signature | 1221521 / 11/20/13 (Z # / Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68655

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

M&TE No.: 035369
Cal. Expiration Date: 12-18-13
Range: 16-80 ft-lb
Tolerance (+/-): ±3% cw ±6% ccw

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

Performed By: GERALD ESPINOZA [signature] 1237720 11-18-13
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: GERALD ESPINOZA [signature] 1237720 11-18-13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68655

6.[26] Scale File ID number: 019D65

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

6.[28] Drum gross weight: 1704 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: GERARD ESPINOZA (Operator (print)) [signature] (Signature) 237720 (Z #) 11-18-13 (Date)

7.1[4] Reviewed By: Jose Perez (Supervisor or designee (print)) [signature] (Signature) 224521 (Z #) 11/20/13 (Date)

ATTACHMENT 3
Page 1 of 1

Working Copy
Date: 11-18-13

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S852590

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: 10-10-14

6.3[18] Prepared parent 55-gal drum weight (lb): 413.2

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: Frederick Archuleta / [signature] 120072 / 11-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez / [signature] 122452 / 11/20/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: [illegible] / [signature] 117525 / 11/20/13 / 0940
SOS/SOM or designee (print) Signature Z # Date Time

Inspected 1947 SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S852590 Container Type: 55-GAL (SS 11-4-13) Gross Weight (lbs): 432
Inner Seal #: 019349 Filter Prefix: LAVC Filter Serial #: 01320
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
WSR Comments: LEACHED SOLIDS NITRATE SALTS MST 12 SEAL 12933
Total PE-Ci Activity: 1.67E+01 Equivalent Combustible PE-Ci: 6.28E+00 AM-241 PE-Ci: 1.36E+00
Total Fissile Gram Equivalents: 184.9 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/23/2007 Comment: Impenetrable Obj,
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Signature / 100681 (Z Number) / 12/20/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net wt: 372#. Generator info shows 10 items of nitrate salts; weights range from 5-63#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids &/or debris may be present. RTR PS show presence of impenetrable object(s). No chemicals identified. Applicable waste codes are for chromium, lead, & mercury. Nitrate Salts require repack w/ admixture. Note elevated FGEs.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Signature / 112659 (Z Number) / 4/18/13 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use [illegible] glass during processing
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use the proper ratio of kitty litter to waste in accordance with the procedure.
Performed By: Darrel L. Blair (TRU Remediation Operations (Print)) / Signature / 1218069 (Z Number) / 10/29/13 (Date)

HS Review. Jolly Arnold CSP, may contain Pb, Hg & Cr
-29-13

Document No: EP-DIV-AP-0107 Jose Jerez 221452 10-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 019349

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	OX173275NW		16.590	NITRATE SALTS		27.04	52	6/14 G468	
2	OX1732275NE		16.140	NITRATE SALTS		40.61	52	6/14 G468	
3	OX173276NE		13.410	NITRATE SALTS		17.3	52	6/14 G468	
4	OX173277NW		7.500	NITRATE SALTS		7.81	52	6/14 G468	
5	DS278NE1		12.950	NITRATE SALTS		6.81	52	6/14 G468	
6	DS278NW1		28.410	NITRATE SALTS		26.48	52	6/14 G468	
7	DS278NW2		15.230	NITRATE SALTS		11.55	52	6/14 G468	
8	RR286VRNW		6.140	NITRATE SALTS	3[redacted]		52	6/14 G468	
9	LR280NW1		16.140	NITRATE SALTS		12.48	52	6/14 G468	
10	NX287NE1		2.500	NITRATE SALTS		11.38	52	6/14 G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 195.9

Material Type	SNM (grams)	Items Net Wt (kg)
52	177.01	135.01
Totals	177.01	135.01

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 5/21/13

Container No. (5.[1])	S853590					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT N/A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	213.84 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

Reviewed By: Nathan Wales (CCP (Print)), 238844 (Z #)

Comments:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), [signature] (Signature), 100681 (Z #), 5/22/13 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130521c\
Data File : S852590.D
Acq On : 21 May 2013 3:31 pm (#1); 21-May-13, 15:31:01 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL DRUM THROUGH UNOBSTRUCTED 72 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 15:39:50 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.571	96	4111828	201.25 ppmv	0.00
15) Chlorobenzene-d5	5.904	117	3554710	177.00 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.600	GC1	1520m	213.86 ppmv	

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

vocgas.m Tue May 21 15:39:58 2013

11-18-13

0600 ASSUMMING WCRRF OPERATIONS CENTER H SMITH

0604 STARTING PRE-JOB BREIFING

0630 PRE JOB COMPLETED

0635 STARTING OUTSIDE ROUNDS

0653 OPERATORS ENTERING BUILDING TO BEGIN PROCESSING

0710 RCT'S WHILE CHECKING CAMS, REMOVED PORT COVERS AND GOT READINGS OF 2000 DPM ON PORT #1 RIGHT HAND, WILL REPLACE COVER FINISH CHECKING CAMS AND RECHECK

0715 COMPLETED OUTSIDE ROUNDS

0730 STARTING INSIDE ROUNDS

0758 TECH 14 NOTIFIED OPS CENTER NEED TO CHANGE OUT GLOVEBOX GLOVES AT STATIONS #2 AND #8 ALSO

0755 ITEM #63 INSIDE ROUNDS ODS, PERMISSION GRANTED TO PROCED, POD IN PLACE PER CSE DOCUMENTATION

0805 INSIDE ROUNDS COMPLETED

0827 LATE ENTRY STARTING SHIPMENT OUT TO TA-54 0800 HS

0830 INSIDE AND OUTSIDE ROUNDS ~~SH~~ HS 11/18/13 REVIEWED BY SDS

0835 PERMISSION GRANTED TO LOWER VEHICLE ACCESS GATES ~~TO ACCEPT SHIPMENT FROM TA50 TO~~ 11/18/13 HSMITH FOR SHIPMENT TO TA-54

0847 STARTING GLOVEBOX GLOVE CHANGES AT STATIONS #1, #2, #8

0912 SHIPMENT OUT TO TA-54 IS COMPLETED, TRANSPORTAINER DOOR ARE CLOSED AND LATCHED, VEHICLE ACCESS GATES ARE RESTORED.

0920 RCT NOTIFIED OPS. CENTER OF 2 PIN HOLES ON STATION 1 RIGHT HAND GLOVE FOREARM AREA, 8000 DPM ALPHA, 200 DPM LAS, 48 DPM REMOVABLE INSIDE GLOVE AREA ENTERING EP-WCRR-RM-0210. SOM NOTIFIED AND WILL MAKE NOTIFICATIONS

1023 GLOVEBOX GLOVE CHANGES ARE COMPLETED, 50 COUNT SMEARS BEING CONDUCTED BY RCT'S

1123 MODE CHANGE WCRRF AND TA50-69 - MODE INCREASE TO OPERATIONS MODE, ALL SMEAR RETURNED NDA

1151 LATE ENTRY EXIT EP-WCRR-RM-0210 1120 HS

CONTINUED ON NEXT PAGE HSMITH

11-18-93 CONTINUED FROM PREVIOUS PAGE H SMITH
1152 PERMISSION GRANTED TO MANIPULATE WASTE, MOVE WASTE FROM TA 50-194/75 TO TA-50/69.
1250 MOVEMENT INTO TA50-69 COMPLETED
1252 PERMISSION GRANTED TO LOWER VEHICLE ACCESS GATE FOR SHIPMENT INTO TA50-69 WCRRF.
1315 BEING RELIEVED BY OCO CLARISSA VORLANDE H SMITH
1315 11-18-93 ASSUMING WCRRF operational center - Orlando
1330 Starting to denest 3 drums then will be bagging on 9832150.
1443 Denesting and Bag on is complete.
1510 movement into transportainers from transport vehicle is complete
1600 Starting outside rounds
1619 Bagging off 1 daughter, bagging on 1 daughter
1620 Completed outside rounds.
1637 Bag off complete continuing to process.
1645 Starting inside rounds.
1700 Item 63 is 005, PCD in place OK to proceed per CSE documentation
1718 Inside rounds complete
1738 Bagging off, bagging on 9852590
1800 Bag on, Bag off complete.
11-18-93 1805 Relieved by OCO Terri Coleman - Orlando

HH
HH

no further entries this page.

11-18-13

1800 Assuming WCRR operations center.
1820 Shift turnover with daypshift being conducted.
1825 Pre-job being conducted by SOS.
1835 Pre-job concluded.
1859 Operators entering 5069 to begin processing S852590.
2130 Bagging off 1 daughter, bagging on another daughter.
2145 Bag off/on complete.
2324 Bagging off 1 daughter, bagging on S853279.
2354 Bag off/on JC 11-18-13 completed. Minor issue - The operators were not able to bag on due to a broken clip on the drumlift. SOS notified and is going into ML-2 to get a replacement clip.

11-18-13 0021 Operators out for lunch. Operators have replaced the clip on the drumlift.
0105 Beginning outside rounds.
0132 Outside rounds complete.
0207 Bagging on S853279.
0208 Late entry - at 0133, operators back from lunch. JC
0209 Initiating a drum movement from transportainer to 5069.
0218 Bag on complete. Drum movement complete.
0225 Beginning inside rounds.
0226 Initiating a drum movement from 5069 to a transportainer.
0248 Item #63 is OOS, Okay to proceed per CSE documentation
0258 Drum movement complete.
0303 Late entry at 0250, inside rounds complete. JC
11-19 0324 Both rounds reviewed by SOS.
0415 Bagging off 1 daughter, 1 POC, bagging on another daughter.
0448 Bag off/on complete.
11-19-13 0605 Being relieved by OCO, Clarissa Velarde, JColeman

No further entries this page

11-18-2013 DAYSHIFT

0555 Reviewed shift logs and assumed the SOM position [signature]

0635 Completed attending the pre-job brief conducted by the SOM (Clarissa). The safety topic discussed was shift work and hand injuries. The FSR topic was dropping the vehicle barrier gate - when is it allowed. There is a transfer scheduled in from AREA G of 16 12 drums and a transfer out of 16 drums. The current shift orders WCRR-SH-13-003 Rg and WCRR-SH-13-005 Rc were reviewed

0707 Completed daily call in to update Facility POD status with AREA G SOM

0710 RCTs were performing routine surveys with WCG and changing out CAM filters. They identified at station one under the port cover on the glove box glove 2000 dpm direct. This was at the RWP limit. RCTs will complete CAM filter change outs, then continue surveys after donning respirators. The port cover was placed back onto station 1.

0744 Outside operators initiate staging TRU waste drums for the transfer out and the transport truck arrives at WCRR.

0751 Inside Operators report stations 2 and 8 both pair require changing due to wear marks.

0844 Inside Operators obtain supplies, hex-armors, tape, cheesecloth, etc for re-stock, also they note station 3 lead window, previously taped up was noted on the WCG glovebox floor and pretty much shattered (spider cracked with tape) - Operators requested a stainless steel plate with velcro to place over the small window at station 3. Requested SOS to follow up with ES procurement on paperwork/quote for JONAS to cut lead windows.

0847 Inside operators report they will initiate glove changes on stations 1, 2, and 8, both left and right hands

0920 RP-1 reported station 1 right hand was identified with 8K direct, Alpha removable on the Large Area Survey (LAS) was noted at 200 dpm. the glove swipe by the inner cuff was reported at 48 dpm Alpha removable. There were two pin holes located about 1" down from the cuff where the glove attaches to the glovebox. EP-WCRR-RM-AOP-0210, Loss of GB Integrity was entered by the OCO. The glove will be changed. Notification was made to OM. RP-1 indicated that an RPO will be written.

0940 Notification was made to DOE Fac Rep (R Torres)

1028 All glovebox glove changes were noted completed. Additional 50 surveys post glove change is being conducted.

1123 Mode Change: 50/69 and 7/and transition from Cold/Warm to Operations/Operations.

1152 Outside operations initiate a transfer in of 3 Parent drums

1205 Completed escorting Fire Safety Engineer (R. Plonski) through LEVEL B storage Area with support from the custodian, and he obtained spec sheets for the

11-18-2013 DAYSHIFT CONT:

heater blankets, then we escorted to the yard to observe the forklift battery charging station and transportainer where the electrical pass-through would support the heater blankets. Information was provided to the OM.

1230 Completed the noon facility status call in with OM, SOM, and others.

1250 The transfer into 50/69 was completed.

1330 Upon receipt and staging, inside operations initiate ~~to~~ denesting and bag on of parent drum 5832150.

1354 Completed extending shift orders WCRR-SH-13-003: R2 and WCRR-SH-13-005 R0 through 11-25-13.

1443 De-nesting and bag-on are noted completed.

1506 Discussed with production control (V. Norris) our next transfer to WCRRF. E mail noted SP-3. Additional discussion with RP-1 identified some drums 55 Parent were noted with 1M dpm alpha removable at AREA G - These drums were bagged and placed into an overpack 85. A list of these drum were requested to verify which drums are wrapped in plastic and those not wrapped. WCRRF will review to comply with current RWP requirements and precautions.

1620 Inside operators initiate bag off of 1 daughter and bag on another and continue to process.

1622 - Late entry for 1510, Outside operations complete the movement of 12 drums into the facility, receive them in WCATS and transfer them to the transportainers.

1637 Bag on is completed and operations continue to process.

1800 Inside Operation completed Bag off of daughter and Bag on of Parent drum 5852590.

1805 Completed Shift turnover checklist review with oncoming SOM.

1816 Relieved by R. AXTELL as SOM

No further Entries this Page

11/18/13 Night Shift

1816 Reviewed Shift Turnover Checklist, approved and posted the night shift operations watchbill and assumed the WCRR SOM position.

1842 Prejob brief conducted by SOM was completed. Discussed WCG glove issues from this morning. To prevent from happening in future will ensure that last shift of week performs thourough inspections. Operators briefed and signed active shift orders WCRR-SH-13-003 R2 and WCRR-SH-13-005. R0. Updated operators on WCG lighting maintenance performed on Friday. Requested operators pay attention to house keeping inside 50-69.

2145 Completed bag off of 1 daughter - continuing to process

2354 Completed all bagoffs of parent # 5852590 (2 daughters total) Operators reported a drum lift pin clip broken. SOS will obtain from ML-2 storage. Bag on of next parent will take place after clip replacement and lunch.

11/19/13 0021 Operators replaced clip on drum lift. Breaking for lunch

0133 Resuming operations.

0218 Bag on of parent # 5853279 completed. Completed move in of 2 drums from transportainer to 50-69.

0258 Movement of 6 drums from 50-69 to transportainers completed.

0326 Reviewed both inside and outside roundsheets.

0340 Reviewed and signed off Compliance Tracking worksheet. Status board has been updated.

0448 Completed bagging off 1 daughter and 1 POC - continuing to process.

0605 SOS reported that drum on the WCG is almost complete - operators cleaning out remnant waste out of parent and will turn over the final bag offs to day shift.

11/19/13 0611 Relieved by J. Gundagnol. as SOM.

No further entries this page

PROJECT NAME _____ NOTEBOOK NO. _____

11-13-13 Continued from Previous Page
1600 starting outside Rounds
1604 Bagging off 1 daughter Bagging on Another
1607 Bag off complete Continuing to Process
1738 Bagging off on 3852590
1800 Bag on left Complete.
1810 Reviewed Inside And outside Rounds
11-14-13 Reviewed By Clayton Mullins
RIG

No further entries on this Page

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

24

PROJECT NAME WCRR SOS Log Book NOTEBOOK NO.

11/14/13

1800 Assuming SOS position for the evening. [illegible]

1825 Performing Turnover with off going SOS Gilbert Martinez. Pre-Job started, discussing events that happened during the day with glove changes and contamination. JHI discussed the importance of inspecting gloves throughout processing. They processed one parent 2 parent bagged on ready to start processing, third parent was D-Vested and ready to bag on. Will need to push in more parents to possibly D-Vest.

1840 Pre-Job complete.

1915 Operators reporting that the bolt on the parent that was bagged on was tight and they are unable to loosen it. They have soaked it with Lubtastic to hopefully be able to break the bolt loose

1945 Operators were able to loosen the bolt and have started processing.

2130 Bagging off one daughter, Bagging on second daughter and continuing to process 5852590

2145 Bag on Bag off Complete.

2324 Bagging off 1 daughter and Parent, Bagging on next Parent 5853279

Minor Issue 2355 Operator reporting that they were not able to bag on Parent due to the drum lift missing a clip and needing to be replaced prior to bagging on

0010 Clip has been replaced, Parent will be bagged on after lunch.

0020 ~~BOT~~ 11-10-B Operators breaking for lunch.

0120 Operators returning from lunch.

0145 Reviewed and signed outside rounds.

0202 Bagging on 5853279

0218 Bag on Complete.

HA 0324 Reviewed and signed inside rounds.

0417 Bagging off one daughter and one POC, bagging on another daughter and continuing to process.

0449 Bag on Bag off Complete.

0600 ~~EOT~~ 11/10/13 Parent continuing to be processed, has been completed, out of time to bag off, on coming crew will need to bag off

11/10/13 0610 Turning over SOS position to Gilbert Martinez. [illegible]

No further entries on this page

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0131
Examination Date:	11/21/2013
Waste Container ID:	68652
Video/Audio Recorded Media Number:	LA-RTR2-13-0131 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 187.5 kg Tare Wt.: 33.4 kg Net Wt.: 154.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68652

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	31.6
Other Inorganic Materials (OI)	
Cellulosics (C):	1.5
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	115.0
Soils (S):	
Total WMP Weight:	154.1

CCP Radiography Data Sheet

Waste Container ID: 68652

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

Comments: N/A

RTR Operator:

Michael Simmons		11/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68652	Count Sequence Number:	23896
Operator:	D3PW2DK1\operator		
Assay Start:	11/26/2013 11:37:48 AM		
Description 1:	1LANDA1870		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 154.0 kg	Net:	154.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.780 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23896	Batch Number:	1LANDA1870
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:	68652	Analysis Date:	11/26/2013

Net Weight	154000.0 g			
Pu mass	1.04E+002	+-	2.27E+001	g
TRU Alpha Activity	1.66E+001	+-	5.13E+000	Ci
TRU Activity Concentration	1.08E+005	+-	3.33E+004	nCi/g
Pu-239 Equivalent Activity	1.68E+001	+-	5.13E+000	Ci
Pu-239 FGE	9.80E+001	+-	2.26E+001	g
Decay heat	5.37E-001	+-	1.70E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.20E-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	4.62E-006
NP237	2.08E-001	1.46E-004	2.89E-005	6.47E-006
PU238	9.49E-003	1.62E-001	4.30E-002	1.69E-003
U238	<LLD	<LLD	0.00E+000	2.81E-005
PU239	9.75E+001	6.05E+000	1.40E+000	6.28E-002
PU240	6.23E+000	1.41E+000	3.85E-001	1.47E-002
AM241	2.62E+000	9.00E+000	4.92E+000	1.65E-001
PU241	1.19E-001	1.22E+001	3.33E+000	1.27E-001
PU242	2.08E-002	8.22E-005	2.23E-005	0.00E+000
AM243	1.84E-002	3.68E-003	7.34E-004	2.27E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 11.27.13

ITR: _____ Date: 11.27.13

Automated Independent Technical Review

Count Sequence Number: 23896 Batch Number: 1LANDA1870
Counter ID: MCS HENC #1
Container ID: 68652
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/26/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. NCC Pu mass was above calibration range. FGE is greater than the upper limit of 200.00 The Standard NCC Pu effective mass exceeds the Upper Calibration Limit. No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA. 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. - The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue. Cosmic Ray Rejection Analysis complete with warnings.	OK 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

Comments	Disposition
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 11/27/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68652**

BDR Number: **LA13FG2122**

Sampling Date: **12/2/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	500.05	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131202c\
Data File : 68652.D
Acq On : 2 Dec 2013 12:00 pm (#1); 02-Dec-13, 12:00:16 (#2)
Operator : EL 12-3-13 EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 12:09:16 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.591	96	4057608	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.891	117	3206611	177.50 ppmv	0.03
Target Compounds					Qvalue
1) Hydrogen	1.616	GC1	3760	500.05 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-RTR2-13-0131
Examination Date:	11/21/2013
Waste Container ID:	68655
Video/Audio Recorded Media Number:	LA-RTR2-13-0131 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 157.0 kg Tare Wt.: 33.4 kg Net Wt.: 123.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	85 %

CCP Radiography Data Sheet

Waste Container ID: 68655

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):	2.5
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	110.1
Soils (S):	
Total WMP Weight:	123.6

CCP Radiography Data Sheet

Waste Container ID: 68655

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

Comments: N/A

RTR Operator:

Michael Simmons		11/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68655	Count Sequence Number:	23917
Operator:	D3PW2DK1\operator		
Assay Start:	12/3/2013 11:32:57 AM		
Description 1:	1LANDA1871		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 124.0 kg	Net:	124.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.700 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23917	Batch Number:	1LANDA1871
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68655	Analysis Date:	12/3/2013

Net Weight	124000.0 g			
Pu mass	9.55E+001	+-	2.89E+001	g
TRU Alpha Activity	1.07E+001	+-	3.12E+000	Ci
TRU Activity Concentration	8.60E+004	+-	2.52E+004	nCi/g
Pu-239 Equivalent Activity	1.09E+001	+-	3.12E+000	Ci
Pu-239 FGE	9.00E+001	+-	2.88E+001	g
Decay heat	3.40E-001	+-	1.02E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.66E-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	3.07E-006
NP237	1.22E-001	8.60E-005	1.59E-005	4.50E-006
PU238	8.72E-003	1.49E-001	5.16E-002	2.09E-003
U238	<LLD	<LLD	0.00E+000	1.90E-005
PU239	8.96E+001	5.56E+000	1.79E+000	7.80E-002
PU240	5.73E+000	1.30E+000	4.57E-001	1.83E-002
AM241	1.07E+000	3.66E+000	2.52E+000	1.75E-001
PU241	1.09E-001	1.12E+001	3.95E+000	1.58E-001
PU242	1.91E-002	7.55E-005	2.65E-005	0.00E+000
AM243	5.04E-003	1.01E-003	1.89E-004	1.37E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 12/10/13

ITR: _____ Date: 12-10-13

Automated Independent Technical Review

Count Sequence Number: 23917 Batch Number: 1LANDA1871
Counter ID: MCS HENC #1
Container ID: 68655
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. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 12-4-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68655**

BDR Number: **LA13FG2124**

Sampling Date: **12/6/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	265.45	
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 : 68655.D
Acq On : 6 Dec 2013 10:20 am (#1); 06-Dec-13, 10:19:58 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 06 10:28:49 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.535	96	3793742	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.845	117	2955329	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.602	GC1	1996m	265.45 ppmv	

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

VOCGAS.M Thu Dec 12 10:05:45 2013

S852592

Container 753859

File Options Reports Help

S852592

753859	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

S852592

- S852592
  - LA00000068753
    - LA00000069318 – EMPTY
    - LA00000069282 – WCS
      - LASB50064
    - LA00000069285 – LANL
      - LASB50416

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	LA00000069285	0.0	kg

 5852592

Working Copy
Date: 1-28-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68753

6.2[4] Date Processed: 1/28/14

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

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

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

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

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

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

Performed By: JOE QUINTANA / Joe Q 239987 / 1/28/14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68753

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

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 495.4 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68753

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69283	69285		
10.1[4]	Daughter Drum Filter No. AN 512	~~L 11725~~	AN 505	N	
10.1[4]	Daughter Drum Bag Filter No.	L 11725	L-11684		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				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		N		
10.2[14]	POC Assembly Gross Weight (lb)			A	
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100	80	N	
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter	Kitty litter		A

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68753

Comments: 12 GALLONS OF LIQUID, KITTY LITTER, NITRATE SALTS & DEGRADED LEAD

11.1[1] Performed By: JOE QUINTANA, Joe Q 289987, 1/28/14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Joe Jerez, Joe Jerez 221452, 1/31/14 1035
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 1-28-14

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.:	501563
Lot No.:	.0238366-1
Manufacture Date:	2013
	SERIAL #020

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.:	81905
Serial No.:	LM 1928
Manufacture Date:	12/12

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

5. [11] Performed By: 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 INSIDE WCRR

8.1[1] Performed By: JOE QUINTANA, [signature] 239987, 1/28/14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Jerez, [signature] 1221521 1/31/14
Supervisor or designee (print) Signature Z # Date

UET Working Copy
Date: 1-28-14

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69318

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

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

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

Performed By: JOE QUINTANA / Joe Q 239987 1/28/14
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): 169.2 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA / Joe Q 239987 1/28/14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez / [signature] 122458 1/31/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
1/24/14 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69282

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 6244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC-1.5 2SPVC
Serial No.: L-11725
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11/12/14	8/05/14
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: Jon Ramos (Operator (print)) [signature] (Signature) 1109702 (Z #) 1/24/14 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN-512
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: 619035

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.: 69282

Comments: N/C

5.[35] Performed By: Jr Romero (Operator (print)) [signature] (Signature) 1109202 (Z #) 1/24/14 (Date)

7.1[4] Reviewed By: Jose Jerez (Supervisor or designee (print)) [signature] (Signature) 1221451 (Z #) 1/31/14 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69282

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 / 234487 / 1/28/14
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: 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.: 69282

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 353.6 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: JOE QUINTANA (Operator (print)) | Joe Z (Signature) | 239987 (Z. #) | 1/28/14 (Date)

7.1[4] Reviewed By: Jose Jerez (Supervisor or designee (print)) | (Signature) | 1221421 (Z. #) | 1/31/14 (Date)

Working Copy
Date: 1-22-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69285

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.: 6epvc-1.5-2.5pvc
Serial No.: L-11684
Manufacture Date: 06/13

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

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

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

Performed By: Andrew H. Romero (Operator (print)) | Andrew H Romero (Signature) | 1187001 (Z #) | 01/22/14 (Date)

5.[23] Filtered vent information:
Manufacturer: NucFil
Model No.: 019DS
Serial No.: AN-505
Manufacture Date: 01/13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69285

Comments: N/C

5.[35] Performed By: Branden Chacz / [signature] 2097421 / 1-24-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Juarez / [signature] 1221452 / 1/31/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69285

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 / 1/28/14
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: 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.: 69285

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 286.6 lbs

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

Comments: N/C

6.[32] Performed By: JOE QUINTANA (Operator (print)) [signature] (Signature) 239987 (Z #) 1/28/14 (Date)

7.1[4] Reviewed By: Jose Jerez (Supervisor or designee (print)) [signature] (Signature) 1221521 (Z #) 1/30/14 (Date)

JET

Working Copy
Date: 1-28-14

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68753

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): 412.4

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

Comments: N/C

8.1[1] Performed By: JOE QUINTANA, [signature] — Waste Handling Technician (print) Signature — 239987 Z # — 1/28/14 Date

8.1[7] Reviewed By: Jose Jerez, [signature] — Supervisor or designee (print) Signature — 221452 Z # — 1/31/14 Date

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

8.1[8][D] Approved by: Clayton Mullis, [signature] — SOS/SOM or designee (print) Signature — 240082 Z # — 1/31/14 Date — 1035 Time

68753 1945 SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S852592 Container Type: 85 GAL DRUM Gross Weight (lbs): 437.913
Total PE-Ci Activity: 1.49E+01 Equivalent Combustible PE-Ci: 5.57E+00
Total Fissile Gram Equivalents: 1.54E+02 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 2/26/13. Attachment 3 of DOP-1030 is attached. RTR pre-screen indicates liquid in 90 mil liner, lead liner, and rigid liner in the drum

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~298 lbs. and generator data shows 11 items of nitrate salts with weights ranging from ~10-43 lbs.

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

IHS Representative

Potential IHS Safety Risks: May contain D007, D008 and D009 Contains free liquids, no other hazard noted

Performed By: Johnny Shadwood (IHS Representative (Print)) | Signature | 241659 (Z#) | 8-31-13 (Date)

LTP Engineering

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

Engineering Comments: NA

Performed By: Valerie Rhodes (LTP Engineering (Print)) | Signature | 112609 (Z#) | 9/3/13 (Date)

TRU Remediation Operations

Potential Safety Risks: Use proper PPE and kitty litter

Performed By: Gilbert Martinez (TRU Operations (Print)) | Signature | 1143235 (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 hexamum gloves when processing. Use proper tool for the job.

Approved By: Jose Perez (OM or designee (Print)) | Signature | 1221952 (Z#) | 12/6/13 (Date)

Noncertified TRU Waste Drum Item Information

DrumID: 019354

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	LR274NW1		16.820	NITRATE SALTS		14.46	52	6/14	G468
2	LR274NE1		19.320	NITRATE SALTS		24.22	52	6/14	G468
3	LR281NE1		12.050	NITRATE SALTS		5.45	52	6/14	G468
4	OX175282NW		17.050	NITRATE SALTS		23.48	52	6/14	G468
5	OX175282NE		13.640	NITRATE SALTS		18.14	52	6/14	G468
6	O175282NW2		10.910	NITRATE SALTS		7.05	52	6/14	G468
7	OX176284NW		4.770	NITRATE SALTS		33.78	53	6/14	G468
8	OX176285NW		7.500	NITRATE SALTS		9.02	53	6/14	G468
9	LR288NE1		12.270	NITRATE SALTS		7.33	53	6/14	G468
10	LR288NW1		9.770	NITRATE SALTS		8.34	53	6/14	G468
11	OX177292NE		11.470	NITRATE SALTS		13.6	52	6/14	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	106.4	101.26
53	58.47	34.31
Totals	164.87	135.57

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: S852597

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

7.[5] (5) 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	____ %	0.178618 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	26.35 ppm
Filter Vent Unique Identifier No.:	____	AN-365
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: S852592

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

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

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

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

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

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

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

ATTACHMENT 3
Page 3 of 3

7 [2] Waste Container Unique Identifier: S852597

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

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

N/A

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

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

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

7 [13][A] (S) 55-gal waste containers to be transferred to WCRRF satisfy the following criteria (WCRRF SAC 5.10.2.3.4.a): ☑ SAT ☐ UNSAT ~~☐ N A~~ 12/6/13
- Hydrogen concentration less than or equal to 2.4% (24,000 ppm)
- VOC less than or equal to 5,250 ppm

Comments: N/A

7 [11][C] 7 [23] Performed By: Chris Vigil 163082 2-26-13
LTP-DDP Supervisor designee (Print) Signature Date

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

10 [4] Reviewed by: Chris Vigil 163082 2-26-13
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: 9852592
PE-Ci Content: 14.86335631
PE-Ci Equivalent Combustible content: 13.07975355
FGE content 153.8406602
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 2-26-13
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

6.18 (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: S852597

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

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

(CS)

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

Comments:

N/A

5.[19] 6.[28] Performed By: Chris Vigil [signature] 163082 2-26-13
LTP-DDP Supervisor designee (Print) Signature Z # Date

10.1[3] Reviewed by Chris Vigil [signature] 163082 2-26-13
LTP-DDP Supervisor designee (print) Signature Z # Date

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

10.1.8[1] Approved by Chris Vigil [signature] 163082 2-26-13
SOS SOM or designee (print) Signature Z # Date

DVS Gas Determination Results Report

Date: 2/26/2013

Waste Container Number: S852592

Batch Number: DVS2130226

Filter Type Installed: 08DS

Number of Filters Installed:

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	26.35	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	0	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	26.35	I.V.R. Intial and Date	2-26-13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.178618	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-365

DVS Operator Print Name

Signature

02-26-2013
Date

1-28-14
0550 Assuming WCRR operations center. Kleeman
0615 Beginning inside and outside rounds. Pre-job being conducted by SOS.
0633 Item #63 is OOS, Okay to proceed per CSE documentation.
0634 Pre-job concluded.
0636 Inside rounds complete.
0642 Outside rounds complete.
0656 Both rounds reviewed by SOS.
0715 Mode changed to operations in WCRRF yard and 50-69.
0735 ASSUMING OPERATION CENTER IN TRAINING UNDER TERRI COLMAN [illegible] JC
0806 PERMISSION GRANTED to LOWER VEHICLE ACCESS GATES to LOAD TRANSPORT VEHICLE FOR SHIPMENT to AREA G
0833 LATE ENTRY at 0703, OPERATORS ENTERED 50-69 to RESUME OPERATIONS ON DRUM 68743 AS
0914 BAGGING OFF ONE DAUGHTER, BAGGING ON 68753
0920 VEHICLE ACCESS GATES RESTORED. TRANSPORTAINERS RESTORED
0950 BAG ON / OFF COMPLETE
1024 PERMISSION granted to lower vehicle access gates to unload vehicle transport and Begin Receipt of drums from Area G
1133 Bagging off 1 daughter, bagging on another daughter.
1152 Bag off/on complete. APL check is Sat.
1350 BAGGING OFF 1 DAUGHTER BAGGING ON ANOTHER DAUGHTER and BAGGING ON PARENT 84323
1438 VEHICLE ACESS GATES HAVE BEEN RESTORED and TRANSPORTAINERS ARE SECURE
1444 LATE ENTRY AT 1418, BAG OFF/ON COMPLETED AS
1446 LATE ENTRY AT 1440, BEGAN OUTSIDE ROUNDS AS
1456 OUTSIDE ROUNDS ARE COMPLETE
1507 BAGGING OFF 1 DAUGHTER and BAGGING ON DRUM ~~92067~~ AS 1-28-14 92070
1540 BAG ON/OFF COMPLETE
1625 BAGGING OFF/ON 1 DAUGHTER AND DRUM 84430
1640 BAG OFF/ON COMPLETE
1644 STARTED MOVEMENT OUT OF 50/69 INTO TRANSPORTAINERS
1645 STARTED INSIDE ROUNDS AT 1645
1703 ITEM # 63 OOS OK to PROCEED POD IN PLACE
1705 INSIDE ROUNDS COMPLETE
1727 BAGGING ON/OFF 1 DAUGHTER and BAGGING ON DRUM 92067

CONTINUED ON NEXT PAGE [illegible]

1-28-14 WCRR SOM

0554 Reviewed logbooks and assumed the WCRR SOM position John Lundquist

0635 Completed attending the pre-job brief conducted by the SOS (Clayton) Safety topic was knee injury reported from TA 54 - during loading of a laundry bag. Shift Orders were reviewed, There is one transfer in and one out. One drum is currently bagged on SP-72 and is 50% empty, Procedure reviewed was EP-WCRR-WO-DOP-1200 - Prep and closure of SWB. The RCT requested operators to not remove filter cartridges from respirators - unless an RCT is present. - (noted after usage of a respirator) Also respirator cartridges should be handled - as though they are contaminated.

0708 Completed the daily phone call to Area G SOM statusing POD activities.

0715 Mode Change: 50/68 and Yard transition from Warm/Warm to Operations/Operations.

0722 WO#468400-03 - FY14 WCRRF Repair Life Safety Equip will be merged for FRI - work -

0735 Inside temperature is noted at 69°F and the setpoint is at 77°F.

0800 Operators requested to move temperature setting to 66°F approval obtained.

0805 P+T arrives to inspect drums for the transfer out. SOM observes operators and P+T wearing appropriate PPE - Drums were being staged near transportainer on asphalt and straps utilized appropriately.

1-28-14 0850 ~~0800~~ P+T will scratch two drums from the transfer due to no EPA codes attached to the haz label on the drum, and the TWSR requires reprinting. Production Inventory is working resolution. These drums will be added to the next transfer out.

0920 The vehicle barrier gates were restored. The transfer out was completed, 16 total

0950 Inside PIC reports completion of bag off of 1 daughter and bag on another and Bag on of Parent drum 68753 and initiate processing.

0958 P+T arrives at WCRR with drums from AREA G.

1019 Completed review of Operator Aid Logbook, verification of operator aids posted was conducted with support from Operators. - All noted satisfactory. The monthly review and quarterly review were signed off.

1034 Outside operators initiate lowering vehicle barriers to initiate receipt of drums.

1133 Inside operators initiate bag off of 1 daughter and bag on of another

1140 Discussed with Production Inventory - transfer issues with ratios and discussed with WCATs (Charlotte) - WCATs will investigate and provide status

1156 Inside Operators report bagging off one daughter and bagging on another.

1233 Completed noon ~~transfer~~ 1-28-14 - call in with DM, PM, SOM and others.

1350 Inside Operators initiate bag off of completed Parent and Bag on of PARENT 84323 - SP-21 - The SOS and ES/PM briefed the operators on prior history of the drum. Operators will proceed with caution - potential pyrophoric

(Continued on Next Page)

1-28-14 WCRR-SOM (continued)

1418 Inside Operations report the bag off and bag on was completed.

1430 Completed review and Compliance Tracking Spreadsheet validating with QA-approval (R. Trujillo) to implement TSR compliance tracking spreadsheet noted as: TSR inspection RO1B — WCRRE REV 1. The OCO's are aware of the share folder for utilization. 1-28-14

1507 Bag off of 1 daughter and bag on of drum ~~92067~~ Parent 92070 SP-21

1540 Bag on and off completed

1612 Completed checking file in Operations Center and ensured certs were available for the 2"x4' WEB slings and 2"x10' WEB slings.

1625 Bagging off and on 1 daughter and bag on Parent 84430 SP-21

1640 Bag off and on completed

1727 Inside operations initiate bag off and bag on of Parent drum 92067 SP-21 This is the drum containing a Uranium Source

1730 Current inside temperature is 66°F and the setpoint is at 68°F.

1738 Late entry for 1545 hrs; conferenced call waste help and (Kathleen G.) to evaluate resolution of material type and ratios going into daughter drums when Uranium is present. Kathleen concurred, that waste help should make changes with the ratios for the 5 drums which were scratched today for the transfer from WCRR to AREA G- TRSRs / P&T should approve for next transfer OUT. 1-28-14

1752 Inside Operators report bag off / bag on completed.

1759 The SOM obtained OM approval to leave the Parent Drum 92067 SP-21 bagged on overnight. The WCG is in a safe configuration.

1810 Outside operations completed the movement out of 50-69 to the transportainers 10 drums total, and completed the movement into the facility 4-drums total.

1813 Made Change: 50/69 and 3/and transition from Operations/Operations to WRRM/WRRM

1818 Inside temperature is at 66°F setpoint is set by Operator at 77°F

1820 Secured the WCRR SOM position John Guadagol

No further entries this page
JGG

97 PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

1/28/14
0600 Assuming SOS position. CA
0615 Starting Pre-Job, discussed electrical cord safety also went over 3 shift orders and new procedure, EP-WCRR-WO-DOP-1100, R.0.
0635 Pre-Job complete.
0656 Signed off on the rounds.
0715 Mode change complete, WCRRF yard and SO-69 are now in Operations.
0806 Starting shipment out of WCRRF.
0914 Bagging off, bagging on 68753
0920 Shipment out complete.
0950 Bag off/on complete.
1024 Starting shipment into WCRRF.
1133 Bagging off 1st daughter, bagging on a 2nd.
1152 Bag off/on complete.
1350 Bagging off 2nd daughter, bagging on 84323.
1418 Bag off/on complete.
1438 Shipment in complete.
1507 Bagging off, bagging on ~~92067~~ 1-28-14 92070
1540 Bag on/off complete.
1-28-14 1600 Turning over SOS position to Jose Jerez. CA
1600 Assuming SOS position for the day
1625 Bagging off 1 daughter, Bagging on 84430
1640 Bag off, Bag on complete
1715 Signed off on ~~rounds~~ 1/28/14 rounds
1726 Bagging off Parent and 1 daughter, Bagging on 92067
1752 Bag off Bag on complete.
1759 Approval from OM received to leave Parent bagged on over night
1806 Starting movement of 4 Parents from Transportainer to SO-69
~~1815~~ Movement complete
1813 Mode change WCRR Yard and SO-69 are in WRRM Stand By
Securing SOS position

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-RTR2-14-0014
Examination Date:	2/3/2014
Waste Container ID:	69282
Video/Audio Recorded Media Number:	LA-RTR2-14-0014 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.: 160.5 kg Tare Wt.: 33.4 kg Net Wt.: 127.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 69282

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	118.1
Soils (S):	
Total WMP Weight:	127.1

CCP Radiography Data Sheet

Waste Container ID: 69282

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		2/3/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69282	Count Sequence Number:	1354
Operator:	CLREMO67292\User		
Assay Start:	2/19/2014 1:14:17 PM		
Description 1:	4LANDA0055		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 127.0 kg	Net:	127.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.760 kg /l		

System Configuration

Counter:	MILCC		
Efficiency Description:	208 Drum Far 1_01_13		
Segments:	Number: 2	Offset:	0
Count Type:	Item Assay		
Collimator/Geometry Setting:	Far - 2		

Errors quoted at 1.000 sigma

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.4

Count Sequence Number:	1354	Batch Number:	4LANDA0055
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 0	Software Version:	NDA 2000 V.4.0
Item ID:	69282	Analysis Date:	2/19/2014

Net Weight	127000.0 g		
Pu mass	7.74E+001	+- 2.19E+001	g
TRU Alpha Activity	1.24E+001	+- 2.57E+000	Ci
TRU Activity Concentration	9.77E+004	+- 2.02E+004	nCi/g
Pu-239 Equivalent Activity	1.25E+001	+- 2.57E+000	Ci
Pu-239 FGE	7.14E+001	+- 2.18E+001	g
Decay heat	4.00E-001	+- 8.38E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NA22	5.95E-011	3.72E-007	1.23E-007	3.10E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.44E-006
U233	<LLD	<LLD	0.00E+000	1.93E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.10E-006
NP237	2.17E-001	1.53E-004	4.48E-005	2.72E-006
PU238	7.97E-003	1.36E-001	8.63E-002	1.53E-003
U238	<LLD	<LLD	0.00E+000	3.09E-005
PU239	7.11E+001	4.41E+000	1.35E+000	4.94E-002
PU240	6.15E+000	1.39E+000	4.30E-001	1.56E-002
AM241	1.89E+000	6.47E+000	2.14E+000	6.22E-002
PU241	6.93E-002	7.13E+000	2.20E+000	7.99E-002
PU242	6.24E-002	2.47E-004	1.03E-004	0.00E+000
AM243	1.03E-002	2.06E-003	6.05E-004	8.18E-006

Errors quoted at 1.000 sigma

Operator: D = n c Date: 2-24-14

ITR: Bhattacharya Date: 2-25-14

Automated Independent Technical Review

Count Sequence Number: 1354
Batch Number: 4LANDA0055
Counter ID: MILCC
Container ID: 69282
Waste Matrix Code: S3000
Count Type:
Sequence Type:
Assay Date: 2/19/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 2/21/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69282**

BDR Number: **LA14FG2023**

Sampling Date: **2/20/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	461.89	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	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\140220c\
Data File : 69282.D
Acq On : 20 Feb 2014 12:48 pm (#1); 20-Feb-14, 12:47:20 (#2)
Operator : DE
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 20 12:56:54 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	2704424	205.75	ppmv	0.01
15) Chlorobenzene-d5	5.848	117	2184714	177.50	ppmv	-0.01
Target Compounds						Qvalue
1) Hydrogen	1.614	GC1	3473m	461.89	ppmv	

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

VOCGAS.M Mon Feb 24 12:43:37 2014

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0014
Examination Date:	2/3/2014
Waste Container ID:	69285
Video/Audio Recorded Media Number:	LA-RTR2-14-0014 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 129.5 kg Tare Wt.: 33.4 kg Net Wt.: 96.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 69285

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	1.5
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	82.6
Soils (S):	
Total WMP Weight:	96.1

CCP Radiography Data Sheet

Waste Container ID: 69285

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

Comments: N/A

RTR Operator:

Benito Maestas	[signature]	2/3/2014
Print Name	Signature	Date

585 2592

NDA 2000 Assay Report

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

Item ID:	69285	Count Sequence Number:	24259
Operator:	D3PW2DK1\operator		
Assay Start:	2/3/2014 3:31:32 PM		
Description 1:	1LANDA1904		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 96.1 kg	Net:	96.1 kg
Container:	Volume: 208.0 l	Full:	60.0 %
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

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24259	Batch Number:	1LANDA1904
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:	69285	Analysis Date:	2/3/2014

Net Weight	96100.0 g		
Pu mass	9.98E+001	+-	3.39E+001 g
TRU Alpha Activity	1.35E+001	+-	4.64E+000 Ci
TRU Activity Concentration	1.40E+005	+-	4.83E+004 nCi/g
Pu-239 Equivalent Activity	1.37E+001	+-	4.64E+000 Ci
Pu-239 FGE	9.33E+001	+-	3.38E+001 g
Decay heat	4.33E-001	+-	1.52E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.53E-007
U233	<LLD	<LLD	0.00E+000	9.95E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.68E-006
NP237	8.15E-002	5.75E-005	1.13E-005	3.76E-006
PU238	1.55E-002	2.65E-001	1.03E-001	2.95E-003
U238	<LLD	<LLD	0.00E+000	2.00E-005
PU239	9.27E+001	5.75E+000	2.09E+000	6.42E-002
PU240	6.86E+000	1.56E+000	6.08E-001	1.74E-002
AM241	1.73E+000	5.92E+000	4.09E+000	1.95E-001
PU241	1.42E-001	1.46E+001	5.69E+000	1.63E-001
PU242	3.80E-002	1.50E-004	5.86E-005	0.00E+000
AM243	8.71E-003	1.74E-003	3.45E-004	1.24E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 2.4.14

ITR: _____ Date: 2.5.14

Automated Independent Technical Review

Count Sequence Number: 24259 Batch Number: 1LANDA1904
Counter ID: MCS HENC #1
Container ID: 69285
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/3/2014

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 Chamberlain Date: 2-4-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69285**

BDR Number: **LA14FG2019**

Sampling Date: **2/12/2014**

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\140212c\
Data File : 69285.D
Acq On : 12 Feb 2014 1:57 pm (#1); 12-Feb-14, 13:57:07 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 14:09:24 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	3.581	96	3216540	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.878	117	2568979	177.50	ppmv	0.02

Target Compounds	Qvalue

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

VOCGAS.M Wed Feb 12 15:22:43 2014

S852593

Conta[illegible] Profile 768204

File Options Reports Help

S852593

768204	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

Genealogy

S852593

- S852593
  - LA00000068754
    - LA00000069179
      - LASB50025
    - LA00000069204 - EMPTY
  - W798319 - EMPTY

Task History

Transfer Details

Transfer Amo...	Transfer Unit	Item	Measured We...	Measured We...
0.01	%			

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 1/10/14 HS

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68754

6.2[4] Date Processed: 1-10-14

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

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

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

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

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

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

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

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

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

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

Performed By: Brandon Chavez / [signature] [illegible] / 1-10-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68754

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 374.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 396.8 lb

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

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

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.: 68754

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69179			
10.1[4]	Daughter Drum Filter No.	L-10074		N/A	
10.1[4]	Daughter Drum Bag Filter No:	AN-674			
10.1[4]	Daughter Drum Purchase Order No.	501892			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.		N/A		
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	N/A		N/A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	2 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead		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		N/A	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic Kitty litter			

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 68754

Comments: Lead, nitrate salts, kitty litter, liquid, plastic

11.1[1] Performed By: Brandon Chavez / [signature] 204742 / 1-10-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [signature] 149351 / 1/12/14 1040
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Stay Copy
1/10/14

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238366
Manufacture Date: 13

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

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

Overpack filtered vent information:

Manufacturer:
Model No.:
Serial No.: N/A
Manufacture Date:

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

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

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

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

Comments: prepped at 71-54

8.1[1] Performed By: Brandon Chavez / _____ B08742 / 1-10-14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / _____ / _____ 11/12/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 1/16/14 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69204

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

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

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

Performed By: Brandon Chavez / [signature] 1-10-14
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): 249.0 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 1-10-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] 144235 1/12/14
Supervisor or designee (print) Signature Z # Date

Date: 1-4-14 ω

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69179

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.: 6CPUC 1.5-25PUC
Serial No.: L-10074
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11-12-14	8-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	~~±3% cw~~ DC 1/6/14 ±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 Cadow / [signature] 2827594 / 1/6/14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN-674
Manufacture Date: 1/13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69179

Comments: N/C

5.[35] Performed By: Brian Cardona [signature] 287544 1/6/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 1452251 1/6/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69179

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

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

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

Performed By: Brandon Chavez / [signature] / 224742 / 11-10-14
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: / / / /
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69179

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 383.6 lbs

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

Comments: n/a

6.[32] Performed By: Brandon Chavez (Operator (print)) [signature] (Signature) [illegible] (Z #) 1-10-2014 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) [signature] (Signature) 149351 (Z #) 1/12/14 (Date)

ATTACHMENT 3
Page 1 of 1

Working
Date: ~~1-7-14~~ 1-9-14 DS

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET 1-9-14 DS

6.3[21] Prepared Parent 55-Gal Drum Number: 687941

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): 374.8

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: Dan Segovia / Dan Segovia / 0767021 / 1-9-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] / 14235 / 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] / 1492351 / 1/12/14 / 1035
SOS/SOM or designee (print) Signature Z # Date Time

Salvage Drum 1445 SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control New drum used @ 412 Prep. New id given in WCATS. B Smyth 12/2/13

Container ID: S852593 / 68754 Container Type: 85-GAL Gross Weight (lbs): 383

Inner Seal #: 019367 Filter Prefix: LAVC Filter Serial #: 01411

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

TWSR Comments: LEACHED SOLIDS NITRATE SALTS MST 12

Total PE-Ci Activity: 1.18E+01 Equivalent Combustible PE-Ci: 4.42E+00 AM-241 PE-Ci: 1.01E+00

Total Fissile Gram Equivalents: 126.5 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): [redacted] D009

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 7/10/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 28

Certified RTR Comment: None

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

Security Determination: ✓ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID Split ☑ Repack

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

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

Performed By: Susan Ramsey / [signature] / 100681 / 11/20/12
Production Control (Print) Signature Z Number Date

WDP Engineering

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

Processing Determination: ☑ Accept Reject

WDP Engineering Comments: Nitrate Salts
Net Wt. 323#. Generator info shows 9 items of nitrate salts, with weights ranging from 10-16 OH. No RTR BDR. RTR PS shows prohibited liquids, & impenetrable item(s). Nitrate salts are typically packaged in plastic bags; other debris & undocumented liquids often present. Applicable waste codes are lead, chromium, & mercury. Repack with admixture is required.

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 1/7/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns: USE Proper PPE

Processing Determination: ☑ Accept Reject

TRU Remediation Operations Comments: Do not push or press on waste with hands. Use hexamaxx gloves during processing.

Performed By: Gilbert Martinez / [signature] / 1149235 / 12/6/13
TRU Remediation Operations (Print) Signature Z Number Date

Jose Jerez / [signature] / 221452 / 12/6/13

IHS REVIEW: AB 2060362 11.27.12 NOTES: D007 = Chromium D008 = Lead

Noncertified TRU Waste Drum Item Information

DrumID: 019367

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	MX289NW1		22.780	NITRATE SALTS		63.38	52	6/14	G468	
2	DSL290NW1		18.930	NITRATE SALTS		8.59	52	6/14	G468	
3	DSL290NE		13.780	NITRATE SALT		12.78	52	6/14	G468	
4	DSL290NEM		8.860	NITRATE SALT		6.4	52	6/14	G468	
5	DSL290NEW		8.730	NITRATE SALT		4.48	52	6/14	G468	
6	DSL290NE2		12.190	NITRATE SALT		2.6	52	6/14	G468	
7	0176285RWS		4.600	NITRATE SALT		21.24	53	6/14	G468	
8	OX177291NW		4.640	NITRATE SALT		2.19	52	6/14	G468	
9	OX177292NW		7.870	NITRATE SALT		13.27	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 173.7

Material Type	SNM (grams)	Items Net Wt (kg)
52	113.69	97.78
53	21.24	4.60
Totals	134.93	102.38

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/26/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Sara Aragon	Sara Aragon	1237575	11-31-11
	/	/	/

Container No. (7.[1]):	S852593		
Container Type (SWB, 110/85/55-gal) (7.[1]):	55 gal		
Current Filter Vent No. (7.[1]):	72		
New Filter Vent No.: (7.[8][A]):	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		

No Further Entries
SK 1/31/11

No Further Entries
SK 1/31/11

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S852593		
Hydrogen Reading (ppm) (7.[10]):	480.05 ppm	ppm	ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	ppm	ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	ppm	ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	No Further Entries	No Further Entries
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT		
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A		
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A		
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][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		

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

Comments:
55 gallon drum was sampled from inside an 85 gallon overpack.

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 1/31/11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT
- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

11.1[7][B]/ 11.1[8] Reviewed By: Kenny Romero [signature] 111786 / 1.31.11
Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110126c\
Data File : S852593.D
Acq On : 26 Jan 2011 3:33 pm (#1); 26-Jan-11, 15:33:10 (#2)
Operator : EL
Sample :
Misc : 55 GAL DRUM FROM 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 26 15:57:32 2011
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Mon Jan 10 10:28:07 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.671	96	7759807	205.50	ppmv	0.04
15) Chlorobenzene-d5	5.997	117	6470643	182.75	ppmv	0.04
Target Compounds						Qvalue
1) Hydrogen	1.640	GC1	3756m	480.05	ppmv	

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

vocgas.m Wed Jan 26 15:57:45 2011

1-10-14

0600 ASSUMMING OPERATIONS CENTER HSMITH

0615 STARTING PRE-JOB BRIEFING

0630 PREJOB BRIEFING CONCLUDED

0640 STARTING OUTSIDE ROUNDS

0645 STARTING INSIDE ROUNDS

0658 ITEM #63 INSIDE ROUNDS OOS, POD IN PLACE, PERMISSION GRANTED TO PROCEED

0706 OUTSIDE ROUNDS COMPLETED

0710 INSIDE ROUNDS COMPLETED

0719 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SDS

0729 MODE CHANGE INCREASE TO OPERATIONS IN WCRR YARD AND TA 50-69

0729 LATE ENTRY: OPERATORS IN TO PROCESS AT 0700, HS

0805 BAGGING ON S852588

0817 BAG ON COMPLETED

1000 BAGGING OFF BAGGING ON S844215

1023 BAGGING ON COMPLETED

1059 STARTING SHIPMENT INTO TASO-194/75,

1126 OPERATORS NOTIFIED ~~OPERATIONS~~ 1/10/14 HS OPS CENTER OF BROKEN LED LINED GLASS ON GLOVEBOX STATION 2

1220 OPERATORS EXIT FOR LUNCH

1346 BEING RELIEVED BY OCO CLARISA VELARDE, HSMITH

1351 Assuming WCRRF Operations Center - CVelarde

1355 late entry - Vehicle access gates have been restored shipment into WCRRF complete 1338 CV.

1435 Bag on, bag off complete

1440 movement into 50-69 being performed.

1500 movement into 50-69 complete, ~~Bag on Bag off complete~~ 01-10-14.

1523 Starting inside rounds

1537 Item 63 is OOS POD in place, okay to proceed per OSE documentation.

1543 Inside rounds complete, starting movement out of 52-69

1615 movement out of 52-69 complete

1619 Bagging off, Bagging on 68741

1647 Bag on, Bag off complete.

- continue on next page - CVelarde

1-10-14 - Continued from previous page CRelland

1648 Rounds signed off by SCS

1745 Bagging off last drum, will be installing port covers.

1808 Bag off complete.

1821 mode change to ~~operational~~ warm standby, TA-50-69 and WCRRF yard.

1-10-14 1850 End of day WCRRF operations center secure - CRelland

HM

No further entries this page

1/10/14 WCRR SOM

0600 Reviewed Shift Turnover Checklist and assumed the WCRR SOM position.

0603 Bldg 50-69 inside temp @ 70°F as noted on HVA-001 display in Ops Center.

0634 Prejob brief conducted by SOS (G. Martinez) concluded. ES-II# safety topic was proper use of PPE - eyewear in particular. Discussed current inventory w/ drums scheduled to be received today - backfill drums on spill pallets inside 50-69 and use of shielding stands for heavy SP-57 drums. Noted that a couple of operators having wounds

0711 Completed daily call in to TA 54 SOM for WCRR PDD activities.

0729 Completed Mode Change. WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations

0735 Operators adjusted thermostat in 50-69 to 68°F.

0817 Completed bag on of drum # 5852588.

1023 Completed all bag offs for drum 5852588 (1 daughter total), bagged on drum # 5844215

1435 All bag off completed for drum # 5844215 (1 daughter and 1 POC total), bagged on # 68754.

1500 Completed a move in of 4 drums from transportainers to 50-69. All drums are SP-72.

1647 Completed all bag offs for parent # 68754 (1 daughter total), bagged on drum # 68761

1808 Completed all bag offs for parent # 68761 (1 daughter, 1 POC total) Port cover in place.

1821 Completed Mode Change WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm

1830 Secured the SOM position

No further entries this page

RAG

PROJECT NAME WRR SOS LOGBOOK NOTEBOOK NO.

1/10/14

0600 Assuming SOS Position at HB MG
0605 Conducted shift brief went over Scheme Inside 50-62
Also went over EP-WCRR-FO-DOP-192, R.0
0610 Concluded shift brief.
0719 Sighted all Inside and outside Rounds.
0720 Mode Change Complete WCRRF In Operations Mode Late entry
Operator In to process at once. MG
0813 Bagging on 5852568
0817 Bag on Complete.
1000 Bagging off for 3844215
1008 Bag on Complete.
1035 Starting Shipment In From 6
1125 Operators notified of broken led lined Glass on station 2
1210 Operator exiting for lunch.
1230 Shipment Complete.
1330 Operator Returning operations
1410 bagging off for 68754
1433 bag on last Complete.
1440 Moving into building 8-65
1500 Move In Complete
1523 Starting Rounds.
1545 Starting Move out at 50-65
1615 Move out complete
1619 Bagging off for 68761
1647 Bag on last complete.
1646 Conducted Inside and outside Rounds
1745 Bagging at last drum of Day.
1755 bagging off complete.
1821 Mode Change Complete WCRRF In ~~Operat~~ Gen Hold WGrin.
1/10/3 1830 Securing SOS Position end of shift. MG
HA

No further entries on this page

Best Available Copy

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0005
Examination Date:	1/15/2014
Waste Container ID:	69179
Video/Audio Recorded Media Number:	LA-RTR2-14-0005 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
RUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 174.0 kg Tare Wt.: 33.4 kg Net Wt.: 140.6 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: 69179

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, utility knife

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):	0.2
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):	129.4
Soils (S):	
Total WMP Weight:	140.6

CCP Radiography Data Sheet

Waste Container ID: 69179

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

Comments: N/A

RTR Operator:

Thad Hasselstrom	[signature]	1/15/2014
Print Name	Signature	Date

5852593

NDA 2000 Assay Report

Item Information

Item ID:	69179	Count Sequence Number:	1154
Operator:	CLREMO67292\User		
Assay Start:	1/16/2014 2:32:45 PM		
Description 1:	4LANDA0034		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 141.0 kg	Net:	141.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.710 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:	1154	Batch Number:	4LANDA0034
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 0	Software Version:	NDA 2000 V.4.0
Item ID:	69179	Analysis Date:	1/16/2014

Net Weight	141000.0 g		
Pu mass	7.99E+001	+-	2.45E+001 g
TRU Alpha Activity	9.48E+000	+-	1.99E+000 Ci
TRU Activity Concentration	6.72E+004	+-	1.41E+004 nCi/g
Pu-239 Equivalent Activity	9.86E+000	+-	2.00E+000 Ci
Pu-239 FGE	7.91E+001	+-	2.44E+001 g
Decay heat	3.04E-001	+-	6.36E-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	8.00E-007
U233	9.68E-001	9.32E-003	4.64E-003	7.25E-003
U234	6.74E-002	4.19E-004	1.32E-004	0.00E+000
U235	4.82E+000	1.04E-005	3.29E-006	1.90E-006
NP237	1.09E-001	7.71E-005	2.42E-005	1.81E-006
PU238	1.05E-002	1.79E-001	6.28E-002	1.26E-003
U238	<LLD	<LLD	0.00E+000	2.20E-005
PU239	7.46E+001	4.63E+000	1.51E+000	3.26E-002
PU240	5.10E+000	1.16E+000	4.11E-001	8.15E-003
AM241	1.02E+000	3.51E+000	1.23E+000	3.56E-002
PU241	1.81E-001	1.86E+001	6.58E+000	1.31E-001
PU242	2.24E-002	8.84E-005	3.09E-005	0.00E+000
AM243	3.65E-003	7.29E-004	2.29E-004	7.76E-006

Errors quoted at 1.000 sigma

Operator: Maria [illegible] Date: 1.22.14

ITR: [illegible] Date: 1-23-14

Automated Independent Technical Review

Count Sequence Number: 1154
Batch Number: 4LANDA0034
Counter ID: MILCC
Container ID: 69179
Waste Matrix Code: S3000
Count Type:
Sequence Type:
Assay Date: 1/16/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
MGA Analysis Results are marked as invalid.	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.
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: _____ Date: 1/22/14

Waste Container ID: **69179**

BDR Number: **LA14FG2022**

Sampling Date: **2/19/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	2082.81	
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\140219c\
Data File : 69179.D
Acq On : 19 Feb 2014 12:59 pm (#1); 19-Feb-14, 12:59:09 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 19 13:09:08 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	3.549	96	3034300	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.858	117	2389962	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	7.755	GC1	15661m	2082.81	ppmv	

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

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S852883

S852883

Container Profile 754056

File Options Reports Help

S852883

754056	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

Genealogy

S852883

- S852883
  - LA00000068542
  - LA00000068513
  - LA00000068525 — empty

UET Copy
Working Date: 10-25-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5852883

6.2[4] Date Processed: 10-25-13

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

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

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

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

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

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

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

4.3[6] ($) Stationary Fire Watch has been established: ☑ 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: GERARD ESPINOZA / [signature] / 237720 / 10-25-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5852883

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 397.0 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) 397 0 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S852983

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	L8542			
10.1[4]	Daughter Drum Filter No.	LM3602			
10.1[4]	Daughter Drum Bag Filter No.	L-16789			
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	BOP			
	Model No.	Uop1.5-25PL			
	Serial No.	L-16288			
	Date of Manufacture	5-13			
10.2[5]	POC ID No	U8513/D2586			
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	GE 237720			
10.2[14]	POC Assembly Gross Weight (lb)	371.0			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1200.5			
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 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			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S852883

Comments: PLASTIC, NITRATE SALTS, LEAD SHIELDING, KITY litter, LIQUID

11.1[1] Performed By: GERALD ESPINOZA / [signature] / 1237720 / 10/25/13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Darrel L. Blair / [signature] / 1218869 / 10/28/13 0840
SOS or designee (print) Signature Z # Date/Time

~~Working Copy~~
Date: 10-4-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 02383606-1
Manufacture Date: 2013

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

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

Overpack filtered vent information:

Manufacturer: NucFil
Model No.: 013
Serial No.: JL-1034
Manufacture Date: 10/11

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

5. [11] Performed By: Brandon Chavez / [signature] 204742 / 10-4-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 204742 / 10-4-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Darrel L. Blain / [signature] 218069 / 10/28/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-25-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68525

7.[23] Overpack drum closure ring torque wrench information: GE 10-25-13

M&TE No.:	~~037448~~	0383669
Cal. Expiration Date:	~~3-6-14~~	12-18-13
Range in ft-lb:	~~10-80~~	10-80
Tolerance:	~~±~~	±3% CW ±6% CCW

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

Performed By: GERALD ESPINOZA / [signature] 1237720 / 10-25-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 165.8 lb

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA / [signature] 1237720 / 10/25/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: David L. Blair / [signature] 1218869 / 10/28/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68542

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: DOP
Model No.: 6CPVC 1.5-23PVC
Serial No.: L-6789
Manufacture Date: 7/13

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

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

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

Performed By: [illegible] [illegible] 191352/10-21-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-362
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): 10/21/13 MM ~~68~~ 75 lbs

5.[34][E] Drum ID No.: 68542

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA [signature] 191352 10-21/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Darrell L. Blain [signature] R18169 10/28/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 108542

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

GE 10 25 13

M&TE No.: ~~037418~~ 038361

Cal. Expiration Date: GE 10 25 13 ~~3-6-14~~ 12-18-13

Range in ft-lb: 10-80

Tolerance: ±3% or ±6% (CW)

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

Performed By: GERALD ESPINOZA / [signature] / 1237720 / 10/25/13
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: GERALD ESPINOZA / [signature] / 1237720 / 10/25/13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68542

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 529.2 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: GERALD ESPINOZA / [signature] 1237721 10/25/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Darrel L. Blair / [signature] 1218691 10/28/13
Supervisor or designee (print) Signature Z # Date

1939
SP78

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S852883 Container Type: 55-GAL Gross Weight (lbs): 398
Inner Seal #: 020627 Filter Prefix: LAVC Filter Serial #: 03180
WK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS NITRATE SALTS MST 12 12360
Total PE-Ci Activity: 6.64E+00 Equivalent Combustible PE-Ci: 2.49E+00 AM-241 PE-Ci: 5.39E-01
Total Fissile Gram Equivalents: 73.4 Total Surface Dose Rate (mrem/hr): 8
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 4/20/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured Liquid Location: 22
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Signature / 100681 (Z Number) / 12/20/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: ~~Ag~~ 1/16/13 Nitrate Salts
Net wt: 338#. Generator info shows 10 items of nitrate salts; weights range from 4-43#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids &/or debris may be present. RTR PS shows prohibited liquids, impenetrable object(s), & unpunctured liner. No chemicals identified, applicable waste codes are for chromium, lead, & mercury. Nitrate salts require repack w/ admixture

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Signature / 112609 (Z Number) / 1/15/13 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use hexavalent gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE mix Ratio

Performed By: Gmh (TRU Remediation Operations (Print)) / Signature / 149235 (Z Number) / 6/19/13 (Date)
Jose Perez / 221452 / 6/22/13

HS Review [illegible] ES?, may contain Pb, Hg, Cr

L-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 020627

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX178299NW		12.690	NITRATE SALTS		13.17	52	1/13	G468	
2	RR300VRNW1		2.600	NITRATE SALTS		0.3	52	1/13	G468	
3	LR301NE1		11.400	NITRATE SALTS		8.85	52	1/13	G468	
4	LR302NE1		7.060	NITRATE SALTS		2.62	52	1/13	G468	
5	LR301NW1		20.100	NITRATE SALTS		7.04	52	1/13	G468	
6	DSL303NW1		15.150	NITRATE SALTS		2.97	52	1/13	G468	
7	DSL303NE1		23.100	NITRATE SALTS		9.88	52	1/13	G468	
8	DSL303RNE		25.030	NITRATE SALTS		24.2	52	1/13	G468	
9	OX179304NW		11.640	NITRATE SALTS		7.84	52	1/13	G468	
10	RR307VRNE1		2.220	NITRATE SALTS		1.07	52	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 180.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	77.94	130.99
Totals	77.94	130.99

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	S657863					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	072					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	683.45 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), Sm S. Ramsey (Signature), 100681 (Z #) 5/20/13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S852883.D
Acq On : 11 Apr 2013 12:22 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 12:30:45 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.253	96	2056799	206.00 ppm	0.00
15) Chlorobenzene-d5	5.939	117	1827557	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.222	GC1	168917m	683.65 ppm	

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

Vocgas.m Thu Apr 11 12:30:54 2013

10/25/13

0600 Assumed WCRR SOM position.

0635 Attended prejob brief conducted by SOS (D. Blaine) Safety topic was be careful of snakes looking for places to den for cold weather, Discussed weather conditions and effects on todays work (shipments). Identified current Shift Orders in place. Currently have one drum in facility to process - identified as high dose (10.3 mrem/hr @ 3 ft)

0657 Contacted scheduler to emerge WCRR processing items onto POD (J. Vigil).

0710 Completed daily call in to Area G to status todays work.

0745 Reviewed inside/outside rounds.

0748 Completed Mode Change: WCRR Yard/Bldg 50-69 from Warm/Warm to Operations/Operations.

0754 Late Entry @ 0715 - SOS reported that there are areas identified in 50-69 w/ water leakage - same areas as before near platform scale and in front of GBE. Surveys and wipe up to be performed. RAG

0800 Bag on is complete of drum # 8230146.

0918 Completed bag off of 1 daughter - continuing to process.

0931 Loading of outgoing shipment completed and all access gates are restored.

1049 Incoming shipment on-site - vehicle access gate is lowered.

1100 Completed all bag offs for parent # 5823014 (2 daughters total) - bagged on 5852883

1108 Ops Center received report that during bag off a small pin hole was identified on the empty parent by the drum lid ring. Initial direct survey results were 6K dpm/100cm². Area was taped over, resurveyed w/ additional large area wipes taken in vicinity. No other contamination detected. Ops resumed.

1245 Completed receipt of incoming shipment (15 drums total). Access gates restored and transportainers secured.

1446 Completed all bag offs for parent # 5852883 - 1 POC and 1 daughter.

1505 Completed review of rounds

1508 Mode change completed WCRR Yard/Bldg 50-69 from Operations/Operations to Warm/Warm.

1558 Bldg 50-69 is deinventoried off all TRU waste.

10-25-13

0600 Assuming WCRR operations center. JColeman

0615 Pre-job being conducted by SOS.

0633 Pre-job concluded.

0639 Beginning outside rounds.

0644 Beginning inside rounds.

0709 Item #63 is OOS, okay to proceed per CSE documentation.

0710 Inside rounds complete.

0711 Late entry at 0708, outside rounds complete. JC

0740 Both rounds reviewed by SOS.

0748 Mode changed to operations in WCRRF yard and 5069.

0749 Bagging on S823016.

0800 Bag on complete. Operators report that there is an elevated CAM.

0814 Initiating a drum movement from transportainer to the transfer vehicle. Permission granted to lower the vehicle access gates.

0903 Bagging off 1 daughter, bagging on another daughter.

0918 Bag off/on complete.

0924 Transportainers closed and latched. Transfer vehicle loaded for a shipment to Area G.

0931 Vehicle access gates have been restored.

0932 Initiating a drum movement from transportainer to 5069.

0945 Drum movement into 5069 complete.

1009 Initiating a drum movement from 5069 to a transportainer.

1024 Bagging off 2nd daughter, bagging on S852883.

~~1043 Bag off/on complete.~~ JC 10-25-13

1049 Initiating a drum movement from transfer vehicle to transportainers. Permission granted to lower vehicle access gates.

1100 Bag off/on complete.

minor issue 1108 Tech 38 states that during the bag off, they encountered a small pinhole in the bag off the empty by the ring. Operators followed RCT instruction and taped and resmeared for contamination. Direct count was 6000 DPM. RCTs took large area smears, no other

continued on next page JColeman

10-25-13 Continued from previous page. JColeman
contamination was found. Continuing operations.
1217 All waste containers have been accepted from Area G.
1245 Vehicle access gates restored. Transportainers secure.
1330 Beginning outside rounds.
1335 Beginning inside rounds.
1352 Item #63 to OOS, Okay to proceed per CSE documentation.
1400 Inside rounds complete.
1401 Late entry - At 1352, outside rounds complete. (JC)
1402 Bagging off 1 daughter and 1 POC, then placing the port covers on the WCG.
1446 Bagoff complete.
1458 Both Rounds reviewed by SOS.
1508 Mode changed to warm in WCRRF yard and 5069.
1527 Initiating a drum movement from 5069 to a transportainer.
1558 Drum movement out of 5069 complete. All inventory has been removed from 5069.
1601 Mode change complete. We are now in COLD in 5069 and warm in WCRRF yard.
10-25-13 1605 End of day. OCD position secure. JColeman
HP

No further entries this page

10/25/13 WERRF SOS Log Book

0600 Assuming SOS position. DXB

0615 Started Pre Job, discussed Processing drums, shipping drums, receiving drums, slips, trips, Falls Weather conditions, Shift Orders

0640 Pre job completed.

0715 Signed off on outside Rounds.

0740 Signed off on Inside Rounds.

0747 Mode change to Operations Completed.

0749 Bagging on S 823016.

0800 Bag on complete.

0903 Bag off 1 daughter. Bag on 1 daughter

0918 Bag on complete

0924 Shipment completed to TA-54

0932 Moving 2 drums inside 50-69.

0945 Drum movement completed

1024 Bagging off daughter bagging on S 852883

1100 Bag off/on complete.

1108 Tech 38 reports that while bagging off a small pin hole was found on the empty drum. Operators followed RCT instructions and taped the pin hole RCT's conducted smears and large area smears and found no further contamination

1245 Incoming shipment received.

1400 Reviewed and signed outside Rounds.

1402 Bagging off 1 daughter and 1 POC Placed Port covers on the box

1446 Bag off complete

1458 Reviewed and signed Inside Rounds

1508 Mode change to Warm

1527 Moving drums out of 50-69.

1600 Move out completed

1605 Mode change to Cold

HG 1625 Secure SOS position for the day DXB

No further entries on this page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0120
Examination Date:	10/30/2013
Waste Container ID:	68513
Video/Audio Recorded Media Number:	LA-RTR2-13-0120 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.: 145.1 kg Net Wt.: 22.9 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:	75 %

CCP Radiography Data Sheet

Waste Container ID: 68513

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	19.9
Soils (S):	
Total WMP Weight:	22.9

CCP Radiography Data Sheet

Waste Container ID: 68513

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Eric Lyles		10/30/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68513	Count Sequence Number:	16659
Operator:	DCLTD231\Operator		
Assay Start:	10/30/2013 1:51:28 PM		
Description 1:	2LANDA1235		
Description 2:	POC 168.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 22.9 kg	Net:	22.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.710 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16659	Batch Number:	2LANDA1235
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68513	Analysis Date:	10/30/2013

Net Weight	22900.0 g		
Pu mass	2.20E+001	+-	1.20E+001 g
TRU Alpha Activity	5.11E+000	+-	2.53E+000 Ci
TRU Activity Concentration	2.23E+005	+-	1.10E+005 nCi/g
Pu-239 Equivalent Activity	5.16E+000	+-	2.53E+000 Ci
Pu-239 FGE	2.08E+001	+-	1.20E+001 g
Decay heat	1.67E-001	+-	8.35E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.67E-007
U233	<LLD	<LLD	0.00E+000	6.66E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.13E-006
NP237	2.96E-002	2.09E-005	3.90E-006	1.37E-006
PU238	2.01E-003	3.44E-002	2.05E-002	5.50E-004
U238	<LLD	<LLD	0.00E+000	1.36E-005
PU239	2.07E+001	1.28E+000	7.41E-001	2.05E-002
PU240	1.32E+000	3.00E-001	1.79E-001	4.80E-003
AM241	1.02E+000	3.50E+000	2.41E+000	1.10E-001
PU241	2.53E-002	2.61E+000	1.55E+000	4.17E-002
PU242	4.41E-003	1.74E-005	1.04E-005	0.00E+000
AM243	3.31E-003	6.61E-004	1.24E-004	9.13E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 11-1-13

ITR: [signature] Date: 11/4/13

Automated Independent Technical Review

Count Sequence Number: 16659
Batch Number: 2LANDA1235
Counter ID: HENC #2
Container ID: 68513
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 10/30/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	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: 10-31-13

Waste Container ID: **68513**

BDR Number: **LA13FG2115**

Sampling Date: **11/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	227.29	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131113c\
Data File : 68513.D
Acq On : 13 Nov 2013 1:57 pm (#1); 13-Nov-13, 13:56:58 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 13 14:05:38 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.584	96	4606241	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.884	117	3570944	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.607	GC1	1709m	227.29 ppmv	

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

CCP Radiography Data Sheet

CCP-TP-053 Attachment 2

5852883

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0120
Examination Date:	10/30/2013
Waste Container ID:	68542
Video/Audio Recorded Media Number:	LA-RTR2-13-0120 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.: 239.5 kg Tare Wt.: 33.4 kg Net Wt.: 206.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68542

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Utility knife

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):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	194.0
Soils (S):	
Total WMP Weight:	206.1

CCP Radiography Data Sheet

Waste Container ID: 68542

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

RTR Operator:

Eric Lyles		10/30/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68542	Count Sequence Number:	16658
Operator:	DCLTD231\Operator		
Assay Start:	10/30/2013 1:00:09 PM		
Description 1:	2LANDA1235		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 206.0 kg	Net:	206.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	1.040 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:	16658	Batch Number:	2LANDA1235
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68542	Analysis Date:	10/30/2013

Net Weight	206000.0 g		
Pu mass	5.43E+001	+- 1.27E+001	g
TRU Alpha Activity	1.63E+001	+- 6.95E+000	Ci
TRU Activity Concentration	7.91E+004	+- 3.37E+004	nCi/g
Pu-239 Equivalent Activity	1.64E+001	+- 6.95E+000	Ci
Pu-239 FGE	5.13E+001	+- 1.27E+001	g
Decay heat	5.33E-001	+- 2.31E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.53E-006
U233	<LLD	<LLD	0.00E+000	1.85E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.00E-006
NP237	1.97E-001	1.39E-004	3.24E-005	4.05E-006
PU238	4.96E-003	8.49E-002	2.43E-002	1.73E-003
U238	<LLD	<LLD	0.00E+000	4.48E-005
PU239	5.10E+001	3.16E+000	7.87E-001	6.45E-002
PU240	3.26E+000	7.40E-001	2.12E-001	1.51E-002
AM241	3.59E+000	1.23E+001	6.90E+000	1.61E-001
PU241	6.24E-002	6.43E+000	1.84E+000	1.31E-001
PU242	1.09E-002	4.30E-005	1.23E-005	0.00E+000
AM243	8.99E-003	1.80E-003	4.21E-004	2.63E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 11-1-13

ITR: [signature] Date: 11/4/13

Automated Independent Technical Review

Count Sequence Number: 16658
Batch Number: 2LANDA1235
Counter ID: HENC #2
Container ID: 68542
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 10/30/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source perturbation out of limits.	Neutron results not used. Gamma results applied.
Add-a-Source Calibration exceeds Upper Limit.	Gamma results applied.
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Add-a-Source reals correction factor is above calibration upper limit.	Gamma results applied.
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.

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

Expert Review by: Sheri Chambers Date: 10-31-13

Waste Container ID: **68542**

BDR Number: **LA13FG2114**

Sampling Date: **11/8/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	582.78	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131108c\
Data File : 68542.D
Acq On : 8 Nov 2013 10:35 am (#1); 08-Nov-13, 10:34:38 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 08 10:43:17 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.588	96	4691297	205.75	ppmv	0.07
15) Chlorobenzene-d5	5.887	117	3626266	177.50	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.613	GC1	4382m	582.78	ppmv	

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

S852895

Container Profile 760836

File Options Reports Help

S852895

760836	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

Genealogy

S852895

- S852895
  - LA00000068555
  - LA00000068549
  - LA00000068609
  - LA00000068598 – EMPTY

Date: 11-6-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S852895

6.2[4] Date Processed: 11-6-13

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: 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: Melinda Stewart / Melinda Stewart / 277268 / 11-6-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 15990885

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 440.4 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 523.4 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S 852895

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68555	68549	68609	
10.1[4]	Daughter Drum Filter No.	LM-308	LM-367	LM-309	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-10372	L-10342	L-10365	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578	501578	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	N/A			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A	N/A	
10.3[5][A]	Free Liquid Volume/Units	7 gallons	N/A	N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding	Lead Shielding	Lead Shielding	N/A
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See comments	See Comments	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	60%	100%	40%	N/A
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Plastic	Kitty Litter Plastic	Kitty Litter Plastic	

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: S852895

Comments: Poly Liner, Plastic, Kitty Litter, Liquid Nitrate Salt

11.1[1] Performed By: Melinda Stewart Melinda Stewart 277265, 11-7-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, CM 240092, 11/14/13 0450
SOS or designee (print) Signature Z # Date/Time

10/31/13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 02383646
Manufacture Date: 13

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
Tolerance:	±4% cw ±6% ccw	±3% cw ±4% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1902
Manufacture Date: 10-11

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

5. [11] Performed By GERALD ESPINOZA / [signature] 1237720 / 10/31/13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA / [signature] 1237720 / 10/31/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / [signature] 1452351 / 11/13/1
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

11-6-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68598

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: +/- 3% CW + +/- 6% CCW

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

Performed By: Melinda Stewart (Waste Handling Technician (print)) Melinda Stewart (Signature) 277268 (Z #) 11-7-13 (Date)

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 167.0 lb

Comments: N/C

8.1[1] Performed By: Melinda Stewart (Waste Handling Technician (print)) Melinda Stewart (Signature) 277268 (Z #) 11-7-13 (Date)

8.1[7] Reviewed By: G Mk (Supervisor or designee (print)) (Signature) (Z #) 11/15 (Date)

Working Copy
Date: 10-21-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68549

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6PNC1.5-2SPA/C
Serial No.: L-10342
Manufacture Date: 6/13

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

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

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

Performed By: BRIAN GALLEGOS / B. Gallegos 267129 10-21-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-367
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
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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.: 68549

Comments: N/c

5.[35] Performed By: BERN GALLEGOS / B. Gallegos / 261129 10-21-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [illegible] / 142275 10/13/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68549

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

M&TE No.: 038364
Cal. Expiration Date: 12-15-13
Range in ft-lb: 16-80
Tolerance: +/- 3% cw & +/- 6% ccw

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

Performed By: Melinda Stewart (Operator (print)) Melinda Stewart (Signature) 127268 (Z #) 11-7-13 (Date)

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

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

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

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

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

Performed By: N/A (Operator (print)) N/A (Signature) N/A (Z #) N/A (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.: 68549

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 506.8 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: Melinda Stewart | Melinda Stewart | 1277268 | 11-7-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Gilbert [illegible] | [illegible] | 147237 | [illegible]
Supervisor or designee (print) | Signature | Z # | Date

Working Copy
Date: 10-21-13

ATTACHMENT 1
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WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68555

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5-2 SPVC
Serial No.: L-10372
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038349
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4% CW ±6% CCW	±3% CW ±6% CCW

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

Performed By: Brian Gallegos / B. Gallegos / 247129 / 10-21-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-308
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: 019045

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.: 68555

Comments: N/C

5.[35] Performed By: BRIAN GALLEGOS | Brian Gallegos | 267129 | 10-21-13
Operator (print) | Signature | Z# | Date

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

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68555

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

M&TE No.: 635364
Cal. Expiration Date: 12-11-13
Range in ft-lb: 1 to 80
Tolerance: +/- 3% cw + 6% ccw

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

Performed By: Melinda Stewart (Operator (print)) Melinda Stewart (Signature) 12712648 (Z #) 11-6-13 (Date)

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

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

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

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

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

Performed By: N/A (Operator (print)), N/A (Signature), N/A (Z #), N/A (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.: 68555

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 240.0 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: Melinda Stewart (Operator (print)) | Melinda Stewart (Signature) | 1272268 (Z #) | 11-7-13 (Date)

7.1[4] Reviewed By: GMK (Supervisor or designee (print)) | (Signature) | 14225 (Z #) | 11/12/13 (Date)

Date: 10-31-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 608609

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 02410119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5-2 SPVC
Serial No.: L-103165
Manufacture Date: 10-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036249
Cal. Expiration Date:	12.18.13	8.5.14
Range in ft-lb:	40-200 in-lb	16-80
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: GERALD ESPENOZA / [signature] / 1287780 / 10/31/13
Operator (print) / Signature / Z# / Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-309
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: 019045

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68609

Comments: N/C

5.[35] Performed By: GERALD ESPINOZA / [signature] / 1237721 / 10/31/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 240091 / 11/14/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 6S6C9

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16 50
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 (Operator (print)) Melinda Stewart (Signature) 1277264 (Z #) 11-7-13 (Date)

6.[12] Drum closure ring torque value: 21 ft-lb

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

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

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

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

Performed By: N/A (Operator (print)) N/A (Signature) N/A (Z #) N/A (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.: 68609

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 114.6 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: Melinda Stewart / Melinda Stewart / 1277268 / 11-7-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / CA / 1240092 / 11/14/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 11-6-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5852895

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): 440.4

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

Comments: N/C

8.1[1] Performed By: Edward Martinez, [signature] 1239911 11-6-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins, [signature] 1248092 11/14/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Randy Axtell, [signature] 1109185 11/14/13 0948
SOS/SOM or designee (print) Signature Z # Date Time

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S852895 Container Type: ~~55~~ 85-GAL 11-4-13 Gross Weight (lbs): 465
Inner Seal #: 020625 Filter Prefix: LAVC Filter Serial #: 01941
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLID NITRATE SALT MST 12 SEAL 13000
Total PE-Ci Activity: 4.85 Equivalent Combustible PE-Ci: 1.84 AM-241 PE-Ci: No data
Total Fissile Gram Equivalents: 57.0 Total Surface Dose Rate (mrem/hr): 4
EPA Code(s): None
NCR RTR/NDA Comment: None
~~Pre-Screen RTR Comment: Liquids, Impenetrable Obj.~~
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
Remediation Determination: ☐ Green ☑ Yellow ☑ VE 10/21/12 ☑ PID ☐ Split ☑ Repack
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1:2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.
Performed By: R.W. Jones / R.W. Jones 117434 12.1.2009
Production Control (Print) / Signature / Z Number / Date
SUSAN S. RAMSEY / Susan S. Ramsey 100687 10/31/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ~~☐ Accept~~ ☑ Reject
WDP Engineering Comments: NITRATE SALTS. NO HAZARDOUS CHEMICALS INDICATED. TWO ITEMS WITH APPROXIMATELY 15 G N52L (POSSIBLE HIGHER DOSE). 01/20/10 - THE DRUM IS OF THE SAME TYPE AND FROM THE SAME SOURCE (GLOVEBOX) AS S888928. [redacted] RTR APPEARS TO [redacted]
Performed By: ROBERT L. GRIFFIS / Robert L. Griffis 130356 12-14-09
WDP Engineering (Print) / Signature / Z Number / Date
Robert L. Griffis 130356 01-20-10

TRU 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 Hexamax gloves during processing
Processing Determination: ☑ Accept Reject
TRU Operations Comments: Use proper ratio of kitty litter to waste. 2.15.13
Performed By: Clarissa Velarde / Clar Velarde 234079 12/22/09
TRU Operations (Print) / Signature / Z Number / Date
ROBINSHAW 272995 2/15/13

Production Control

TRU Transfer Number: Date:

HG Review Johnny Amalfuel CSP, may contain Pb, Cr, Hg

Noncertified TRU Waste Drum Item Information

DrumID: 020625

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	OX180306NE		11.400	NITRATE SALTS		6.16	52	6/14	G468
2	OX179305NW		13.710	NITRATE SALTS		12.46	52	6/14	G468
3	LR308NW1		12.110	NITRATE SALTS		4.92	52	6/14	G468
4	LR308NE1		12.630	NITRATE SALTS		3.43	52	6/14	G468
5	DSL311NW1		5.920	NITRATE SALTS		1.28	52	6/14	G468
6	OX181310NW		13.970	NITRATE SALTS		3.15	52	6/14	G468
7	UOX181310NE		10.460	NITRATE SALTS		2.82	52	6/14	G468
8	LR309NW1		20.740	NITRATE SALTS		5.34	52	6/14	G468
9	LR309NE1		16.740	NITRATE SALTS		4.65	52	6/14	G468
10	DSL311NE		8.040	NITRATE SALTS		1.49	52	6/14	G468
11	UOX11313NW		14.100	NITRATE SALTS		15.03	53	6/14	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 210.9

Material Type	SNM (grams)	Items Net Wt (kg)
52	45.7	125.72
53	15.03	14.10
Totals	60.73	139.82

11-6-13

1800 Assuming WCRR operations center - JCleman

1820 Pre-job being conducted by SOS.

1842 Pre-job concluded. 2 operators and myself briefing to new RWP JC 11-6-13 JWO#ES-WCRRF-2013-0002.

2015 Bagging off 1 daughter, bagging on another daughter.

2027 Bag off/on complete.

2131 Initiating a drum movement from 50-69 to a transportainer.

2149 Drum movement out of 50-69 complete.

2242 Operators denesting 2 drums.

2320 Denesting complete. Bagging off and bagging on S852895

2343 Bag on/off complete.

11-7-13 0002 Operators out for lunch.

0030 Beginning outside rounds.

~~0050 Item# JC 11-6-13~~

0100 Outside rounds complete.

0220 Beginning inside rounds.

0221 Late entry - at 0119, operators back from lunch (JC)

0238 Item#63 is OOS, okay to proceed per CSE documentation.

0239 Inside rounds complete.

0326 Both rounds reviewed by SOS.

0335 Bagging off 1 daughter, bagging on another daughter.

0352 Bag off/on complete.

0520 Bagging off 2 daughters.

0541 Bagging on S833409.

0550 Bag off/on complete.

0556 Air quality personnel arrived to perform weekly stack monitoring.

11-7-13 0608 Being relieved by OCO, Howard Smith, JCleman

No further entries this page

11/6/13 Night Shift

1810 Reviewed shift turnover checklist, approved and posted Night shift Operations watchbill, assumed WCRR SOM position.

1845 Pre job brief was conducted and completed by SOS. Safety topic by IH was use of rigging equipment here @ WCRR. Discussed status of lead window procurement, Roto Grip evaluation by mechanics (OK to use) and repairs required to return to service the Versa Lift. Briefed workers on active shift orders.

2027 Completed bag off of 1 daughter - continuing to process.

2149 Operators completed movement of 4 drums from 50-69 to transportainers.

2320 Operators completed denesting 2 drums

2343 Completed all ~~pr~~ LRG 11/6/13 bagoffs for parent # 5860093 (2 daughters total). Bagged on 5852895

11/6/13 0002 Operators breaking for lunch.

0119 Resuming operations.

0352 Completed bagging off 1 daughter - continuing processing.

0535 Reviewed Roundsheets. No issues.

0545 Reviewed compliance tracking schedule - Status board updated.

0544 Late Entry @ 0541 Operators in process of bagging off 2 more daughters to complete parent 5852895 (3 daughters total). Bagging on drum # 5833409. LRG

11/6/13 0606 Relieved by J. Gundagnoli as WCRR SOM.

No further entries this page LRG

8

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

11/6/13

1816 Assuming SOS position. CA

1818 Starting Pre-Job, discussed turnover from day shift as well as ensure that all rigging equipment is certified and that personnel is trained.

1841 Pre-Job complete.

2015 Bagging off 1st daughter, bagging on a 2nd.

2027 Bag off/on complete.

2131 Starting movement out of 60-69.

2149 Movement out complete.

2242 Starting to denest 2 drums.

2320 Denesting complete. Bagging off 2nd daughter, bagging on 5852895.

2343 Bag off/on complete.

0326 Signed off on the rounds.

0335 Bagging off 1st daughter, bagging on a 2nd.

0352 Bag off/on complete.

0520 Bagging off 2nd and 3rd daughter, 5833408.

11/7/13 0550 Bag off/on complete.

11/4 0610 Turning over SOS position to Gilbert Martinez. CA 11/7/13

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-RTR2-13-0127
Examination Date:	11/13/2013
Waste Container ID:	68549
Video/Audio Recorded Media Number:	LA-RTR2-13-0127 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.: 231.0 kg Tare Wt.: 33.4 kg Net Wt.: 197.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

CCP Radiography Data Sheet

Waste Container ID: 68549

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Drum filter

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.2
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	190.9
Soils (S):	
Total WMP Weight:	197.6

CCP Radiography Data Sheet

Waste Container ID: 68549

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

RTR Operator:

Michael Simmons		11/13/2013
Print Name	Signature	Date

5852895

NDA 2000 Assay Report

Item Information

Item ID:	68549	Count Sequence Number:	23862
Operator:	D3PW2DK1\operator		
Assay Start:	11/19/2013 9:38:11 AM		
Description 1:	1LANDA1867		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 197.6 kg	Net:	197.6 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.950 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23862	Batch Number:	1LANDA1867
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:	68549	Analysis Date:	11/19/2013

Net Weight	197600.0 g		
Pu mass	6.89E+001	+- 2.71E+001	g
TRU Alpha Activity	1.20E+001	+- 5.10E+000	Ci
TRU Activity Concentration	6.06E+004	+- 2.58E+004	nCi/g
Pu-239 Equivalent Activity	1.22E+001	+- 5.10E+000	Ci
Pu-239 FGE	6.61E+001	+- 2.70E+001	g
Decay heat	3.88E-001	+- 1.68E-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	1.03E-006
U233	<LLD	<LLD	0.00E+000	1.13E-002
U234	3.25E-002	2.02E-004	7.82E-005	0.00E+000
U235	2.32E+000	5.02E-006	1.94E-006	4.95E-006
NP237	1.34E-001	9.43E-005	2.10E-005	4.81E-006
PU238	6.30E-003	1.08E-001	4.78E-002	2.15E-003
U238	<LLD	<LLD	0.00E+000	4.62E-005
PU239	6.43E+001	3.98E+000	1.68E+000	7.95E-002
PU240	4.56E+000	1.03E+000	4.59E-001	2.06E-002
AM241	2.00E+000	6.86E+000	4.80E+000	2.33E-001
PU241	9.48E-002	9.76E+000	4.33E+000	1.95E-001
PU242	2.07E-002	8.18E-005	3.63E-005	0.00E+000
AM243	6.51E-003	1.30E-003	2.91E-004	1.52E-005

Errors quoted at 1.000 sigma

Operator: Marla E Date: 11-25-13

ITR: Date: 11-25-13

Automated Independent Technical Review

Count Sequence Number: 23862 Batch Number: 1LANDA1867
Counter ID: MCS HENC #1
Container ID: 68549
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/19/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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: 11-25-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68549**

BDR Number: **LA13FG2119**

Sampling Date: **11/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	248.56	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131122c\
Data File : 68549.D
Acq On : 22 Nov 2013 11:45 am (#1); 22-Nov-13, 11:44:56 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 22 11:53:45 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.561	96	4716022	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.871	117	3659773	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.615	GC1	1869m	248.56 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0127
Examination Date:	11/13/2013
Waste Container ID:	68555
Video/Audio Recorded Media Number:	LA-RTR2-13-0127 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.: 109.5 kg Tare Wt.: 33.4 kg Net Wt.: 76.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68555

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, 90 mil liner lid, plastic container

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):	5.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	64.6
Soils (S):	
Total WMP Weight:	76.1

CCP Radiography Data Sheet

Waste Container ID: 68555

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

Comments: N/A

RTR Operator:

Michael Simmons		11/13/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68555	Count Sequence Number:	23844
Operator:	D3PW2DK1\operator		
Assay Start:	11/14/2013 3:24:16 PM		
Description 1:	1LANDA1865		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 76.1 kg	Net:	76.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.730 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23844	Batch Number:	1LANDA1865
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:	68555	Analysis Date:	11/14/2013

Net Weight	76100.0 g			
Pu mass	1.13E+000	+-	2.04E-001	g
TRU Alpha Activity	1.42E-001	+-	1.79E-002	Ci
TRU Activity Concentration	1.86E+003	+-	2.35E+002	nCi/g
Pu-239 Equivalent Activity	1.45E-001	+-	1.79E-002	Ci
Pu-239 FGE	1.44E+000	+-	2.27E-001	g
Decay heat	4.55E-003	+-	5.74E-004	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.84E-008
U233	<LLD	<LLD	0.00E+000	1.27E-003
U234	8.32E-003	5.18E-005	1.37E-005	0.00E+000
U235	5.95E-001	1.28E-006	3.40E-007	7.15E-007
NP237	1.07E-002	7.57E-006	1.44E-006	3.69E-007
PU238	1.55E-004	2.65E-003	6.34E-004	4.12E-004
U238	<LLD	<LLD	0.00E+000	6.75E-006
PU239	1.05E+000	6.54E-002	1.26E-002	1.02E-002
PU240	7.47E-002	1.70E-002	4.05E-003	2.64E-003
AM241	1.66E-002	5.68E-002	1.20E-002	2.05E-002
PU241	1.56E-003	1.60E-001	3.83E-002	2.49E-002
PU242	3.63E-004	1.43E-006	3.42E-007	0.00E+000
AM243	9.45E-005	1.89E-005	3.67E-006	1.87E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/19/13

ITR: _____ Date: 11-21-13

Automated Independent Technical Review

Count Sequence Number: 23844
Batch Number: 1LANDA1865
Counter ID: MCS HENC #1
Container ID: 68555
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; 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 Chamberlain Date: 11-18-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68555**

BDR Number: **LA13FG2119**

Sampling Date: **11/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131122c\
Data File : 68555.D
Acq On : 22 Nov 2013 1:24 pm (#1); 22-Nov-13, 13:23:28 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 22 13:31:51 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.561	96	4295835	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.868	117	3398852	177.50 ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0127
Examination Date:	11/13/2013
Waste Container ID:	68609
Video/Audio Recorded Media Number:	LA-RTR2-13-0127 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.: 52.0 kg Tare Wt.: 33.4 kg Net Wt.: 18.6 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:	20 %

CCP Radiography Data Sheet

Waste Container ID: 68609

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	16.6
Soils (S):	
Total WMP Weight:	18.6

CCP Radiography Data Sheet

Waste Container ID: 68609

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

RTR Operator:

Michael Simmons		11/13/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68609	Count Sequence Number:	23849
Operator:	D3PW2DK1\operator		
Assay Start:	11/15/2013 9:24:25 AM		
Description 1:	1LANDA1866		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 18.6 kg	Net:	18.6 kg
Container:	Volume: 208.0 l	Full:	20.0 %
Density:	0.450 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23849	Batch Number:	1LANDA1866
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:	68609	Analysis Date:	11/15/2013

Net Weight	18600.0 g		
Pu mass	5.33E-001	+- 1.09E-001	g
TRU Alpha Activity	1.54E-001	+- 2.30E-002	Ci
TRU Activity Concentration	8.28E+003	+- 1.24E+003	nCi/g
Pu-239 Equivalent Activity	1.55E-001	+- 2.31E-002	Ci
Pu-239 FGE	5.00E-001	+- 1.08E-001	g
Decay heat	5.04E-003	+- 7.62E-004	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.33E-009	1.83E-007	8.29E-008	0.00E+000
CS137	2.11E-009	1.83E-007	8.29E-008	1.27E-007
U233	<LLD	<LLD	0.00E+000	1.08E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.71E-007
NP237	3.88E-003	2.74E-006	4.01E-007	2.65E-007
PU238	6.82E-005	1.17E-003	3.03E-004	2.56E-004
U238	<LLD	<LLD	0.00E+000	6.11E-006
PU239	4.97E-001	3.08E-002	6.70E-003	6.75E-003
PU240	3.52E-002	7.99E-003	2.07E-003	1.75E-003
AM241	3.32E-002	1.14E-001	2.20E-002	1.16E-002
PU241	7.33E-004	7.55E-002	1.96E-002	1.66E-002
PU242	1.71E-004	6.75E-007	1.75E-007	0.00E+000
AM243	2.28E-004	4.57E-005	6.70E-006	1.56E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/21/13

ITR: _____ Date: 11-22-13

Automated Independent Technical Review

Count Sequence Number: 23849
Batch Number: 1LANDA1866
Counter ID: MCS HENC #1
Container ID: 68609
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/15/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
No Warnings Reported.	
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
Density is outside range (0.02 to 2.10 g/cc) or fill height is below 30%.	Fill height acceptable, results consistent with neutron.

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

Expert Review by: Sheri Chambers Date: 11-19-13

Waste Container ID: **68609**

BDR Number: **LA13FG2119**

Sampling Date: **11/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131122c\
Data File : 68609.D
Acq On : 22 Nov 2013 1:35 pm (#1); 22-Nov-13, 13:34:25 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 22 13:42:53 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.562	96	4287207	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.868	117	3395481	177.50 ppmv	0.00

Target Compounds	Qvalue

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

S852923

Container 747111

File Options Reports Help

S852923

747111	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

S852923

- S852923
  - LA00000068446
  - LA00000068410
  - LA00000068393
  - LA00000068405 – EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.01	%			

UET Date: 9-19-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5852923

6.2[4] Date Processed: 9-19-13

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

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

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

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

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

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

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

4.3[6] ($) Stationary Fire Watch has been established: ☑ N/A
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) NA
(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] 2762021 9-19-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S852923

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 467.0 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 587.0 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5852923

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68410	68446		
10.1[4]	Daughter Drum Filter No.	LM-274	LM-273	N	
10.1[4]	Daughter Drum Bag Filter No.	L-11532	L-6705	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	[illegible]			
	Serial No.	L-6701			
	Date of Manufacture	1/13			
10.2[5]	POC ID No	68393		N	
10.2[7][B]/10.2[6]	POC Item Description	Solid Nitrate Salt		A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	[illegible] 228626			
10.2[14]	POC Assembly Gross Weight (lb)	367.2			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1 R			
10.3[3][A]	Approx. Containerized Liquid Vol./Units		N	A	
10.3[5][A]	Free Liquid Volume/Units	3 GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding	Lead Shielding		
10.3[9][A]	PCB-contaminated Waste Description		N	A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comments	See Comments	N	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	60%	100%	A	
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty litter Stub out bags	Kitty litter Stub out bags Hex Liners		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S852923

Comments: 1 Poly Liner Lid, Nitrate Salts, Plastic, Kitty litter, lead shielding, PH-2 liquid neutralized.

11.1[1] Performed By: [illegible] [illegible] 1228826 9/9/13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: G M [illegible] 1492235 9/9/13 1617
SOS or designee (print) Signature Z # Date/Time

9-19-13 a)

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501012
Lot No.: 0233945
Manufacture Date: 2012

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

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

Overpack filtered vent information:

Manufacturer: Wheat
Model No.: 013
Serial No.: EK-1116
Manufacture Date: 5/10

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: _____ / _____ / _____ / _____
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 Purged at WCRRF

8.1[1] Performed By: Frederick Robledo [signature] 122502 / 9-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilberto Martinez [signature] 149275 9/19/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET 9/19/13 HS

7.[17] Overpack Drum Unique Identifier No.: 608405

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: +-3% rdg % 6% rdg

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

Performed By: Frederico Arbolado / [signature] 1220026 / 9-19-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 175.0 lb

Comments: N/A

8.1[1] Performed By: Frederico Arbolado / [signature] 1220026 / 9-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilberto Martinez / [signature] 1498389 / 9/19/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

9-17-13 cw

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68410

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2 SPVC
Serial No.: 1-11532
Manufacture Date: 06/13

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

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

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

Performed By: Mohamed Abdullah / [signature] 128[illegible] 9-17-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019DS
Serial No.: LM-274
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.: 68410

Comments: N/C

5.[35] Performed By: Frederico Arabulata [signature] 1228826 9-17-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martin [signature] M9031 9/19/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

9 19 30

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 608410

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: [illegible] cal. [illegible] 40% CRM

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

Performed By: [illegible] / [illegible] [illegible] 9-19-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

6.[17][C] 2 in. bung plug torque value: _____ 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.: 68410

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 277.4 lbs

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

Comments: N/A

6.[32] Performed By: Frederico [illegible] / [signature] 1228[illegible] / 9-19-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 149277 9/19/13
Supervisor or designee (print) Signature Z # Date

9-19-13a

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 1085446

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

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

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

Performed By: [illegible] [signature] [illegible] 9-19-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68446

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 4258 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: [illegible] / [signature] 122551 9-9-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 149235 9/9/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

9-18-13a)

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68416

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 60PVC1.52Spec
Serial No.: L-6705
Manufacture Date: 6-13

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

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

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

Performed By: [illegible] (Operator (print)) [illegible] (Signature) [illegible] (Z #) [illegible] (Date)

5.[23] Filtered vent information:
Manufacturer: MCESI
Model No.: 01905
Serial No.: LM 203
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][F] Drum ID No.: 68446

Comments: N/C

5.[35] Performed By: [illegible] [illegible] [illegible] 7-15-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [illegible] 149225, 9/19/13
Supervisor or designee (print) Signature Z # Date

1939
SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S852923 Container Type: 55-GAL Gross Weight (lbs): 328
Inner Seal #: 020629 Filter Prefix: LAVC Filter Serial #: 01917
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS NITRATE SALTS MST 12 12663
Total PE-Ci Activity: 1.05E+01 Equivalent Combustible PE-Ci: 3.95E+00 AM-241 PE-Ci: 8.55E-01
Total Fissile Gram Equivalents: 116.4 Total Surface Dose Rate (mrem/hr): 4
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 4/30/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured Liquid Location: 16
Certified RTR Comment: None

Prohibited Items: ☑ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ? ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Signature / 100681 (Z Number) / 12/20/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 268# Generator info shows 7 items of nitrate salts, weights range from 30-55#. No RTR BDR. Nitrate salts typically packaged in plastic bags; undocumented liquids &/or debris may be present. RTR PS shows prohibited liquids, impenetrable object(s), & unpunctured liner. No chemicals identified. Applicable waste codes for chromium, lead, & mercury. Nitrate Salts require repack w/ admixture.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112609 (Z Number) / 1/18/13 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use Proper PPE Mix Ratio

Performed By: GMR (TRU Remediation Operations (Print)) / AMR (Signature) / 149235 (Z Number) / 6/19/13 (Date)
Jose Jerez / Jose Jerez / 221452 / 6/22/13

IHS Review - Jaling Amalical CSP, may contain Pb, Hg Cr
1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 020629

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	OX182314NE		14.040	NITRATE SALTS		12.98	52	1/13	G468
2	DSL315NW1		24.800	NITRATE SALTS		4.65	52	1/13	G468
3	DSL315NE1		22.090	NITRATE SALTS		18.73	52	1/13	G468
4	DSL315NW2		34.920	NITRATE SALTS		50.01	52	1/13	G468
5	LR316NE1		16.930	NITRATE SALTS		13.06	52	1/13	G468
6	LR316NW1		21.980	NITRATE SALTS		7.04	52	1/13	G468
7	OX183317NE		13.890	NITRATE SALTS		17.15	52	1/13	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 148.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	123.62	148.65
Totals	123.62	148.65

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 4/18/13

Container No. (5.[1])	S852923					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	PIDS					
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: Erik Loechell / 2324183
CCP (Print) Z#

Reviewed By: Nathan Wales / 2388666
CCP (Print) Z#

Comments:

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

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

6.1[3] Performed By: Susan Ramsey / Susan S. Ramsey / 100681 / 5/20/13
Waste Handling Operator (print) Signature Z# Date

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130418c\
Data File : S852923.D
Acq On : 18 Apr 2013 1:47 pm (#1); 18 Apr 2013 1:46 pm (#2)
Operator : EL
Sample :
Misc : 55 GAL DRUM FROM FILTER-UN-19DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 18 13:56:48 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed Feb 20 11:23:15 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.063	96	8493486	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6965300	178.75 ppmv	0.00

Target Compounds	Qvalue

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

VOCGAS.M Thu Apr 18 13:57:02 2013 UNIT12

9-18-13

1818 Assuming WCRR operation center - K Oleman
1819 Pre-job being conducted by SOS.
1836 Pre-job concluded.
1925 Operators entering 50-69 to begin bagoff, and clean
2053 Bagging off second daughter of drum #S85389
bagging on drum #S842463.
2120 Initiating a drum movement from transportainer to
50-69.
2125 Bagoff/on complete.
2135 Drum movement out of transportainer in 50-69 comp
2218 Initiating a drum movement from 50-69 to a transportai
2233 Drum movement out of 50-69 complete.
0008 Operators out for lunch.
0030 Entering EPWCRR-Rm-AOP-0207 for severe weather.
0058 Beginning 30 minute wait again for thunder.
0128 Exiting EPWCRR Rm-AOP-0207.
0130 Beginning outside rounds.
0136 Operators back from lunch
0142 Item #19 is unsat, okay to proceed, FSR in place.
0155 Outside rounds complete.
0303 Bagging off 2 daughters and 1 POC, bagging on S852923.
0400 Bag off/on complete.
0430 Beginning inside rounds.
0451 Item #63 is OOS, okay to proceed per CSF documentation.
0452 Inside rounds complete.
0516 Both rounds reviewed by SOS.
9-19-13 0600 Relieved by DCO Clarissa Velarde, K Oleman

No further entries this page.

9-19-13

0600 Assuming WCRRF OCO position - Cleland.
0607 Stack monitoring personnel arriving for monitoring.
~~0615~~ 9-19-13 Pre job briefing being performed by SOS.
0637 Pre job concluded.
0810 Bagging off 1 daughter, bagging on 1 daughter.
0818 Permission granted to ~~[illegible]~~ 9-19-13 vehicle access gates for movement out to area G.
0837 Bag on, bag off is complete.
0946 Bagging off 1 daughter and 1 POC, Bagging on 9851752.
0947 Vehicle access gates have been restored, movement out of WCRRF is complete.
1040 Mode change performed TASD-69 and WCRRF yard now in warm standby.
1041 Late entry bag on, bag off is complete at 1038 - CJ.
1045 Maintenance entering 50-69 to perform work on PCM2.
1058 Work is complete on PCM2.
1100 Mode change performed TASD-69 and WCRRF yard now back in operations.
1324 Bagging off, Bagging on ~~9846160~~ CV 9-19-13 ~~9846160~~ 9-19-13 9846160.
1352 Bag on, bag off is complete.
1428 Starting movement into 50-69
1439 Movement into 50-69 is complete.
1441 Starting movement out of 50-69.
1456 Starting inside rounds
1520 Item #63 is OOS, POD in place okay to proceed per CSE documentation
1524 Inside rounds have been completed.
1525 Starting outside rounds.
1530 Bagging off 1 daughter, Bagging on 1 daughter continuing to process.
1540 Item #19 is unsat, FSE in place okay to proceed.
1543 Bag on, bag off complete.
1544 Outside rounds complete.
1650 Inside and outside rounds signed off by SOS.
1656 Bagging off 1 daughter, 1 POC, Bagging on 9845104
- Continued on next page - Cleland

9/18/13 Night Shift

1802 Reviewed shift turnover checklist and assumed WCRR SOM position.

1803 Approved and posted the night shift operations watchbill.

1815 Attended pre job brief conducted by SOS. Safety topic by IH was continued rains and effects on road conditions and driving hazards. Discussed current conditions in facility - Need to complete bag offs for S853899, have a 55 and an 85 gal drum inside to process.

2125 All bag offs completed for drum # S853899 (2 daughters total) and drum # S842463 is bagged on.

2135 Operations completed moving ~~63~~ 3 drums from ~~50-69 to transportainers~~ transportainers to 50 69 for processing.

2233 Operations completed moving 6 drums from 50-69 to transportainers.

2240 Operators notified SOS + IH that liquid in drum that is being processed would not mix w/ neutralization agent. Operators will continue absorbing w/ Kitty litter and make comment on Attachment 1.

9/19/13 0008 Operators breaking for lunch

0030 Entered EP-WCRR-RM-AOP-0207 for severe weather due to lightning.

0128 Exited severe weather restrictions.

0136 Resuming operations

0400 Completed all bag offs for parent # S842463 (2 daughters and 1 POC total) Bagged on S852923

0502 Completed Quarterly review of LO/TO Binder

9/19/13 0614 Relieved by J. Guadagnolo.

No further entries this page

9-19-13 DAYSHIFT

0615 Reviewed the turnover checklist and assumed the day shift SOM position John Gandolfi

0634 Completed attending the pre-job brief conducted by the SOS (Gilbert) The Safety topic was - do not take short cuts - The SOS provided an update on status of the drum bagged on. RPI requested coordination to get the PCM-2 repaired. Coordination after the first drum may be effective. There is one transfer scheduled out. Rainwater was noted in the ARCTIC, operators are to be cautious for slip hazards in 50/69. Current shift orders in affect - Manual Drum Movements WCRR-SH-13-003-R2, Precautions to Prevent Bag Tears WCRR-SH-13-005 R0. A level B walk thru was conducted and compliments were recieved from the quality group. Next week DOE may visit.

0710 Completed the daily AREA G

0712 late entry for 0653 - operators enter 50/69 facility and initiate processing

0837 Inside Operations complete bag off of 1 daughter drum.

0929 Completed performing a spot check with the transfer from the transportainer to the transfer vehicle. Drums being moved were called out to Production Inventory. Production Inventory takes note - per task order of the drums transfering out.

0946 Inside operations initiate bag offs

1020 PCM2 techs arrive and obtain brief (RWP) to support repair of PCM2 under IWD-RP-2-RIC-21 REV #2, they will enter to correct PCM2 after bag offs are completed

1038 Inside Operations report bag off and bag on of Parent 5851752.

1040 Mode Change: 50/69 and Yard transition from Operations/Operations to WARM/WARM

1058 The PCM2 was repaired, Per techs dust is/could be shorting out the board.

1100 Mode Change: 50/69 and Yard transition from WARM/WARM to Operations/Operations

1215 Completed attending the daily noon status meeting with the OM, PM, SOMs and the weekly project status meeting.

1226 Supported production Control, Susan Ramsey in obtaining proper procedure and attachment, to identify single layer of confinement to resolve an issue for six drums will not be sent back to WCRR.

1325 Inside Operations report initiating bag off of daughter drum and bag on of Parent drum 5846660

1352 Inside Operations reported bag off of Parent 5851752 of 1 daughter and bag on of the Parent 5846660 was completed.

1427 The craft planner and carpenter arrived at WCRRF to scope the door leakage at the transportainer. Gasket material will require ordering

(Continued on next page)

9/18/13 WCRR SOS Log Book

1815 Assuming SOS position. CA

1818 Starting Pre-Job, discussed the road wash outs due to heavy rain and potential low spots flooding.

1835 Pre-Job complete.

2020 Relieved by Jose Jerez on 9/18/13. CA

2020 Assuming SOS position for the evening. Performed Turnover with Clayton Mullins. JJ

2023 Bagging off one daughter Bagging on 5842403

2125 Bag on/off Complete

2135 Moving Raw Parent 55 gallon from transportainer into 50-69 Complete

2218 Initiating Daughter drum movement from 50-69 to Transportainer

2233 Drum movement out of 50-69 Complete.

2245 Operators reporting that the liquids are not draining the neutralizer being added. Directed the operators to make a notation of this on the attachment description.

0000 Operators breaking for lunch

0130 Operators returning from lunch and continuing to process.

0303 Bagging off 2 daughters and 1 POC, Bagging on 5852923

0400 Bag on Bag off Complete.

0516 Reviewed and signed inside and outside hands.

0600 Securing SOS position for the day turning over SOS duties to Gilbert Martinez JJ

CA 9-18-13

Do further entries on next page.

9/19/13 WCRR SOS LOG Book

0600 Assuming SOS Position

0615 Conducted shift brief Discussed status of facility. Current drum on Box and to not take shortcuts. Also disscussed the USE OF Hex armors.

0637 Concluded shift brief

0810 Bagging off / daughter bagging on another

0815 shipment out started

0837 Bag on/off complete

0946 Bagging on 5851752 And bagging off

0947 shipment complete

1040 Mode Change Complete WCRRF In warm Lete entry bag on bag off complete @ 1028

1045 Maintenace entering 50-69 to work on PCM

1058 Work on PCM Complete.

1100 mode change Complete WCRRF In operations.

1324 Bagging on/off 5846660

1352 Bag on/off complete

1458 Starting move In to 50-69

1434 Move in Complete.

1441 starting Move out of 50-69

1456 Started Rounds

1530 Bagging off / daughter bagging on Another

1543 Bag on/off Complete

1650 Bag o Reviewed inside and outside Rounds

1656 Bag off daughter And Poc Bagging on 5845104

1733 Bag on/off complete.

1810 Relieved by Jose Jerez

no further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0114
Examination Date:	9/25/2013
Waste Container ID:	68393
Video/Audio Recorded Media Number:	LA-RTR2-13-0114 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 166.5 kg Tare Wt.: 145.1 kg Net Wt.: 21.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68393

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):	19.4
Soils (S):	
Total WMP Weight:	21.4

CCP Radiography Data Sheet

Waste Container ID: 68393

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Eric Lyles		9/25/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68393	Count Sequence Number:	23672
Operator:	D3PW2DK1\operator		
Assay Start:	10/2/2013 11:35:47 AM		
Description 1:	1LANDA1850		
Description 2:	POC - GW = 166.5 kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 21.4 kg	Net:	21.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.702 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:	23672	Batch Number:	1LANDA1850
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:	68393	Analysis Date:	10/2/2013

Net Weight	21400.0 g			
Pu mass	2.04E+001	+-	9.07E+000	g
TRU Alpha Activity	3.12E+000	+-	1.26E+000	Ci
TRU Activity Concentration	1.46E+005	+-	5.89E+004	nCi/g
Pu-239 Equivalent Activity	3.17E+000	+-	1.26E+000	Ci
Pu-239 FGE	1.93E+001	+-	9.05E+000	g
Decay heat	1.01E-001	+-	4.14E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.56E-007
U233	<LLD	<LLD	0.00E+000	4.49E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.44E-006
NP237	3.74E-002	2.64E-005	4.92E-006	1.93E-006
PU238	1.87E-003	3.19E-002	1.56E-002	5.06E-004
U238	<LLD	<LLD	0.00E+000	8.57E-006
PU239	1.92E+001	1.19E+000	5.61E-001	1.88E-002
PU240	1.22E+000	2.78E-001	1.37E-001	4.41E-003
AM241	4.74E-001	1.63E+000	1.12E+000	1.02E-001
PU241	2.35E-002	2.42E+000	1.20E+000	3.84E-002
PU242	4.09E-003	1.61E-005	7.96E-006	0.00E+000
AM243	1.53E-003	3.06E-004	5.74E-005	6.36E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/3/13

ITR: D E R. _____ Date: 10-3-13

Automated Independent Technical Review

Count Sequence Number: 23672
Batch Number: 1LANDA1850
Counter ID: MCS HENC #1
Container ID: 68393
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 10/2/2013

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

Expert Review by: 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: **68393**

BDR Number: **LA13FG2113**

Sampling Date: **11/5/2013**

S852923

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	45.67	
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 : 68393.D
Acq On : 5 Nov 2013 3:00 pm (#1); 05-Nov-13, 14:59:45 (#2)
Operator : SA
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 15:08:19 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	4660110	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.887	117	3585729	177.50 ppmv	0.03
Target Compounds					Qvalue
4) Methanol	0.883	31	17006	45.67 ppmv	100

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

VOCGAS.M Wed Nov 06 12:35:52 2013

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0114
Examination Date:	9/25/2013
Waste Container ID:	68410
Video/Audio Recorded Media Number:	LA-RTR2-13-0114 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 126.0 kg Tare Wt.: 33.4 kg Net Wt.: 92.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 68410

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	86.6
Soils (S):	
Total WMP Weight:	92.6

CCP Radiography Data Sheet

Waste Container ID: 68410

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

RTR Operator:

Eric Lyles		9/25/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68410	Count Sequence Number:	23671
Operator:	D3PW2DK1\operator		
Assay Start:	10/2/2013 10:53:00 AM		
Description 1:	1LANDA1850		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 92.6 kg	Net:	92.6 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.740 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23671	Batch Number:	1LANDA1850
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:	68410	Analysis Date:	10/2/2013

Net Weight	92600.0 g		
Pu mass	1.95E+001	+-	3.16E+000 g
TRU Alpha Activity	4.98E+000	+-	1.95E+000 Ci
TRU Activity Concentration	5.38E+004	+-	2.10E+004 nCi/g
Pu-239 Equivalent Activity	5.02E+000	+-	1.95E+000 Ci
Pu-239 FGE	1.84E+001	+-	2.96E+000 g
Decay heat	1.63E-001	+-	6.47E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.22E-002	5.79E-005	1.11E-005	3.23E-006
PU238	1.78E-003	3.04E-002	4.93E-003	3.31E-005
PU239	1.83E+001	1.13E+000	1.84E-001	1.23E-003
PU240	1.17E+000	2.65E-001	4.30E-002	2.88E-004
AM241	1.04E+000	3.55E+000	1.94E+000	9.15E-002
PU241	2.24E-002	2.31E+000	3.75E-001	2.51E-003
PU242	3.90E-003	1.54E-005	2.50E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.35E-007
U233	<LLD	<LLD	0.00E+000	7.68E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.38E-006
U238	<LLD	<LLD	0.00E+000	1.52E-005
AM243	3.54E-003	7.08E-004	1.37E-004	1.05E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/3/13

ITR: _____ Date: 10.3.13

Automated Independent Technical Review

Count Sequence Number: 23671 Batch Number: 1LANDA1850
Counter ID: MCS HENC #1
Container ID: 68410
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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: 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: **68410**

BDR Number: **LA13FG2105**

Sampling Date: **10/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	174.22	
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\131004c\
Data File : 68410.D
Acq On : 4 Oct 2013 2:08 pm (#1); 04-Oct-13, 14:07:19 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 04 14:15:59 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.555	96	4147019	205.75	ppmv	0.04
15) Chlorobenzene-d5	5.865	117	3199495	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.607	GC1	1310m	174.22	ppmv	

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

CCP Radiography Data Sheet

5852923

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0114
Examination Date:	9/25/2013
Waste Container ID:	68446
Video/Audio Recorded Media Number:	LA-RTR2-13-0114 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 195.0 kg Tare Wt.: 33.4 kg Net Wt.: 161.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 68446

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):	149.6
Soils (S):	
Total WMP Weight:	161.6

CCP Radiography Data Sheet

Waste Container ID: 68446

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

RTR Operator:

Eric Lyles		9/25/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68446	Count Sequence Number:	16594
Operator:	DCLTD231\Operator		
Assay Start:	10/3/2013 11:00:09 AM		
Description 1:	2LANDA1230		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 161.6 kg	Net:	161.6 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.860 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 16594
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 68446

Batch Number: 2LANDA1230
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/3/2013

Net Weight	161600.0 g		
Pu mass	6.67E+001	+-	1.43E+001 g
TRU Alpha Activity	1.34E+001	+-	4.71E+000 Ci
TRU Activity Concentration	8.29E+004	+-	2.91E+004 nCi/g
Pu-239 Equivalent Activity	1.36E+001	+-	4.71E+000 Ci
Pu-239 FGE	6.43E+001	+-	1.43E+001 g
Decay heat	4.36E-001	+-	1.56E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.38E-007
U233	<LLD	<LLD	0.00E+000	1.21E-002
U234	3.49E-002	2.17E-004	5.28E-005	0.00E+000
U235	2.49E+000	5.37E-006	1.31E-006	3.46E-006
NP237	1.45E-001	1.02E-004	2.13E-005	2.95E-006
PU238	1.17E-002	2.00E-001	5.13E-002	2.47E-003
U238	<LLD	<LLD	0.00E+000	2.82E-005
PU239	6.23E+001	3.86E+000	8.86E-001	4.78E-002
PU240	4.21E+000	9.55E-001	2.56E-001	1.18E-002
AM241	2.44E+000	8.38E+000	4.62E+000	1.02E-001
PU241	1.28E-001	1.32E+001	3.58E+000	1.64E-001
PU242	6.01E-002	2.37E-004	5.97E-005	0.00E+000
AM243	3.88E-003	7.77E-004	1.63E-004	1.72E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10-8-13

ITR: _____ Date: 10-9-13

Automated Independent Technical Review

Count Sequence Number: 16594
Batch Number: 2LANDA1230
Counter ID: HENC #2
Container ID: 68446
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 10/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 10/8/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68446**

BDR Number: **LA13FG2105**

Sampling Date: **10/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	340.86	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131004c\
Data File : 68446.D
Acq On : 4 Oct 2013 1:45 pm (#1); 04-Oct-13, 13:44:57 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 04 13:53:33 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.584	96	4295007	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.884	117	3298946	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.607	GC1	2563m	340.86 ppmv	

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

S852931

S852931

Containe 746995

File Options Reports Help

S852931

746995	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

S852931

- S852931
  - LA00000068743
    - LA00000069279
      - LASB50421
    - LA00000069295
      - LASB50040
    - LA00000069007 - EMPTY
  - W799384 - EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.01	%			

1-27-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68743

6.2[4] Date Processed: 1-27-14

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

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

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

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

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

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

Performed By: Adam Gegovia Adam Gegovia 276702 1-27-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 65743

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 471.4 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) 471.4 lb

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

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

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

John Guadagnoli / [signature] / 125645 / 1-27-14
EWMO-FOD (print) Signature Z.# Date

per telecon approval
from OM - Lou Talbert
at 1820hrs - log entry
in operations Center logbook
1-27-14

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68743

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69295	69279		
10.1[4]	Daughter Drum Filter No.	AN-502	AN-503		
10.1[4]	Daughter Drum Bag Filter No.	L-11692	L-12762		
10.1[4]	Daughter Drum Purchase Order No.	501892	501892		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
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	5 GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Degraded Lead Shielding	Lead		
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comments	See comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	65%	70%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter	Kitty Litter		

UET

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68743

Comments: Ultimate Sorbent Bags, 5 gallons of liquid pH of 1 neutralized to a 6

11.1[1] Performed By: Joe Quinnan / Joe Q 289987 / 11/28/14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Sucre / [signature] 122452 / 11/28/14 1200
SOS or designee (print) Signature Z # Date/Time

69007

Working Copy
Date: 11-19-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 238366
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	108216	036245
Cal. Expiration Date:	12-18-13	8-05-14
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-10161
Manufacture Date: 10/11

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

5. [11] Performed By: Brian Gallegos / [signature] / 2671278 11-19-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/c

8.1[1] Performed By: Brian Gallegos / [signature] / 2671278 11-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Perez / [signature] / 1221452 1/28/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-27-14

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69007

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 SEGOVIA (print) / Signature / Z# 2767021 / Date 1-27-14
Waste Handling Technician (print) Signature Z # Date

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

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

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

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

Comments: N/C

8.1[1] Performed By: JOE QUINTANA / Joe Q / Z# 2399871 / Date 1/28/14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez / Signature / Z# 2214521 / Date 1/28/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-22-14

UET

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69295

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc-1.5-2.5 pvc
Serial No.: L-11692
Manufacture Date: 06/13

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

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

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

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

5.[23] Filtered vent information:
Manufacturer: NucFil
Model No.: 019DS
Serial No.: AN-502
Manufacture Date: 01/13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69295

Comments: N/C

5.[35] Performed By: Andrew H. Romero (Operator (print)) | Andrew H. Romero (Signature) | 178706 (Z #) | 10/22/14 (Date)

7.1[4] Reviewed By: Jose Jerez (Supervisor or designee (print)) | Jose Jerez (Signature) | 221452 (Z #) | 1/28/14 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 65295

6.[9] Drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 9-2-14
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 SEGOVIA / Adam Segovia / Z76702 / 11-27-14
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.: 69295

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 317.4 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: JOE QUINTANA (Operator (print)), Joe Z (Signature), 239987 (Z #), 1/28/14 (Date)

7.1[4] Reviewed By: Jose Jerez (Supervisor or designee (print)), [signature] (Signature), 1221452 (Z #), 1/28/14 (Date)

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 1/24/14 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69279

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC-1.5-2.5PVC
Serial No.: L-12762
Manufacture Date: 7/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11/12/14	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] Z87544 1/24/14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN-503
Manufacture Date: 1/13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69279

Comments: N/C

5.[35] Performed By: Brian Gordon [signature] Z# 1879441 Date 1/24/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Perez [signature] Z# 1221521 Date 1/28/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69279

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
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.: 69279

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 385.4 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: JOE QUINTANA (Operator (print)) Joe (Signature) 239987 (Z.#) 1/28/14 (Date)

7.1[4] Reviewed By: Jose Perez (Supervisor or designee (print)) (Signature) R214321 (Z.#) 1/28/14 (Date)

Working Copy
Date: 12714

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68743

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): 471.4

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

Comments: N/C

8.1[1] Performed By: Adam Segovia / [signature] / 122702 / 1-27-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez / [signature] / 122472 / 1/28/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Clayton Mullins / [signature] / 240092 / 1/28/14 / 1405
SOS/SOM or designee (print) Signature Z # Date Time

68743

1939 SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S852931 Container Type: 85 GAL DRUM Gross Weight (lbs): 485.541
Total PE-Ci Activity: 7.88E+00 Equivalent Combustible PE-Ci: 2.96E+00
Total Fissile Gram Equivalents: 8.71E+01 Total Surface Dose Rate (mrem/hr): 5
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 3/5/13 and Attachment 3 of DOP-1030 is attached. RTR pre-screen indicates liquid in 40 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 ~333 lbs. and generator data shows 11 items of nitrate salts with weights ranging from ~6-49 lbs.

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

IHS Representative

Potential IHS Safety Risks: May contain D007, D008 and D009. May contain free liquids, No other hazards Noted.

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

LTP Engineering

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

Engineering Comments: NA

Performed By: Valerie Rhodes (LTP Engineering (Print)) | Valerie Rhodes (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)) | Gilbert Martinez (Signature) | 149255 (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 Kevlar gloves when processing.

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

Noncertified TRU Waste Drum Item Information

DrumID: 020634

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	OX183317NW		17.910	NITRATE SALTS		17.29	52	1/13	G468
2	OX184318NE		8.820	NITRATE SALTS		39.14	52	1/13	G468
3	RR319VRNE1		2.540	NITRATE SALTS		3.03	52	1/13	G468
4	LR320NW1		12.840	NITRATE SALTS		4.26	52	1/13	G468
5	LR320NE1		10.830	NITRATE SALTS		3.08	52	1/13	G468
6	LR321NW1		12.580	NITRATE SALTS		3.	52	1/13	G468
7	LR321NE1		15.870	NITRATE SALTS		2.44	52	1/13	G468
8	LR321NW2		17.240	NITRATE SALTS		3.63	52	1/13	G468
9	LR322NW1		19.900	NITRATE SALTS		4.38	52	1/13	G468
10	LR322NE1		22.300	NITRATE SALTS		8.49	52	1/13	G468
11	LR322NE2		10.480	NITRATE SALTS		3.76	52	1/13	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 220.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	92.5	151.31
Totals	92.5	151.31

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: S852931

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	____ %	0.127655 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	18.07 ppm
Filter Vent Unique Identifier No.:	____	AN-337
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: S852931

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

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

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

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

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

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

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

ATTACHMENT 3
Page 3 of 3

7.[2] Waste Container Unique Identifier: 3852931

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) BB 10/4/13
- VOC less than or equal to 5,250 ppm

Comments: N/A

7.[11][M] Performed By: Chris Vigil 163082 3-5-13
7.[3] 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 163082 3-5-13
LTP-DDP Supervisor designee (print) Signature Date

DVS Gas Determination Results Report

Date: 3/5/2013

Waste Container Number: S852931

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	18.07	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1 1 Dichloroethene	0	402.80	N	N/A
Acetone	0	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	18.07	I.V.R. Intial and Date	RP 3-5-13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.127655	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

03-05-13

Comments:

AN-337

Doug Eisele
DVS Operator Print Name

Signature

03-05-13
Date

1-27-14
0600 Assuming WCRR operations center - SColeman.
0615 Pre-job being conducted by SOS.
0620 Beginning inside rounds.
0635 Pre-job concluded.
0640 Beginning outside rounds.
0654 Item #63 is OOS, okay to proceed per CSE documentation
0655 Inside rounds complete.
0705 RCT reports the heater is out in the high bay again. Current temp. in 50-69 is 68°.
0707 Outside rounds complete.
0732 Both rounds reviewed by SOS.
0740 mode changed from warm to operations in WCRRF yard and so
0845 Operators denesting 4 drums.
0913 Operators informed the SOS that they have rejected 2 drum due to removable contamination ~~due to~~ 30-27-14 with levels well abo the RWP limit.
0923 Electricians arrived to scope the heater in the high bay.
0932 Heater in the high bay back up and running.
0945 Created a posting for the thermostat in the high bay.
1025 Denesting complete.
1102 Current temp in 50-69 - 64°.
1141 Bagging off 1 daughter, ~~bagging on another daughter~~ TC 1-27-14; then bagging on 68748.
1207 Bag off/on complete. PPE check is Sat.
1347 Bagging off 1 daughter, bagging on 68837.
1419 Bag off/on complete. PPE check is Sat.
1455 Beginning inside rounds.
1505 Beginning outside rounds.
1516 Item #63 is OOS, okay to proceed per CSE documentation.
1527 Outside rounds complete. RCRA inspections complete.
1530 Inside rounds complete.
1546 Bagging off 1 daughter, bagging on 68743. PPE check is Sat.
1609 Both rounds reviewed by SOS.
1620 Bag off, bag on complete. PPE check is Sat.
1638 Initiating a drum movement from 50-69 to a transportainer.
Continued on next page - SColeman

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CRE and

28-14
0550 Assuming WCRR operation center - Coleman
0615 Beginning inside and outside rounds. Pre-job being conducted by SOS.
0633 Item #63 is OOS, Okay to proceed per CSE documentation.
0634 Pre-job concluded.
0636 Inside rounds complete.
0642 Outside rounds complete.
0656 Both rounds reviewed by SOS.
0715 Mode changed to operations in WCRRF yard and 50 to 9.
0735 ASSUMING OPERATION CENTER IN TRAINING UNDER TERR: COLMAN
0806 Permission granted to lower vehicle access gates to load transport vehicle for shipment to Area G
0833 Late entry at 0703, operators entered 50-69 to resume operations on drum 68743 AS
0914 Bagging off one daughter, bagging on 68753
0920 Vehicle access gates restored. Transportainers restored
0950 Bag on / off complete
1024 Permission granted to lower vehicle access gates to unload vehicle transport and begin receipt of drums from Area G
1133 Bagging off 1 daughter, bagging on another daughter.
1152 Bag off/on complete. APE check is Sat.
1350 Bagging off 1 daughter bagging on another daughter and bagging on parent 84323
1438 Vehicle access gates have been restored and transportainers are secure
1444 Late entry at 1418, bag off/on completed AS
1446 Late entry at 1440, began outside rounds AS
1456 Outside rounds are complete
507 Bagging off 1 daughter and bagging on drum ~~92067~~ AS 1-28-14 92070
1540 Bag on/off complete
1625 Bagging off/on 1 daughter and drum 84430
1640 Bag off/on complete
1641 Started movement out of 50/69 into transportainers
645 Started inside rounds at 1645
703 Item # 63 OOS OK to proceed pod in place
705 Inside rounds complete
727 Bagging on/off 1 daughter and bagging on drum 92067

Continued on next page

1-27-14 WCRR SOM

0650 Reviewed shift turnover checklist and logs and assumed the WCRR SOM position [illegible]

0630 Completed attending the pre-job brief conducted by the SOS (Clayton). The Safety Topic was not to take short cuts. One example was stretching across a ladder. There are no scheduled transfers scheduled today. RP-1 noted that during the weekend Station 2 small lead window is broken. Currently there are 2 lead windows broke. RP-1 requested operations to place a steel plate over the cracked glass. Shift Orders WCRR-SM-13-003 R2 - Manual Drum Movements, WCRR-SM-13-005 R0 Instructions to prevent bag Tears were reviewed and signed. Also new Shift order WCRR-SM-14-002 R0 - Filters was implemented and briefed.

0708 Completed the daily phone call with AREVA SOM updating PRD activities

0740 Mode change: 50/69 and 9/and transition from Admin/Admin to Operations/Operations.

0824 CSE will monitor HVR 001 heater to ensure it is functioning correctly. Also SOM and J. Virgil checked the ceiling heater in the truck bay and its not functioning - Notification was made to the OM and crafts.

0845 The CSE set the temperature setpoint to 68°F and confirmed the heater is functioning - notification was made to the operators to not change. Also, operations initiated denesting of 4 drums

0913 Inside operators 2 drums were re-sealed during de-nesting base upon contaminated one drum was noted with 100K - more info to follow - after de-nesting.

0923 Crafts arrive to scope work - Hi bay/truck bay ceiling heater.

0932 The crafts report, the ceiling heater is operational - noted contacts sticking

0945 Initiated posting #000 for ceiling heater, do not raise thermostat greater than 76°F. posted on wall by thermostat

1013 Operations completed de-nesting and proceeded with SP-72s - Total 4 -

1103 Current temperature inside 50/69 Rm102 is at 64°F setpoint is at 68°F

1110 Verified SP-31 drums to be delivered to WCRR tomorrow had satisfactory LEL specs.

1142 Inside Operator (PIC) reports bag off of daughter and Parent 985287L and bag on of additional daughter and Parent

1306 Inside operators report bag off/bag on completed. Parent 68748 was bagged on.

1226 Completed the noon phone call with PM/OM, SOM and others

1347 Bag off of 1 daughter and bag on Parent 68837

1419 Bag off and on Completed.

1545 Operators inside (PIC) report bagging off 1 daughter and bagging on Parent 68743

1620 Inside PIC reports bag on and bag off completed

1623 Discussed with procedure writer changes to three procedures

(Continued on next page)

1-27-14 WCRR SOM (continued)

cont. 1623 that involve critical lifts, and when filling out the attachments currently noted changes, can be implemented/worked.

1632 Completed extending shift orders WCRR-SH-13-003 R_2 - Instructions for Manual Drum Movements, and WCRR-SH-13-005 R_0: Provide instructions for manual drum Movements. Extended till 2-3-14 1830 hours.

1640 RLRA and Rounds reviewed and signed off appropriately, also outside operators initiate a movement out of 50/69 to the transportainers (6 drums total).

1722 Move to the transportainers were conducted successfully

1748 Inside operations initiate bagging off 1 daughter and bagging on another.

1756 Obtained approval (per request) to allow the Parent drum 68743 to be bagged on overnight. Approval granted from the OM. Operations will ensure - no free liquid present and kitty litter is added to the parent prior to placing the lid on the drum.

1802 Inside operators report the bag on and bag off was completed

1805 Operators report the WCG is in a safe configuration.

1811 Mode change: 50/69 and yard transition from Operations/Operations to WARM/WARM.

1820 Verified with inside PIC the temperature setpoint was reset to 77°F

1825 Secured the WCRR SOM position [signature]

No further entries this page
[signature]

1-28-14 WCRR-SOM

0554 Reviewed logbooks and assumed the WCRR SOM position John Gaudagnoli
0635 Completed attending the pre-job brief conducted by the SOS (Clayton)
Safety topic was knee injury reported from TA-54 during loading of a laundry bag.
Shift Orders were reviewed, There is one transfer in and one out. One
drum is currently bagged on SF-22 and is 50% empty. Procedure reviewed
was EP-WCRR-WO-DOP-1200 - Prep and closure of SWA. The RCT requested
operators to not remove filter cartridges from respirators - unless an RCT is
present. - (noted after usage of a respirator) Also respirator cartridges should be
handled - as though they are contaminated.
0708 Completed the daily phone call to Area G SOM statusing POD activities.
0715 Mode Change: 50/62 and 4and transition from Warm/Warm to Operations/Operations.
0722 WO#468400-03 - FY14 WCRR Repair Life Safety Equip. will be merged for FRI work.
0735 Inside temperature is noted at 64°F and the setpoint is at 77°F.
0800 Operators requested to move temperature setting to 66°F approval obtained.
0805 P&T arrives to inspect drums for the transfer out. SOM observes operators
and P&T wearing appropriate PPE. - Drums were being staged near transportainer
on asphalt and straps utilized appropriately.
1-28-14 0850 0806 P&T will scratch two drums from the transfer due to no EPA codes attached
to the HAZ label on the drum, and the TWSR requires reprinting. Production Inventory
is working resolution. These drums will be added to the next transfer out.
0820 The vehicle barrier gates were restored. The transfer out was completed, 16 total
0950 Inside PIC reports completion of bag off of 1 daughter and bag on another
and Bag on of Parent drum 68753 and initiate processing.
0958 P&T arrives at WCRR with drums from AREA G.
1019 Completed review of Operator Aid Logbook, verification of operator aids posted was
conducted with support from Operators. - All noted satisfactory. The monthly review
and quarterly review were signed off.
1024 Outside operators initiate lowering vehicle barrier to initiate receipt of drums.
1133 Inside operators initiate bag off of 1 daughter and bag on of another
1140 Discussed with Production Inventory - transfer issues with ratios and discussed
with WCATs (Charlotte) - WCATs will investigate and provide status.
1152 Inside Operators report bagging off one daughter and bagging on another.
1233 Completed noon ~~transfer~~ JGG 1-28-14 call in with OM, PM, SOM and others.
1350 Inside Operators initiate bag off of completed Parent and Bag on of
PARENT 84323 - SF-21 - The SOS and ES/PM briefed the operators on prior
history of the drum. Operators will proceed with caution - potential pyrophorics

(Continued on Next Page)

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

1/27/14

0600 Assuming SOS position. CA

0615 Starting Pre-Job, discussed not taking short cuts, to follow all procedures. Went over IWD's, new IWD about checking for filters when accepting shipments.

0640 Pre-Job complete.

0732 Signed off on the rounds.

0740 Mode change complete, WCRRF yard and 50-69 are now in Operations.

0845 Starting to denest 4 drums.

0913 Operators rejected 2 drums due to removable contamination levels above RWP limits.

1025 Denesting complete.

1141 Bagging off, bagging on 68748.

1207 Bag off/on complete.

1347 Bagging off, bagging on 68837

1419 Bag off/on complete.

1546 Bagging off, bagging on 68743.

1609 Signed off on the rounds.

1620 Bag off/on complete.

1638 Starting movement out of 50-69.

1722 Movement out complete.

1747 Bagging off 1st daughter, bagging on a 2nd.

1801 Bag off/on complete.

1803 Late entry @ 1756 permission from OM to leave drum bagged on overnight.

1811 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.

1820 Securing SOS position. CA

No Further Entries on this Page

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

1/28/14
0600 Assuming SOS position. CA
0615 Starting Pre-Job, discussed electrical cord safety also went over 3 shift orders and new procedure, EP-WCRR-WO-DOP-1100, R.0.
0635 Pre-Job complete.
0656 Signed off on the rounds.
0715 Mode change complete, WCRRF yard and SO-69 are now in Operations.
0806 Starting shipment out of WCRRF.
0914 Bagging off, bagging on 68753
0920 Shipment out complete.
0950 Bag off/on complete.
1024 Starting shipment into WCRRF.
1133 Bagging off 1st daughter, bagging on a 2nd.
1152 Bag off/on complete.
1350 Bagging off 2nd daughter, bagging on 84323.
1418 Bag off/on complete.
1438 Shipment in complete.
1507 Bagging off, bagging on ~~92067~~ 1-28-14 92070
1540 Bag on/off complete.
1-28-14 1600 Turning over SOS position to Jose Jerez. CA
1600 Assuming SOS position for the day. Jose Jerez
1625 Bagging off 1 daughter, Bagging on 84430
1640 Bag off, Bag on complete
1715 Signed off on ~~rd~~ Hello rounds.
1708 Bagging off Parent and 1 daughter, Bagging on 92067
1752 Bag off Bag on complete.
1759 Approval from OM received to leave Parent bagged on over night
1806 Starting movement of 4 Parents from Transportainer to SO-69.
1-28-14 ~~1815~~ Movement complete
1813 Mode change WCRR Yard and SO-69 are in WARM Stand By, Securing SOS position Jose Jerez

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-RTR2-14-0014
Examination Date:	2/3/2014
Waste Container ID:	69279
Video/Audio Recorded Media Number:	LA-RTR2-14-0014 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.: 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:	70 %

CCP Radiography Data Sheet

Waste Container ID: 69279

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	131.6
Soils (S):	
Total WMP Weight:	141.6

CCP Radiography Data Sheet

Waste Container ID: 69279

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		2/3/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69279	Count Sequence Number:	16946
Operator:	DCLTD231\Operator		
Assay Start:	2/4/2014 11:18:58 AM		
Description 1:	2LANDA1263		
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:	70.0 %
Density:	0.980 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:	16946	Batch Number:	2LANDA1263
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69279	Analysis Date:	2/4/2014

Net Weight	142000.0 g		
Pu mass	1.09E+002	+- 3.45E+001	g
TRU Alpha Activity	2.75E+001	+- 4.94E+000	Ci
TRU Activity Concentration	1.94E+005	+- 3.48E+004	nCi/g
Pu-239 Equivalent Activity	2.78E+001	+- 4.94E+000	Ci
Pu-239 FGE	1.02E+002	+- 3.44E+001	g
Decay heat	9.00E-001	+- 1.62E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	3.96E-010	4.47E-007	1.48E-007	3.33E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.13E-006
U233	<LLD	<LLD	0.00E+000	2.22E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.86E-006
NP237	3.01E-001	2.12E-004	4.78E-005	5.08E-006
PU238	9.90E-003	1.69E-001	6.20E-002	2.19E-003
U238	<LLD	<LLD	0.00E+000	4.99E-005
PU239	1.02E+002	6.32E+000	2.13E+000	8.18E-002
PU240	6.52E+000	1.48E+000	5.41E-001	1.92E-002
AM241	5.71E+000	1.96E+001	4.42E+000	2.72E-001
PU241	1.23E-001	1.27E+001	4.64E+000	1.64E-001
PU242	2.17E-002	8.59E-005	3.14E-005	0.00E+000
AM243	9.96E-003	1.99E-003	4.51E-004	1.55E-005

Errors quoted at 1.000 sigma

Operator: Martha Gu Date: 2.5.14

ITR: Ann Burton Date: 2/5/14

Automated Independent Technical Review

Count Sequence Number: 16946 Batch Number: 2LANDA1263
Counter ID: HENC #2
Container ID: 69279
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/4/2014

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
FGE is greater than the upper limit of 200.00	Neutron results suspect. Gamma results applied.
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Analysis Status: Override enabled; data marked not available but were used.	
Results taken from Quantitative Gamma data.	
Results comparison test passed.	

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 = 52.79%
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: Sheri Chamberlin Date: 2-5-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69279**

BDR Number: **LA14FG2018**

Sampling Date: **2/11/2014**

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\140211c\
Data File : 69279.D
Acq On : 11 Feb 2014 10:26 am (#1); 11-Feb-14, 10:25:54 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 11 14:34:09 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	3.565	96	3206171	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.868	117	2529583	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-RTR2-14-0014
Examination Date:	2/3/2014
Waste Container ID:	69295
Video/Audio Recorded Media Number:	LA-RTR2-14-0014 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.: 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 2 layers
Volume Utilization Percentage:	100 %

CCP Radiography Data Sheet

Waste Container ID: 69295

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	2.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	92.5
Soils (S):	
Total WMP Weight:	110.6

CCP Radiography Data Sheet

Waste Container ID: 69295

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		2/3/2014
Print Name	Signature	Date

5852931

NDA 2000 Assay Report

Item Information

Item ID:	69295	Count Sequence Number:	24258
Operator:	D3PW2DK1\operator		
Assay Start:	2/3/2014 2:38:36 PM		
Description 1:	1LANDA1904		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 111.0 kg	Net:	111.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.530 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 24258
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 69295

Batch Number: 1LANDA1904
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 2/3/2014

Net Weight	111000.0 g		
Pu mass	6.31E+000	+-	1.11E+000 g
TRU Alpha Activity	2.92E+000	+-	3.99E-001 Ci
TRU Activity Concentration	2.63E+004	+-	3.59E+003 nCi/g
Pu-239 Equivalent Activity	2.93E+000	+-	3.99E-001 Ci
Pu-239 FGE	5.96E+000	+-	1.11E+000 g
Decay heat	9.60E-002	+-	1.32E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	6.57E-009	9.06E-007	5.14E-007	0.00E+000
CS137	1.04E-008	9.06E-007	5.14E-007	4.73E-007
U233	<LLD	<LLD	0.00E+000	4.32E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.34E-006
NP237	6.25E-002	4.41E-005	6.95E-006	1.97E-006
PU238	5.75E-004	9.84E-003	2.24E-003	5.17E-004
U238	<LLD	<LLD	0.00E+000	1.13E-005
PU239	5.92E+000	3.67E-001	6.89E-002	1.93E-002
PU240	3.79E-001	8.59E-002	2.02E-002	4.51E-003
AM241	7.15E-001	2.45E+000	3.92E-001	4.91E-002
PU241	7.16E-003	7.37E-001	1.73E-001	3.87E-002
PU242	1.26E-003	4.99E-006	1.17E-006	0.00E+000
AM243	1.41E-003	2.82E-004	4.51E-005	6.24E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 2-4-14

ITR: _____ Date: 2-5-14

Automated Independent Technical Review

Count Sequence Number: 24258 Batch Number: 1LANDA1904
Counter ID: MCS HENC #1
Container ID: 69295
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/3/2014

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

Expert Review by: Sheri Chamberlin Date: 2-4-14

Waste Container ID: **69295**

BDR Number: **LA14FG2018**

Sampling Date: **2/11/2014**

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\140211c\
Data File : 69295.D
Acq On : 11 Feb 2014 11:11 am (#1); 11-Feb-14, 11:10:36 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 11 11:19:06 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	3.581	96	3162015	205.75 ppmv	0.06
15) Chlorobenzene-d5	5.878	117	2519287	177.50 ppmv	0.02

Target Compounds	Qvalue

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

22

L

S852952

Container 765699

File Options Reports Help

S852952

765699	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

S852952

- S852952
  - 92616
    - SB01971
  - W791561 - Empty
  - 92618

Task History

Transfer Details

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

Working Copy
Date: 1-17-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 3852952

6.2[4] Date Processed: 1-17-13

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

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

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

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

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

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

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

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

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

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

Performed By: Brian Gallegos / B. [signature] 7281129 1-17-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT I
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S852952

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 334.0 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 454.0 lb

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

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

N/A

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S892952

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92616			
10.1[4]	Daughter Drum Filter No.	AM-1028		A	
10.1[4]	Daughter Drum Bag Filter No.	WO-319	N		
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	BOB			
	Model No.	WCPIC1.5-25PV4			
	Serial No.	-6053			
	Date of Manufacture	6-12			
10.2[5]	POC ID No	92618			
10.2[7][B]/10.2[6]	POC Item Description	CERAMICS			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BG 267129			
10.2[14]	POC Assembly Gross Weight (lb)	351.4		A	
10.2[15]	POC Rad. Survey Results (mrem/hr)	110D			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A		N	
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD LINED GLOVES			
10.3[9][A]	PCB-contaminated Waste Description	N A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	BAG OUT STUBS			
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	SEE COMMENTS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5852952

Comments: ROOM TRASH, METAL CANS, CERAMICS, SALTS, PLASTIC, LEAD LINED GLOVES.

11.1[1] Performed By: BRIAN GALLEGOS / [signature] 1267129 / 17-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: [signature] 1499335 / 1213 0930
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.: 413724
- Lot No.: Z10114
- Manufacture Date: 2010

5.[8] Overpack filtered vent information:
- Manufacturer: Nucfil
- Model No.: 013
- Serial No.: 1L-66
- 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: James Sandal [signature] 1-16-13
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: 60 ft-lb

Comments: N/C

8.1[1] Performed By: James Sandal [signature] 1-16-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: [signature] [signature] 1-22-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-17-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92619

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 088367
Cal. Expiration Date: 3-14-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±4% ccw

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

Performed By: Brian Gallegos / B. Gallegos 267129 1-17-13
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): 1440 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / B. Gallegos 267129 1-17-13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: G. Martin / [illegible] 145255 1-22-13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 926016

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 #: ~~Schutt~~ 501011
Lot #: 23370
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 #: LCPVC 13-25PVC
Serial #: WO-519
Date of Manufacture: 1-11

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 cardbag/d/plastic liner into drum liner bag/filter assembly
- [x] Line up liner with drum seam
- [x] Place liner/bag/filter assembly into drum
- [ ] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [ ] 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: Ann Arbor
Model #: 014-04
Serial #: Am-1023
Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	011654	M&TE ID #:	038369
Cal Expiration Date:	4-20-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	30-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% or ±2%	Tolerance:	±3% or ±6%

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

[x] Yes [ ] No

Print Name: Michael Ramos Signature: [signature] ZI#: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wight (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, ~8" 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 Ramos Operator Sign: [signature] ZI#: 182723 Date: 1-16-13

Verifier Print: Brian Gallegos Verifier Sign: [signature] ZI#: 267129 Date: 1-17-13

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

DRUM ID#: 92-096

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038367

Cal expiration date: 3-14-13

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): 331.2

Scale ID#: 039005

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

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

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

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S852952 Container Type: 55-GAL Gross Weight (lbs): 286
Liner Seal #: 020029 Filter Prefix: LAVC Filter Serial #: 01522
RCRA Waste Stream: LA-MHD01.001 Certified RTR BDR: LA-RTR2-12-0085
TWSR Comments: LEACHED SOLIDS MST 13 SEAL 12925
Total PE-Ci Activity: 1.70E+01 Equivalent Combustible PE-Ci: 6.39E+00 AM-241 PE-Ci: 1.38E+00
Total Fissile Gram Equivalents: 188.3 Total Surface Dose Rate (mrem/hr): 25
EPA Code(s): D008
NCR RTR/NDA Comment: LANL: remediate -Prohibited Item
RTR Pre-Screen Date: 3/22/2007 Comment: Sealed Ctr > 4L
Certified RTR Comment: >50% heterogeneous, Sealed containers >4L 30 GAL Drum and Paint Cans

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: _____

Performed By: Julie Gallegos / [signature] / 176905 / 8-31-12
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: Leached Solids + Debris
Net Wt: 226 lb, Generator info is incomplete and does not identify individual items; waste description is leached solids. RTR BDR shows sealed 30-gal drum, metal cans w/ material, scrap metal, broken glass, plastic bags + homogenous solids. It also identifies >4 Liter sealed container(s) and inconsistant waste stream description. No chemicals identified; drum carries waste code for lead (D008) Note elevated FGE's

May require RWP for > 1000 + < 10000 mrem/hr
Performed By: Valerie Rhodes / Valerie Rhodes / 176609 / 10/17/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use Heavyweight gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Remediate Prohibited items. Possible sealed Containers
Performed By: Jose Jerez / [signature] / 177452 / 1-10-13
TRU Remediation Operations (Print) Signature Z Number Date

IHS Review. Johnny Anderson CSP, Contains lead.
10/25/12

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-12-0085
Examination Date:	07/27/12
Waste Container ID:	S852952
Video/Audio Recorded Media Number:	LA-RTR2-12-0085 A
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-LANL-1362-12 NCR No.: NCR-LANL-1364-12

Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt: 148.0 kg. Tare Wt: 29.7 kg. Net Wt: 118.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	No Liner
Number of Layers of Confinement:	Appears to be 4 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: S852952

Section 3: Container Inventory and Comments (Detailed descriptions)
Sealed 30 GAL drum, metal cans with material, scrap metal
Broken glass
Plastic bags
Homogeneous solids

Section 4: Packaging Material and Waste Material Parameters		
Packaging Material:		Estimated Weight (kg)
Steel (ST):		27.7
Plastics (PP):	Plastic Liner Bag	2.0
Others:		0.0
Total Packaging Weight:		29.7
Waste Material Parameter:		Estimated Weight (kg)
Iron-based Metal / Alloys (IM):		30.0
Aluminum-based Metals / Alloys (AM):		
Other Metals (OM):		
Other Inorganic Materials (OI):		4.3
Cellulosics (C):		
Rubber (R):		
Plastics (waste materials) (XPM):		6.0
Organic Matrix (OR):		
Inorganic Matrix (IN):		78.0
Soils (S):		
Total WMP Weight:		118.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: S852952

Section C: 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-1364-12, NCR-LANL-1362-12 Container(s) currently assigned to Waste Stream LA-CIN01.001. Waste appears to be greater than 50% heterogeneous; therefore, the waste does not match the waste stream description or the waste matrix code.
Per CCP-SO-LANL-55 - Inconsistencies associated with these packing configurations (Layers of Confinement) will not disqualify container from meeting the waste stream description.

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	07/27/12
Print Name	Signature	Date

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: Jan. 8 2013

Container No. (5.[1])	S852952					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55gal					
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])	50.85 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A 1.9.13

5.[7] Certified CCP Technician:

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

Reviewed By: Nathan Wales / 2388606
CCP (Print) Z #

Comments: n/a

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

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

6.1[3] Performed By: Julie Gallegos Julie Gallegos 176905 1·9·13
Waste Handling Operator (print) Signature Z # Date

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130108c\
Data File : S852952.D
Acq On : 8 Jan 2013 9:07 am (#1); 8 Jan 2013 9:06 am (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL DRUM THROUGH FILTER-072 UNOBSTR. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 08 09:18:12 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Oct 04 08:07:46 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.937	GC1	14362m	50.85	ppmv	

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

H2-CH4.M Tue Jan 08 09:18:17 2013 UNIT12

1-17-13

0600 Assuming WCRRF Operations Center - CVelarde
0615 Starting Pre job briefing with SOS
0630 Pre job briefing concluded.
0640 Starting outside rounds
0700 Starting inside rounds.
0711 Completed outside rounds
0719 Item #61 is OOS, POD in place, OK to continue.
0725 performing shift turnover with OCO tech Coleman Velarde
0726 Assuming WCRR operations center. JColeman
Inside rounds complete.
0735 Both rounds reviewed by SOS.
0736 Initiating a drum movement from transportainer to transfer vehicle for a shipment to Area G, transfer #2491. Permission granted to lower vehicle access gate
0755 Mode change completed. We are now in operations in WCRRF yard and 50 to 9.
0816 Bagging on S855293.
0826 Vehicle access gates restored. Transfer vehicle loaded. Transportainers secured.
0830 Bag on complete. PPE Check is Sat.
0938 Bagging off S 855293 and 1 PCC, bagging on S823178. PPE check Sat.
0959 Bag on complete. PPE Check Sat.
1049 Bagging off S823178, bagging on S813657. PPE check is Sat.
1118 Bag on complete. PPE check Sat.
1130 Initiating a drum movement from 50 to 9 to a transportainer.
1144 Drum movement out of 50 to 9 complete.
1204 ~~Being~~ JC 1-17-13 Shift turnover brief with OCO Clarissa Velarde - JColeman
1205 Assuming WCRR Operations Center - CVelarde
1208 bagging off S813657, bagging on S852952
1233 bag on, bag off complete.
1424 Permission granted to lower vehicle access gates
- Continued from 1-17-13 on next page - CVel

0600 Assumed WCRR SOM position. [illegible]
0615 Attended prejob brief conducted by SOS. Discussed Eyewash requirements in the yard while moving drums.
0700 Performed daily call in to TA-54 SOM DOD meeting - Statused WCRR activities, verified DUS activities scheduled - RP-1 personnel again will assist in HERTR decon activities.
0755 Mode Change Completed: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations
0816 Bagging on 1st drum.
0930 Verified that all CSE's having systems worked tomorrow for maintenance will be available to close out work packages before COB tomorrow. FSS system flow test is emerged to work tomorrow @ 1000
1053 Received IPC change to EP-WCRR-WO-DOP-1101 WCRRF WCG Maintenance Procedure. To be briefed tomorrow prior to WCG HEPA Filter replacement.
1225 (Late Entry) 1030 Attended Bi Weekly team meeting conducted by PM.
1400 Met w/ OM and QA representative regarding ISI, SR, TSR requirements at WCRR which have software interfaces. R. Trujillo provided spreadsheet w/ complete TSR related set for WCRR which OM + SOM provided input. Forwarded to CSE's for Ventillation sys and FSS requirements.
1405 (Late Entry 1300) Had Inventory Control personnel B. Fordham and J. Coleman attend WCAT preview meeting.
1430 Fire Safety Engineer on site to perform Quarterly ISI 4.4.1
1400 Notified by SOS that LLW containers are needed to package LLW generated from operations. All containers in storage yard are full. Left message w/ NNSS Waste Package Certifier (WPC) to schedule next week support. Left message w/ container procurement to have boxes delivered next week.
1630 Made contact w/ WPC and he will place order for 4 B-45's (ST-45's or half boxes) and contact WPC. Reviewed LLW Draft procedure w/ SSW. Will need changes
1730 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.
1810 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Warm / Cold.
1816 Reviewed and approved Quarterly Combustible Loading Surveillance (SR 4.4.1) - Bldg 50-69 is @ 0.56 lbs/ft².
1830 Secured SOM position. [illegible]

1/17/13

No further entries this page

SIGNATURE [illegible] DATE 1/17 20 13
READ AND UNDERSTOOD DATE 20

1.17.13 WCRR SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0610 Conducting Shift brief Discussed Proper PPE for shift

0630 Shift brief concluded

0735 Reviewed Inside and outside Rounds

0755 Mode Change Complete WCRRF In Operations

0816 Bagging on 5855293

0830 PPE Check

0938 Bagging off and bagging on 5823178 PPE SH

1049 Bagging off and bagging on 5813657 PPE SHT

1208 bagging off and bagging on 5852952

1437 PPE Check 5816409

1517 bagging on and bagging off 5852952

1548 PPE Check SHT

1603 PPE Check SHT

1701 bagging off last drum of day

1730 Mode Change Complete WCRRF In warm Moving out Inventory From 50-69 to 60 Cold Maintenance going on 1-18-13.

1810 Mode Change Complete WCRRF Yard In warm 50-69 In Cold

1713/1830 end of shift securing SOS Position on [illegible]

No further entries on this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0041
Examination Date:	3/9/2013
Waste Container ID:	92616
Video/Audio Recorded Media Number:	LA-RTR2-13-0041 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 150.5 kg Tare Wt.: 33.4 kg Net Wt.: 117.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 3 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92616

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: 30 gal drum (Open), metal lids, metal cans with material, drum lid, scrap metal

AM:

OM:

OI: Broken glass

C:

R: Rubber gloves, leaded rubber gloves

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	34.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	14.1
Cellulosics (C):	
Rubber (R):	10.3
Plastics (waste materials) (XPM):	6.2
Organic Matrix (OR):	
Inorganic Matrix (IN):	52.2
Soils (S):	
Total WMP Weight:	117.1

CCP Radiography Data Sheet

Waste Container ID: 92616

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:

Michael Simmons		3/9/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92616	Count Sequence Number:	22304
Operator:	D3PW2DK1\operator		
Assay Start:	3/18/2013 1:12:30 PM		
Description 1:	1LANDA1733		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 117.0 kg	Net:	117.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.630 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 22304
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92616

Batch Number: 1LANDA1733
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 3/18/2013

Net Weight	117000.0 g		
Pu mass	1.71E+002	+-	2.33E+001 g
TRU Alpha Activity	1.55E+001	+-	1.46E+000 Ci
TRU Activity Concentration	1.32E+005	+-	1.25E+004 nCi/g
Pu-239 Equivalent Activity	1.58E+001	+-	1.46E+000 Ci
Pu-239 FGE	1.61E+002	+-	2.19E+001 g
Decay heat	4.88E-001	+-	4.54E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.99E-002	2.13E-005	3.84E-006	3.79E-006
PU238	2.13E-002	3.69E-001	5.02E-002	4.52E-005
PU239	1.61E+002	1.01E+001	1.37E+000	1.24E-003
PU240	1.05E+001	2.41E+000	3.27E-001	2.95E-004
AM241	7.51E-001	2.61E+000	3.55E-001	3.19E-004
PU241	1.50E-001	1.56E+001	2.13E+000	1.92E-003
PU242	5.07E-002	2.01E-004	2.74E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.14E-007
U233	<LLD	<LLD	0.00E+000	7.81E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.28E-006
U238	<LLD	<LLD	0.00E+000	1.24E-005

Errors quoted at 1.000 sigma

Operator: Marla Gr Date: 3·19·13

ITR: Date: 3-19-13

Automated Independent Technical Review

Count Sequence Number: 22304 Batch Number: 1LANDA1733
Counter ID: MCS HENC #1
Container ID: 92616
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 3/18/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	Ok
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Passive Neutron Pu and Gamma U data specified as input.	Passive Neutron Pu and Gamma U data specified as input.
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	Ok
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Pu239 FGE >200g with 2*TMU but <325g.

Expert Review by: Sheri Chamberlain Date: 3-19-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92616**

BDR Number: **LA13FG2029**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	111.71	
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\130322c\
Data File : 92616.D
Acq On : 22 Mar 2013 2:14 pm (#1); 22-Mar-13, 14:13:29 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 22 14:21:50 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.578	96	3584869	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.910	117	3122165	177.00	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.610	GC1	794	111.71	ppmv	100

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

CCP Radiography Data Sheet

5852952

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92618
Video/Audio Recorded Media Number:	LA-RTR2-13-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 152.0 kg Tare Wt.: 145.1 kg Net Wt.: 6.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	35 %

CCP Radiography Data Sheet

Waste Container ID: 92618

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal can with material

AM:

OM:

OI: Broken glass

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); Fiberboard Liner Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.8
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	2.3
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	3.8
Soils (S):	
Total WMP Weight:	6.9

CCP Radiography Data Sheet

Waste Container ID: 92618

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. 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		3/8/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92618	Count Sequence Number:	15243
Operator:	DCLTD231\Operator		
Assay Start:	3/11/2013 1:09:35 PM		
Description 1:	2LANDA1115		
Description 2:	POC - GROSS WT = 152.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 6.9 kg	Net:	6.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.629 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:	15243	Batch Number:	2LANDA1115
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92618	Analysis Date:	3/11/2013

Net Weight	6900.0 g		
Pu mass	9.96E+000	+-	4.18E+000 g
TRU Alpha Activity	5.80E+000	+-	2.74E+000 Ci
TRU Activity Concentration	8.41E+005	+-	3.97E+005 nCi/g
Pu-239 Equivalent Activity	5.82E+000	+-	2.74E+000 Ci
Pu-239 FGE	9.42E+000	+-	4.17E+000 g
Decay heat	1.92E-001	+-	9.15E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.19E-007
U233	<LLD	<LLD	0.00E+000	4.93E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.60E-006
NP237	6.21E-002	4.43E-005	7.69E-006	1.28E-006
PU238	9.15E-004	1.58E-002	7.41E-003	4.88E-004
U238	<LLD	<LLD	0.00E+000	1.32E-005
PU239	9.35E+000	5.88E-001	2.62E-001	1.81E-002
PU240	5.98E-001	1.37E-001	6.43E-002	4.24E-003
AM241	1.46E+000	5.06E+000	2.73E+000	4.18E-002
PU241	1.18E-002	1.23E+000	5.74E-001	3.78E-002
PU242	1.99E-003	7.92E-006	3.71E-006	0.00E+000
AM243	1.10E-004	2.23E-005	4.26E-006	6.61E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-15-13

ITR: _____ Date: 3-18-13

Automated Independent Technical Review

Count Sequence Number: 15243 Batch Number: 2LANDA1115
Counter ID: HENC #2
Container ID: 92618
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 3/11/2013

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

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

Expert Review by: Sherri Chamberlin Date: 3-12-13

5852952

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92618**

BDR Number: **LA13FG2044**

Sampling Date: **4/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130425c\
Data File : 92618.D
Acq On : 25 Apr 2013 3:42 pm (#1); 25-Apr-13, 15:41:28 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 25 15:49:58 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.535	96	4249047	201.25 ppmv	-0.03
15) Chlorobenzene-d5	5.868	117	3630226	177.00 ppmv	-0.03

Target Compounds	Qvalue

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

S853006

Container 753755

File Options Reports Help

S853006

753755	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

S853006

- S853006
  - W798276
  - LA00000068817 – Empty
    - LA00000069170 – EMPTY
    - LA00000069182 – WCS
      - LASB50037
    - LA00000069105 – LANL
      - LASB50045
    - LA00000069181 – LANL
      - LASB50033
    - LA00000069177 – LANL
      - LASB50039

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	LA00000069177	0.0	kg

Working Copy
Date: 1-8-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68817

6.2[4] Date Processed: 1-8-14

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

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

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

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

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

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

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

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

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

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

Performed By: Adam Segovia / [signature] Z2670211-8-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68817

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 436 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) 519.0 lb

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

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

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

[illegible] / [illegible] / 1[illegible] 1-9-14
EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68817

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69177		69181	69182
10.1[4]	Daughter Drum Filter No.	NW 679	N/A	AN-658	AN-669
10.1[4]	Daughter Drum Bag Filter No.	L-10146		L-10073	L-10071
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		BOP		
	Model No.		6CPVC1.5-25PVC		
	Serial No.		L-10114		
	Date of Manufacture		5-13		
10.2[5]	POC ID No		69105	N/A	N/A
10.2[7][B]/10.2[6]	POC Item Description	N/A	Nitrate SALTS Kittylitter	N/A	N/A
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		CS 376702		
10.2[14]	POC Assembly Gross Weight (lb)		425.4		
10.2[15]	POC Rad. Survey Results (mrem/hr)		1,000 mrem		
10.3[3][A]	Approx. Containerized Liquid Vol./Units		N/A		
10.3[5][A]	Free Liquid Volume/Units	4 GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	degraded lead shielding		N/A	
10.3[9][A]	PCB-contaminated Waste Description			N/A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments		SEE COMMENTS	SEE COMMENTS
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	90%	N/A	60%	60%
10.5[3]/10.6[2]	Description Waste Added During Processing	kitty litter		KITTY LITTER	KITTY LITTER

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68817

Comments: Nitrate salts, plastic student bags, kitty litter, degraded lead,

11.1[1] Performed By: Adam Segovia, Adam Segovia, 276702, 1-8-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, CA, 240092, 1/9/13 1443
SOS or designee (print) Signature Z # Date/Time

69170

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 1/5/14 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATASHEET

5.[3] Overpack drum information:

Purchase Order No.: 501893
Lot No.: 02 44438
Manufacture Date: 2013

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: HL-844
Manufacture Date: 08/11

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

5. [11] Performed By: Randy Roybal, [signature] 1187034 ~~01/05/14~~ EP. 01/05/14 01/05/14
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Randy Roybal, [signature] 1187034 01/05/14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins, [signature] 1240096 1/9/14
Supervisor or designee (print) Signature Z # Date

Date: 1-9-14

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69170

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: MICHAEL MONTOYA / [signature] 191352 / 1/09/14
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): 233.6 lb

Comments: LEAD WAS LEFT INSIDE.MM

8.1[1] Performed By: MICHAEL MONTOYA / [signature] 191352 / 1/09/14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] [illegible] / 1/9/14
Supervisor or designee (print) Signature Z # Date

UET Working Copy

Date: 1-11-14 a2

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69177

5.[3] Drum information:
Purchase Order No.: 501852
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPXL 1.5-2 SPUC
Serial No.: L-10146
Manufacture Date: 5/13

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

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

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] (Signature) Z# 1/6/14 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 019DS
Serial No.: AN-679
Manufacture Date: 1/13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69177

Comments: N/C

5.[35] Performed By: Brian Cardova [signature] 287544 2/6/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mellins [signature] 240092 1/9/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69177

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

Performed By: Adam Segovia / [signature] 276702 / 8-14
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 (+/-):		

N/A

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

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

6.[17][C] 2 in. bung plug torque value: 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.: 69177

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 297.0 lbs

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

Comments: N/C

6.[32] Performed By: ADAM SEGOVIA (Operator (print)) | Signature | Z # 276702 | Date 1-8-14

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) | Signature | Z # 240082 | Date 1/9/14

UET Working Copy
Date: 1-6-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69181

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.: 6cpvc1.52Spvc
Serial No.: L-10073
Manufacture Date: 5-13

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

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

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

Performed By: Brandon Chaver / [signature] 804742 1-6-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 01PD5
Serial No.: AN-658
Manufacture Date: 1-13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69181

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 204742 / 1-6-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 124009W 1/9/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69181

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

M&TE No.: 038370
Cal. Expiration Date: ~~10-[illegible] 1-8-14~~ 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 SEGOVIA / [signature] / 2767021 / 1-8-14
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.: 69181

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 213.4 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: MICHAEL MONTOYA [signature] 191352 1/8/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton McNeil [signature] 1240096 1/9/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 1-6-14

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69182

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: 130P
Model No.: 6cprc1.52Sprc
Serial No.: L-10071
Manufacture Date: 5-13

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

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

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

Performed By: Brandon Chavez / [signature] Z04742 / 1-6-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN-669
Manufacture Date: 1-13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69182

Comments: N/C

5.[35] Performed By: Brandon Chaver / [signature] 2047421 1-6-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 2400092 1/9/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69182

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

M&TE No.: 038370
Cal. Expiration Date: 8/02/14
Range: 16-80 ft-lb
Tolerance (+/-): ±30/0 cw ± 60/0 ccw

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

Performed By: MICHAEL MONTOYA / [signature] / 191352 / 1/09/14
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.:	101310	038370
Cal. Expiration Date:	11/12/14	08/02/14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	±40/0cw ± 60/0ccw	±30/0cw ± 60/0ccw

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 MONTOYA / [signature] / 191352 / 1/09/14.
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.: 69182

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 251.8 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] / 191352 / 1/09/14
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 240092 / 1/9/14
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 3
Page 1 of 1

Working Copy
1/8/14

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68817

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): 436.4

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

Comments: N/C

8.1[1] Performed By: ADAM SEGOVIA [signature] 2767021 1-8-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins [signature] 240092 1/9/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Jose Jerez [signature] 1221452 1/9/14 1800 1-9-14
SOS/SOM or designee (print) Signature Z # Date Time

Salvage Drum Header

WDP TRU Waste Container Management Operations

UET

Document No: EP-DIV-AP-0107 Rev 2.1.11
Attachment: 1
Revision: 1
Effective Date: 12/22/2009 SP

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control Container re-labeled & given new id on WCATS. B Amipilla 12/2/13

Container ID: S853006 / 68817 Container Type: 85-GAL Gross Weight (lbs): [redacted]

Inner Seal #: 019397 Filter Prefix: LAVC Filter Serial #: 01454; 02464

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

TWSR Comments: [redacted]DS MST 12 #12724

Total PE-Ci Activity: 8.42E+00 Equivalent Combustible PE-Ci: 3.20E+00 AM-241 PE-Ci: No data

Total Fissile Gram Equivalents: 93.0 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 2/13/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured, Liquid Location: BTTM

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☑ VE RW 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 / R. W. Jones / 117434 / 11-6-12
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: RTR indicates liquids, impenetrable solid, liner not punctured, liquid location: bottom. Waste disposal record indicates 12 items of leached nitrate salts. Heaviest is 17 kg (37 lbs). Total net weight of 12 items is 143 kg (315 lbs). May have residual solvents on salts. Elevated radiation levels may require RWP for > 1,000 mrem/hr @ 30 cm.

Performed By: Michael Garcia / Michael Garcia / 079143 / 7/12/10
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns: Use Proper PPE and Kitty Litter Ratio

Gilbert Martinez / Gilbert Martinez / 149235 / 12/6/13

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Do not push or press on waste with hands. Use heavy duty gloves during processing.

Performed By: Clarissa Velarde / Clarissa Velarde / 1234079 / 7/15/10
TRU Remediation Operations (Print) Signature Z Number Date

Jose Jerez / Jose Jerez / 221452 / 12/6/13

HHS Review Johnny Amaldonado CSP, may contain Cr, Pb, Hg 11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 019397

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	LR279NE1		10.230	NITRATE SALTS		6.63	52	6/14	G468	
2	LR294NW1		17.230	NITRATE SALTS		5.6	52	6/14	G468	
3	LR294NE1		15.930	NITRATE SALTS		4.22	52	6/14	G468	
4	LR293NW1		7.320	NITRATE SALTS		25.37	52	6/14	G468	
5	LR295NE1		8.080	NITRATE SALTS		2.08	52	6/14	G468	
6	DSL296NW1		14.200	NITRATE SALTS		3.95	52	6/14	G468	
7	DSL296NE1		11.800	NITRATE SALTS		1.95	6.	6/14	G468	
8	DSL296NW2		6.160	NITRATE SALTS		12.61	52	6/14	G468	
9	DSL296NE1R		15.780	NITRATE SALTS		6.92	52	6/14	G468	
10	OX178298NE		15.940	NITRATE SALTS		9.61	52	6/14	G468	
11	OX178298NW		10.520	NITRATE SALTS		13.13	52	6/14	G468	
12	OX178299NE		9.700	NITRATE SALTS		6.7	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 212.

Material Type	SNM (grams)	Items Net Wt (kg)
52	96.82	131.09
6.	1.95	11.80
Totals	98.77	142.89

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 8·3·10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Sara Aragon	Sara Aragon	123797518	8-4-10
	/	/	/

Container No. (7.[1]):	S863063	S893128	S853006
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	2.50		
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene	39.08		
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene	7.66		
o-Xylene			
Acetone	189.50		
1-Butanol			
Methanol			73.63
Methyl ethyl ketone	33.02		
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	271.76	Ø	73.63

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S863063	S893128	S853006
Hydrogen Reading (ppm) (7.[10]):	373.07 ppm	Ø ppm	1349.11 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	271.76 ppm	Ø ppm	73.63 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 sampled from inside 85 gallon overpack.

11.1[1] Performed By: Alicia Herrera / [signature] 198450 8-4-10
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: Michael Vigil for Ken Romero / [signature] 215267 / 8/4/10
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

8/4/10

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\100803c\
Data File : S853006.D
Acq On : 3 Aug 2010 4:37 pm (#1); 03-Aug-10, 16:37:04 (#2)
Operator : GR
Sample :
Misc : 55 GAL DRUM FROM INSIDE 85 GAL OVERPACK. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 03 16:55:22 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Jul 28 09:15:27 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.701	96	5615612	209.25	ppmv	0.04
15) Chlorobenzene-d5	6.027	117	4827885	181.25	ppmv	0.04
Target Compounds						Qvalue
1) Hydrogen	1.660	GC1	9811	1349.11	ppmv	100
4) Methanol	0.836	31	46539	73.63	ppmv	100

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

vocgas.m Tue Aug 03 16:55:58 2010

1-8-14 Continued from previous page
1207 Bagging off, bagging on 68817.
1230 Bag off/on complete.
1336 SOM notifies that HAZMAT has been called to clean up diesel fuel.
1414 Per OM, since the spill is known, we do not have to enter the BEP.
1415 Permission granted to start ~~offla~~ CM 1-8-14 off loading shipment, will stage drums in the yard until IC person has returned from training.
1416 Vehicle access gate has been removed for accepting shipment.
1511 Notified by lead inside that they have a POC.
1530 The support from EMR/HAZMAT team, with micro blaze, completed effort, with WMC and laborers/crafts.
1606 Portable light station, that was leaking, has been replaced.
1620 Starting outside rounds.
1622 Bagging off 1st daughter and 1 POC, bagging on a 2nd daughter.
1642 Completed outside rounds.
1651 Bag off/on complete.
1750 Bagging off 2nd daughter, bagging on a ~~3rd~~ CM 1-8-14 2nd POC.
1752 Late entry @ 1730 permission granted from OM to leave 68817 on over night. CMullin
1805 Starting inside rounds.
1810 Bag off/on complete, WCG is ~~the~~ CT 1-8-14 in a safe configuration.
1814 Item 63 is OOS, ok to proceed per CSE.
1815 Current temperature inside 50-69 is 67°F, temp gauge will be left at 77°F overnight.
1817 Completed inside rounds.
1818 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.
1-8-14 1820 Securing Ops Center. CT

No Further Entries on this Page

9-14
0550 Assuming WCRR operation center - JCOleman
0605 Beginning outside rounds
0606 Late entry - At 0600, air quality personnel arrived to perform weekly stack monitoring. (JC)
0607 Air quality completed weekly stack monitoring.
0615 Pre-job being conducted by SOS.
0620 Beginning inside rounds.
0632 Outside rounds complete.
0633 Item #63 is OOS, okay to proceed per CSE documentation.
0637 Inside rounds complete.
0654 Both rounds reviewed by SOS.
0700 Mode change complete. We are now in operations in WCRRF yard and 5069.
0742 Permission granted to stage the drums being shipped to Area G.
0744 Permission granted to lower the vehicle access gates.
0802 Late entry - At 0704 operators entered 5069 to resume operations on drum #68817. (JC)
0844 Electricians arrived to change out a ballast in the RCT's room, WO# 00483120-01.
0900 Vehicle access gates restored. Shipment out of WCRRF to Area G complete.
0940 Bagging off 1 daughter, bagging on S841239.
1010 Bag off/on complete.
1017 Initiating a drum movement from transportainer to 5069.
1018 Notified that the urinal upstairs in 5054 is overflowing. Maintenance was performed on it earlier this morning.
1020 Contacted maintenance manager (Louis Smith). Also contacted custodial to perform mopping.
1030 Drum movement into 5069 complete.
1128 Bagging off 1 daughter, bagging on another daughter.
1143 Bag off/on complete.
1234 Operators out for lunch, second team entering 5069 to continue processing drum # S841239.
1325 Tour of 5069 beginning. Group being briefed to the RWP.
1337 Tour group entering 5069.
Continued on next page - JCOleman

1-8-14 WCRR SOM

0558 Reviewed Shift Turnover checklist and assumed the WCRR SOM position [illegible]

0630 Completed attending the pre-job brief conducted by the SOS (Jose) The safety topic discussed was the use of cell phones and distractions. Currently in the facility there are 4 drums in the facility to process. 1-drum SP 1 and 3 SP-4 that require de-nesting. The turnover noted station 2 - Right hand requires changing. Others will be inspected. Shift Orders in effect were discussed and signed off. Also 3 LLW drums are to be moved out of the facility to the LLW staging area. The new DRUM LIFT is to be delivered and stored in Level B storage.

0710 Completed the daily phone call to Update Area G SOM with POD activities

0740 Inside Operators report upon completion of glove inspection, that station 3 left hand, Station 2 Right hand and station 4 Right hand require changing.

0828 Operators initiate glove changes.

0859 Rounds were reviewed by SOM, Noted - Inside rounds completed at 0804, inside temperature taken at 0769 per rounds was 65°F. Also crafts arrive with NEW drum lift ES/FM-505 (J.J) and Jack are present to observe transfer to ML 2 storage.

0924 Inside operator reports glove changes completed.

0930 The NEW drum lift was observed safely transfered from the flatbed to the ML-2 storage AREA.

0931 Mode Change: SO/GS and YARD transition from Warm/Warm to Operations/Operations

0935 The transfer to WCRRF from AREA G was merged via - Jack.

1007 Operations initiate denesting and upon completion will bag on Parent 68831 SP 1

1055 Operations initiate unloading / opening gate to allow RCTs to smear transfer vehicle and initiate transfer into WCRRF.

1100 GS/IH reports staining of diesel fuel under the portable Unit by the transfer gate. Notification is made to WMC and OM to obtain change out of Oildry by laborers and WMC to provide a container.

1103 Reviewed and approved 00483120-014 / 50-84 Relamp work package

1104 Inside Operations complete de-nesting 3 drums and bagged on Parent 68839.

1123 EWMD point of contact notified on diesel stain (noted on asphalt). Laborer Supervisor was called for support, and will have laborers come up after lunch

1207 Operations report initiating bag off of Parent 68839 and daughter, and bagging on another Parent.

1230 Bag off is noted complete, and Parent 68817 is bagged on, continue to process

(Continued on Next page)

1-8-14 WCRR SOM (cont.)

1238 Completed daily phone call with SOM, PM, and others.

1250 Operations exit for lunch.

1336 Per OM discussed utilizing micro sorb and OM called HAZ MAT to see if they can provide to laborers during cleanup. HAZ Mat an EMR said they will support.

1349 EMR arrives to assess stain with EWMO. EMR will notify HAZ MAT on supplies required.

1414 Per discussion with OM, the noted stain had been there for a while and was known, therefore the DET was not required to be entered, or other procedures.

1415 Operations initiate movement of drums from the transfer vehicle.

1530 The support from EMR/ HAZ MAT team with micro blaze completed. effort with WAC (RP) and Laborers/Crafts.

1606 The portable light station located on the South Side of SC-B4 was switched out.

1622 Inside operations report initiating bag off of 1 POC and 1 daughter and bagging on another daughter and continue to process.

1652 Inside operations report bag off and bag on complete, continue processing. Also discussed with the SOS on moving in drums from the transfer to support Reducing the time required to thaw. Currently only 1 position is available on the secondary containment pallet. He indicate he would like to move potential 4 in, by tomorrow AM.

1730 Per discussion with the SOS, the remaining items in Parent drum 68817 are noted to be POCs - currently a daughter drum is bagged on. Per telecon with the OM, the SOM requested approval to leave the parent drum bagged on, only after placing POC items back into the Parent drum, securing the lid and bagging off of current daughter drum. The OM approved leaving Parent bagged on only after the WCG is in a safe configuration and daughter is bagged off and POC on.

1751 Inside operations initiate bagging off 1 daughter and bagging on a POC.

1805 Inside operations report bag on completed, and WCG

1815 Verified inside temperature is currently at 67°F - operations set - setpoint at 77°F

1818 Mode Change: 56/69 and final transition from Operations/Operations to WARM/WARM

1828 Secured the SOM position John Guadagni

No further entries this page

1-9-14 WCRRF SOM

0538 Reviewed logs and assumed the WCRR SOM position [illegible]

0638 Completed attending the pre-job brief conducted by the SOS (Clayton) The safety message was receptacle lid closure, and fork truck safety when manipulating hi loads, forktruck drivers can drive in a reverse condition. There is one transfer out. -18 containers total for AREA-G, The SOM requested RCRA inspectors to keep an eye on the portable generators. Shift orders in effect were reviewed, The ES/PM discussed initiatives

0646 Reviewed and approved Operator AIDS 50-09-015 R1 (PCM instructions) 50-09-013 R.1 (Iodium Model 214 instructions) 50-09-014 - R1 (HEPA instruction)

0653 Inside temperature of 50/69 is noted at 67°F

0700 Mode Change: 50/69 and yard transition from warm/warm to Operations/Operations

0703 Operators enter 50/69 to initiate processing.

0742 Outside operators begin staging drums/containers for the transfer Out.

0810 All staging is completed.

0835 Reviewed work package 483120-1/50-84 Spot Rekamp and approved to replace the ballast in the RCT office.

0858 The transfer out was completed. Observed all personnel with proper PPE

0910 Inside operators initiate bag off of 1 daughter, and bag on Parent 5841239 Operators utilized enough Kitty Litter to reduce the dose and not generate additional PCGs

1010 Bag off is complete and operations will continue to process.

1018 OCD notified the SOM, that 50-54 upstairs bathroom was overflowing maintenance and utilities were contacted for support.

1030 Drum movement into 50/69 completed,

1128 Inside Operations report Bagging off 1 daughter and bagging on another

1143 Bag off noted complete

1154 Completed walk thru of LLW staging area with RP-1, RP-1 management (G. Schram) and WMC - Discussion focused on securing a LLW - pathford and SWB

1158 Late Entry for 1135, completed walk thru with EWMO coordinator and he requested removal of 1x2 ft asphalt and repatch, an FSR is to be submitted.

1220 Completed daily Noon phone call for staffing WCRRF.

1234 Operations rotated 1st team out for lunch and the second team is in.

1301 Completed submittal of FSR 116240 to remove asphalt and repatch per EWMO digs

1400 Completed facility tour with OM and STRs - approximate departure is 1/2 hour

1413 Outside operations initiate movement of 4 drums out of facility to transportainer.

1429 Move out of the facility was completed

1508 Operations initiate de-nesting 4 drums

(Continued on Next Page)

11/8/14 PROJECT NAME WCRR 305 Log Book NOTEBOOK NO.

0600 Assuming 305 position for the day. You Jy
0615 Starting Pre-Job. Safety Topic discussed the use of cell phones, and not to use them when you are performing a task. If you need to take the call, stop what you are doing and answer the call or text. Will need to perform glove change on station 2 first thing. Cycle complete we will need to D-Nest Parent drums for processing. Re briefed everyone to shift orders in place and also BEP. Alarm test in Attic this afternoon.
0630 Pre-Job complete
0740 Operators completed inspection of other gloves. Station 2 Right Station 3 Left and Station 4 Right
0800 Reviewed and signed inside and outside Rounds. Operators finalizing Prepping of stations for gloves that need to be changed.
0808 Starting glove change
0925 Glove Changes complete.
0931 Mode Change complete WCRR yard and 50-69 are in operations
0940 Late Entry at 0900 We received the new drum lift and placed into MC-2 (JJ)
0945 Shipment of cardboard liners for the 55 gallon drums were received.
1010 Operators starting to D-Nest and will be bagging on Parent 68839 operators are also turning down the thermostat inside of facility.
1055 Operators starting to ~~unh~~ disconnect vehicle access gate to move drums inside of transport vehicle for RCT's to start their surveys.
1100 TH reporting that the light plant located on the south side by where the shipments come in and out at has a leak appearing to be oil.
1105 D-Nesting and Bag on complete. PPE check is SAT.
1205 Bagging off one daughter and bagging on 68817
1230 Bag on Bag off complete
1245 Operators breaking for lunch. Unable to work through lunch due to being shorthanded. 1 operator at physical, 3 other called in. Operator that has physical today to be back this afternoon.
1326 SOM notifying that they have called HAZWHT to clean the diesel spill that was identified by ES TH underneath the light plant.
1345 Operators returning from lunch to continue processing second parent.
1414 Per OM, since the spill is known, the BEP will not need to be entered.

Continued on Next Page

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

PROJECT NAME WCRR 505 Log Book NOTEBOOK NO.

1-8-14

1415 Operators are unloading the shipment so that the truck could be moved for movement of the transportainer. Drums being staged in the yard until inventory control arrives from training

1430 SOM notifying Ops Center that he has requested that the light plant get changed out due to it appearing to still be leaking.

1530 Support from EMR / HAZMAT team with Micro Blaze complete. WMC & laborers have completed

1600 Portable light station has been changed out.

1622 Bagging off one daughter and 1 POC, continuing to process parent. Waste material contained a lot of liquid needing to be absorbed & pH'd. A lot of high dose material that operators worked on to reduce amount of POC's being generated.

1700 Reviewed and signed outside rounds.

1730 Per tele con with CAWL OM permission granted to leave the parent bagged on overnight. Operators reporting that all the material they have pulled out will need to go into several POC's. Operators putting waste material back into the parent and will be bagging off another daughter and bagging as a POC to continue processing tomorrow.

1750 Bagging off 2nd daughter, bagged on a POC

1805 Bag off complete

1815 Temperature on thermostat has been set at 77 degrees. Current temperature inside of 50-69 ~~Set at~~ 11-3-14 is 67 degrees

1818 Mode change complete WCRR Yard and 50-69 are in WARM

1825 Reviewed and signed inside rounds

1830 Securing 505 position for the day.

No further entries on this page

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

75 1-9-14 ~~1-8-14~~ cm 1-9-14 PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

0600 Assuming SOS position. CA
0615 Starting Pre-Job, discussed watching out for all potential sharps and pinch points. Also, discussed forklift safety, with moving large ~~object~~ cm 1-9-14 objects, able to drive backwards if objects are too large.
0640 Pre-Job complete.
0654 Signed off on the rounds.
0700 Mode change complete, WCRRF yard and 50-69 are now in Operations.
0744 Starting shipment out of WCRRF.
0844 Electricians here to change out ballast in RCT office, WO#00483120-01.
0900 Shipment out complete.
0940 Bagging off, bagging on 5841239.
1005 Electricians work complete.
1010 Bag off/on complete.
1018 Notified that the mens urinal upstairs inside 50-54 is overflowing, OCO contacting maintenance to correct this minor issue.
1025 Starting movement into 50-69.
1029 Movement in complete.
1128 Bagging off 1st daughter, bagging on a 2nd.
1142 Bag off/on complete.
1325 Tour of 50-69 onsite, being brieted to RWP, 2011-0018 Tours/Walk-Downs
1337 Tour group entering 50-69.
1352 Tour group exited 50-69.
1401 Starting movement out of 50-69.
1405 Mens urinal upstairs in 50-54 has been fixed by maintenance.
1430 Movement out complete.
1508 Starting to denest 4 drums.
1617 Notified by lead inside that 2 operators booties have come up elevated.
1640 RCT's have given the all clear to continue denesting.
1641 Bagging off 2nd daughter to complete processing
1706 Denesting and bag off complete.
1804 Signed off on the rounds.
1810 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.
1-9-14 1815 Securing SOS position. CA
MA

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-RTR2-14-0005
Examination Date:	1/15/2014
Waste Container ID:	69105
Video/Audio Recorded Media Number:	LA-RTR2-14-0005 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 165.0 kg Tare Wt.: 145.1 kg Net Wt.: 19.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 69105

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	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):	1.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	18.4
Soils (S):	
Total WMP Weight:	19.9

CCP Radiography Data Sheet

Waste Container ID: 69105

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

Comments: Standard Pipe Overpack Container (P.O.C.)
There is separation between liner lid and liner therefore liner is vented.

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	1/15/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69105	Count Sequence Number:	1243
Operator:	CLREMO67292\User		
Assay Start:	1/28/2014 11:12:00 AM		
Description 1:	4LANDA0042		
Description 2:	POC 165		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 19.9 kg	Net:	19.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.695 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:	1243	Batch Number:	4LANDA0042
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 0	Software Version:	NDA 2000 V.4.0
Item ID:	69105	Analysis Date:	1/28/2014

Net Weight	19900.0 g		
Pu mass	2.07E+001	+-	6.09E+000 g
TRU Alpha Activity	4.06E+000	+-	9.57E-001 Ci
TRU Activity Concentration	2.04E+005	+-	4.81E+004 nCi/g
Pu-239 Equivalent Activity	4.13E+000	+-	9.57E-001 Ci
Pu-239 FGE	1.96E+001	+-	6.07E+000 g
Decay heat	1.32E-001	+-	3.15E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.66E-007
U233	<LLD	<LLD	0.00E+000	4.89E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	8.64E-007
NP237	4.66E-002	3.28E-005	1.01E-005	1.32E-006
PU238	2.06E-003	3.52E-002	1.21E-002	2.58E-004
U238	<LLD	<LLD	0.00E+000	8.79E-006
PU239	1.94E+001	1.20E+000	3.77E-001	8.85E-003
PU240	1.24E+000	2.82E-001	9.68E-002	2.07E-003
AM241	7.39E-001	2.54E+000	8.74E-001	1.43E-002
PU241	3.97E-002	4.09E+000	1.40E+000	3.00E-002
PU242	4.14E-003	1.64E-005	5.62E-006	0.00E+000
AM243	3.14E-003	6.29E-004	1.95E-004	2.34E-006

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 1·31·14

ITR: [illegible] Date: 2-3-14

Automated Independent Technical Review

Count Sequence Number: 1243
Counter ID: MILCC
Container ID: 69105
Waste Matrix Code: S3000
Sequence Type:

Batch Number: 4LANDA0042
Count Type:
Assay Date: 1/28/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
MGA Analysis Section 4 - MGA Analysis Expert review is recommended; the following validity tests failed: Normalized fit value (41.21) is greater than allowed (1.25). Fit value (565.7) is greater than allowed (2.50). Uncertainty in Pu240 effective (1659.%) is greater than allowed (20.0%).	Isotopic analysis not applied. 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, results valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: RLBrown Date: 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: **69105**

BDR Number: **LA14FG12018**

Sampling Date: **2/4/2014**

5853006

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	475.02	
74-82-8	Methane	6.56	U
67-56-1	Methanol	32.93	
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	1.67	
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140204c\
Data File : 69105.D
Acq On : 4 Feb 2014 1:36 pm (#1); 4 Feb 2014 1:35 pm (#2)
Operator : DE
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 04 13:50:01 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	9895822	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7469274	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.917	GC1	135500	475.02 ppmv	100
4) Methanol	0.824	31	17219m	32.93 ppmv	
7) Acetone	1.363	58	4407	1.67 ppmv	90

(#) = 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-RTR2-14-0005
Examination Date:	1/15/2014
Waste Container ID:	69177
Video/Audio Recorded Media Number:	LA-RTR2-14-0005 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V:001
Waste Container Weights:	Gross Wt.: 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 2 layers
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 69177

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware

AM:

OM:

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):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	95.0
Soils (S):	
Total WMP Weight:	101.1

CCP Radiography Data Sheet

Waste Container ID: 69177

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

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	1/15/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69177	Count Sequence Number:	1164
Operator:	CLREMO67292\User		
Assay Start:	1/17/2014 1:21:31 PM		
Description 1:	4LANDA0035		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 101.0 kg	Net:	101.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.690 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:	1164	Batch Number:	4LANDA0035
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 0	Software Version:	NDA 2000 V.4.0
Item ID:	69177	Analysis Date:	1/17/2014

Net Weight	101000.0 g		
Pu mass	1.04E+001	+-	3.16E+000 g
TRU Alpha Activity	2.83E+000	+-	7.38E-001 Ci
TRU Activity Concentration	2.80E+004	+-	7.31E+003 nCi/g
Pu-239 Equivalent Activity	2.87E+000	+-	7.39E-001 Ci
Pu-239 FGE	9.84E+000	+-	3.16E+000 g
Decay heat	9.26E-002	+-	2.44E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NA22	1.75E-010	1.09E-006	3.40E-007	2.50E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.46E-007
U233	<LLD	<LLD	0.00E+000	6.27E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.07E-006
NP237	4.67E-002	3.29E-005	1.01E-005	8.32E-007
PU238	1.03E-003	1.77E-002	6.23E-003	4.47E-004
U238	<LLD	<LLD	0.00E+000	1.38E-005
PU239	9.77E+000	6.06E-001	1.96E-001	1.53E-002
PU240	6.25E-001	1.42E-001	5.00E-002	3.59E-003
AM241	6.02E-001	2.07E+000	7.10E-001	2.29E-002
PU241	1.98E-002	2.04E+000	7.19E-001	5.17E-002
PU242	2.08E-003	8.23E-006	2.90E-006	0.00E+000
AM243	3.96E-003	7.91E-004	2.44E-004	5.46E-006

Errors quoted at 1.000 sigma

Operator: Marsha Gu Date: 1-23-14

ITR: [illegible] Date: 1-23-14

Automated Independent Technical Review

Count Sequence Number: 1164
Batch Number: 4LANDA0035
Counter ID: MILCC
Container ID: 69177
Waste Matrix Code: S3000
Count Type:
Sequence Type:
Assay Date: 1/17/2014

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

Expert Review by: _____ Date: 1/23/14

Waste Container ID: **69177**

BDR Number: **LA14FG12010**

Sampling Date: **1/22/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	84.73	
74-82-8	Methane	6.56	U
67-56-1	Methanol	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140122c\
Data File : 69177.D
Acq On : 22 Jan 2014 1:51 pm (#1); 22 Jan 2014 1:50 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 13:59:59 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	9073335	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	7127506	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.910	GC1	24170m	84.73	ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0005
Examination Date:	1/15/2014
Waste Container ID:	69181
Video/Audio Recorded Media Number:	LA-RTR2-14-0005 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 96.5 kg Tare Wt.: 33.4 kg Net Wt.: 63.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 69181

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	58.6
Soils (S):	
Total WMP Weight:	63.1

CCP Radiography Data Sheet

Waste Container ID: 69181

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

RTR Operator:

Print Name	Signature	Date
Thad Hasselstrom	Thad Hasselstrom	1/15/2014

NDA 2000 Assay Report

Item Information

Item ID:	69181	Count Sequence Number:	1190
Operator:	CLREMO67292\User		
Assay Start:	1/21/2014 4:15:15 PM		
Description 1:	4LANDA0037		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Homo		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 63.1 kg	Net:	63.1 kg
Container:	Volume: 208.0 l	Full:	55.0 %
Density:	0.550 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: 1190
Assay Instrument: MILCC
Analysis Method: CCP-TP-076 v 0
Item ID: 69181

Batch Number: 4LANDA0037
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/21/2014

Net Weight	63100.0 g		
Pu mass	1.47E+001	+-	3.87E+000 g
TRU Alpha Activity	2.11E+000	+-	3.68E-001 Ci
TRU Activity Concentration	3.34E+004	+-	5.83E+003 nCi/g
Pu-239 Equivalent Activity	2.16E+000	+-	3.68E-001 Ci
Pu-239 FGE	1.39E+001	+-	3.86E+000 g
Decay heat	6.79E-002	+-	1.19E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	7.35E-009	1.01E-006	3.17E-007	0.00E+000
CS137	1.17E-008	1.01E-006	3.17E-007	2.68E-007
U233	<LLD	<LLD	0.00E+000	2.12E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.11E-007
NP237	2.34E-002	1.65E-005	4.36E-006	5.22E-007
PU238	1.46E-003	2.50E-002	7.84E-003	3.34E-004
U238	<LLD	<LLD	0.00E+000	1.02E-005
PU239	1.38E+001	8.58E-001	2.40E-001	1.14E-002
PU240	8.85E-001	2.01E-001	6.29E-002	2.68E-003
AM241	2.98E-001	1.02E+000	2.71E-001	1.82E-002
PU241	2.83E-002	2.91E+000	9.12E-001	3.88E-002
PU242	2.95E-003	1.17E-005	3.65E-006	0.00E+000
AM243	1.93E-003	3.85E-004	1.02E-004	2.96E-006

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 1/23/14

ITR: [illegible] Date: 1-23-14

Automated Independent Technical Review

Count Sequence Number: 1190
Batch Number: 4LANDA0037
Counter ID: MILCC
Container ID: 69181
Waste Matrix Code: S3000
Count Type:
Sequence Type:
Assay Date: 1/21/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
MGA Analysis Results are marked as invalid.	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.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] 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: **69181**

BDR Number: **LA14FG12010**

Sampling Date: **1/22/2014**

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

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140122c\
Data File : 69181.D
Acq On : 22 Jan 2014 2:04 pm (#1); 22 Jan 2014 2:03 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 14:35:23 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	8885027	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	7004731	178.75	ppmv	0.00

Target Compounds Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0005
Examination Date:	1/15/2014
Waste Container ID:	69182
Video/Audio Recorded Media Number:	LA-RTR2-14-0005 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 114.0 kg Tare Wt.: 33.4 kg Net Wt.: 80.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 69182

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Utility knife

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	71.5
Soils (S):	
Total WMP Weight:	80.6

CCP Radiography Data Sheet

Waste Container ID: 69182

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

Comments: N/A

RTR Operator:

Print Name	Signature	Date
Thad Hasselstrom	Thad Hasselstrom	1/15/2014

NDA 2000 Assay Report

Item Information

Item ID:	69182	Count Sequence Number:	1189
Operator:	CLREMO67292\User		
Assay Start:	1/21/2014 3:33:13 PM		
Description 1:	4LANDA0037		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Homo		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 80.6 kg	Net:	80.6 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.650 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

006
CS 6/25/14

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.4

Count Sequence Number:	1189	Batch Number:	4LANDA0037
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 1	Software Version:	NDA 2000 V.4.0
Item ID:	69182	Analysis Date:	1/21/2014

Net Weight	80600.0 g			
Pu mass	5.58E+001	+-	1.88E+001	g
TRU Alpha Activity	8.21E+000	+-	1.82E+000	Ci
TRU Activity Concentration	1.02E+005	+-	2.26E+004	nCi/g
Pu-239 Equivalent Activity	8.41E+000	+-	1.82E+000	Ci
Pu-239 FGE	5.27E+001	+-	1.88E+001	g
Decay heat	2.65E-001	+-	5.89E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.81E-007
U233	<LLD	<LLD	0.00E+000	7.76E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.17E-006
NP237	6.67E-002	4.70E-005	1.39E-005	1.08E-006
PU238	5.54E-003	9.48E-002	3.66E-002	6.42E-004
U238	<LLD	<LLD	0.00E+000	1.94E-005
PU239	5.23E+001	3.24E+000	1.17E+000	2.20E-002
PU240	3.35E+000	7.60E-001	2.93E-001	5.15E-003
AM241	1.20E+000	4.11E+000	1.37E+000	1.88E-002
PU241	1.07E-001	1.10E+001	4.26E+000	7.46E-002
PU242	1.12E-002	4.41E-005	1.70E-005	0.00E+000
AM243	5.91E-003	1.18E-003	3.50E-004	4.90E-006

Errors quoted at 1.000 sigma

Operator: D=R Date: 6-10-14

ITR: D Date: 6-10-14

007
CS 6/25/14

Automated Independent Technical Review

Count Sequence Number: 1189
Batch Number: 4LANDA0037
Counter ID: MILCC
Container ID: 69182
Waste Matrix Code: S3000
Count Type:
Sequence Type:
Assay Date: 1/21/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
MGA Analysis Results are marked as invalid.	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. Am-241 direct reported from gamma results.

Expert Review by: [signature] Date: 6-4-14

008
(J) 4/25/14

S853006

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69182**

BDR Number: **LA14FG12010**

Sampling Date: **1/22/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	104.12	
74-82-8	Methane	6.56	U
67-56-1	Methanol	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140122c\
Data File : 69182.D
Acq On : 22 Jan 2014 2:35 pm (#1); 22 Jan 2014 2:34 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 14:43:51 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	8751675	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.642	117	6927553	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.917	GC1	29701m	104.12 ppmv	

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

S853279

Container Profile 760632

File Options Reports Help

S853279

760632	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

S853279

- S853279
  - LA00000068659 - WUPP
  - LA00000068507 - WESTAVL
  - LA00000068672 WIPP
  - LA00000069003 - empty

Working Copy
Date: 11-19-13 JE
11-18-13 W
11-19-13 JE

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S853279

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.: 019005
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: GERALD ESPINOZA / [signature] / 1237720 / 11-19-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
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4.1[6][B]	Parent Waste Container No.: S853279	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	463.8 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)	463.8 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.	CM 1240092 / 11-19-13 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.: 5853279

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68672	68659		
10.1[4]	Daughter Drum Filter No.	LM-857	LM-860	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-16107	L-10327		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	WCRNU 5-28PL			
	Serial No.	L-10827			
	Date of Manufacture	5-13			
10.2[5]	POC ID No	68507			
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS, KITTY Litter			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	GE 237720		N/A	
10.2[14]	POC Assembly Gross Weight (lb)	352.0			
10.2[15]	POC Rad. Survey Results (mrem/hr)	800			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	-NA-			
10.3[5][A]	Free Liquid Volume/Units	3 GAL			
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	N/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	PLASTIC	PLASTIC		

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: S853279

Comments: NITRATE SALTS, PLASTIC, LIQUID, LEAD SHIELDING

11.1[1] Performed By: GERALD ESPINOZA / [signature] / 1237720 / 11.19.13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Jerez / [signature] / 1221452 / 11/20/13 0510
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 11/12/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68659

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CMC 1.5 - 25MC
Serial No.: L-10327
Manufacture Date: 6-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/- 4% cw +/- 6% ccw	+/- 3% cw +/- 6% ccw

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

Performed By: [signature] [signature] 11-12-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NucSil
Model No.: 019DS
Serial No.: 1m-860
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.: 685659

Comments: N/C

5.[35] Performed By: Federico Abbate / [signature] 1228824 / 11-12-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jerez / [signature] 1221452 11/20/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68059

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range: 16-80 ft-lb
Tolerance (+/-): +/-3/cw & +/-6/ccw

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

Performed By: James Scott [signature] 1116621 11-19-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

6.[17][C] 2 in. bung plug torque value: _____ 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.: 68659

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 357 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: James Smith / [signature] 1116621 11-19-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Perez / [signature] 221472 11/20/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 11/13/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68672

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVL 1.5-2 SPVL
Serial No.: L-10107
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12/18/13	8/5/14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/- 4%, CW +/- 6%, CCW	+/- 3%, CW +/- 6%, CCW

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

Performed By: JOE QUINTANA (Operator (print)), Joe Z (Signature), 239987 (Z #), 11/13/13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 01905
Serial No.: LM-857
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.: 68672

Comments: n/c

5.[35] Performed By: Gilbert [illegible] / Brian Cadan — Operator (print) — Signature — 149236 / 1287541 — Z # — 11/13/13 / 11/13/13 — Date

7.1[4] Reviewed By: Jose Jerez — Supervisor or designee (print) — Signature — 1221452 — Z # — 11/20/13 — Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 168672

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range: 16 80 ft-lb
Tolerance (+/-): ±3/cw ±6/ccw

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

Performed By: GERALD ESPINOSA (Operator (print)) [signature] (Signature) 123772d (Z #) 11-19-13 (Date)

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:		
Range:	N/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: GERALD ESPINOSA (Operator (print)) [signature] (Signature) 123772 (Z #) 11-19-13 (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.: 68672

6.[26] Scale File ID number: 019665

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

6.[28] Drum gross weight: 343.6 lbs

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

Comments: N/C

6.[32] Performed By: GERALD ESPINOZA / [signature] 1237724 11-19-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jerez / [signature] 1221452 11/20/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 11-18-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S853279

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): 463.8

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: Frederick Mobleh / [signature] 122046 / 11-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez / [signature] 221452 11/20/13
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] 119935 11/20/13 0800
SOS/SOM or designee (print) Signature Z # Date Time

Inspected 1934
SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S853279 Container Type: ~~55-GAL~~ 85 11-443 Gross Weight (lbs): 472
Inner Seal #: 020639 Filter Prefix: LAVC Filter Serial #: 00722
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS NITRATE SALTS MST 12 SEAL A0014
Total PE-Ci Activity: 6.87E+00 Equivalent Combustible PE-Ci: 2.58E+00 AM-241 PE-Ci: 5.58E-01
Total Fissile Gram Equivalents: 75.9 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/25/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured Liquid Location: 22
Certified RTR Comment: None

Prohibited Items: ☑ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / [signature] / 100681 / 12/20/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 412#. Generator info shows 11 items of nitrate salts; weights range from 12-44#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids &/or debris may be present. RTR PS shows prohibited liquids & impenetrable object(s). No chemicals identified. Chromium, lead & mercury are applicable waste codes. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes / [signature] / 112609 / 1/18/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves when processing
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use the proper ratio of kitty litter to waste in accordance with procedure.
Performed By: Darrel L. Blain / [signature] / 1218069 / 10/29/13
TRU Remediation Operations (Print) Signature Z Number Date

HS Review [signature] CSP, may contain Pb, Hg + Cr
1-29-13
Jose Jerez [signature] 221402 10-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 020639

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	LR323NE1		20.040	NITRATE SALTS		6.37	52	1/13	G468
2	LR323NW1		19.650	NITRATE SALTS		3.9	52	1/13	G468
3	LR323NE2		9.390	NITRATE SALTS		2.16	52	1/13	G468
4	LR324NW1		6.350	NITRATE SALTS		2.03	52	1/13	G468
5	MX325NE1		8.190	NITRATE SALTS		1.51	52	1/13	G468
6	DSL326NW1		16.090	NITRATE SALTS		4.61	52	1/13	G468
7	DSL326NE1		14.690	NITRATE SALTS		3.78	52	1/13	G468
8	OX185327NE		8.860	NITRATE SALTS		4.91	52	1/13	G468
9	DSL326NW3		14.310	NITRATE SALTS		9.87	52	1/13	G468
10	RR323VRNE1		6.400	NITRATE SALTS		28.26	52	1/13	G468
11	1R329NE1		18.690	NITRATE SALTS		13.19	52	1/13	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 214.1

Material Type	SNM (grams)	Items Net Wt (kg)
52	80.59	142.66
Totals	80.59	142.66

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	S853279					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	073					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	1.89 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:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), Susan Ramsey (Signature), 100681 (Z#), 5/20/13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S853279.D
Acq On : 11 Apr 2013 12:01 pm (#1); 11 Apr 2013 12:00 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 073 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 12:09:29 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	3.256	96	2128548	206.00 ppm	0.00
15) Chlorobenzene-d5	5.943	117	1865632	179.50 ppm	0.00
Target Compounds					Qvalue
13) 1,2-Dichloroethane	3.030	62	5841	1.89 ppm	97

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

Vocgas.m Thu Apr 11 12:09:38 2013

11/18/13 Night Shift

1816 Reviewed Shift Turnover Checklist, approved and posted the night shift operations watchbill and assumed the WCRR SOM position.

1842 Preejob brief conducted by SOM was completed. Discussed WCG glove issues from this morning. To prevent from happening in future will ensure that last shift of week performs thorough inspections. Operators briefed and signed active shift orders WCRR-SH-13-003 R.2 and WCRR-SH-13-003. R.0. Updated operators on WCG lighting maintenance performed on Friday. Requested operators pay attention to house keeping inside 50-69.

2145 Completed bag off of 1 daughter - continuing to process

2354 Completed all bagoffs of parent # 5852590 (2 daughters total) Operators reported a drum lift pin clip broken. SOS will obtain from ML-2 storage. Bag on of next parent will take place after clip replacement and lunch.

11/19/13 0021 Operators replaced clip on drum lift. Breaking for lunch

0133 Resuming operations.

0218 Bag on of parent # 5853279 completed. Completed move in of 2 drums from transportainer to 50-69.

0258 Movement of 6 drums from 50-69 to transportainers completed.

0326 Reviewed both inside and outside roundsheets.

0340 Reviewed and signed off Compliance Tracking worksheet. Status board has been updated.

0448 Completed bagging off 1 daughter and 1 POC - continuing to process.

0605 SOS reported that drum on the WCG is almost complete - operators cleaning out remnant waste out of parent and will turn over the final bag offs to day shift.

11/19/13 0611 Relieved by J. Gundegnol as SOM.

No further entries this page

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11-19-2013 DAYSHIFT

0558 Reviewed the shift turnover checklist and logs and assumed the SOM duties from Quadagno.

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 Ellie fabricated tool. Energy Solutions will follow up. Operators requested the fork truck tire replacement 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 G 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, RMI, RCTs report smears may be elevated.

0836 RP-1 reports area for weekly was 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 ESE (B Griffis) observed transportation, and de-nesting thru the window.

0935 Inside operations report bag off complete Parent drum ~~568~~ 5891279 was bagged on. Operations request to change station 7 back pair and 3.

1000 Mode change: 50-69 and yard transition from Operation/Operation to Warm/Jubum

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 - 15100 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

11-18-13

1800 Assuming WCRR operations center.
1820 Shift turnover with dayshift being conducted.
1825 Pre-job being conducted by SOS.
1835 Pre-job concluded.
1859 Operators entering 5069 to begin processing S852590.
2130 Bagging off 1 daughter, bagging on another daughter.
2145 Bag off/on complete.
2324 Bagging off 1 daughter, bagging on S853279.
2354 Bag off/on JC 11-18-13 completed. Minor issue - The operators were not able to bag on due to a broken clip on the drumlift. SOS notified and is going into ML-2 to get a replacement clip.

11-18-13 0021 Operators out for lunch. Operators have replaced the clip on the drumlift.
0105 Beginning outside rounds.
0132 Outside rounds complete.
0207 Bagging on S853279.
0208 Late entry - at 0133, operators back from lunch. JC
0209 Initiating a drum movement from transportainer to 5069.
0218 Bag on complete. Drum movement complete.
0225 Beginning inside rounds.
0226 Initiating a drum movement from 5069 to a transportainer.
0248 Item #63 to CCS, Okay to proceed per CSE documentation.
0258 Drum movement complete.
0303 Late entry at 0250, inside rounds complete. JC
0324 Both rounds reviewed by SOS.
0415 Bagging off 1 daughter, 1 POC, bagging on another daughter.
0448 Bag off/on complete.

11-19-13 0605 Being relieved by OCO, Clarissa Velarde, JCollman

No further entries this page

11-19-13

0605 assuming WCRRF operations center - Orlando

0616 Pre job being conducted by SOS. During SOS a discussion 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 nodes will be changed to change gloves.

0834 Operators notifying Ops center the RCT's have smears coming up warms

0832 Operators will be denisting 2 drums then will be performing bag on, bag off's.

0838 RCT's have notified that smears ~~have~~ are in normal range. 11-19-13

- 0954 Denisting and bag on, bag off is complete, Bagged on 48724, Operators stating that only one drum discussion 48734 lid and Band were cracked and degraded.

1000 mode change performed TA5D-69 and WCRRF yard is warm standby for glove changes.

1015 Operators notifying ops center that Operators are coming out not during HFM sumup SOS and SDM 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 sumup and will perform swabs for precautions.

1050 RCT's notified that 1500 dpm on Right bottles on one RCT ~~operator. and~~ 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 ~~clean air~~ denisting area to step off pad. RCT's and operators will perform decon from step off to denisting area, will perform 300 smears

1200 RCT's and Operators ~~bagging~~ 11-19-13 to RWP for decon.

1210 RWP is ~~expired~~ ~~expired~~ 11-19-13 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

PROJECT NAME WCRR 505 Log Book NOTEBOOK NO.

11/18/13

1800 Assuming 505 position for the evening. [illegible]

1825 Performing Turnover with off going 505 [illegible] Gilbert Martinez. Pre-Job started, discussing events that happened during the day with glove changes and contamination. 2011 discussed the importance of inspecting gloves throughout processing. They processed one parent & parent bagged on ready to start processing, third parent was D-Bested and ready to bag on. Will need to push in more parents to possibly D-Best.

1840 Pre-Job complete.

1915 Operators reporting that the bolt on the parent that was bagged on was tight and they are unable to loosen it. They have soaked it with fantastic to hopefully be able to break the bolt loose

1945 Operators were able to loosen the bolt and have started processing.

2130 Bagging off one daughter, Bagging on second daughter and continuing to process 5852590

2145 Bag on Bag off Complete.

2324 Bagging off 1 daughter and Parent, Bagging on next Parent 5853279.

Minor Issue 2355 Operator reporting that they were not able to bag on Parent due to the drum lift missing a clip and needing to be replace prior to bagging on.

0010 Clip has been replaced, Parent will be bagged on after lunch.

0020 ~~0001~~ 11-19-13 Operators breaking for lunch.

0120 Operators returning from lunch.

0145 Reviewed and signed outside rounds.

0207 Bagging on 5853279

0218 Bag on Complete.

NA 0324 Reviewed and signed inside rounds.

0417 Bagging off one daughter and one POC, bagging on another daughter and continuing to process

0449 Bag on Bag off Complete.

0600 11/19/13 Parent continuing to be processed, has been completed, out of time to bag off, on coming crew will need to bag off

11/19/13 0610 Turning over 505 position to Gilbert Martinez.

No further entries on this Page

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

PROJECT NAME WCC SOS LOG Book NOTEBOOK NO.

11/19/13

0600 Assuming SOS Position [illegible]

0600 CCS Conducted shift brief discussed current status of Glovebox Operator's need to Dispose Gloves for off going shift.

0610 Conducted shift Brief.

0655 Operators entering 58-69

0832 Operators will be bagging of daughter

0834 Operators exhausted at high smears

0852 Operators demashing 7 drums them will bag on left

0873 RCTs notified that smears moved

0934 Demashing and bagging on operators only directed 1 drum other one ring is created

1000 Mock drance complete WCCF JA ~~operators~~ warm aside due to Glove Changers

1015 notified by operators were demashing HEM bag off on 1 Operator Neck 1 RCT. operators Right body Neck RCT's Left RCTs will Perform smears and give Further Investigations

1050 RCTs notified 500 cpm on Right hoolies this was Nets body

[illegible] Operators body 1333 cpm Alpha All exited Nets need to bag to RWP.

[illegible] RCTs notified was center 1A1 is 500 cpm to 1000 on Floor from demashing Area to step of pad will need to decon All this area. And Perform 300 smears.

1100 RCTs and operators heading to RWP

1110 Log Book examined will need to update

1116 Operators entering SCBS to start decon efforts

1116 First round of decon complete has still showing 500 cpm through [illegible] cpm need to continue decon efforts

1208 [illegible] set off operators entering facility to continue

1216 started rounds

1237 Second decon shift Complete RCTs will perform 300 smears.

1300 still working on smear surveys

[illegible] Relieved by Clayton Walters [illegible]

HP

[illegible] further entering on [illegible] 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-RTR2-13-0132
Examination Date:	12/2/2013
Waste Container ID:	68507
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.: 160.5 kg Tare Wt.: 145.1 kg Net Wt.: 15.4 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: 68507

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):	13.4
Soils (S):	
Total WMP Weight:	15.4

CCP Radiography Data Sheet

Waste Container ID: 68507

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 Component (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Benito Maestas		12/2/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68507	Count Sequence Number:	16791
Operator:	DCLTD231\Operator		
Assay Start:	12/3/2013 10:01:50 AM		
Description 1:	2LANDA1248		
Description 2:	POC 160.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 15.4 kg	Net:	15.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.672 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:	16791	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:	68507	Analysis Date:	12/3/2013

Net Weight	15400.0 g		
Pu mass	3.89E+001	+-	1.41E+001 g
TRU Alpha Activity	4.65E+000	+-	1.53E+000 Ci
TRU Activity Concentration	3.02E+005	+-	9.92E+004 nCi/g
Pu-239 Equivalent Activity	4.73E+000	+-	1.53E+000 Ci
Pu-239 FGE	3.67E+001	+-	1.40E+001 g
Decay heat	1.49E-001	+-	4.97E-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	3.49E-007
U233	<LLD	<LLD	0.00E+000	4.77E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.57E-006
NP237	3.25E-002	2.29E-005	4.14E-006	1.24E-006
PU238	3.55E-003	6.08E-002	2.49E-002	5.52E-004
U238	<LLD	<LLD	0.00E+000	1.15E-005
PU239	3.65E+001	2.26E+000	8.70E-001	2.06E-002
PU240	2.33E+000	5.30E-001	2.17E-001	4.82E-003
AM241	5.24E-001	1.80E+000	1.24E+000	8.25E-002
PU241	4.45E-002	4.58E+000	1.88E+000	4.17E-002
PU242	7.79E-003	3.08E-005	1.26E-005	0.00E+000
AM243	4.15E-004	8.30E-005	1.52E-005	7.09E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 12.4.13

ITR: _____ Date: 12/9/13

Automated Independent Technical Review

Count Sequence Number: 16791
Batch Number: 2LANDA1248
Counter ID: HENC #2
Container ID: 68507
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 12/3/2013

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

Expert Review by: Sheri Chambers Date: 12-3-13

5853279

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68507**

BDR Number: **LA14FG2008**

Sampling Date: **1/22/2014**

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\140122c\
Data File : 68507.D
Acq On : 22 Jan 2014 3:21 pm (#1); 22-Jan-14, 15:20:20 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 15:28:44 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	3.542	96	2830618	205.75	ppmv	0.02
15) Chlorobenzene-d5	5.851	117	2259092	177.50	ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0132
Examination Date:	12/2/2013
Waste Container ID:	68659
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.: 163.5 kg Tare Wt.: 33.4 kg Net Wt.: 130.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68659

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	125.1
Soils (S):	
Total WMP Weight:	130.1

CCP Radiography Data Sheet

Waste Container ID: 68659

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		12/2/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68659	Count Sequence Number:	16806
Operator:	DCLTD231\Operator		
Assay Start:	12/4/2013 2:36:45 PM		
Description 1:	2LANDA1249		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 130.0 kg	Net:	130.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
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:	16806	Batch Number:	2LANDA1249
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68659	Analysis Date:	12/4/2013

Net Weight	130000.0 g		
Pu mass	4.18E+001	+- 1.64E+001	g
TRU Alpha Activity	8.26E+000	+- 3.77E+000	Ci
TRU Activity Concentration	6.35E+004	+- 2.90E+004	nCi/g
Pu-239 Equivalent Activity	8.35E+000	+- 3.77E+000	Ci
Pu-239 FGE	3.94E+001	+- 1.64E+001	g
Decay heat	2.68E-001	+- 1.25E-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	6.20E-007
U233	<LLD	<LLD	0.00E+000	7.93E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.60E-006
NP237	8.32E-002	5.87E-005	1.25E-005	1.83E-006
PU238	3.81E-003	6.52E-002	2.87E-002	8.34E-004
U238	<LLD	<LLD	0.00E+000	2.00E-005
PU239	3.92E+001	2.43E+000	1.01E+000	3.11E-002
PU240	2.51E+000	5.69E-001	2.51E-001	7.27E-003
AM241	1.51E+000	5.19E+000	3.62E+000	1.07E-001
PU241	4.77E-002	4.92E+000	2.17E+000	6.29E-002
PU242	8.36E-003	3.30E-005	1.46E-005	0.00E+000
AM243	2.59E-003	5.18E-004	1.11E-004	1.12E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 12/10/13

ITR: _____ Date: 12·11·13

Automated Independent Technical Review

Count Sequence Number: 16806 Batch Number: 2LANDA1249
Counter ID: HENC #2
Container ID: 68659
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/4/2013

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

Expert Review by: Sheri Chandler Date: 12-5-13

Waste Container ID: **68659**

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 : 68659.D
Acq On : 6 Dec 2013 1:19 pm (#1); 06-Dec-13, 13:18:59 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 06 13:27:34 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.535	96	3792739	205.75	ppmv	0.02
15) Chlorobenzene-d5	5.851	117	3017568	177.50	ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0132
Examination Date:	12/2/2013
Waste Container ID:	68672
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.: 157.0 kg Tare Wt.: 33.4 kg Net Wt.: 123.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 68672

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	115.6
Soils (S):	
Total WMP Weight:	123.6

CCP Radiography Data Sheet

Waste Container ID: 68672

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		12/2/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68672	Count Sequence Number:	16790
Operator:	DCLTD231\Operator		
Assay Start:	12/3/2013 9:08:12 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: 124.0 kg	Net:	124.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
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:	16790	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:	68672	Analysis Date:	12/3/2013

Net Weight	124000.0 g		
Pu mass	3.77E+001	+-	7.10E+000 g
TRU Alpha Activity	6.57E+000	+-	2.13E+000 Ci
TRU Activity Concentration	5.30E+004	+-	1.72E+004 nCi/g
Pu-239 Equivalent Activity	6.65E+000	+-	2.13E+000 Ci
Pu-239 FGE	3.56E+001	+-	7.07E+000 g
Decay heat	2.13E-001	+-	7.07E-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	5.53E-007
U233	<LLD	<LLD	0.00E+000	8.55E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.86E-006
NP237	8.73E-002	6.16E-005	1.23E-005	2.02E-006
PU238	3.45E-003	5.89E-002	1.44E-002	9.30E-004
U238	<LLD	<LLD	0.00E+000	1.52E-005
PU239	3.54E+001	2.20E+000	4.39E-001	3.47E-002
PU240	2.26E+000	5.14E-001	1.26E-001	8.11E-003
AM241	1.11E+000	3.80E+000	2.08E+000	8.06E-002
PU241	4.32E-002	4.45E+000	1.09E+000	7.02E-002
PU242	7.56E-003	2.99E-005	7.30E-006	0.00E+000
AM243	2.61E-003	5.22E-004	1.05E-004	1.26E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 12-4-13

ITR: Jan Barton Date: 12/9/13

Automated Independent Technical Review

Count Sequence Number: 16790
Batch Number: 2LANDA1248
Counter ID: HENC #2
Container ID: 68672
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. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Clark 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: **68672**

BDR Number: **LA13FG2124**

Sampling Date: **12/6/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	117.70	
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\131206C\
Data File : 68672.D
Acq On : 6 Dec 2013 2:16 pm (#1); 06-Dec-13, 14:15:23 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 06 14:27:59 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.562	96	3786287	205.75	ppmv	0.04
15) Chlorobenzene-d5	5.868	117	3018738	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.613	GC1	885m	117.70	ppmv	

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

S853326

S853326

Container Profile 747279

File Options Reports Help

S853326

747279	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

Genealogy

S853326

- S853326
  - LA00000068629
  - LA00000068654
  - LA00000068595 – EMPTY

Working Copy
Date: 11/13/13 HS

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S853326

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

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

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

4.1[6][B] Parent Waste Container RCRA Designations: 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) cm 11-14-13

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

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

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

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

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

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

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

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5853326

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 483.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 566.8 lb

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

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

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

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

ATTACHMENT 1

Page 3 of 4

4.1[6][B] Parent Waste Container No.: S853326

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68654	68629	N	
10.1[4]	Daughter Drum Filter No.	AN-666	2M-868		
10.1[4]	Daughter Drum Bag Filter No.	L-10124	L-10131		A
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No		N		
10.2[7][B]/10.2[6]	POC Item Description			A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	2 Gallons	1 Qt		
10.3[5][A]	Free Liquid Volume/Units	6 gallons	1 Gallon		
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	lead shielding		
10.3[9][A]	PCB-contaminated Waste Description	N	A	N	
10.3[9][B]	PCB Item ID No.				A
10.3[10]	Remaining Waste Description	See comments	See Comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	90%	90%		
10.5[3]/10.6[2]	Description Waste Added During Processing	kitty litter + Plastic	kitty litter + Plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S853326

Comments: Nitrate Salts, Kitty Litter, pH 3 liquid w gellers, neutralized. lead shielding, poly lid.

11.1[1] Performed By: James Sulk / [signature] 111661 / 11-13 13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins / [signature] 124092 11/13/13 2350
SOS or designee (print) Signature Z # Date/Time

10/31/13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 5015563
Lot No.: 02383666
Manufacture Date: 13

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12.18.13	8.5.14
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-905
Manufacture Date: 10-11

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

5. [11] Performed By: GERALD ESPINOZA / [signature] / 1287720 / 10/31/13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA / [signature] / 1287720 / 10/31/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 1241092 / 11/14/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 11/13/13 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68595

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: +/- 3% cw +/- 6% ccw

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

Performed By: Andrew Schlich / [signature] 122886 / 11-13-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 170.0 lb

Comments: N/C

8.1[1] Performed By: James Sabol / [signature] 146662 11-13-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 240092 11/14/13
Supervisor or designee (print) Signature Z # Date

11-7-13 jc

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68629

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc1.S2Spvc
Serial No.: L-10131
Manufacture Date: 5-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
Range in ft-lb:	40-200	10-80
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Brandon Chavez / [signature] 204742 / 11-7-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-868
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): 760 lbs

5.[34][E] Drum ID No.: 686629

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 204742 / 11-7-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 24009 / 11/14/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68629

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: +1-3% cw + +1-6% ccw

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

Performed By: James S. [illegible] [illegible] 1116662 / 11-13-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68629

6.[26] Scale File ID number: C19065

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

6.[28] Drum gross weight: 380.0 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: James Smith / [signature] / 1014621 / 11-13-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 1249092 / 11/14/13
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.: 68654

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2SPVC
Serial No.: L-10134
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-05-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	±4%cw ± 6%ccw	±3%cw ± 6%ccw

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

Performed By: MICHAEL MONTOYA / [signature] / 191352 / 11/17/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN-666
Manufacture Date: 1/13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68654

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA [signature] 191352 11/12/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 240092 11/14/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 108654

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range: 16-80 ft-lb
Tolerance (+/-): +/- 3% CW +/- 6% CCW

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

Performed By: Federico Arbolada / [signature] / 1228824 / 11-13-13
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: / / / /
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.: 68654

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 385 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: James Sa[illegible] [signature] 1166621 12-13-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 240092 12/14/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 11·13·13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 85326

6.3[15] (S) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019005
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 483.8

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

Comments: 11-13-13 N/C

8.1[1] Performed By: Edward Martinez — Waste Handling Technician (print) Signature — Z # D349111 Date 11-13-13

8.1[7] Reviewed By: Clayton Mullins — Supervisor or designee (print) Signature — Z # D400911 Date 11/13/13

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

8.1[8][D] Approved by: Randy Axtell — SOS/SOM or designee (print) Signature — Z # 110985 Date 11/14/13 Time 0148

Inspected 1939 SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S853326 Container Type: ~~55~~-GAL 85 11-4-13 Gross Weight (lbs): 498

Inner Seal #: 020636 Filter Prefix: LAVC Filter Serial #: 00768

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

TWSR Comments: LEACHED SOLIDS MST 12 A0086

Total PE-Ci Activity: 1.13E+01 Equivalent Combustible PE-Ci: 4.24E+00 AM-241 PE-Ci: 9.17E-01

Total Fissile Gram Equivalents: 124.7 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D007; D008; D009

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 6/13/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 20"

Certified RTR Comment: None

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

Security Determination: ? WE 11/8/13 ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack

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

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

Performed By: Susan Ramsey (Production Control (Print)) / Signature / 100681 (Z Number) / 12/20/12 (Date)

WDP Engineering

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts
Net Wt: 438#. Generator info shows 9 items of nitrate salts; weights range from 14-55#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids +/or debris may be present. RTR PS shows prohibited liquids + impenetrable object(s). No chemicals identified; chromium, lead, + mercury are applicable waste codes. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Signature / 112009 (Z Number) / 6/18/13 (Date)

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

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

Performed By: Darrell L. Blain (TRU Remediation Operations (Print)) / Signature / 1218069 (Z Number) / 10/29/13 (Date)

145 Review. Only small amount CSP, may contain Pb, Hg + C
No other concerns 1-29-13
Jose Jerez 221452 10-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 020636

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX186331NE1		11.780	NITRATE SALTS		39.59	52	1/13	G468	
2	5LR1-1NE1		24.950	NITRATE SALTS		42.3	52	1/13	G468	
3	5LR1-1NW1		23.580	NITRATE SALTS		15.6	52	1/13	G468	
4	LR332NW1		22.330	NITRATE SALTS		13.05	52	1/13	G468	
5	5DSL1-2NE1		6.450	NITRATE SALTS		1.11	52	1/13	G468	
6	5DSL1-2NW1		8.360	NITRATE SALTS		2.43	52	1/13	G468	
7	5LR2-4NE1		23.200	NITRATE SALTS		8.08	52	1/13	G468	
8	5DSL1-2NE2		11.080	NITRATE SALTS		5.23	52	1/13	G468	
9	5MX1-3NW1		23.990	NITRATE SALTS		5.17	52	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 225.9

Material Type	SNM (grams)	Items Net Wt (kg)
52	132.56	155.72
Totals	132.56	155.72

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	S853326					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	073					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	2306.79 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 Miles (CCP (Print)) 235864 (Z #)

Comments:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)) [signature] (Signature) 100681 (Z #) 5/20/13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S853326.D
Acq On : 11 Apr 2013 1:05 pm (#1); 11 Apr 2013 1:04 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 073 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 13:14:57 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	2025552	206.00 ppm	0.00
15) Chlorobenzene-d5	5.940	117	1807819	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.250	GC1	569967m	2306.79 ppm	

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

Vocgas.m Thu Apr 11 13:15:05 2013

11-13-13

0605 ASSUMMING OPERATIONS CENTER POSITION - H SMITH

0615 STARTING PRE-JOB BRIEFING - DISCUSSING GLOVE BOX GLASS, TOOLS, AND STANDING ORDERS

0638 PRE JOB CONCLUDED.

0722 OPERATORS ENTER TO BEGIN PROCESSING

0804 PERMISSION GRANTED TO BEGIN SHIPMENT OUT OF WCRR, VEHICLE ACCESS GATE LOWERED

0808 BAGGING OFF 1 DAUGHTER, 1 POC, BAGGING ON S853326

0817 RCT'S INFORM OPERATION CENTER RED BEACON IN HI-BAY AREA FAULTY AND SMOKE COMING FROM UNIT, LIGHT WAS SHUT OFF AND RCT'S POSTED AT DOORS TO PREVENT ACCIDENTIAL ENTRY, NOTIFIED SOS

0828 OPERATIONS CENTER NOTIFIED SDM

0851 BAG ON - BAG OFF COMPLETED, ELEVATED CAM READINGS

0911 OPERETOR ARE OUT OF RESPIRATORS

0918 VEHICLE ACCESS GATES RESTORED, SHIPMENT OUT OF WCRR TA50-69 IS COMPLETED

0916 RCT CALLED OPS CENTER TO REQUEST ~~STOP WORK~~ HS 11-13-13 PAUSE WORK, DUE TO BAG CUTTING CONTAMINATION WITH CUTTING SHEARS.

0920 RCT REPORTING 500DPM ON OPERATOR'S HIGH DEXTERITY GLOVES, PERFORMING AREA SMEARS

0930 ALL SMEARS NDA AND OPERATORS ASSEMBLING AND TA 50-196 FOR INCIDENT BRIEFING

0941 OPERATORS ASSEMBLE TO DISCUSS PROPER TECHNIQUES FOR USING HORSETAIL CUTTERS, AND SAFETY PRACTICES INVOLVED IN THE OPERATION

1030 SOS AND OPERATORS GIVE DEMONSTRATE PROPER CUTTING OF HORSETAILS

1100 OPERATORS RETURN TO TA50-69 TO CONTINUE TO PROCESS

1232 PERMISSION GRANTED TO BEGIN MOVEMENT FROM ~~TRANS~~ 11-13-13 HS TA 50-69 TO TRANSPORTAINERS. TA 50/194

1302 MOVEMENT COMPLETED TO TA-50/194.

1321 OPERATORS OUT OF BUILDING FOR LUNCH

CONTINUED ON NEXT PAGE H SMITH →

PROJECT NAME _____ NOTEBOOK NO. _____

11-13-13

0600 Assuming WCRRF SOS position - Arlande
0615 Conducted pre job briefing, discussed safety and following procedures.
0638 Pre job has been concluded.
0705 Operators returning 50-69 to continue processing.
0804 Starting movement to transport vehicle per Area C shipment.
0808 Bagging off 1 daughter, 1 POC, bagging on 98533216.
0817 Notified by RCT that the Red Beacon light in high Bay area is smoking is coming out from it.
0830 Beacon light issue has been resolved.
0852 Bag on, Bag off completed, elevated camera
0911 Areas are back in range operators are out of respirators
0915 Vehicles access gates have been restored, shipment to area C is complete.
0914 RCTs calling a ~~stop~~ pause work due to contamination from bag off cut.
0918 RCTs reporting 500 dpm on high dexterity gloves, RCTs performing smears.
0931 All smears MDA and operators assembling in break room to discuss minor issue.
0940 Operators have discussed what went wrong with bag out and where improvements can be made to prevent future issues. ES production manager and SOS discussed safety and following procedures.
1030 SOS and operators performing demonstration on cutting ~~horsetails~~ 11-13-13 horsetails.
1100 Operators returning 50-69 to continue processing.
1232 ~~1157~~ Starting movement out of 50-69.
1302 movement completed into 50-69
1321 Operators out for lunch.
1325 Operators returning 50-69 to continue processing.
1505 Bagging off 1 daughter, Bagging on 1 daughter.
1529 Bag on complete.
1610 Starting inside rounds.
1625 Brief pause RCT's requesting some operators to exit ~~exiting~~ 50-69 due to sweating due to thick PPE.
1635 Starting outside rounds
1636 Inside rounds complete
1644 Outside rounds complete
1650 Operators continuing to process.
1700 Rounds signed off by SOS.
1715 Bagging off 1 daughter, Denoting then bagging on 38440089.
- Continued on next page - Arlande

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

11-13-13 CONTINUED FROM PREVIOUS PAGE H SMITH

1505 BAGGING OFF DAUGHTER 68654 BAGGING ON DAUGH. 68629 HS 11/13/13.

1526 BAG ON - BAG OFF COMPLETED, CONTINUING TO PROCESS

1610 STARTING INSIDE ROUNDS

1625 BRIEF PAUSE - OPERATORS EXIT BUILDING TO CHANGE, DUE TO HEAVY SWEATING PER RCT's

1633 STARTING OUTSIDE ROUNDS

1636 ITEM #63 DOS, INSIDE ROUNDS, POD IN PLACE OKBY TO PROCEED PER CSE DOCUMENTATION

1643 INSIDE ROUNDS COMPLETED

1644 OUTSIDE ROUNDS COMPLETED

1650 OPERATORS RETURN TO PROCESS

1711 BAG OFF - BAG ON ~~DAUGHTER~~ 11-13-13 HS DEMEST AND BAGGING ON 5844689

1720 11/13/13 1400 HS 1700 LATE ENTRY. INSIDE AND OUTSIDE ROUNDS REVIEWED BY SDS

11-13-13 1803 BEING RELIEVED BY OCO TERRI COLEMAN - H SMITH

NO FURTHER ENTRIES ON THIS PAGE H SMITH

N DAUGHTER
PROCESS
ANGE,
OKBY
BAGGING
UNDS
7H

1-13-13
1803 Assuming WCRR operations center. - JColeman
1815 Pre-job being conducted by SOS.
1823 Late entry at 1810, denesting of S844689 complete and bagge on. YC
1841 Pre-job concluded.
1906 Operators entering 50-69 to begin operations on S844689.
2119 Bagging off 1 daughter, bagging on another daughter.
2130 Bagoff/on complete.
2243 Initiating a drum movement from transportainer to 50-69.
2252 Drum movement into 50-69 complete.
2305 Initiating a drum movement from 50-69 to a transportainer.
2315 Drum movement out of 50-69 complete.
2336 Bagging off 1 daughter.
1-14-13 0000 Bag off complete.
0010 Operators out for lunch.
0030 Beginning outside rounds.
0057 Outside rounds complete.
0137 Operators entering 50-69 after lunch.
0218 Denesting drum #S832144 and bagging it on.
0252 Denesting and bag on complete.
0400 Beginning inside rounds.
0415 Minor issue - The SOS reports that the light bulb on top of the WCG has blown out causing poor visibility at stations 3 and 8. The path forward - FSR and notifying electrician.
0420 An FSR has been submitted for the light bulb on top of the WCG. FSR# 114298.
0422 Item #63 is OOS. Okay to proceed per CSE documentation.
0424 Inside rounds complete.
0436 Bagging off 1 Daughter and 1 POC., bagging on another daughter.
0439 Supervisor has signed off on both rounds.
0510 Bag off complete.
0522 Initiating a drum movement from 50-69 to a transportainer.
0536 Drum movement out of 50-69 complete.
0600 Air quality has arrived to perform the weekly stack monitoring.
3 ~~0607~~ 0604 Air quality has completed the weekly stack monitoring.
3 0607 Being relieved by OCA, Howard Smith - JColeman
No further entries this page.

11-13-13 DAYSHIFT

0610 Received the shift turnover checklist and assumed the WCRR SOM position John Gandagnoli

0638 Completed attending the pre-job brief conducted by the SOS (Clarissa) The safety topic was to stay focused and think thru the steps. There is one transfer scheduled out. Operators mentioned that the roto-grip is seen to generate a static spark. The SOS reminded operators of the two shift orders in effect. Discussion focused on lead windows and where the 1/4 in steel was placed. Note: Station 2 was taped with lead ~3 inches top of window - No shine identified by the RCTs. The 1/4" steel plate was placed on station 5 outside. The SOS will evaluate using 1/4" steel on station 6. 11-13-13 During bag offs the steel will be required to be removed so that operators can see what items may be loaded (POC). RCTs are required to be present when shielding is removed and replaced. Notification made to OM on static electricity.

0710 Completed daily phone call updating Plan of Day status for WCRRF

0800 P&T arrives to inspect TRU drums in the transportainer.

0808 Operators initiate Bag off of 1 daughter, 1 POC, and Bag on of Parent 585 3324

0817 RCTs inform operations center of red Beacon light in Rm 104 not working smell of faint smoke noted, RCT kept switch off, and RCTs posted doors with battery operated units on doors.

0830 Further evaluation identifies the strobe/mirror globe came off spindle in Rm 104. An FSR was submitted for repair.

0851 Bag off and Bag on was completed, however RCTs note there were elevated CAMs, RCTs will allow cam to cycle, the CAM was A-3, noted at 11 DAC hour

0920 RP-1 reports 1 high dexterity glove was thrown away due to 500dpm; also the cutter was thrown away, additional surveys are in progress.

0922 RCT request a pause of work due to the use of cutters. Notification is made to the OM. The SOM requested personnel to exit 50/69 and regroup in the break trailer.

0940 RP-1 reports all surveys (post) were NDA, and CAM was normal. The cutters were noted between 10K and 20K - which were tossed, new cutters will be provided.

1030 Completed Safety pause to discuss contamination control and proper techniques of bag offs/ bag cuts and the positioning of the cutting tool and after the cut, what to do with the cutter, wiping the blade and placement of cutter and waste. The message was, expect the unexpected, be slow, meticulous and ensure proper steps and techniques when making cuts to control contamination. Operators are to work and

(Continued on Next Page)

11-13-13 DAYSHIFT continued

listen to RCTs and if questions arise ask prior to proceeding. It was noted, that the operator cutting the pig tail of the daughter drum, performed a double cut. He thought the 1st cut was all the way through, but it was not. Also, operators were holding the pig tail at a good/normal distance to initiate the second cut.

1030 Operators and SDS performed cold/mock up pig tail cuts in the break trailer with RCTs present. Upon completion of practice, all personnel were on the same page/thought and all were personnel, including RCTs were satisfied to continue operations. During mockup, proper PPE was used

1108 Operators initiate entrance into 50/69 to continue operating.

1226 Participated in the noon phone call with PM, OM, SDS and others

1235 Outside operators completed a movement of 11 drums from 50/69 to the transportainers.

1315 Discussed shift orders with SDS and ES/PM to incorporate mechanical means and two person rule for removal of drums from the red lift table. The procedure writer was contacted and will initiate changes in current draft for review.

1505 Inside Operations report bagging off 1 daughter, bagging on another and continue to process.

1536 Bag on and bagoff noted complete

1600 Obtained an update from the SDS, that he had inside operators leave the 1/4 inch stainless steel plate on station 5 outside and added another 1/4 inch stainless steel plate to station 2 – per RCTs, station 2 was shielded with lead glass and tape (lead) – additional SS plate was added for extra precaution.

1629 Operations Center Operator reports two operators exiting 50/69 due to excessive sweating. They will change modesty's rehydrate and re-enter.

1710 Inside Operations initiate bag off of 1 daughter, bag on another daughter, denest, prep, then bag on Parent S 8444689.

1807 Operations completed the denest and bag ons –

1811 Relieved by R. Axtell John Guardagnoli

No further entries this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0130
Examination Date:	11/19/2013
Waste Container ID:	68629
Video/Audio Recorded Media Number:	LA-RTR2-13-0130 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 172.9 kg Tare Wt.: 33.4 kg Net Wt.: 139.5 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: 68629

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	127.5
Soils (S):	
Total WMP Weight:	139.5

CCP Radiography Data Sheet

Waste Container ID: 68629

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

Comments: N/A

RTR Operator:

Benito Maestas		11/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68629	Count Sequence Number:	23938
Operator:	D3PW2DK1\operator		
Assay Start:	12/5/2013 12:53:11 PM		
Description 1:	1LANDA1873		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 140.0 kg	Net:	140.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
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: 23938
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68629

Batch Number: 1LANDA1873
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 12/5/2013

Net Weight	140000.0 g		
Pu mass	9.23E+001	+-	3.10E+001 g
TRU Alpha Activity	1.57E+001	+-	6.51E+000 Ci
TRU Activity Concentration	1.12E+005	+-	4.65E+004 nCi/g
Pu-239 Equivalent Activity	1.59E+001	+-	6.51E+000 Ci
Pu-239 FGE	8.70E+001	+-	3.09E+001 g
Decay heat	5.08E-001	+-	2.15E-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	1.16E-006
U233	<LLD	<LLD	0.00E+000	1.07E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.04E-006
NP237	1.72E-001	1.21E-004	2.51E-005	5.09E-006
PU238	8.43E-003	1.44E-001	5.46E-002	1.36E-003
U238	<LLD	<LLD	0.00E+000	2.52E-005
PU239	8.66E+001	5.37E+000	1.92E+000	5.05E-002
PU240	5.54E+000	1.26E+000	4.83E-001	1.18E-002
AM241	2.60E+000	8.93E+000	6.20E+000	2.15E-001
PU241	1.05E-001	1.09E+001	4.17E+000	1.02E-001
PU242	1.85E-002	7.30E-005	2.80E-005	0.00E+000
AM243	3.95E-003	7.91E-004	1.65E-004	1.45E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 12/10/13

ITR: _____ Date: 12-10-13

Automated Independent Technical Review

Count Sequence Number: 23938 Batch Number: 1LANDA1873
Counter ID: MCS HENC #1
Container ID: 68629
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/5/2013

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

Expert Review by: Sheri Chandler Date: 12-9-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68629**

BDR Number: **LA13FG2125**

Sampling Date: **12/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131209c\
Data File : 68629.D
Acq On : 9 Dec 2013 12:52 pm (#1); 09-Dec-13, 12:52:08 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 09 13:02:51 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.532	96	3652046	205.75 ppmv	0.01
15) Chlorobenzene-d5	5.845	117	2856871	177.50 ppmv	-0.02

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0130
Examination Date:	11/19/2013
Waste Container ID:	68654
Video/Audio Recorded Media Number:	LA-RTR2-13-0130 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 174.0 kg Tare Wt.: 33.4 kg Net Wt.: 140.6 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: 68654

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	129.6
Soils (S):	
Total WMP Weight:	140.6

CCP Radiography Data Sheet

Waste Container ID: 68654

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

Comments: N/A

RTR Operator:

Benito Maestas		11/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68654	Count Sequence Number:	23928
Operator:	D3PW2DK1\operator		
Assay Start:	12/4/2013 2:00:18 PM		
Description 1:	1LANDA1872		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 141.0 kg	Net:	141.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.750 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23928	Batch Number:	1LANDA1872
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68654	Analysis Date:	12/4/2013

Net Weight	141000.0 g		
Pu mass	4.23E+001	+- 1.40E+001	g
TRU Alpha Activity	1.12E+001	+- 5.63E+000	Ci
TRU Activity Concentration	7.91E+004	+- 4.00E+004	nCi/g
Pu-239 Equivalent Activity	1.12E+001	+- 5.63E+000	Ci
Pu-239 FGE	3.99E+001	+- 1.40E+001	g
Decay heat	3.65E-001	+- 1.87E-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	1.16E-006
U233	<LLD	<LLD	0.00E+000	1.13E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.41E-006
NP237	1.33E-001	9.39E-005	1.82E-005	5.25E-006
PU238	3.87E-003	6.61E-002	2.47E-002	1.43E-003
U238	<LLD	<LLD	0.00E+000	2.10E-005
PU239	3.97E+001	2.46E+000	8.66E-001	5.33E-002
PU240	2.54E+000	5.76E-001	2.18E-001	1.25E-002
AM241	2.35E+000	8.05E+000	5.56E+000	2.40E-001
PU241	4.84E-002	4.98E+000	1.89E+000	1.08E-001
PU242	8.47E-003	3.35E-005	1.27E-005	0.00E+000
AM243	4.06E-003	8.12E-004	1.58E-004	1.59E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 12/10/13

ITR: [signature] Date: 12/10/13

Automated Independent Technical Review

Count Sequence Number: 23928
Batch Number: 1LANDA1872
Counter ID: MCS HENC #1
Container ID: 68654
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 12/4/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
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: Shei Chamb Date: 12-5-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68654**

BDR Number: **LA13FG2124**

Sampling Date: **12/6/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	322.24	
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 : 68654.D
Acq On : 6 Dec 2013 1:43 pm (#1); 06-Dec-13, 13:42:21 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 06 13:51:12 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.542	96	3763477	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.855	117	2985290	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.610	GC1	2423m	322.24 ppmv	

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

41

S853482

S853482

Container F 760245

File Options Reports Help

S853482

760245	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

S853482

- S853482
  - 94217
  - 94216
  - 94215
    - LASB02090
  - 94220 - EMPTY

Task History

Transfer Details

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

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET 8/19/13 45

4.1[6][B] Parent Waste Container No.: S853482

6.2[4] Date Processed: 08-19-13

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 and 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: 10-14-14

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

4.3[6] (S) Stationary Fire Watch has been established:
(> 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: James Sadel [signature] 114002 / 08-19-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S853402

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 482.0 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 602.0 lb

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S853482

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94215	94216	N/A	
10.1[4]	Daughter Drum Filter No.	KL-450	KL-448		
10.1[4]	Daughter Drum Bag Filter No.	L-8216	L-10027		
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.	6CPVC1.5-2PVC			
	Serial No.	L-8214			
	Date of Manufacture	3-13			
10.2[5]	POC ID No	94217		N/A	
10.2[7][B]/10.2[6]	POC Item Description	Nitrate Salts Kitty litter			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)	800 mr			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	1 Qt.	1 QT		
10.3[5][A]	Free Liquid Volume/Units	3 gallons	1 Qt	N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A	lead		
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	N/A	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	70%	95%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic & Room Trash	Plastic & Room Trash		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S853482

Comments: Nitrate Salts, Kitty litter, Plastics and Room Trash

11.1[1] Performed By: James Sch / [signature] / 144662 / 08-19-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Mk / [signature] / 145255 / 8/19/13 1755
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

8/19/13 [illegible]

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

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

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 01209
Serial No.: EK-1143
Manufacture Date: 5-10

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

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

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

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

Comments: NOT Prepped AT TA50-69, Drum Is Being Reused.

8.1[1] Performed By: James S [illegible] / [illegible] / 116612 08-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G [illegible] / [illegible] / 149225 8/19/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

8/19/13 HSO

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94220

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: #38373
Cal. Expiration Date: 09-11-13
Range in ft-lb: 10-80
Tolerance: +/-3% cw + +/-6% ccw

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

Performed By: James Sutel / [signature] / 116662 / 08-19-13
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): 176.8 lb

Comments: N/C

8.1[1] Performed By: James Sutel / [signature] / 116662 / 08-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk / [signature] / 149055 / 8/19/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 94215

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 BA 8-13-13

RECORD drum information:

- Purchase Request #: 5913223-1
- Lot #: 0237120
- 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: BOP
- Model #: 16SPVC1 5-2 SPVC
- Serial #: L-8246
- Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

- Manufacturer: NUCFIL
- Model #: 019DS
- Serial #: KL-450
- Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% CW ±6% CCW	Tolerance:	±3% CW ±6% CCW

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

☑ Yes ☐ No

Print Name: BRIAN GALLEGOS Signature: [signature] Z#: 267129

5. Weigh Drum Assembly

RECORD weight information

- Tare witght (lbs) 75.8
- File ID #: 019065

☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print:	BRIAN GALLEGOS	Operator Sign:	[signature]	Z#: 267129	Date: 8-13-13
Verifier Print:	[illegible]	Verifier Sign:	[signature]	Z#: 116662	Date: 08-19-13

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

DRUM ID#: 94215

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date 09-11-13

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

--- Tolerance +/-3% CW +/-6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs) 244.0

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 08-19-13

Verifier Print/Sign: Michael Montoya Date: 8-19-13

1B

Date: 8-13-13 AV

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

Drum ID#: 94216

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 #: 023 7720
Date of Manufacture: 13

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CNC-15-2 SPVC
Serial #: L-10027
Date of Manufacture: 5-0

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 019 DS
Serial #: KL-448
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100216
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/- 3% +/- 6% Rdg

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-200
Tolerance: +/- 3% +/- 6% Rdg

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

[x] Yes [ ] No

Print Name: Frederick Archuleta Signature: [signature] Z#: 228826

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (lbs) 760
File ID #: 019085

- [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: Frederick Archuleta Operator Sign: [signature] Z#: 228826 Date: 8-13-13

Verifier Print: James Sabal Verifier Sign: [signature] Z#: 116662 Date: 08-19-13

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

DRUM ID#: 94216

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 09-11-13

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

Tolerance +/-3% CW +/-6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

✓ 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): 449.8

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: James [illegible] Date 08-19-13

Verifier Print/Sign: MICHAEL MORRISON Date: 8-19-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S853482 Container Type: 55-GAL Gross Weight (lbs): 495

Inner Seal #: 020610 Filter Prefix: LAVC Filter Serial #: 01895

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: No BDR

TWSR Comments: LEACHED PROCESS RESIDUE MST 12 A0142

Total PE-Ci Activity: 8.08E 00 Equivalent Combustible PE-Ci: 3.03E 00 AM-241 PE-Ci: 6.79E-01

Total Fissile Gram Equivalents: 87.4 Total Surface Dose Rate (mrem/hr): 8

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 6/7/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured Liquid Location: 22"

Certified RTR Comment: None

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

Security Determination: ✓ Green Yellow

Remediation Determination: VE ✓ PID Split Repack

Estimated 30-cm Dose Rate (mrem/hr): <100 >100 and <1,000 ✓ >1,000 and <10,000 11/28/12 >10,000

TRUCON Code: None Production Control Comments:

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

WDP Engineering

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

Processing Determination: ✓ Accept Reject

WDP Engineering Comments: Nitrate salts

Net Wt: 435# Generator info shows 10 items of nitrate salts, weights range from 11-47#. No RTR BDR available for review. Nitrate salts are typically packaged in plastic bags + can contain undocumented liquids. RTR PS shows presence of liquids, impenetrable item, unpunctured liner. Nitrate salts require repack w/ admixture. No chemicals identified, nitrate salts carry waste codes for chromium lead + mercury.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 1112609 (Z Number) / 12/12/12 (Date)

TRU Remediation Operations

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

Other Specific Safety Concerns: USE Proper PPE And Kitty Litter Ratio To not push or press on waste with hands. Use Hemmaway tools

Processing Determination: ✓ Accept Reject

TRU Remediation Operations Comments:

Performed By: Jose Jerez (TRU Remediation Operations (Print)) / Jose Jerez (Signature) / 221452 (Z Number) / 7-31-13 (Date)

IHS Review

May contain lead, Chromium, and Mercury, no others noted

Joey Smallwood 241659 7-23-13

Noncertified TRU Waste Drum Item Information

DrumID: 020610

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	5LR6-12NE1		15.450	NITRATE SALTS		23.35	52	1/13	G468	
2	5LR6-12NW1		21.300	NITRATE SALTS		7.18	52	1/13	G468	
3	5LR7-13NE1		20.840	NITRATE SALTS		13.97	52	1/13	G468	
4	5OX4-14NW1		6.850	NITRATE SALTS		7.87	53	1/13	G468	
5	5OX4-14NE1		5.000	NITRATE SALTS		2.26	53	1/13	G468	
6	5MX2-15NW1		6.400	NITRATE SALTS		4.17	52	1/13	G468	
7	5OX5-17NE1		10.010	NITRATE SALTS		7.72	52	1/13	G468	
8	5DS3-18NW1		19.550	NITRATE SALTS		14.76	52	1/13	G468	
9	5DS3-18NE1		16.370	NITRATE SALTS		8.25	52	1/13	G468	
10	5LR7-19NW1		18.540	NITRATE SALTS		3.59	52	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 224.3

Material Type	SNM (grams)	Items Net Wt (kg)
52	82.99	128.46
53	10.13	11.85
Totals	93.12	140.31

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 2.13.13

Container No. (5.[1])	S853482					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55gal					
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])	16.87 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

7.23.13

5.[7] Certified CCP Technician:

Performed By: Rick Jagielski (CCP (Print)) 2666088 (Z #)

Reviewed By: Gabe Romero (CCP (Print)) 236973 (Z #)

Comments: N/a

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

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

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z #) 7.23.13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130213C\
Data File : S853482.D
Acq On : 13 Feb 2013 2:47 pm (#1); 13 Feb 2013 2:42 pm (#2)
Operator : RJ
Sample :
InstName : Unit 8
Misc : 55 Gal drum, through unobstructed Nucfil-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 13 14:51:57 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	5.299	GC1	18993m	76.87	ppm	

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

H2-CH4.M Wed Feb 13 14:52:04 2013

8-19-13

0600 Assuming WCRRF Operations Center - Cleland

0605 ASSUMING WCRRF OPERATIONS IN TRAINING. HOWARD SMITH

0610 STARTING OUTSIDE ROUNDS

0611 PER SDM, BOILERS SHUT DOWN, OK TO CONTINUE

0642 STARTING INSIDE ROUNDS

0645 ITEM #63 ~~OUTSIDE~~ INSIDE ROUNDS OOS, POD IN PLACE, OK TO CONTINUE

0653 ITEM #3 OUTSIDE ROUNDS UNSAT, FSR IN PLACE. OKAY CONTINUE.

0712 ITEM 19 OUTSIDE ROUNDS UNSAT. OK TO CONTINUE PER SDM

0720 COMPLETE OUTSIDE ROUNDS

0724 INSIDE AND OUTSIDE ROUNDS ~~SIGNED~~ 8/19/13 SIGNED OFF BY S

0812 OPERATIONS MODE FOR WCRRF & TA 50-69

0818 STARTED MOVEMENT INTO TA50-69

0833 MOVEMENT INTO TA50-69 COMPLETE.

0852 PERMISSION GRANTED TO LOWER VEHICLE ACCESS GATE FOR SHIPMENT OUT OF WCRR

0914 BAGGING ON S853482

0934 BAGGING ON OF S853482 COMPLETED.

0953 VEHICLE ACCESS GATES SECURED, SHIPMENT COMPLETE

1125 BAGGING OFF 1 DAUGHTER, BAGGING ON 1 DAUGHTER CONTINUING THE PROCESS.

1144 BAG ON, BAG OF COMPLETE.

1248 OPERATORS EXIT BUILDING FOR LUNCH.

1341 OPERATOR RETURN TO PROCESSING

1427 BAGGING OFF ONE DAUGHTER, AND 1 POC, BAGGING ON ONE DAUGHTER, DENESTING THREE DRUMS.

1611 BAG OFF BAG ON COMPLETE BAG ON S864647

1652 STARTING OUTSIDE ROUNDS

1656 STARTING INSIDE ROUNDS

1659 ITEM #3 OUTSIDE ROUNDS, FSR IN PLACE, OKAY TO CONTINUE

1705 ITEM #63 INSIDE ROUNDS, POD IN PLACE OKAY TO CONTINUE

1712 ITEM #19 OUTSIDE ROUNDS. FSR IN PLACE OKAY TO CONTINUE

1713 INSIDE ROUNDS COMPLETE

1714 OUTSIDE ROUNDS COMPLETE

CONTINUE ON NEXT PAGE - HA SMITH

8-19-13 DAYSHIFT

0600 Assumed the dayshift SOM position. Reviewed the shift turnover checklist. Noting boiler is off and bleed valve isolation is caution tagged out.

0634 Completed attending the pre-job brief conducted by Gilbert the SOS. The safety topic was watching out for each other and take breaks as needed since dayshift is noted to be shorthanded. The current condition of the facility was provided to operations, there is one scheduled transfer out, There are two shift orders in affect - Manual Drum Movements - WCRP-SH-13-003 R2 and Precautions to Prevent Bag Tears - WCRP-SH-13-005 R0.

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

0740 Reviewed Rounds, item 19 on Outside Rounds noted unsat. Caution Tag is placed on the Boiler Valve BPV-031. An FSR was submitted to repair, replace. OM notified.

0812 Mode Change: 50/69 and yard transition from Cold/WARM to Operations/Operations

0819 Outside Operations initiate movement of Parent Drum into facility.

0840 4 Parent drums - SP-57 were moved into the facility 50/69.

0914 Inside operations complete prepping and initiate the 1st bag on of Parent 5853482

0934 Bag on is noted completed

0948 The transfer out was completed - 21 drums total.

1125 Inside operations report bagging off 1 daughter and 1 POC and bag on of another daughter and continue to process. Neutralizer was required for the liquid.

1144 Bag off and Bag on was completed.

1201 Supported daily call in with PM/OM and SOM -

1235 Operators exit the Facility for lunch and note 3 gallons of liquid was from the Parent.

1346 Operators return to initiate processing.

1427 Operators initiate bagging off one daughter and bagging on another, and de-nest 3 drums

1611 Inside operations report denesting completed, and bag off of parent complete and bag on of Parent 5864647 was completed.

1630 Reviewed Outside rounds - All noted Satisfactory except #19 Boiler - Notation/Comment

1804 Conducted shift checklist turnover with Night shift SOM. Conducted PFITS brief.

1809 Secured the SOM position [signature]

8-30-13

No further Comments this page
[signature]

8/19/13 WCRK SOS LOG BOOK

0600 Assuming SOS Position [signature]

0605 Conducted shift brief with operators Discussed status with Boiler Leak unit has been turned off Per CSE need to make comments on Rounds. It will be repaired wednesday or thursday Per SOM we are short handed today so will not work thru lunch. brief operators to take breaks as needed.

0630 shift brief completed.

0724 Reviewed Inside and outside Rounds.

0812 Mode Change Complete WCRKF In Operations

0818 Starting Move in to 50-69

0837 Move In Complete.

0852 Starting Shipment out of 50-69 to 6

0914 Bagging on ~~88~~ 5853482.

0932 Bag on/off Complete

0953 Shipment Complete

1125 bagging off 1 Daughter, Bag on Another

1144 Bag on Bag off Complete

1248 Operator exiting for lunch

1346 Operators Back In to process.

1422 Bagging off one Daughter and 1 POC Bagging on one Daughter Denesting three Drums.

1611 Bag off/on complete Bagging on 5864647

1652 Starting outside Rounds

1656 Starting Inside Rounds

1718 Inside Rounds Complete

1714 outside Rounds Complete

1806 Reviewed Inside and outside Rounds

1808 Shift turnover with Clayton Mullins [signature]

Was further entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0103
Examination Date:	8/21/2013
Waste Container ID:	94215
Video/Audio Recorded Media Number:	LA-RTR2-13-0103 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 110.5 kg Tare Wt.: 33.4 kg Net Wt.: 77.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 94215

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.2
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	4.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	68.9
Soils (S):	
Total WMP Weight:	77.1

CCP Radiography Data Sheet

Waste Container ID: 94215

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

Comments:N/A

RTR Operator:

Benito Maestas		8/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94215	Count Sequence Number:	23492
Operator:	D3PW2DK1\operator		
Assay Start:	8/22/2013 12:40:12 PM		
Description 1:	1LANDA1832		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 77.1 kg	Net:	77.1 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.620 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23492	Batch Number:	1LANDA1832
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:	94215	Analysis Date:	8/22/2013

Net Weight	77100.0 g		
Pu mass	2.75E+001	+-	4.23E+000 g
TRU Alpha Activity	6.18E+000	+-	2.25E+000 Ci
TRU Activity Concentration	8.02E+004	+-	2.92E+004 nCi/g
Pu-239 Equivalent Activity	6.25E+000	+-	2.25E+000 Ci
Pu-239 FGE	2.59E+001	+-	3.96E+000 g
Decay heat	2.01E-001	+-	7.47E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.50E-001	1.06E-004	1.82E-005	3.59E-006
PU238	2.52E-003	4.31E-002	6.62E-003	3.17E-005
PU239	2.58E+001	1.60E+000	2.45E-001	1.17E-003
PU240	1.72E+000	3.91E-001	6.01E-002	2.88E-004
AM241	1.21E+000	4.15E+000	2.24E+000	9.28E-002
PU241	3.51E-002	3.62E+000	5.55E-001	2.66E-003
PU242	6.89E-003	2.72E-005	4.18E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.96E-007
U233	<LLD	<LLD	0.00E+000	8.76E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.47E-006
U238	<LLD	<LLD	0.00E+000	1.24E-005
AM243	4.55E-003	9.11E-004	1.59E-004	1.19E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 8.26.13

ITR: [signature] Date: 8-27-13

Automated Independent Technical Review

Count Sequence Number: 23492 Batch Number: 1LANDA1832
Counter ID: MCS HENC #1
Container ID: 94215
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/22/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlain Date: 8-26-13

Waste Container ID: **94215**

BDR Number: **LA13FG12087**

Sampling Date: **9/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	254.89	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130904c\
Data File : 94215.D
Acq On : 4 Sep 2013 12:49 pm (#1); 4 Sep 2013 12:48 pm (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 04 12:53:30 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.893	GC1	72708m	254.89	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0103
Examination Date:	8/21/2013
Waste Container ID:	94216
Video/Audio Recorded Media Number:	LA-RTR2-13-0103 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 204.0 kg Tare Wt.: 33.4 kg Net Wt.: 170.6 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: 94216

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):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	156.6
Soils (S):	
Total WMP Weight:	170.6

CCP Radiography Data Sheet

Waste Container ID: 94216

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	[X] Yes [ ] No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	[ ] Yes [X] No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	[ ] Yes [X] No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	[ ] Yes [X] No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	[ ] Yes [X] No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	[ ] Yes [X] No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	[ ] Yes [X] No
Is there an indication of wastes containing explosives or compressed gases?	[ ] Yes [X] No
Is there an indication of PCBs liquids?	[ ] Yes [X] No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	[ ] Yes [X] No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	[ ] Yes [X] No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	[ ] Yes [X] No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	[ ] Yes [X] No
Are there sealed containers GREATER than 4 liters?	[ ] Yes [X] No
Are there indications of inadequate protection for heavy and/or sharp objects?	[ ] Yes [X] No
Comments:N/A	

RTR Operator:

Print Name	Signature	Date
Benito Maestas	[signature]	8/21/2013

NDA 2000 Assay Report

Item Information

Item ID:	94216	Count Sequence Number:	23491
Operator:	D3PW2DK1\operator		
Assay Start:	8/22/2013 11:49:50 AM		
Description 1:	1LANDA1832		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 171.0 kg	Net:	171.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.870 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: 23491
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 94216

Batch Number: 1LANDA1832
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 8/22/2013

Net Weight	171000.0 g	
Pu mass	9.82E+001 +-	1.74E+001 g
TRU Alpha Activity	1.38E+001 +-	3.75E+000 Ci
TRU Activity Concentration	8.07E+004 +-	2.19E+004 nCi/g
Pu-239 Equivalent Activity	1.40E+001 +-	3.75E+000 Ci
Pu-239 FGE	9.23E+001 +-	1.62E+001 g
Decay heat	4.44E-001 +-	1.24E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.52E-001	1.07E-004	2.25E-005	4.93E-006
PU238	1.08E-002	1.84E-001	3.26E-002	3.83E-005
PU239	9.19E+001	5.70E+000	1.01E+000	1.18E-003
PU240	6.16E+000	1.40E+000	2.47E-001	2.90E-004
AM241	1.90E+000	6.52E+000	3.60E+000	1.17E-001
PU241	1.20E-001	1.23E+001	2.18E+000	2.56E-003
PU242	1.97E-002	7.77E-005	1.37E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.46E-007
U233	<LLD	<LLD	0.00E+000	1.16E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.24E-006
U238	<LLD	<LLD	0.00E+000	2.11E-005
AM243	4.40E-003	8.80E-004	1.87E-004	1.52E-005

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 8-26-13

ITR: [illegible] Date: 8-27-13

Automated Independent Technical Review

Count Sequence Number: 23491 Batch Number: 1LANDA1832
Counter ID: MCS HENC #1
Container ID: 94216
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/22/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chandler Date: 8-26-13

Attachment 4 -- Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **94216**

BDR Number: **LA13FG12087**

Sampling Date: **9/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	510.16	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130904c\
Data File : 94216.D
Acq On : 4 Sep 2013 10:51 am (#1); 4 Sep 2013 10:49 am (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 04 10:54:55 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.897	GC1	145524m	510.16	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0103
Examination Date:	8/21/2013
Waste Container ID:	94217
Video/Audio Recorded Media Number:	LA-RTR2-13-0103 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 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 1 layer
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 94217

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 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):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	10.4
Soils (S):	
Total WMP Weight:	14.4

CCP Radiography Data Sheet

Waste Container ID: 94217

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments:
Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Benito Maestas		8/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94217	Count Sequence Number:	23489
Operator:	D3PW2DK1\operator		
Assay Start:	8/22/2013 10:24:04 AM		
Description 1:	1LANDA1832		
Description 2:	POC - Gross Wt. = 159.5 Kg		
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

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IA 8-27-13

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23489
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 94217

Batch Number: 1LANDA1832
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 8/22/2013

Net Weight	14400.0 g	
Pu mass	1.83E+001 +-	5.91E+000 g
TRU Alpha Activity	3.89E+000 +-	1.72E+000 Ci
TRU Activity Concentration	2.70E+005 +-	1.19E+005 nCi/g
Pu-239 Equivalent Activity	3.96E+000 +-	1.72E+000 Ci
Pu-239 FGE	1.68E+001 +-	5.89E+000 g
Decay heat	1.27E-001 +-	5.69E-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	5.16E-007
U233	<LLD	<LLD	0.00E+000	5.29E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.58E-006
NP237	4.81E-002	3.39E-005	6.13E-006	2.24E-006
PU238	4.68E-003	8.01E-002	3.04E-002	1.71E-003
U238	<LLD	<LLD	0.00E+000	8.26E-006
PU239	1.67E+001	1.04E+000	3.65E-001	2.21E-002
PU240	1.50E+000	3.41E-001	1.29E-001	7.28E-003
AM241	7.10E-001	2.43E+000	1.67E+000	1.13E-001
PU241	3.71E-002	3.82E+000	1.45E+000	8.15E-002
PU242	1.21E-002	4.77E-005	1.81E-005	0.00E+000
AM243	1.86E-003	3.71E-004	6.76E-005	7.21E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 8-26-13

ITR: [signature] Date: 8-27-13

Automated Independent Technical Review

Count Sequence Number: 23489 Batch Number: 1LANDA1832
Counter ID: MCS HENC #1
Container ID: 94217
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/22/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheila Chambers Date: 8-26-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **94217**

BDR Number: **LA13FG12087**

Sampling Date: **9/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	195.80	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130904c\
Data File : 94217.D
Acq On : 4 Sep 2013 10:45 am (#1); 4 Sep 2013 10:43 am (#2)
Operator : EL
Sample :
Misc : POC through Drum Filter, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 04 10:49:00 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.897	GC1	55851m	195.80	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

S853641

S853641

Container 746983

File Options Reports Help

S853641

746983	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

S853641

S853641
- LA00000068300
- LA00000068321
- LA00000068310
- LA00000068353 - EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.01	%			

9-4-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S8536041

6.2[4] Date Processed: 09/04/13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☑ Repack

4.1[6][B] Prohibited Items:
☑ Sealed Containers > 4L ☐ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D002, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) 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: Kevin Bolusoak / Kevin Bolusoak / 123849 / 09/04/13
Waste Handling Tech (print) Signature Z # Date

UCI

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5853641

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 458.3 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 80.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 538.8 lb

6.2[7] (S) Total Parent Drum Weight < 624 lb (SR 4.5.1): ☑ SAT ☐ UNSAT

6.2[17][D] Drum lift hinge pin retaining clip replaced Initials: [illegible] / / Date

6.2[28] Approval to leave a parent drum attached to the WCG overnight

EWMO-FOD (print) Signature / / Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S853641

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	108300	108310		
10.1[4]	Daughter Drum Filter No.	KL-547	KL-550	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-6717	L-16626		
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.	16W1.5.2WVE			
	Serial No.	L-6901			
	Date of Manufacture	1-13			
10.2[5]	POC ID No.	02W40/U6321			
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	GE 257720		N/A	
10.2[14]	POC Assembly Gross Weight (lb)	360.6			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1500.5			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[5][A]	Free Liquid Volume/Units	4 GAL			
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 (%)	90%	100%	N/A	
10.5[3]/10.6[2]	Description Waste Added During Processing	Stub outs Kitty litter	STUB OUTS Kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S853641

Comments: Lead Shielding, Liquid, Poly Liner, NITRATE SALTS, PLASTIC

11.1[1] Performed By: CHERRO BISHOP [signature] 2377204 5-13
Waste Handling Tech (print) Signature 7 # Date

11.1[8] Reviewed By: [signature] [signature] 2377204 5-13 1630
SOS or designee (print) Signature 7 # Date Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 8/27/13

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 o/cw ±6 o/ccw	±3 o/cw ±6 o/ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1898
Manufacture Date: 10/11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 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: NC

8.1[1] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 8/27/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: [signature] / [signature] / 149235 / 9/5/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 9/4/13

WCRRF OVERPACK DRUM CLOSURE DAT

LA00000068353

7.[17] Overpack Drum Unique Identifier No.:

7.[23] Overpack drum closure ring torque wrench information:

M&TE No.: 038373
Cal. Expiration Date: 09/11/13
Range in ft-lb: 10-80
Tolerance: +/-3%CW and +/-6%CCW

7.[24] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Kevin Beluscak / Kevin Beluscak / 123844 / 09/05/13
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): 190.4 lb

Comments: N/C

8.1[1] Performed By: Gerald Espinoza / [signature] / 125770 / 9-5-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: [signature] / [signature] / 149235 / 9/5/13
Supervisor or designee (print) Signature Z # Date

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 68300

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 #: 0237720
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: BOP
Model #: 6CPVC1.5.2.SPVC
Serial #: L-6717
Date of Manufacture: 01-13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- ☑ Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- ☑ Place cardboard/plastic liner into drum liner bag/filter assembly
- ☑ Line up filter with drum seam
- ☑ Place liner/bag/filter assembly into drum
- ☑ Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- ☑ Place lid and ring onto drum
- ☑ Tighten ring sufficiently to simply hold lid in place
- ☑ Torque 2" bung plug
- ☑ Apply sealant to filter threads, screw in ¾" bung hole, and torque
- ☑ Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 019DS
Serial #: KL-547
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100216
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±1.47cw ±1.42cw

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: ±3.6cw ±6/cw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.

☑ Yes ☐ No

Print Name: Jason Sulla Signature: [signature] Z#: 116662

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: Jason Sulla Operator Sign: [signature] Z#: 116662 Date: 08-27-13

Verifier Print: Kevin Belucak Verifier Sign: Kevin Belu Z#: 238199 Date: 09/05/13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 68300

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions.

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 09/11/13

Range/ Value (ft-lbs): 10-80

Tolerance +/- 3% cw and +/- 6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

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.): 2584

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: Kevin Bekscek Date: 09/05/13

Verifier Print/Sign: Brandon Chavez Date: 9-5-13

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 108310

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501321
Lot #: 0237720
Date of Manufacture: 13

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: LCPC1.5-2SPIC
Serial #: L-6626
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 #: 019DJ
Serial #: KL-550
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	± 4% cw ± 6% ccw	Tolerance:	± 3% cw ± 6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: MICHAEL MONTOYA Signature: [signature] Z#: 191352

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 762
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191352 Date: 8/27/13
Verifier Print: GERALD ESPINOZA Verifier Sign: [signature] Z#: 237720 Date: 9-5-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: U8310

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 #: 033333

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 10-80

Tolerance ±3% CW ±6% CCW

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

N/A Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 446.2

Scale ID#: 0190165

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

GERALD ESTRADA

Operator Print/Sign: [signature] Date: 9-5-13

Verifier Print/Sign: [signature] Date: 9-5-13

1974
SP70

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S853641 Container Type: 55-GAL Gross Weight (lbs): 475
Inner Seal #: 020613 Filter Prefix: LAVC Filter Serial #: 01942
[illegible] Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 A0111
Total PE-Ci Activity: 1.45E+01 Equivalent Combustible PE-Ci: 5.43E+00 AM-241 PE-Ci: 1.33E+00
Total Fissile Gram Equivalents: 148.2 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/30/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 26
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☒ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / [signature] / 100681 / 12/20/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt. 415#. Generator info shows, 11 items of nitrate salts; weights range from 8-66#. No RTR BDR. Nitrate salts typically packaged in plastic bags; undocumented liquids t/or debris may be present. RTR PS shows prohibited liquids t impenetrable object(s). No chemicals identified; applicable waste codes are for chromium lead + mercury. Nitrate salts require repack w/ admixture

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 1/18/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☒ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☒ Accept ☐ Reject
TRU Remediation Operations Comments: USE PROPER PPE mix Ratio

Performed By: G M / [signature] / 149235 / 6/19/13
TRU Remediation Operations (Print) Signature Z Number Date
Jose Jerez [signature] 221452 6/22/13

IHS Review. Jobing Small Can CSP, May contain Pb, Hg + Cr
No other concerns 1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 020613

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	5LR3-5NW1		16.410	NITRATE SALTS		3.92	52	1/13	G468
2	5LR3-5NE1		16.700	NITRATE SALTS		1.56	52	1/13	G468
3	5OX1-6NE1		6.530	NITRATE SALTS		2.7	52	1/13	G468
4	5OX1-6NW1		13.970	NITRATE SALTS	TW	2.57	52	1/13	G468
5	5OX2-8NW1	(??)	7.620	NITRATE SALTS	31.64	[redacted]	52	1/13	G468
6	5LR4-9NE1		29.720	NITRATE SALTS		26.48	52	1/13	G468
7	5LR4-9NW1		20.120	NITRATE SALTS		15.46	52	1/13	G468
8	5LR5-10NE1		6.200	NITRATE SALTS		4.92	52	1/13	G468
9	5OX3-11NE1		15.550	NITRATE SALTS		65.92	53	1/13	G468
10	5DS1-16NE1	TW 3.89	[redacted]	NITRATE SALTS		1.39	52	1/13	G468
11	5DS2-16NW1		5.230	NITRATE SALTS		2.55	52	1/13	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 215.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	64.12	126.09
53	65.92	15.55
Totals	130.04	141.64

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: 4/18/13

Container No. (5.[1])	3853641					
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])	2313.75 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: Erik Loechell, 234183
CCP (Print) Z#

Reviewed By: Nathan Wales, 238866
CCP (Print) Z#

Comments:

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Susan Ramsey, Susan B. Ramsey, 100681, 5/20/13
Waste Handling Operator (print) Signature Z# Date

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130418c\
Data File : S853641.D
Acq On : 18 Apr 2013 1:59 pm (#1); 18 Apr 2013 1:58 pm (#2)
Operator : EL
Sample :
Misc : 55 GAL DRUM FROM FILTER-UN-19DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 18 14:10:26 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed Feb 20 11:23:15 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.057	96	8488359	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6862874	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.903	GC1	659955m	2313.75 ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

VOCGAS.M Thu Apr 18 14:10:34 2013 UNIT12

9-4-13
1815 Assuming UXRR operations center - JCaeman
1828 Pre-job being conducted by SOS.
1855 Pre-job concluded.
1922 Operators entering 5069 to begin operations on S813562.
2054 Initiating a drum movement from 5069 to a transportainer.
2155 Drum movement out of 5069 complete.
2245 Bagging off 1 daughter, bagging on S853641.
2315 Bag off/on complete.
0030 Operators out for lunch.
0130 Operators entering 5069 to resume operations.
0226 Bagging off 1 daughter, bagging on another daughter.
0241 Bag off/on complete.
0242 Initiating a drum movement from transportainer to 5069.
0301 Drum movements completed.
0400 Beginning outside rounds.
0420 Item #19 to unset, Okay to proceed, FSL in place.
0428 Outside rounds complete.
0444 Bagging off 1 daughter, 1 POC, bagging on S832143.
0450 Beginning inside rounds.
0504 Item #63 to OOS, Okay to proceed, POD in place.
0534 Bag off/on complete.
0540 Inside rounds complete.
0546 Both rounds reviewed by SOS.
0612 Shift turnover with OCO, Clarissa Delardo - JCaeman
9-4-13

no further entries this page

9-4-13 NIGHTSHIFT WCAR- SOM

1801 Reviewed the shift turnover check list and assumed the NIGHTSHIFT SOM position for Quadrant.

1830 Completed attending the pre-job brief conducted by the SOS (Jose) the safety topic was sharps in the glovebox - and outside slips trips and falls. Operators inside are required to place plastic down over the paint that is peeling, place furniture pads on bottom of stands, also introduced G-Mix ARMORS Rep's 55 and 853, and becautious during bag off of parent - noted a rust spot. The shift focus for sliding drums was discussed - WCAR-SH-13-003-R2 Drum movements and WCAR-SH-13-005 R0 Precautions for bag outs. Also Rounds MOV was discussed.

1950 Completed follow-up with MSDS for LLW glycol in 55 gallon drum. Conducted follow-up requesting documentation for 8" round LCG filters/gaskets and repair of PDI-012 noted OOS on rounds.

1951 Late entry for 1922 - Operators enter 50/69 to initiate work

2040 SOM entered 50/69 and observed operators placing tape on floor where paint chipped up, and operators placed furniture pads on foot stands.

2050 Inspections were completed for the drum grabber.

2057 Operators initiated movements (7 daughters moved out) (empty daughters and 85s moved in, and 2 parents moved in). Observed correct tools utilized for placement of the drum coasters, radiological boundaries were observed, and adherence to the Drum Movement Shift Order was observed satisfactory.

2130 All drum movements were secured with WCAIS data base was updated - no issues noted, also operators initiated wiping down glovebox gloves and sweeping remaining contents of parent drum into the daughter drum prior to bag off.

2200 Wipe down of glove box was completed, and operators weight parent for bag on.

2245 Operators initiate bag off of Parent 5813562 and daughter, and initiate bag on of 5853641. (two daughters were generated with 5813562)

2320 Bag off and bag on completed.

2345 Parent drum 5853641 - SP-72 contains ~ 3-4 gallons of liquid noted with pH ~ 3

0010 Operators break for lunch.

0150 Operators return from lunch

0224 Operators bag off one daughter and bag on another and continue to process.

0445 Inside Operations bagging off 1 daughter / PDC and bagging on Parent 5832143, Also 2 parents were transferred into 50/69

0615 Reviewed Shift turn over checklist with Dayshift SOM

0616 Secured the nightshift SOM position for Quadrant.

No further entries this page

9/4/13 WCRR 505 Log Book

1810 Performed 505 turnover with off going 505 Gilbert Martinez, Assuming 505 position for the evening. [illegible]

1820 Starting Pre-Job brief, Safety Topic, discussing slips trips and falls. Discussed paint peeling up in 50-69 in areas that have been painted. Operators will need to lay plastic down in areas where paint is chipping up. Once plastic is laid down, Parent drums and daughters are ready to be bagged off, operators will need to do a final wipe down prior to bagging off. Two additional parents and empties are in the high bay and ready to be moved in once plastic is complete RCT turnover identified sharps in waste material being processed, ensure operators are wearing heavy duty gloves during processing.

1850 Pre-Job Complete

1915 Operators gathering supplies to take into processing facility to secure areas where paint is peeling

1970 Operator called out stating that area where paint is peeling is under the stands, they are placing tape over these areas and putting padding on the stands to hopefully assist in not peeling any more paint

2015 Operators finalizing the taping and placement of furniture pads on stands inside of 50-69.

2054 Moving out 7 daughter drums, moving in 2 parents (85 gallon and (55 gallon and empties also.

2155 Move out and move in complete 7 daughter drums moved in Transfer time 19

2231 Bagging off Parent and ~~daughter~~ daughter 11-4-13 that was left bagged on from day crew, bagging on Parent 5853641

2114 Bag on complete

0030 Operators breaking for lunch.

0130 Operators returning from lunch and will continue proc[illegible] Operators reporting approximately 3 gallons of liquids processed so far on shipment.

0225 Bagging off one daughter and bagging on second

0327 Moved in two more parent drums into 50-69, both are 55 gallon drums.

9/4/13 Continued from Previous Page WCRR SOS LogBook

0413 Bagging off one daughter and 1 BC, bagging on 5832143

0533 Bag on Bag off complete.

0546 Reviewed and signed rounds inside and outside

0614 Turning over SOS position to Gilbert Martinez, Securing SOS position for the day. [illegible]

No further entries on this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0108
Examination Date:	9/12/2013
Waste Container ID:	68300
Video/Audio Recorded Media Number:	LA-RTR2-13-0108 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.: 117.0 kg Tare Wt.: 33.4 kg Net Wt.: 83.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68300

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	76.6
Soils (S):	
Total WMP Weight:	83.6

CCP Radiography Data Sheet

Waste Container ID: 68300

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: N/A	

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	9/12/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68300	Count Sequence Number:	16496
Operator:	DCLTD231\Operator		
Assay Start:	9/12/2013 12:40:57 PM		
Description 1:	2LANDA1222		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 83.6 kg	Net:	83.6 kg
Container:	Volume: 208.0 l	Full:	70.0 %
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

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16496	Batch Number:	2LANDA1222
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68300	Analysis Date:	9/12/2013

Net Weight	83600.0 g		
Pu mass	3.59E+001	+-	6.90E+000 g
TRU Alpha Activity	8.71E+000	+-	3.23E+000 Ci
TRU Activity Concentration	1.04E+005	+-	3.86E+004 nCi/g
Pu-239 Equivalent Activity	8.81E+000	+-	3.23E+000 Ci
Pu-239 FGE	3.35E+001	+-	6.40E+000 g
Decay heat	2.84E-001	+-	1.07E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.17E-001	8.25E-005	1.35E-005	2.22E-006
PU238	5.91E-003	1.01E-001	1.94E-002	5.34E-005
PU239	3.33E+001	2.06E+000	3.97E-001	1.09E-003
PU240	2.51E+000	5.71E-001	1.10E-001	3.02E-004
AM241	1.74E+000	5.97E+000	3.20E+000	8.11E-002
PU241	5.60E-002	5.77E+000	1.11E+000	3.05E-003
PU242	1.47E-002	5.82E-005	1.12E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.66E-007
U233	<LLD	<LLD	0.00E+000	8.75E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.89E-006
U238	<LLD	<LLD	0.00E+000	1.59E-005
AM243	2.29E-003	4.59E-004	7.52E-005	1.34E-005
CM243	4.82E-007	2.36E-005	1.49E-005	2.23E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 9/17/13

1TR: [signature] Date: 9.17.13

Automated Independent Technical Review

Count Sequence Number: 16496 Batch Number: 2LANDA1222
Counter ID: HENC #2
Container ID: 68300
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/12/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 9-16-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68300**

BDR Number: **LA13FG2102**

Sampling Date: **9/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	416.27	
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\130925C\
Data File : 68300.D
Acq On : 25 Sep 2013 10:48 am (#1); 25-Sep-13, 10:48:11 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 25 10:56:32 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	4885504	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.887	117	3709619	177.50 ppmv	0.03
Target Compounds					Qvalue
1) Hydrogen	1.610	GC1	3130	416.27 ppmv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0108
Examination Date:	9/12/2013
Waste Container ID:	68310
Video/Audio Recorded Media Number:	LA-RTR2-13-0108 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.: 202.5 kg Tare Wt.: 33.4 kg Net Wt.: 169.1 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: 68310

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	160.6
Soils (S):	
Total WMP Weight:	169.1

CCP Radiography Data Sheet

Waste Container ID: 68310

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: N/A	

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	9/12/2013
Print Name	Signature	Date

```
|-----------------------------------------------------------------------|
|                          NDA 2000 Assay Report                        |
|-----------------------------------------------------------------------|

*************************    Item Information    ************************

Item ID:            68310              Count Sequence Number:  23606
Operator:           D3PW2DK1\operator
Assay Start:        9/19/2013  10:33:11 AM
Description 1:      1LANDA1844
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       169.0   kg        Net:    169.0 kg
Container:          Volume:    208.0   l        Full:     95.0 %
Density:                         0.860 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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Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23606
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68310

Batch Number: 1LANDA1844
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/19/2013

Net Weight	169000.0 g		
Pu mass	6.73E+001	+-	1.28E+001 g
TRU Alpha Activity	1.13E+001	+-	3.37E+000 Ci
TRU Activity Concentration	6.67E+004	+-	1.99E+004 nCi/g
Pu-239 Equivalent Activity	1.16E+001	+-	3.37E+000 Ci
Pu-239 FGE	6.20E+001	+-	1.17E+001 g
Decay heat	3.65E-001	+-	1.11E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.26E-001	8.85E-005	1.86E-005	4.29E-006
PU238	1.53E-002	2.62E-001	4.99E-002	5.96E-005
PU239	6.14E+001	3.81E+000	7.25E-001	8.65E-004
PU240	5.58E+000	1.27E+000	2.41E-001	2.87E-004
AM241	1.73E+000	5.94E+000	3.28E+000	9.70E-002
PU241	1.76E-001	1.81E+001	3.45E+000	4.12E-003
PU242	6.94E-002	2.74E-004	5.21E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.95E-007
U233	<LLD	<LLD	0.00E+000	9.19E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.61E-006
U238	<LLD	<LLD	0.00E+000	1.86E-005
AM243	1.88E-003	3.76E-004	7.95E-005	1.23E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 9-24-13

ITR: [signature] Date: 9-24-13

Automated Independent Technical Review

Count Sequence Number: 23606 Batch Number: 1LANDA1844
Counter ID: MCS HENC #1
Container ID: 68310
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/19/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52 and 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. Marah Date: 9/23/13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68310**

BDR Number: **LA13FG2102**

Sampling Date: **9/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	152.01	
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\130925C\
Data File : 68310.D
Acq On : 25 Sep 2013 12:01 pm (#1); 25-Sep-13, 12:00:37 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 25 12:09:40 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.522	96	4856371	205.75 ppmv	0.00
15) Chlorobenzene-d5	5.842	117	3664502	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.616	GC1	1143m	152.01 ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

5853641

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0108
Examination Date:	9/12/2013
Waste Container ID:	68321
Video/Audio Recorded Media Number:	LA-RTR2-13-0108 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 163.5 kg Tare Wt.: 145.1 kg Net Wt.: 18.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 68321

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	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):	4.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	14.4
Soils (S):	
Total WMP Weight:	18.4

CCP Radiography Data Sheet

Waste Container ID: 68321

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	9/12/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68321	Count Sequence Number:	23656
Operator:	D3PW2DK1\operator		
Assay Start:	9/26/2013 10:51:30 AM		
Description 1:	1LANDA1849		
Description 2:	POC, 163.5		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 18.4 kg	Net:	18.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.687 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:	23656	Batch Number:	1LANDA1849
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:	68321	Analysis Date:	9/26/2013

Net Weight	18400.0 g		
Pu mass	9.51E+001	+- 3.10E+001	g
TRU Alpha Activity	9.36E+000	+- 2.04E+000	Ci
TRU Activity Concentration	5.08E+005	+- 1.11E+005	nCi/g
Pu-239 Equivalent Activity	9.64E+000	+- 2.05E+000	Ci
Pu-239 FGE	8.87E+001	+- 3.09E+001	g
Decay heat	2.97E-001	+- 6.38E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	7.05E-009	9.73E-007	5.14E-007	0.00E+000
CS137	1.12E-008	9.73E-007	5.14E-007	5.06E-007
U233	<LLD	<LLD	0.00E+000	6.00E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.85E-006
NP237	1.38E-001	9.74E-005	1.78E-005	3.05E-006
PU238	8.70E-003	1.49E-001	5.62E-002	1.33E-003
U238	<LLD	<LLD	0.00E+000	1.39E-005
PU239	8.82E+001	5.47E+000	1.92E+000	4.91E-002
PU240	6.67E+000	1.51E+000	5.72E-001	1.36E-002
AM241	6.48E-001	2.22E+000	4.13E-001	1.20E-001
PU241	1.48E-001	1.53E+001	5.77E+000	1.37E-001
PU242	3.91E-002	1.54E-004	5.83E-005	0.00E+000
AM243	8.45E-004	1.69E-004	3.14E-005	8.61E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 10-1-13

ITR: [signature] Date: 10.1.13

Automated Independent Technical Review

Count Sequence Number: 23656 Batch Number: 1LANDA1849
Counter ID: MCS HENC #1
Container ID: 68321
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/26/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 9-30-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68321**

BDR Number: **LA13FG2113**

Sampling Date: **11/5/2013**

5853641

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	594.75	
74-82-8	Methane	142.14	U
67-56-1	Methanol	57.78	
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 : 68321.D
Acq On : 5 Nov 2013 2:49 pm (#1); 05-Nov-13, 14:48:51 (#2)
Operator : SA
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 14:57:29 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	3.581	96	4615076	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.878	117	3569713	177.50	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.615	GC1	4472m	594.75	ppmv	
4) Methanol	0.886	31	21309	57.78	ppmv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

VOCGAS.M Wed Nov 06 12:35:24 2013

S853771

Container Profile 747422

File Options Reports Help

S853771

747422	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

Genealogy

S853771

- S853771
  - LA00000068616
    - LASB02134
  - LA00000068612
  - LA00000068591 – EMPTY

Working Copy
Date: 11/4/13 HS

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 8853771

6.2[4] Date Processed: 11/5/13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☑ Repack

4.1[6][B] Prohibited Items:
☐ Sealed Containers > 4L ☐ Liquids ☐ Pressurized Containers ☑ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established: (> 300 PE-Ci Equivalent Combustible) (SAC 5.10.1.7.2) ☑ N/A
N/A
(Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☐ YES ☑ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: Edward Martinez [signature] 123941 11/5/13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5853771

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 441.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 83 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 524.6 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.: 5853771

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68612	68616		
10.1[4]	Daughter Drum Filter No.	LM-316	LM-315		A
10.1[4]	Daughter Drum Bag Filter No.	L-10363	L-10357	N	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	N	A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	1gallon			A
10.3[5][A]	Free Liquid Volume/Units	2gallons	2 GALLONS		
10.3[7][A]	Opaque/Non-penetrable Item Description:	N A	LEAD SHIELDING	N	
10.3[9][A]	PCB-contaminated Waste Description		N A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	SEE COMMENTS		
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	80%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty litter stab outs	KITTY LITTER		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S85377

Comments: Nitrate salts, bags, lead shielding, plastic, HEX ARMOUR GLOVES, ROOM TRASH

11.1[1] Performed By: BRIAN GALLEGOS, [signature] 267129 11-05-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert [signature] 142235 11/6/13 0900
SOS or designee (print) Signature Z # Date/Time

Working Copy

Date: 10-31-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.:	501563
Lot No.:	0238366-1
Manufacture Date:	2013

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-2013	08-05-2014
Tolerance:	±4% cw / ±6% ccw	±3% cw / ±6% ccw

Overpack filtered vent information:

Manufacturer:	Nucfil
Model No.:	013
Serial No.:	JL-910
Manufacture Date:	10/11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: GERALD ESPINOZA / [signature] 1237720 10/31/13
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5. [18] 2-in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA / [signature] 1237720 / 10/31/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / [signature] [illegible] / [illegible]
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 11/4/13 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68591

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: C36245
Cal. Expiration Date: 08/05/2014
Range in ft-lb: 16-80
Tolerance: +/-3% cw and +/-6% ccw

7.[24] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Edward Martinez / [signature] / 239711 / 11-5-13
Waste Handling Technician (print) Signature Z# Date

7.[26] Overpack drum closure ring torque value: 60 ft-lb

7.[29] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☐ SAT ☐ UNSAT

7.[34][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 164.4 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / [signature] / 267129 / 11-05-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] / 149235 / 11/6/13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 1
Page 1 of 2

10 31 13 dc

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 686612

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.: 6 cpvc 1.5-2 spvc
Serial No.: 10363
Manufacture Date: 6.13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8.5.14
Range in ft-lb:	40-200 in-lb	16.80
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: GERALD ESPENOZA (Operator (print)) [signature] (Signature) 237720 (Z #) 10/31/13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: CM-316
Manufacture Date: 12-12

5.[26] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[29][B] 2 in. bung plug torque value: 30 ft-lb

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

5.[32] Drum tare weight (lbs): 76.0 lbs

5.[34][E] Drum ID No.: 68612

Comments: N/C

5.[35] Performed By: Gerardo Espinoza | [signature] | 1257720 | 10/31/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilberto Martinez | [signature] | [illegible] | [illegible]
Supervisor of designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68612

6.[9] Drum closure ring torque wrench information:

M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range in ft-lb: 16-80
Tolerance: +/- 3% CW and +/- 6% CCW

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Edward Martinez [signature] 1234911 11-5-2013
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.:	N/A	N/A
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: N/A
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: N/A in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: N/A in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68612

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 370.4 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/c

6.[32] Performed By: BRIAN GALLEGOS / [signature] / 261129 11-05-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 149235 / 11/6/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-31-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 686116

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BDP
Model No.: 6CPVCL.6-7 SPVCL
Serial No.: GE 10/31/13 L-10357
Manufacture Date: 6.13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	1002116	0362245
Cal. Expiration Date:	12.18-13	8-5-14
Range in ft-lb:	40-200 in-lb	16-80
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: GERALD ESPENOZA [signature] 125172 10/31/13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 DS
Serial No.: LM315
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: 0190605

ATTACHMENT 1
Page 2 of 2

5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

5.[32] Drum tare weight (lbs): 76.0 lbs

5.[34][E] Drum ID No.: 686166

Comments: N/c

5.[35] Performed By: GERALD ESPENOSA [signature] 1257780 10/31/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 145235 11/1/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68616

6.[9] Drum closure ring torque wrench information:

M&TE No.: 036245
Cal. Expiration Date: 8-05-14
Range in ft-lb: 16 - 80
Tolerance: ±3% CW ±6% CCW

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: BRIAN GALLEGOS / [signature] 261129 11-05-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: _____ / _____ / _____ / _____
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: _____ in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68616

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 361.0 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS [signature] 1267179 11-05-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] [signature] 1423751 11/6/13
Supervisor or designee (print) Signature Z # Date

1939
SP70

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S853771 Container Type: 55-GAL Gross Weight (lbs): 454
Inner Seal #: 020608 Filter Prefix: LAVC Filter Serial #: 03117
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 A0461
Total PE-Ci Activity: 4.95E+00 Equivalent Combustible PE-Ci: 1.86E+00 AM-241 PE-Ci: 4.02E-01
Total Fissile Gram Equivalents: 54.7 Total Surface Dose Rate (mrem/hr): 5
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/13/2007 Comment: Impenetrable Obj,
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / Susan P. Ramsey / 100681 / 12/20/12
Production Control (Print) / Signature / Z Number / Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt. 394#, Generator info shows 12 items of nitrate salts; weights range from 2-52#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; other debris +/or undocumented liquids may be present. RTR PS shows impenetrable object(s). No chemicals identified, waste codes for chromium lead + mercury are applicable. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 1/18/13
WDP Engineering (Print) / Signature / Z Number / Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE Mix Ratio

Performed By: G Mt / [illegible] / 1149255 / 6/19/13
TRU Remediation Operations (Print) / Signature / Z Number / Date
Jose Jerez / Jose Jerez / 221452 / 6/22/13

IHS Review. July Amalgam CST, may contain Pb, Hg etc
No other concerns 1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 020608

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	6LR311NW1		23.360	NITRATE SALTS		13.86	52	1/13	G468	
2	6OX4 13NW1		13.000	NITRATE SALTS		5.7	52	1/13	G468	
3	6LR6 12NE1		20.000	NITRATE SALTS		13.67	52	1/13	G468	
4	6OX5 14NE1	TW	1.020	NITRATE SALTS		10.56	52	1/13	G468	
5	6OX ??????	6.55	[illegible]	NITRATE SALTS		1.38	52	1/13	G468	
6	6LR7-16NW1		7.410	NITRATE SALTS		1.34	52	1/13	G468	
7	6LR7-16NE1		7.480	NITRATE SALTS		1.79	52	1/13	G468	
8	6LR8-17NW1		6.870	NITRATE SALTS		1.33	52	1/13	G468	
9	6LR8-17NE2		3.520	NITRATE SALTS		0.35	52	1/13	G468	
10	6DS4-19NE1		4.910	NITRATE SALTS		1.71	52	1/13	G468	
11	6MX2-18NW1		12.640	NITRATE SALTS		5.71	52	1/13	G468	
12	6OX5-20NW2		16.300	NITRATE SALTS		0.67	52	1/13	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 206.

Material Type	SNM (grams)	Items Net Wt (kg)
52	58.07	123.07
Totals	58.07	123.07

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: 5/21/13

Container No. (5.[1])	S853771 ~~S853771~~					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT N/A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	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 Wiles (CCP (Print)), 238864 (Z#)

Comments:

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), Susan J. Ramsey (Signature), 110681 (Z#), 5/22/13 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130521c\
Data File : S853771.D
Acq On : 21 May 2013 4:05 pm (#1); 21-May-13, 16:04:53 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL DRUM THROUGH UNOBSTRUCTED 72 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 16:13:29 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.529	96	3899272	201.25	ppmv	-0.04
15) Chlorobenzene-d5	5.868	117	3335713	177.00	ppmv	0.03

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

vocgas.m Tue May 21 16:13:44 2013

11/4/13

1816 Assuming WCRRF Operations Center. CA

1820 Suspending outside operations, due to lightning. EP-WCRR-RM-AOP-0207.

1821 Pre-Job being conducted by the SOS. Starting with turnover from day shift. Also making sure the bag of kitty liter weighs less than the 34lb. limit.

1844 Pre-Job complete.

1940 Exited EP-WCRR-RM-AOP-0207

2130 Bagging off a daughter, bagging on another daughter.

2137 Suspending outside operations due to lightning. EP-WCRR-RM-AOP-0207.

2146 Bag off/on complete.

2207 Exited EP-WCRR-RM-AOP-0207

0001 Turning over Operations Center to Jose Jerez. CA

0001 Assuming OCO position. per fly

0130 Operators returning from lunch and continuing to process parent.

0220 Starting outside rounds.

0250 Rounds Outside completed

0255 Signed off on outside rounds.

0305 Bagging off one daughter and Parent, Bagging on 5853771

0320 Bag on Bag off complete.

0451 Operator 38 reporting that the thread bolt count being performed is different than the inspection performed on days. Thread count is 1, 1, 1.

0503 Starting inside rounds

0524 Inside rounds completed

11/5/13 0545 Securing OCO position for the evening and turning over to
HG on comming OCO H. Smith. per fly

No further entries on this page.

11-5-13

0545 0620 HS 11-5-13	ASSUMMING WCRR OPS. CENTER H.SMITH
0545 0620 HS 11-5-13	11-5-13 0541 LATE ENTRY, COMPLETED OUTSIDE ROUNDS
0615	STARTING PRE-JOB BRIEFING, DISCUSSING EMPLOYEE SAFETY.
0655	PRE-JOB BRIEFING COMPLETED
0802	BAGGING OFF, BAGGING ON 1 DAUGHTER
0922	BEGINNING MOVEMENT INTO TA 50-69 FROM TA50-175 TA50-194/75 TRANSPORTAINERS
0952	BAGGING OFF 1 DAUGHTER BAGGING ON S 823127
1027	BAG OFF - BAG ON COMPLETE, MOVEMENT COMPLETED
1045	PERMISSION GRANTED TO MANIPULATE WASTE. BEGIN MOVE OUT TO TRANSPORTAINERS
1047	TECH 15 REPORTED TO OPS. CENTER, WHILE OPERATOR WAS NEUTRALIZING LIQUID FROM DRUM ON BOX, NOTICED LIQUID SMOULDERING. TO NOTIFY I-H, PORTS HAVE BEEN PUT ON STATIONS #1 & #2 OPERATORS HAVE PAUSED WAITING FOR RESULTS FROM I-H AND RCT'S.
1106	PER RCT'S INSTRUCTIONS OPERATORS ARE EXITING BUILDING TA 50-69 FOR PAUSE TO DISCUSS EVENTS
1113	MOVEMENT INTO TA50-194 IS COMPLETE
1325	OPERATOR RETURNED FROM OCC MED WITH NO RESTRICTIONS, OK TO RETURN TO WORK
1326 ~~1304~~ HS 11/5/13	1304, OPERATORS ENTER BUILDING TO CHECK GLOVEBOX GLOVES, LATE ENTRY.
1341	SOS ADVISED OPS. CENTER, NO BREACH IN GLOVES, NO DEGRADATION OF HEX-ARMOR GLOVE WHERE LIQUID CAME IN CONTACT WITH GLOVE, RCT'S PERFORMING SWEAR. SOS WILL BRIEF OPERATORS BEFORE REENTERING FACILITY.
1352	SOS BRIEFED OPERATORS ON GLOVE CONDITIONS AND LIMITS OF WORK WITH CHEMICALS, AND ADVISED OPERATORS THAT WITH OCC MED & RCT'S WERE GIVEN PERMISSION TO RETURN TO WORK

CONTINUED OF NEXT PAGE - H SMITH

11-4-13 Dayshift

0600 Reviewed the SOM LOGBOOK and assumed the SOM turnover checklist and assumed the WCRR SOM position ~~the Guardsgnt~~

0633 Completed attending the pre-job brief conducted by Gilbert (the SOS). The safety message discussed was workplace ACTIVE SHOOTER. There is a scheduled transfer in and out of WCRRF. The shift orders Manual drum movements WCRR-SH-0[illegible] Rq and Precautions to prevent bag tears WCRR-SH-0025 Rq are in effect. The ES/PM discussed the current status of the WCRRF Generator and in the event of a power loss, Operations would follow AOP-0205-Loss of Power. Personnel will perform glove box inspections and pre shift turnover, stations 2, 7, 8, and possibly station 1 both pair require changing. Operators were briefed to the RWP-2013-0015

0705 Completed the daily phone call, status using the FDD activities for WCRRF

0745 Discussed with OM and procurement specialist - ordering of lead windows. Jack indicated that the specialist will obtain word today if the vendor can supply the lead windows with the tolerances indicated. Also discussed ordering thinner lead windows and doubling them up. Jack with get back to us on the method of ordering which benefits WCRRF

0850 P&T arrives for inspection and transfer out from WCRRF to AREA 5

0905 P&T completes inspection of drums and staging and loading is initiated

0907 Inside operators initiate glove changes on stations 1, 2, 7, and 8

1020 P&T exits/completes the transfer out of WCRR and backs up for the transfer to WCRR, 18 drums to be received, 22 drums were transfered out.

1050 Operations completed glove box glove changes on both pair at stations 1, 2, 7, & 8.

1100 Operations outside initiate movement in, of 3 Parent Drums.

1127 Mode Change: WCRR YARD and 50/60 Facility transition from WARM/COLD to Operations/Operations - Procedural driven work is released.

1155 Notification was made to the Operations Center and SOM that an operator in the Hi Bay AREA while prepping drums and wearing mechanical gloves had received a scrape on his right hand index finger between the 1st and second knuckle. The area is an RBA, the surface skin was removed ~ 1/4" diameter and there was no blood. EOP 0309 - injured person minor was entered, notification was made to the OM, PM, and ES/PM. The operator was transported to OCC Med for a wound count. The OM will notify DOE

1204 Participated in the daily noon phone call, providing facility update to OM/SOM office

1240 OM reports DOE was notified

1301 Operator returns from Occ Med, wound count is NDA - noted as First Aid and

11-4-13 Dayshift (Cont.)

1301 cont. operator is restricted from performing glove box work, he will need to keep it occluded until healed and report back to OCC MED as soon as it is healed or at 7 days. Other work can continue in WCRR YARD by operator. The OCO exited EDP-0309 Injured Person

1340 Operators inside initiated bag on of Parent drum 581367e.

1359. Operators inside indicate bag on completed.

1415 Follow up was conducted with the scraped knuckle injury, ES/IH evaluated PPE and determined appropriate PPE was worn. The operator overtightened the band, which caused a release and the hands came together and the 1st finger on right hand came in contact with the L piece of metal which is utilized to cut the excess band material. Lessons Learned - do not overtighten and ES will brief their personnel at WCRRF during pre job brief.

1454 Inside Operators initiated bag off of daughter and bag on and will continue to process.

1550 Notified by DOE and RP-1 - that Fac Rep Roberts and representative Rad Fac Rep from TA-55 will perform a radiological assessment at WCRRF on 11-5-13 - during day shift - no other details available.

1615 Inside Operations report bagging off a daughter and bagging on Parent 5842181

1627 The transfer of drums from the transfer truck to the transport vehicle was completed - all TRU Drums secured. Production Inventory is initiating acceptance in WCATS.

1653 Inside operator reports POC identified on the box.

1727 Inside operators report bagging off 1 daughter and 2 Pocs which will leave the Parent drum 30% full.

1745 initiated shift turnover checklist for oncoming SOM. R. Axtel

1755 Completed shift turnover with Oncoming SOM R. Axtel and relieved of SOM duties by R Axtell [signature]

OK 11-5-13

No further entries this page [signature]

11/4/13 Nightshift

1755 Reviewed shift turnover checklist and assumed WCRR SOM. R

1806 Approved and posted Nightshift operations watchbill.

1820 Due to Lightening entered the 30/30 rule - Suspended outdoor operations per EP-WCRR-RM-AOP-0207 Severe Weather.

1845 Prejob brief conducted by SOS completed. Discussed today's injured personnel and importance of wearing proper PPE - injury could have been much worse. Operators instructed not to tighten banding causing slipping of the tool. Covered active shift orders and briefed operators to status of the emergency diesel generator and how it will affect facility status should we lose AC power.

1940 Exited severe weather AOP.

2137 Entered severe weather restrictions - 30/30 rule for lightening per EP-WCRR-RM-AOP-0207. Outside ops suspended.

2146 Completed bag off of another daughter - continuing to process.

2207 Exited severe weather AOP.

11/5/13 0015 Operators breaking for lunch

0050 Due to lightening entering EP-WCRR-RM-AOP-0207 Severe Weather and 30/30 rule Outside ops suspended.

0130 Resuming operations. Exiting severe weather AOP.

0320 Completed bag off of all drums for parent # 5842181 (3 daughters & 2 POC's). Bagged on drum # 5853771.

0600 Reviewed the AM roundsheets

0623 Approved and posted the Dayshift Operations watchbill.

11/5/13 0630 Relieved by L. Julbert as SOM. R

VS 11-5-13

No further entries this page
KM

WCRR DAYSHIFT 11-5-13

0630 ASSUMED SOM WATCH FOR 11-5-13.
0640 MORNING CALL IN.
1030 BAG OFF/BAG ON 5823127.
1108 WORKERS CALLED A PAUSE BECAUSE OF A WORKERS HAND GOING NUMB WHILE NUETRALIZING A HALF GALLON OF A LIQUID WITH A PH OF 11.
1115 LEFT MESSAGE WITH FOD OVER T1108 ENTRY
1117 REPORTED T1108 TO PROGRAM MANAGER.
1175 DIRECT CONTACT TO FOD. T1108 ENTRY
1200 TUESDAY ROUNDUP/DAILY CALL IN.
1216 SENDING T1108 TO DCCMED FOR DOCUMENTING.
1224 TURN SOM DUTIES OVER TO J. GUADAGNOLI.
1224 Assumed the SOM Duties at WCRRF
1325 Operator returned from OCC Med and it was identified that he can return to work and there were no restrictions.
1341 An operator, RCT, and ES/IH entered the facility and inspected the glovebox glove station 1 Left hand. All surveys were NDA and the glove was noted acceptable no degradation. Upon discussion with ES/IH the employees hand ~~[illegible]~~ gloved came in contact with the solution Black/Brown liquid - dripping from the edge of the drum when he felt the difference in temperature. Drum #5823127
1405 Conducted follow up with machine shop to status operators on steel plates. the shop noted arrival of material at 3m-30 and should be able to work on the plates tomorrow.
1523 Conducted follow up on parts for the generator - The planner indicated parts are to be procured offsite and the package will include changing the air filter and performing a load test. Anticipated to be scheduled during our next maintenance day.
1555 Inside operators report bagging off and bagging on 1 daughter and continue to process.
1614 Bag off is noted completed
1733 Operators report bagging off another daughter and bagging on parent 5864662
1802 Bag offs and bag ons noted completed.
1805 Initiated shift turnover check list
1807 Relieved of SOM duties by A. Axtell

No Further Entries this page

4

PROJECT NAME WCRR 305 Log Book NOTEBOOK NO.

11/4/18

1800 Assuming 305 position for the evening, conducted turnover with off going 305 Gilbert Martinez.

1815 Starting Pre-Job brief. Off going 305 briefing status of glove Box, Parent currently bagged on has approximately 20% remaining to process. Safety topic discussed wearing the proper leather gloves for the task being performed. Discussed operator incident when putting bandsing on Parent when prepping. also discussed Exp evaluation performed by TH and 40 lb. kitty litter bags, bags need to weigh around 20 pounds. Also discussed that we will be short ~~that~~ handed operators due to training that operators need to take during the day.

1820 Entering 30/30 due to lightning and thunder

1845 Concluded Pre-Job brief

1905 Continuing 30/30 for lightning

1940 30/30 no longer in effect, operators headed to the back to finish processing parent that is bagged on.

2130 Bagging off one daughter bagging on another daughter to continue processing. Operators needing to replace Hexarmour gloves, Gloves are reading above 80 m/hr and are also curled up and cannot be moved.

2137 Starting 30/30, suspending all outside operations, inside operations continuing.

2146 Bag on / off Complete.

2200 Inventory control operator explaining that he is having problems with the empty daughters that are being generated. It appears that they were moved in but not completely moved in the WCRRS system and he is having to contact waste helps so that he can create them in the system to create daughters. Appears that it is a problem with the units not syncing completely when the daughter drums are prepped.

2205 30/30 lifted outside operations can resume.

0015 Operators breaking for lunch

0050 Starting 30/30 for lightning suspending outside operations.

0130 Operators returning from lunch to continue processing. 30/30 lifted outside operations can resume

0255 Outside rounds have been reviewed and signed.

0305 Bagging off one daughter and parent, Bagging on 5853771

0320 Bag on Bag off complete.

0541 Inside rounds reviewed and signed.

0615 Securing 305 position for the evening turning over to oncoming 305 Daniel Blaire.

No further entries on this Page.

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

PROJECT NAME WCRR SOS log Book NOTEBOOK NO.

11/05/13

0600 0600 Assuming SOS position for the day. Conducted turn over with the off going SOS Jose Jerez. DJB

0615 0615 Started Pre job brief with off going shift. Parent bagged on with 30% remaining. Safety talk about over tightening bands, glove box ergonomics split the kitty litter in half to ~ 20 lbs. Staying focused with task at hand.

0802 0802 Bagging off/on 1 daughter

0922 0922 Begin move into TA-50-69.

0952 Bagging off 1 daughter and Bagging on S 823127

1027 Bag on/off and movement completed.

1045 Move out of 50-69.

1047 ~~Tech 15~~ DJB 11-5-13 Minor Condition: Tech ~~15~~ 14 DJB 11-5-13 reported that he was neutralizing a liquid from drum # S 823127. He had some liquid run across his left knuckle area. He felt a tingling sensation and then his hand got cold. The liquid was not the normal color of yellow/green it was a coffee color. All work was paused and the drum was put into a safe configuration. All workers exited the building. RCT's surveyed the area and found no gross contamination. Management was notified. along with IH. Tech 15 was sent to OC Med just to document the incident per Robert Allred.

1300 Tech 15, IH and RCT entering 50-69 to inspect gloves on station 1 to ensure gloves were not breached. Everyone was briefed to know and what to look for while inspecting the glove. Use the right hand glove, do not stick hand on left side. Have RCT monitor for any contamination.

1325 Tech 14 returns from OC Med with no restrictions. Needs to report back to OC Med 11/06/13 @ 0700 for a recheck.

1327 Tech 15 reports that after glove inspection completed no degradation of Her Armourglove or Glove box glove. Both gloves not breeched. RCT reports no contamination found in glove.

1400 Crew briefed about the pause work situation and returning to work. Will continue to process drum #S823127.

1540 Signed off inside/outside rounds.

1855 Bag on/bag off 1 daughter and continue to process.

1614 Bag on/off completed.

1733 Bag off daughter. Bag on S 964662.

11/6/13 0810 Secured SOS Position for the day. Turning over to Jose Jerez. DJB

No further entries on this page. DJB

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-RTR2-13-0127
Examination Date:	11/13/2013
Waste Container ID:	68612
Video/Audio Recorded Media Number:	LA-RTR2-13-0127 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: 68612

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R: Rubber gloves

XPM: Plastic bags, 90 mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	10.0
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	116.6
Soils (S):	
Total WMP Weight:	134.6

CCP Radiography Data Sheet

Waste Container ID: 68612

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Michael Simmons		11/13/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68612	Count Sequence Number:	23853
Operator:	D3PW2DK1\operator		
Assay Start:	11/15/2013 12:12:14 PM		
Description 1:	1LANDA1866		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 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

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23853	Batch Number:	1LANDA1866
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:	68612	Analysis Date:	11/15/2013

Net Weight	135000.0 g		
Pu mass	2.09E+001	+-	9.19E+000 g
TRU Alpha Activity	3.61E+000	+-	1.54E+000 Ci
TRU Activity Concentration	2.67E+004	+-	1.14E+004 nCi/g
Pu-239 Equivalent Activity	3.65E+000	+-	1.54E+000 Ci
Pu-239 FGE	1.97E+001	+-	9.17E+000 g
Decay heat	1.17E-001	+-	5.08E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.72E-007
U233	<LLD	<LLD	0.00E+000	4.55E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.39E-006
NP237	5.42E-002	3.82E-005	6.98E-006	2.09E-006
PU238	1.91E-003	3.27E-002	1.58E-002	9.36E-004
U238	<LLD	<LLD	0.00E+000	1.03E-005
PU239	1.96E+001	1.22E+000	5.69E-001	3.49E-002
PU240	1.26E+000	2.85E-001	1.39E-001	8.16E-003
AM241	6.04E-001	2.07E+000	1.43E+000	9.61E-002
PU241	2.40E-002	2.47E+000	1.21E+000	7.07E-002
PU242	4.19E-003	1.66E-005	8.08E-006	0.00E+000
AM243	9.78E-004	1.96E-004	3.61E-005	6.42E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/21/13

ITR: _____ Date: 11-22-13

Automated Independent Technical Review

Count Sequence Number: 23853
Batch Number: 1LANDA1866
Counter ID: MCS HENC #1
Container ID: 68612
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/15/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 11-19-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68612**

BDR Number: **LA13FG2120**

Sampling Date: **11/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131125c\
Data File : 68612.D
Acq On : 25 Nov 2013 1:40 pm (#1); 25-Nov-13, 13:39:44 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 25 13:48:59 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.571	96	4188643	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.871	117	3316342	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-RTR2-13-0127
Examination Date:	11/13/2013
Waste Container ID:	68616
Video/Audio Recorded Media Number:	LA-RTR2-13-0127 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 164.0 kg Tare Wt.: 33.4 kg Net Wt.: 130.6 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: 68616

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves, tape roll

R: Rubber gloves

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	2.5
Rubber (R):	2.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	114.1
Soils (S):	
Total WMP Weight:	130.6

CCP Radiography Data Sheet

Waste Container ID: 68616

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Michael Simmons		11/13/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68616	Count Sequence Number:	23866
Operator:	D3PW2DK1\operator		
Assay Start:	11/19/2013 12:57:36 PM		
Description 1:	1LANDA1867		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 130.6 kg	Net:	130.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
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:	23866	Batch Number:	1LANDA1867
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:	68616	Analysis Date:	11/19/2013

Net Weight	130600.0 g			
Pu mass	5.35E+001	+-	1.13E+001	g
TRU Alpha Activity	1.27E+001	+-	4.91E+000	Ci
TRU Activity Concentration	9.76E+004	+-	3.76E+004	nCi/g
Pu-239 Equivalent Activity	1.29E+001	+-	4.91E+000	Ci
Pu-239 FGE	5.05E+001	+-	1.12E+001	g
Decay heat	4.16E-001	+-	1.63E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.13E-006
U233	<LLD	<LLD	0.00E+000	9.95E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.70E-006
NP237	1.68E-001	1.19E-004	2.45E-005	4.50E-006
PU238	4.89E-003	8.36E-002	2.16E-002	1.30E-003
U238	<LLD	<LLD	0.00E+000	2.71E-005
PU239	5.02E+001	3.11E+000	6.97E-001	4.83E-002
PU240	3.21E+000	7.29E-001	1.93E-001	1.13E-002
AM241	2.57E+000	8.82E+000	4.86E+000	9.30E-002
PU241	6.13E-002	6.31E+000	1.67E+000	9.80E-002
PU242	1.07E-002	4.23E-005	1.12E-005	0.00E+000
AM243	2.99E-003	5.97E-004	1.25E-004	1.31E-005

Errors quoted at 1.000 sigma

Operator: Marla Eg Date: 11-25-13

ITR: [illegible] Date: 11-25-13

Automated Independent Technical Review

Count Sequence Number: 23866 Batch Number: 1LANDA1867
Counter ID: MCS HENC #1
Container ID: 68616
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/19/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test failed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chandler Date: 11-25-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68616**

BDR Number: **LA13FG2119**

Sampling Date: **11/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	254.68	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131122c\
Data File : 68616.D
Acq On : 22 Nov 2013 10:53 am (#1); 22-Nov-13, 10:52:36 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 22 11:45:29 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	3.578	96	4408121	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.874	117	3473887	177.50	ppmv	0.01
Target Compounds						Qvalue
1) Hydrogen	1.611	GC1	1915m	254.68	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

S853899

S853899

Container H... 767909

File Options Reports Help

S853899

767909	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

S853899

- S853899
  - LA00000068409
  - LA00000068375
  - LA00000068356 - EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.01	%			

Working Copy
Date: 9-18-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S853899

6.2[4] Date Processed: 9-18-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☑ Sealed Containers > 4L ☐ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established: ☑ N/A
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) _____ (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: Frederico Rebolledo / [signature] / 228924 / 9-18-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S853899

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 434.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 120 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 554.8 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.: S853899

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68409	68375		
10.1[4]	Daughter Drum Filter No.	Lm. 265	KL-548	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6772	L-6681	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N	A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	3 gal.		N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead Shielding	lead Shielding		
10.3[9][A]	PCB-contaminated Waste Description		N/A		
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%			
10.5[3]/10.6[2]	Description Waste Added During Processing	stub out Bags Kitty Litter	stub out Bags Kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S853899

Comments: Kitty litter, plastic, PH 4 liquid neutralized, Nitrate Salts,

11.1[1] Performed By: [illegible] 1228426 9/18-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [illegible] 1492375 9/18/13 1805
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date 9/18/13 HB

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238025
Manufacture Date: 2013

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	100246	0383369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	+/- 4% cw +/- 6% ccw	+/- 3% cw +/- 6% ccw

Overpack filtered vent information:

Manufacturer: Nuc. Ci
Model No.: 013
Serial No.: SL - 1879
Manufacture Date: 10/11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: Frederico Rebolledo / [signature] / 1228826 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5. [18] 2-in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Frederico Rebolledo / [signature] / 1228826 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / [signature] / 1492351 / 9/18/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9/18/13 HS

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 608356

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-50
Tolerance: +/- 3% cw +/- 6% ccw

7.[24] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Frederick Arbolado [signature] 1288826 9-18-13
Waste Handling Technician (print) Signature Z # Date

7.[26] Overpack drum closure ring torque value: 60 ft-lb

7.[29] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[34][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 170.8 lb

Comments: N/C

8.1[1] Performed By: Frederick Arbolado [signature] 1288826 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martin [signature] 149235 9/18/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-10-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68375

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5-2SPVC
Serial No.: L6681
Manufacture Date: 1-13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4% CW ±6% CCW	±3% CW ±6% CCW

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: [illegible] / [illegible] [illegible] 9-10-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL 9-10-2013
Model No.: 019DS
Serial No.: KL-548
Manufacture Date: 11-11

5.[26] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[29][B] 2 in. bung plug torque value: 30 ft-lb

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

5.[32] Drum tare weight (lbs): 76 lbs

5.[34][E] Drum ID No.: L-6681

Comments: N/C

5.[35] Performed By: Frederico [illegible] | [signature] | 1228[illegible] | 9-10-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Gilbert Martinez | [signature] | 1492751 | 9/18/13
Supervisor or designee (print) | Signature | Z # | Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date: 9/8/13

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68375

6.[9] Drum closure ring torque wrench information:

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: +/-3% cal. +/-6% cal

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Fredoris Nebleh / [signature] / 125826 / 9-18-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☐ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	N/A	N/A
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: N/A / / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: _____ in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68375

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 264.4 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: [illegible] / [signature] 1228824 / 9-18-13
Operator ~~(print)~~ Signature Z # Date

7.1[4] Reviewed By: Gilbert Martin / [signature] 149235 / 9/18/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-17-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68409

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: D240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: NM 6 C PVC 1.5-2 SPVC
Serial No.: BC 9/17/13 ~~LM 265~~ L-6772
Manufacture Date: BC 9/17/13 ~~12/12~~ 01/13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4% CW ±6% CCW	±3% CW ±6% CCW

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: MICHAEL MONTOYA / [signature] / 191352 / 9/17/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-265
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.: 68409

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA / [signature] / 119132 / 9/12/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 145235 / 9/12/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

Date: 9-17-13

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68409

6.[9] Drum closure ring torque wrench information:

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: +/- 2% 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] 9-18-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:	N/A	N/A
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ 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.: 68409

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 391.0 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: n/a

6.[32] Performed By: Frederick Robledo (Operator (print)) [signature] (Signature) 1225826 (Z #) 9-18-13 (Date)

7.1[4] Reviewed By: Gilbert Martin (Supervisor or designee (print)) [signature] (Signature) 1492237 (Z #) 9/18/13 (Date)

SR 72

1940

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S853899 Container Type: 55-GAL Gross Weight (lbs): 454

Inner Seal #: 021299 Filter Prefix: LAVC Filter Serial #: 03241

AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: LEACHED SOLIDS MST 12 A0551

Total PE-Ci Activity: 5.40E+00 Equivalent Combustible PE-Ci: 2.03E+00 AM-241 PE-Ci: 4.48E-01

Total Fissile Gram Equivalents: 58.9 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): None D007, D008, D009 WL 1/7/13

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 3/20/2007 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 11/20/12 ☑ 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: Assume EPA Codes D007, D008, and D009 are on the label. A minimum of 1:2 volumes of kitty litter/zeolite must be mixed with 1:0 volume of nitrate salts.

Performed By: R. W. Jones / R. W. Jones / 117434 / 1.18.11
Production Control (Print) Signature Z Number Date

SUSAN S. RAMSEY / Susan S. Ramsey / 100681 / 11/20/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts
Net Wt: 394#, Generator info shows 16 items of nitrate salts, with weights ranging from 11-30#. No RTR BDR. RTR PS shows impenetrable item(s), >4L sealed container(s), + unpunctured liner. Nitrate salts usually packaged in plastic bags; other debris + undocumented liquids often present. Applicable waste codes are lead, chromium, + mercury. Repack ~~recommend~~ WL 1/7/13 w/ admixture is required.

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 1/7/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available

Other Specific Safety Concerns: Do not push or press on waste with hands. Use Hexarmour gloves during processing.

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.

Performed By: Jose Perez / [signature] / 221452 / 2-5-13
TRU Remediation Operations (Print) Signature Z Number Date

ROBIN SHULT [signature] 272995 2-11-13

IHC REVIEW AB 206362 11.27.12 NOTES: D007 = chromium
D008 = lead

Noncertified TRU Waste Drum Item Information

DrumID: 021299

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	6LR8-21NE1		8.780	NITRATE SALTS		1.97	52	1/13	G468
2	6LR821NW1		8.850	NITRATE SALTS		3.71	52	1/13	G468
3	10X1-1NE1		9.790	NITRATE SALTS		2.98	52	1/13	G468
4	7LR1-2NE1		4.960	NITRATE SALTS		1.2	52	1/13	G468
5	7LR1-2NW1		8.330	NITRATE SALTS		2.4	52	1/13	G468
6	7LR1-2NE2		7.910	NITRATE SALTS		4.69	52	1/13	G468
7	2LA1-3NE1		7.480	NITRATE SALTS		2.52	52	1/13	G468
8	70X2-4NW1		13.280	NITRATE SALTS		7.63	52	1/13	G468
9	7LR2-5NW1		8.060	NITRATE SALTS		5.87	52	1/13	G468
10	78N2-4NE1		6.290	NITRATE SALTS		2.14	52	1/13	G468
11	70X24NE2		9.020	NITRATE SALTS		2.	52	1/13	G468
12	7LR3-6NW1		8.100	NITRATE SALTS		1.99	53	1/13	G468
13	7LB4-7NE1		5.150	NITRATE SALTS		0.52	53	1/13	G468
14	7LA28NE2		9.140	NITRATE SALTS		1.08	53	1/13	G468
15	70X3-9NW1		11.450	NITRATE SALTS		15.44	52	1/13	G468
16	7LA4-7NW1		7.540	NITRATE SALTS		0.56	53	1/13	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 205.9

Material Type	SNM (grams)	Items Net Wt (kg)
52	52.55	104.20
53	4.15	29.93
Totals	56.7	134.13

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 12/20/10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Erik Lorchell	Erik Lorchell	123483	11-3-11

Container No. (7.[1]):	S861745	S853899LS	3833872
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]):	S861745	S853899	S833872
Hydrogen Reading (ppm) (7.[10]):	137.15 ppm	1604.38 ppm	127.13 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:
N/A

11.1[1] Performed By: Alicia Herrera [signature] 198450 12-22-10
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] 111856 1-7-2011
Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\101220c\
Data File : S853899.D
Acq On : 20 Dec 2010 12:39 pm (#1); 20-Dec-10, 12:38:32 (#2)
Operator : GR
Sample :
Misc : 55 GAL LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 20 12:51:01 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	3.635	96	10063953	206.75	ppmv	-0.11
15) Chlorobenzene-d5	5.961	117	8760635	183.50	ppmv	-0.10
Target Compounds						Qvalue
1) Hydrogen	1.656	GC1	12166m	1604.38	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

vocgas.m Mon Dec 20 12:51:14 2010

9-18-13

0600 Assuming WCRRF OCO position - CKelander
0600 ASSUMING WCRRF OCO POSITION IN TRAINING H SMITH
0615 PRE-JOB BRIEFING 9/18/13 HS CONDUCTED BY SDS
0630 PRE-JOB BRIEFING CONCLUDED
0635 OPERATORS ENTERING BUILDING TA50-69 TO START PROCESSING
0734 Starting to process 3841240
0800 CSE returning to scope drumlift.
0801 Operators notifying operations center that FORK lift ~~#940~~ @ 9-18-13 #943092 is unsat for daily inspection. Error code 4, CSE 9-17-13 SDS and Sam have been notified. Sam will be contacting maintenance.
0826 Bagging off 1 daughter, bagging on 1 daughter and will continue to process.
0850 Bag on, Bag off is complete.
0935 Maintenance returning WCRRF yard to scope Forklift. WO# 00446212-02, 50-69 Equipment servicing.
0953 Bagging off, ~~3842241~~ 9-18-13, Bagging on 3842241
1030 Bag on, Bag off is complete
1101 Starting movement out of 50-69
1134 Bagging off 1 daughter bagging on another then will continue processing.
1156 Bag on Bag off complete.
1254 Starting movement into 50-69.
9-18-13 1319 movement into 50-69 is complete.
1400 Bagging off and Bagging on 3853899
1438 Bag on, Bag off is complete
1450 RCT pausing inside operations due to water leaking on scale. RCTs are performing smears.
1501 Smears are NDA Okay to continue processing.
1513 Starting outside rounds
1520 Item #19 is unsat, FSR in place okay to proceed. CSE accumulation.
1532 Starting inside rounds.
- Continued on next page - CKelander

-Continued from previous page -Orlando

1530 Completed outside rounds.

1542 Item # 103 to 005, POD in place, okay to proceed per OSE documentation.

1550 Inside rounds complete.

1645 Bagging off (daughter), bagging on (daughter), continuing to process

1655 Bag on, bag off complete

1656 Inside and outside rounds signed off by SCS.

1702 Bagging off and bagging on 9842463.

1814 Operators notifying operations center that bag off will not be performed. 9842463 will not be bagged on.

1818 9-18-13 Relieved by OCO Terri Coleman -Orlando, H SMITH

1819 JJ

NO further entries this page

9/18/13 WCRR 505 LOG Book

0600 Assuming Position [illegible]

0615 Conducted shift brief discussed the drum that is currently bagged on Also Roof Is Leaking again need to watch bubble on Roof And be Aware of wet slippery surfaces.

0635 Concluded shift brief.

0657 Operators entering 50-69 to start processing

0800 CE entering to scope drum lift.

0801 Operators notified forklift unsafe Error code #6 showing up som has been notified.

0826 Bagging off 1 daughter bagging on Another And continuing

0850 Bag on/off Complete

0935 Maintenance entering 50-69 to scope Forklift

0953 Bagging off Bagging on 5862241

1030 Bag on/off complete

1101 starting movement out of 50-69

1132 Bagging off 1 daughter bagging on Another end continuing

1156 Bag on/off Complete

1254 Starting move Into 50-69.

1314 Move in Complete.

1400 Bagging off and bagging on 5853899

1438 Bag on/off complete

1450 RCA's pausing work due to water on scale will Perform smears.

1501 Smears are LDA ok to proceed

1513 Started Rounds.

1645 Bagging off 1 daughter bagging on Another And continuing to process

1655 bag on/off complete

1656 Inside and outside Rounds signed off

1814 Relieved by Clayton Mullins.

No Further entries on this Page

9-18-13 DAYSHIFT (CONT)

1254 Outside operations, starting movement into 50/69 - 2 drums - 55 gallon
1319 The transfer into 50/69 was completed.
1400 Inside Operations initiated bag offs of daughter and Parent, and Bag On of Parent 5853899.
1437 Inside Operations report bag offs were Completed. Parent drum ~~Noted to~~ 9-18-13 5862241 was noted to generate 2 daughters. Operations continue to process.
1438 QA arrives at WCRRF to perform a walkthru of Level B storage. The Level B custodian is assisting in the walkthru.
1450 RCTs request a Pause, inside Operations noted water drippage near scales. RCTs initiate counting smears -
1501 All smears were noted NDA, operations continued.
1538 A debrief was conducted with ES QA, and the LEVEL B custodian. The Level B custodian completed the walkthru with LANL QA. The following were noted requiring corrections; Two shelves require labelling which will will include the two pallets on the floor (i.e. additional signage). Two Operators on nightshift require read and sign of a LANL procedure and 1 operator requires read and sign on an ES procedure. There were excess bad glovebox gloves and bags which require discarding. All information was provided to the ES/Production Manager. The SOM will request support from the WMC on excessing/recycle of bad glovebox gloves and bags. LANL QA will invite DOE to a walkthru next week - preferably Tuesday or Wednesday or will perform an assessment.
1639 Inside Operators report bagging off 1 daughter and bag on another and continue.
1657 All bag offs and bag ons were completed -
1746 Inside operations ~~initiated~~ 9-18-13 LEAVE bag off of Parent 5853899 which will generated 2 daughters. Operations and RCTs ~~might~~ will 9-18-13 run - past 1830 - monitoring time.
1756 Initiated shift turnover with the nightshift SOM.
1802 Relieved of SOM position by nightshift; also - Parent drum 5853899 is ready to bag off. repeat relieved of SOM position by nightshift SOM R. Axtell.
John Guadagnoli 9-18-13

No Further Actions on Entries this page
JGuadagnoli

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0113
Examination Date:	9/24/2013
Waste Container ID:	68375
Video/Audio Recorded Media Number:	LA-RTR2-13-0113 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 120.0 kg Tare Wt.: 33.4 kg Net Wt.: 86.6 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: 68375

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	76.6
Soils (S):	
Total WMP Weight:	86.6

CCP Radiography Data Sheet

Waste Container ID: 68375

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: The scan of this drum was performed by in-training operator Eddie Rios under the supervision of qualified operator Thad Hasselstrom.

RTR Operator:		
Eddie Rios Thad Hasselstrom	Eddie Rios Thad Hasselstrom	9-24-13 9/24/2013
Print Name	Signature	Date

```
|-----------------------------------------------------------------------|
|                          NDA 2000 Assay Report                        |
|-----------------------------------------------------------------------|

*************************    Item Information    ************************

Item ID:              68375              Count Sequence Number:  16571
Operator:             DCLTD231\Operator
Assay Start:          9/26/2013  12:16:34 PM
Description 1:        2LANDA1228
Description 2:        N/A
Location:             LANL TA-54
Comment:              AK-6
Matrix Type:          Homo Sol. S3000
Container Type:       55 gal Drum
Weight:               Net:        86.6   kg        Net:    86.6 kg
Container:            Volume:    208.0   l        Full:    55.0 %
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: 16571
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 68375

Batch Number: 2LANDA1228
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/26/2013

Net Weight	86600.0 g		
Pu mass	3.17E+001	+-	6.43E+000 g
TRU Alpha Activity	1.00E+001	+-	4.20E+000 Ci
TRU Activity Concentration	1.16E+005	+-	4.85E+004 nCi/g
Pu-239 Equivalent Activity	1.01E+001	+-	4.20E+000 Ci
Pu-239 FGE	2.99E+001	+-	6.41E+000 g
Decay heat	3.28E-001	+-	1.40E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.10E-007
U233	<LLD	<LLD	0.00E+000	8.83E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.28E-006
NP237	1.08E-001	7.62E-005	1.48E-005	2.08E-006
PU238	3.65E-003	6.24E-002	1.58E-002	1.10E-003
U238	<LLD	<LLD	0.00E+000	2.25E-005
PU239	2.97E+001	1.84E+000	3.98E-001	3.24E-002
PU240	1.96E+000	4.45E-001	1.14E-001	7.83E-003
AM241	2.23E+000	7.66E+000	4.18E+000	6.51E-002
PU241	6.73E-002	6.93E+000	1.78E+000	1.22E-001
PU242	7.52E-003	2.97E-005	7.50E-006	0.00E+000
AM243	5.23E-003	1.05E-003	2.03E-004	1.30E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 9.27.13

ITR: _____ Date: 9.27.13

Automated Independent Technical Review

Count Sequence Number: 16571 Batch Number: 2LANDA1228
Counter ID: HENC #2
Container ID: 68375
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/26/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 9/27/13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68375**

BDR Number: **LA13FG12106**

Sampling Date: **10/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	244.21	
74-82-8	Methane	9.63	U
67-56-1	Methanol	30.57	U
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131022c\
Data File : 68375.D
Acq On : 22 Oct 2013 1:46 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 22 13:57:46 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.060	96	7354332	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	5216594	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.903	GC1	69662m	244.21 ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

5853899

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0113
Examination Date:	9/24/2013
Waste Container ID:	68409
Video/Audio Recorded Media Number:	LA-RTR2-13-0113 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 177.0 kg Tare Wt.: 33.4 kg Net Wt.: 143.6 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: 68409

Section 3: Container Inventory and Comments (Detailed descriptions)	
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	
R:	
XPM:	Plastic bags, liner lid
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	133.6
Soils (S):	
Total WMP Weight:	143.6

CCP Radiography Data Sheet

Waste Container ID: 68409

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: The scan of this drum was performed by in-training operator Eddie Rios under the supervision of qualified operator Thad Hasselstrom.

RTR Operator:		
Eddie Rios Thad Hasselstrom	Eddie Rios Thad Hasselstrom	9-24-13 9/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68409	Count Sequence Number:	23663
Operator:	D3PW2DK1\operator		
Assay Start:	9/26/2013 4:02:11 PM		
Description 1:	1LANDA1849		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 144.0 kg	Net:	144.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
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

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23663	Batch Number:	1LANDA1849
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:	68409	Analysis Date:	9/26/2013

Net Weight	144000.0 g		
Pu mass	9.48E+001	+- 1.81E+001	g
TRU Alpha Activity	1.09E+001	+- 2.38E+000	Ci
TRU Activity Concentration	7.55E+004	+- 1.66E+004	nCi/g
Pu-239 Equivalent Activity	1.11E+001	+- 2.39E+000	Ci
Pu-239 FGE	8.92E+001	+- 1.70E+001	g
Decay heat	3.47E-001	+- 7.82E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.24E-002	6.51E-005	1.28E-005	3.57E-006
PU238	8.67E-003	1.48E-001	2.84E-002	3.27E-005
PU239	8.88E+001	5.51E+000	1.05E+000	1.21E-003
PU240	5.86E+000	1.33E+000	2.55E-001	2.93E-004
AM241	1.13E+000	3.88E+000	2.12E+000	8.75E-002
PU241	1.09E-001	1.13E+001	2.16E+000	2.48E-003
PU242	1.90E-002	7.50E-005	1.44E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.95E-007
U233	<LLD	<LLD	0.00E+000	8.36E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.37E-006
U238	<LLD	<LLD	0.00E+000	1.89E-005
AM243	3.22E-003	6.45E-004	1.28E-004	1.11E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 10-1-13

ITR: [signature] Date: 10-1-13

Automated Independent Technical Review

Count Sequence Number: 23663 Batch Number: 1LANDA1849
Counter ID: MCS HENC #1
Container ID: 68409
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/26/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chandler Date: 9-30-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68409**

BDR Number: **LA13FG12107**

Sampling Date: **10/23/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	532.02	
74-82-8	Methane	9.63	U
67-56-1	Methanol	30.57	U
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.67	
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131023C\
Data File : 68409.D
Acq On : 23 Oct 2013 1:20 pm (#1); 23 Oct 2013 1:19 pm (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 23 13:29:16 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	7256426	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	5388692	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.907	GC1	151760m	532.02	ppmv	
12) Benzene	3.720	78	19911	0.67	ppmv #	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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