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NMED
Hazardous Waste Bureau

Los Alamos
NATIONAL LABORATORY
EST 1943

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

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

Date: AUG 18 2014
Symbol: ENV-DO-14-0222
LAUR: 14-26323
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 3

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

The June 10, 2014, email received from Tim Hall, NMED, included a request for additional information for 267 original nitrate salt-bearing waste containers generated by the Permittees and all resulting repackaged/remediated containers. Partial fulfillment of the request was submitted to the NMED on July 9, 2014 and was corrected on July 17, 2014. This submittal includes remediation and repackaging documentation for daughter containers resulting from the repackaging and remeditation of the 267 original nitrate salt-bearing waste containers and is the third 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 ten of the original 267 parent waste containers and all associated daughter and granddaughter waste containers. The enclosed documentation for each parent

36577

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/ms

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 3

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

Cy (continued):

Selena Z. Sauer, LC-ESH, (E-File)
Debra S. Nevergold, LTP, (E-File)
Mark P. Haagenstad, ENV-CP, (E-File)
Luciana Vigil-Holterman, ENV-CP, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
env-correspondence@lanl.gov, (E-File)

Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 3
ENV-DO-14-0222
LA-UR-14-26323

August 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 3

ENV-DO-14-0222

LA-UR-14-26323

Date: AUG 1 8 2014

ParentID	Intermediate Daughters	PKG_ID	Overpacked Into
S816305		94005	
S816374		93902	
S816374		93903	
S816374		93904	
S816440		93909	
S816469		94032	
S816469		94033	
S816469		94034	
S816664		94036	
S816664		94037	
S816667		94141	
S816667		94142	
S816773		93869	
S816828		93866	
S816828		93867	
S816837		68567	
S816837		68578	
S816890		68557	
S816890		68569	

S816305

S816305

Container Profile 759453

File Options Reports Help

S816305

759453	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

S816305

S816305
- 94006 – EMPTY
- 94005

Task History

Transfer Details

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

Working Copy
Date: 07/11/13 KB

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S81630B

6.2[4] Date Processed: 7-11-13

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~~ 7-11-13 D009, D008

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

4.3[1]/4.3[2] (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.: 019005
Cal. Due Date: 7-31-15

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: Ian Marquez / [signature] Z76708 / 7-11-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5816305

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 452.2 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 452.2 lb

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5816305

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94005			
10.1[4]	Daughter Drum Filter No.	KL 485			
10.1[4]	Daughter Drum Bag Filter No.	L-6912			
10.1[4]	Daughter Drum Purchase Order No.	501103			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	2gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
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.: 58163005

Comments: Nitrate salts, kitty litter, ph-1, GLOVES (HEX ARMOURS)

11.1[1] Performed By: Brandon Chavez / [signature] 1201202217-1173
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Sevez / [signature] 1221452 7/18/13 0504
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 7-8-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1967
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] 201192 / 7-8-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 201192 / 7-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Perez / [signature] 122142 / 7/8/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 07/11/13 KB

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94006

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10 - 85
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: Ian Marquez / [signature] / 127675 / 7-11-13
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: 018066
Platform scale calibration expiration date: 7-31-13

7.[35][D] 85-gal overpack drum gross weight (lb): 147.6 lb

Comments: N/C

8.1[1] Performed By: Ian Marquez / [signature] / 127675 / 7-11-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Juarez / [signature] / 122452 / 7/18/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 94005

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 02347605
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 3CPVC1.5-2SPYC
Serial #: L-69M
Date of Manufacture: 1-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: KL-485
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 #: 019068

☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: James Sanchez Operator Sign: [signature] Z#: 116662 Date: 7-3-13

Verifier Print: Ian McMaster Verifier Sign: [signature] Z#: 276708 Date: 7-11-13

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

DRUM ID#: 91005

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 #: 038573

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) 454.6

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Jay Marquez Date 7-11-13

Verifier Print/Sign: [illegible] Date: 7-11-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

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Production Control

Container ID: S816305 Container Type: 55-GAL Gross Weight (lbs): 442
Inner Seal #: 000372 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-CIN01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS- YELLOW TAGGED
Total PE-Ci Activity: 8.36E-01 Equivalent Combustible PE-Ci: 3.14E-01 AM-241 PE-Ci: 6.79E-02
Total Fissile Gram Equivalents: 9.2 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008 D007 D009 MR 12/11/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 9/19/2012 Comment: 1 Gal from 28" to 32"
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: None Production Control Comments: MR 11/28/12 Nitrate Salts apply mixture & EPA codes

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

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 382# Generator info shows 2 items of nitrate salts, weights are 16 + 195#. No RTR BDR available for review. Nitrate salts are typically packaged in plastic bags + can contain undocumented liquids. RTR PS shows presence of liquids. Nitrate salts require repack w/ admixture. No chemicals identified; nitrate salts carry waste codes for chromium, lead, + mercury.

Performed By: Valerie Rhodes / Valerie Rhodes / 1126094 / 12/12/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use Heavyweight gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE. Use proper ratio of kitty litter to Nitrate Salts in accordance with procedure.
Performed By: G Mh / G Mh / 1149235 / 6-2-13
TRU Remediation Operations (Print) Signature Z Number Date
Jose Perez / Jose Perez / 221452 / 6-9-13

HS REVIEW: AS 206362 12/17/12

Discardable Waste Log Sheet

DrumID: 000372

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-380-FB	88.65	NITRATE SALTS		9.05	52	5/11	
2	IXFS-381-F1	7.27	NITRATE SALTS		0.76	52	5/11	
		95.92 kg						

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: March 5 2013

Container No. (5.[1])	S816305					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55					
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])	1.01 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: n/a

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

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

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z #) 3-5-13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130305c\
Data File : S816305.D
Acq On : 5 Mar 2013 1:15 pm
Operator : SA
Sample :
LastName : Unit 8
Misc : 55 GAL DRUM THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 05 13:23:22 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.256	96	2366814	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2139651	179.50 ppm	0.00
Target Compounds					Qvalue
12) Benzene	2.877	78	6076	1.01 ppm	94

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

Vocgas.m Tue Mar 05 13:23:42 2013

Best Available Copy

7-11-13
0400 Assuming WCCF operations center rounds
0412 Rounds have been signed off by SOS
0418 The job being conducted by SOS
0500 Starting movement out of 50 69
0514 Bagging on 9816594.
0513 Bag on complete.
0519 Permission granted to lower vehicle access gates for movement to area G.
0559 Vehicle access gates have been restored movement to area G complete
0955 Operator exiting 50 69. He is feeling ~~nauseous~~ 7-11-13 nauseous. SOS has been notified and IH will be ~~elevated~~ 7-11-13 evaluating operator.
1025 Bagging off 9816594, Bagging on 9816505
1032 Bag on, Bag off complete
1124 Permission granted to lower vehicle access barriers for unloading of transport vehicle
1330 Bagging off, Bagging on 9816304
1355 Bag on Bag off complete
1510 Starting exterior rounds
1514 Item #3 is unsat FSR in place ok to proceed
1520 Bagging off, daughter
[illegible] Starting inside rounds
1527 Outside rounds complete
1550 At 1500 notified by SOM that he has bumped his outside in the parking lot returning EP-WCCF-PM-01 big Rats, SOS and DCE were notified and on hand to escorted him to Owned
1617 Bagging off, Bagging on 9816342
[illegible] Rounds have been signed off by SOS
1650 notified by operator of CCG high high pressure FE-C02 E101, and HCA-C01
1652 Buzzer alarm acknowledged, suspend operations operators following RCT instructions
[illegible] Another buzzer alarm acknowledged
— Continued on next page — Chelsea

Continued from previous page Avalanche.

1659 ~~SOS SM, OM, FCD acknowledged~~ entering EP CORR ARP-0411, 405, 408, 409. and entering LCO 3.3.1 and ~~3.3.6~~ 0074113 3.3.2 and 3.0.1

1701 Entre contacted and asking about any power bumps.

1703 power dropped on Inverter, no power outages.

1705 Generator did not kick on OSE has been notified ok to turn back on.

1740 Operators entering to restart ventilation.

1744 Ventilation has been restarted.

1746 Ventilation start up failure.

1751 Ventilation has been restarted.

1810 Ventilation readings are normal.

1815 performed shift turnover with OCL Travis Warner McDaniel

Further entries this page

7-11-13 assuming WCRR operations center. - JColeman
1815 Pre-job being conducted by SOS.
1817 Contacted Engineering Manager designee on call to come to WCRR to sign off on the LCO paperwork.
1842 Engineering Manager designee has arrived to sign off on the LCO paperwork. Exiting LCOs. Pre-job concluded.
1954 Initiating a drum movement from transportainer to 50-69.
1956 Late entry - at 1917, operators entering 50-69 to resume operations on drum # 5816342. (JC)
2008 Drum movement into 50-69 complete.
2103 Initiating a drum movement from 50-69 to a transportainer.
2130 Drum movement out of 50-69 complete.
2203 Bagging off 1 daughter and 2 POCs, JC 7-11-13 bagging on another ~~daughter~~ POC JC 7-11-13
2220 Late entry at 2145, and JC 7-11-13 an operator walking down the hallway hit his (R) shoulder on the corner of the BBS box on the wall. SOS, SOM notified of a long red scratch. Entered EP-WCRR-RM-EOP-0309. JH also notified. (JC)
2226 DOE hotline called and a message was left by SOM.
2235 Bag off/on complete.
2253 Entering EP-WCRR-RM-AOP-0207 due to lightning.
2257 Beginning 30 minute wait time again due to another clap of thunder.
2300 Entered an FSR # 109073 for the BBS box to be relocated.
2305 Beginning 30 minute wait time again due to another clap of thunder.
2314 Beginning 30 minute wait time again due to another clap of thunder.
2316 Beginning 30 minute wait time again due to another clap of thunder.
2318 30 more for thunder.
2323 30 more for thunder.
2340 30 more for thunder.
2358 Bagging off 1 POC, bagging on a daughter.
0017 Bag off/on complete.
0036 Exiting EP-WCRR-RM-AOP-0207 Resuming outside operations.
Continued on next page JColeman

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7-11-13 DAYSHIFT

0614 Reviewed the shift turnover checklist, reviewed approved and posted
oncoming watchbill. Completed turnover with Nightshift SCM and
assumed the UCER SCM position. [illegible]

0640 Completed attending the pre-job brief conducted by (Gilbert) the SCS.
Issues identified by the team include: Operators complained of heat in
the bulk area especially when wearing lead vests. Requested the temperature
to be lowered - could - degrees, the discussion on the SR-57 Mock Suits and
high, time, distance and shielding was discussed. ETD requirements discussed
the team is aware NOT-liner sleeves, it was suggested Tyvex sleeves be
used over the gauntlets. Shift Chief will SR-13-005 to "Planned Dose Increments"
is still in effect. One transfer out is scheduled to begin 6a.

0710 Completed daily FCD conference call in

0745 DOE/FR and DOE Facility representative (SF) arrive to perform assessment of SCG Readiness

0801 Upon performing a move out of 7 drums from inside the facility, operators bagged
on SBL 394

0845 DOE exited the operations center and their escort was in their opinion
the drains require cleaning and the [illegible] floor drain looks clogged.

0820 One operator reported [illegible] the opening, [illegible] bag on legs, notification
was made to the ES/EH, operator is sitting on [illegible] and ES/EH is
monitoring.

0915 The transfer out of 12 drums to [illegible] is completed. No issues noted.
Upon review of the transfer, one SEDs document was missing for drum
93752 - Notification was made to Radiation Control, they are capturing SEDs.

0922 Notification was made to the Operations Center by RT that drum 5E46054 was
being dropped.

0911 With Ewing's support the SCM conducted walkdown of possible light in the parking lot
at UCER, the diesel fuel was dripping onto the catch pan - Notification was
made to Craft supervision to change out and replace the catch pan. The OCC
was informed.

1015 Operations initiated bagging off SBL 394 and bagging on SBL 3[illegible]

1032 [illegible] on and off were reported completed

1215 Completed the daily facility update to the MI/EOC

1305 The crafts repaired the diesel generator leak on the light power plant, they requested
Liners to replace the catch pan and kitty litter.

1312 The nonsecated operator was reported to be feeling better and the SOSon-ES/EH
declared him ready and fit for duty. He entered SCG to support operations

1450 SCM notified OM that the SCM bumped his forehead in the pantry, it's outside contaminated
area, noted as BTAD notification made to OM.

1500 OCC entered EPUCER-RA-EP-009, RCT, SCG and DOE were notified. SCM exiting to
OCC and with OM (for First AID - bandage

1450 Notified by operator/SCS of WLC high high Pressure FE-002 flow and HVX-201

1652 Mixer Blain acknowledged / SCM + OM suspend operations and ~~following~~ TAILGATE operations following
RCT instructions.

1658 The SOS, SCM, OM, FCD, DOE were all notified, also entering EP-UCER-ARP-
0411, 405, 408, 409 and entering LCO 3.3.1 and 3.3.2 and 310.

(Continued on Next Page)

no further entries this page

7-11-05 DAY SHIFT Continued

1701 EMPR Contacted and did not know of any power bumps
1703 Power dispatch contacted and did not know of any power bumps
1705 Generator did not kick on and CSE was contacted.
1740 Operators entered to restart ventilation
1744 Ventilation was restarted
1745 Inside Operator indicates ventilation start up failure
1751 Ventilation has been restarted.
1803 All Ventilation readings are normal, Existing LCOs.
1815 Conducted shift brief forward with incoming SOM Nightshift
1818 The nightshift SOM completed signing off the watchbill.
1820 It was discussed by OM, RP-1, SOM, and CSE, that potentially the filters require changing in the WCA glovebox, this will be scheduled Monday AM.
1825 Secured the SOM position for Day shift [illegible]

7-12-4

No Further Entries this Page

7/12/

PROJECT NAME 7/11/13 Night Shift NOTEBOOK NO.

1825 Reviewed Shift Turnover Checklist and assumed WCRR SOM position.

1845 Attended pre job brief conducted by SOS. Discussed current condition of facility and path forward to resume operations. Shift order WCRR-SH-13-003 R.2 Manual Drum Movements still in effect. At end of shift facility needs to be in Cold for maintenance.

1850 Completed close out of LCO entry paperwork

2008 Completed movement of drums into 50-69 for denesting/processing

2130 Drum movement out of 50-69 to transportainers complete.

2145 Notified of operator walking down hallway 50-69 hit his right arm on BBS mail box resulting in a 2 inch scratch barely producing blood. Entered into EP-WCRR-RM-EOP-0309 for minor injury. Notified OM and ES-IH. Placed padding on sharp corners of metal box.

2225 Left message on DOE Hotline of minor injury.

2230 Notified by SOS that drum being processed is a nitrate salt drum

2253 Entering EP-WCRR-RM-AOP-0207 Severe Weather due to lightning. Implementing 30/30 rule

2300 OCO initiated an FSR to have the BBS box relocated.

2305 Restarting 30 minute clock for lightning.

7/12/13 0036 Exited EP-WCRR-RM-AOP-0207. Resuming outside operations

0210 SOS identified leakage of water into Arctic building from roof caused by rain. FSR submitted.

0450 Completed all bag offs related to parent drum 5816342. Bagged on 94010 to reprocess using Kitty litter. Drum had initially been processed w/ Waste Lock absorbant instead of Kitty litter.

0525 Completed all bag offs. Production for this shift is 1 parent, 3 daughters and 2 POC's on the 7/12/13 2330-0600 shift. Weekly totals are 15 parents processed resulting in 24 daughters and 6 POC's.

0611 Review of inside rounds had item #37 WCO vacuum reading -0.52 inches wc. Per directions in Section 6.14 Filter change is scheduled for Monday 7/15/13.

0624 Completed Mode Change: WCRR Yard - Warm 50-69 is Cold.

0632 Secured night shift SOM position - turned over to day shift SOM.

JB 7-12-13

No further entries this page

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SIGNATURE RC DATE 7/12 20 13

READ AND UNDERSTOOD DATE 20

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7/11/13 WCRR SOS LOG BOOK

0600 Assuming SOS position.

0615 Conducting shift brief talked about heat inside and staying Hydrated

0635 Shift brief Complete

0645 Operators entering Facility.

0800 starting movement out of 50-69

0801 Bagging on S816394

0813 Bag off/on complete

0819 Operators lowering access gates

0834 movement Complete

0855 Operator exiting 50-69 He was feeling ill IH will evaluate operator.

1025 Bagging off S816394 Bagging on S816305

1052 Bag on/off Complete

1125 Lowering access gates for unloading transport vehicale

1330 Bagging off bagging on S816304

1333 Bag off/on Complete

1510 Starting Rounds.

1512 Bagging off daughter.

1550 Late entry At 1500 notified sum bumped his head entered EP WCRR-EOP-205 sum transported to ocmed

1607 Bagging off bagging on S816342

1631 Reviewed Inside And outside Rounds

1650 From 7-11-13 ~~Operators~~ Operators Inside Notified of WCO high high pressure FE 7002 low and H019-001

1652 Mizer Hiaron acknowledged Suspended operations. Operators EO following RPI Instruction.

1656 ~~Mr~~ the mizer Acknowledged

1658 entering EP-WCRR-AKF-0411, 405, 408, 409 and entering LCO 3.3.1 And 3.3.2 And 3.3.6

1740 Operators Monitoring to restart ventilation

1744 Ventilation Restarted.

1746 Ventilation Start up failure

1751 Ventilation restarted.

1803 Ventilation numbers normal

AM 1900 Sos turn over with clayton Mullins

7/11/13 WCRR SOS Log Book

1815 Assuming SOS position. CM

1820 Starting Pre-Job, discussed alarms and potential for alarms overnight due to low flow rate on the outlet HEPA's of the WCG. Also having to go to cold at end of shift

1851 Pre-Job complete. CM 7-11-13

1855 Late entry @ 1842 Exiting LCO's. CM

1954 Starting movement into 50-69.

2008 Movement into 50-69 complete.

2020 Operators inside state that suction in WCG feels weak almost like there is no suction. Will continue to keep an eye on that. Also told by day shift operator that drum lift making grinding sound, will perform inspection at most convient time. Inner roll up door in high bay when closing ended up stuck on one side about 5ft. off the ground, after raising it up a foot it closed properly. CM 7-11-13 CM 7-11-13

2103 Starting movement out of 50-69.

2130 Move out complete.

2203 Bagging off 1 daughter and 1 POC, bagging on a POC.

2220 Late entry @ 2145 an operator bumped into the BBS box in the hallway, causing his ® shoulder to scratch. SOM and IH notified, entering EP-WCRR-RM-EOP-0309

2225 SOM left message on DOE hotline.

2235 Bag off/on complete

2253 Entering EP-WCRR-RM-AOP-0207 because of lightning.

2300 FSR submitted #109073 to have BBS box relocated.

2358 Bagging off 1 POC, bagging a daughter on.

0017 Bag off/on complete.

0036 Exiting EP-WCRR-RM-AOP-0207.

0210 FSR submitted #109074 for leaks in arctic roof.

0243 Bagging off 1 daughter and bagging on another daughter

0258 Bag off/on complete.

Continued on Next Page CM 7-11-13 CM 7-11-13 CMullins

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0084
Examination Date:	7/16/2013
Waste Container ID:	94005
Video/Audio Recorded Media Number:	LA-HERTR-13-0084 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 206.5 kg Tare Wt.: 33.4 kg Net Wt.: 173.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 94005

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	150.1
Soils (S):	
Total WMP Weight:	173.1

CCP Radiography Data Sheet

Waste Container ID: 94005

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]	7/16/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94005	Count Sequence Number:	16186
Operator:	DCLTD231\Operator		
Assay Start:	7/17/2013 11:41:09 AM		
Description 1:	2LANDA1195		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 173.0 kg	Net:	173.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.920 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: 16186
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 94005

Batch Number: 2LANDA1195
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 7/17/2013

Net Weight	173000.0 g		
Pu mass	1.20E+001	+-	2.34E+000 g
TRU Alpha Activity	3.87E+000	+-	1.66E+000 Ci
TRU Activity Concentration	2.23E+004	+-	9.58E+003 nCi/g
Pu-239 Equivalent Activity	3.89E+000	+-	1.66E+000 Ci
Pu-239 FGE	1.13E+001	+-	2.20E+000 g
Decay heat	1.27E-001	+-	5.53E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.11E-002	4.36E-005	9.58E-006	4.68E-006
PU238	1.10E-003	1.90E-002	3.72E-003	3.68E-005
PU239	1.12E+001	7.07E-001	1.38E-001	1.37E-003
PU240	7.19E-001	1.65E-001	3.23E-002	3.21E-004
AM241	8.57E-001	2.97E+000	1.65E+000	4.33E-002
PU241	1.39E-002	1.45E+000	2.84E-001	2.81E-003
PU242	2.40E-003	9.52E-006	1.86E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.98E-007
U233	<LLD	<LLD	0.00E+000	4.85E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.63E-006
U238	<LLD	<LLD	0.00E+000	1.23E-005

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 7-19-13

ITR: [illegible] Date: 7-22-13

Automated Independent Technical Review

Count Sequence Number: 16186 Batch Number: 2LANDA1195
Counter ID: HENC #2
Container ID: 94005
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/17/2013

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

Expert Review by: Sheri Chamberlin Date: 7-18-13

Waste Container ID: **94005**

BDR Number: **LA13FG12064**

Sampling Date: **7/18/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	8.15	U
74-82-8	Methane	9.63	U
67-56-1	Methanol	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\130718c\
Data File : 94005.D
Acq On : 18 Jul 2013 3:36 pm (#1); 18 Jul 2013 3:35 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 18 15:40:33 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

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

Discardable Waste Log Sheet

DrumID: 000372 S816305

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-380-FB	88.65	NITRATE SALTS		9.05	52	5/11	
2	IXFS-381-F1	7.27	NITRATE SALTS		0.76	52	5/11	
		95.92 kg						

Discardable Waste Log Sheet

DrumID: 010093

S816374

Item	Item ID	Net (kg)	Matrix	M Code	PRE	MT	Auth	Remarks
1	DXFS 392 FB	33.18	NITRATE SALTS		0.87	52	5/11	
2	DXFS 393 F1	50	NITRATE SALTS		5.58	52	5/11	
3	DXFS 394 F1	72.73	NITRATE SALTS		3.27	52	5/11	
		155.91 kg						

1 of 1

Discardable Waste Log Sheet

DrumID: 010097 S816440

Item#	DrumID	Net (kg)	Matrix	M Code	RHR	HIT	Auth	Remarks
1	DXFS 404 F1	119.09	NITRATE SALTS		12.29	52	5/11	
		119.09 kg						

1 2 / 2 1 1 1

Discardable Waste Log Sheet

DrumID: 010096 S816469

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS 405 F1	66.13	NITRATE SALTS		13.52	52	5/11	
2	DXFS 406 F1	20.45	NITRATE SALTS		5.11	52	5/11	
3	DXFS 407 F1	28.64	NITRATE SALTS		5.02	52	5/11	
4	DXFS 408 F1	9.55	NITRATE SALTS		3.97	52	5/11	
		124.77 kg						

Discardable Waste Log Sheet

DrumID: 010931 S816664

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-411-FB	88.18	NITRATE SALTS		10.55	52	5/11	
2	IXFS-412-FA	40.46	NITRATE SALTS		2.85	52	5/11	
		128.64 kg						

2

Discardable Waste Log Sheet

DrumID: 010920 S816667

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-409-F1	54.09	NITRATE SALTS		10.49	52	5/11	
2	IXFS-410-F1	25.45	NITRATE SALTS		6.6	52	5/11	
3	IXFS-411-FA	65.91	NITRATE SALTS		4.01	52	5/11	
		145.45 kg						

Discardable Waste Log Sheet

DrumID: 010979 S816773

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-424-F1	57.73	NITRATE SALTS		4.6	52	5/11	
2	IXFS-428-F1	59.09	NITRATE SALTS		3.71	52	5/11	
3	IXFS-429-F1	22.73	NITRATE SALTS		10.37	52	5/11	
		139.55 kg						

2

Discardable Waste Log Sheet

DrumID: 010339 S816828

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS 432 FC	19.09	NITRATE SALTS		3.01	52	5/11	
2	DXFS 433 F1	26.38	NITRATE SALTS		0.58	42	2/11	
3	DXFS 434 FA	81.36	NITRATE SALTS		11.57	52	5/11	
		126.83 kg						

Discardable Waste Log Sheet

DrumID: 011379 S816837

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-434-FB	60.68			2.7	52	5/11	
2	IXFS-435-F1				5.71	52	5/11	
3	IXFS-436-F1				0.93	52	5/11	
4	IXFS-437-F1	46.83			2.96	52	5/11	
		107.51 kg						

Discardable Waste Log Sheet

DrumID: 011384 S816890

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS-438-F1	72.73	NITRATE SALTS		4.86	52	11	
2	DXFS-439-F1	8.63	NITRATE SALTS		2.18	53	11	
3	DXFS-440-FA	33.95	NITRATE SALTS		2.08	52		
4	DXFS-441-F1	12.5	NITRATE SALTS		1.75	53	11	
		127.81 kg						

S816374

S816374

Container Profile 763224

File Options Reports Help

S816374

763224	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

S816374

S816374
- 93905 – EMPTY
- 93904
- 93903
- 93902

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
33.3329851666667	%			

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 6-26-13w

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5816374

6.2[4] Date Processed: 6-26-13

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

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

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

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

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 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: Brandon Chavez / [signature] 1201742 / 6-26-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
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4.1[6][B]	Parent Waste Container No.: SS16374	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	481.6 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	~~561.6~~ DC corrs 80 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	561.6 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: Approval granted by FOD per telecon on 6/6/13 @ 1740 verified w/ SOM Log.	

Randy Arkell / [signature] 1109185 / 6/22/13
EWMO-FOD (print) Signature Z# Date

ATTACHMENT 1

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4.1[6][B] Parent Waste Container No.: S816374

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93902	93903	93904	
10.1[4]	Daughter Drum Filter No.	KM-571	KM570	KL-342	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-6509	L-6505	L-6820	
10.1[4]	Daughter Drum Purchase Order No.	501103	501103	501103	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No		N/A		
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	2gal	N/A	N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead	Lead	Lead	A
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A	N/A	
10.3[9][B]	PCB Item ID No.				N
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%	70%	60%	
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic	Plastic	Plastic	

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 5816374

Comments: Plastic, Lead, Salts, Sludge, Kitty litter
Battery pack, Drill, Battery charger

11.1[1] Performed By: Brandon Chance / [signature] / 1[illegible] / 6-26-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Mk / [signature] / 14975 / 7/1/12 1509
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 6-19-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501012
Lot No.: 0233945
Manufacture Date: 2012

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: 32-1871
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 6/19/13
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: Michael Montoya [signature] 191352 6/19/13
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: [illegible] [signature] [illegible] 7/1/13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 6-26-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 93905

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: Brandon Chavez / [signature] [illegible] / 6-26-13
Waste Handling Technician (print) Signature Z # Date

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

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

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[35][D] 85-gal overpack drum gross weight (lb): 178.2 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] [illegible] / 6-26-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Mk / [signature] 114938 / 7/1/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 93902

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BDP
Model #: 6CPVC 1.5 2SPVC
Serial #: L-6509
Date of Manufacture: 1/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 01905
Serial #: KM-571
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100216
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±9% CW 6% CCW

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

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

[x] Yes [ ] No

Print Name: MICHAEL MONTOYA Signature [signature] Z#: 6/25/13

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 76.0
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191352 Date: 6/25/13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 201712 Date: 6-26-13

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

DRUM ID#: 93902

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

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

Tolerance ±3% CW ±6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 234.8

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [signature] Date: 6-26-13

Verifier Print/Sign: [signature] Date: 6/27/13

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

Drum ID#: 93903

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 02345765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC 1.5 2SPVC
Serial #: L-6505
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 #: KM-570
Date of Manufacture: 11/12

RECORD torque wrench information:

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

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: +5%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 wtight (lbs) 75.8
File ID #: 619065

- [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: 6/25/13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204742 Date: 6-26-13

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

DRUM ID#: 93903

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-1-13

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

Tolerance ±3%cw ±6%ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

✓ 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) 305.8

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 6-26-13

Verifier Print/Sign: JOE QUINTANA Date: 6/27/13

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

Drum ID#: 939041

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC-1-5 2spvc
Serial #: L-6820
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 #: OPDS
Serial #: KL342
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	035369
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):	10-30
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 witght (lbs) 75.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191352 Date: 6/25/13

Verifier Print: Brandon Chase Verifier Sign: [signature] Z#: 201782 Date: 6-27-13

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

DRUM ID#: 93904

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

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

— Tolerance ± 3% cw ± 6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 214.8

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: Brandon Chacez Date 6-27-13

Verifier Print/Sign: Edward Mt[illegible] Date: 6-27-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S816374 Container Type: 55-GAL Gross Weight (lbs): 344
Inner Seal #: 010093 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0076
TWSR Comments: None
Total PE-Ci Activity: 8.29E-01 Equivalent Combustible PE-Ci: 5.14E-03 AM-241 PE-Ci: 6.72E-02
Total Fissile Gram Equivalents: 9.2 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008 D007 D009 WR 12/11/12
NCR RTR/NDA Comment: LANL: remediate -Prohibited Item
RTR Pre-Screen Date: 12/11/2006 Comment: Impenetrable Obj,
Certified RTR Comment: 2 gallons of liquid at 32"

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 WR ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: None Production Control Comments: Nitrate Salts apply mixture of EPA codes

Performed By: Julie Gallegos (Production Control (Print)) Julie Gallegos (Signature) / 176905 (Z Number) / 9.11.12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 284# Generator info shows 3 items of nitrate salts; weights range from 73-160#. RTR BDR shows plastic bags + homogeneous solids. It also shows prohibited liquids + lead-lined drum. No chemicals identified; nitrate salts carry waste codes for chromium, lead, + mercury.

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

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use Hexarmour gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE. Use proper ratio of kitty litter to PPE In accordance with procedure
Performed By: G Mh (TRU Remediation Operations (Print)) (Signature) / 149235 (Z Number) / 6.2.13 (Date)
Joe Jerez (Signature) / 221452 / 6-9-13

IHS REVIEW: AB 206362 12.17.12

Discardable Waste Log Sheet

DrumID: 010093

Item	Item ID	Net (kg)	Matrix	M Code	PHE	MT	Auth	Remarks
1	DXFS 392 FB	33.18	NITRATE SALTS		0.87	52	5/11	
2	DXFS 393 F1	50	NITRATE SALTS		5.58	52	5/11	
3	DXFS 394 F1	72.73	NITRATE SALTS		3.27	52	5/11	
		155.91 kg						

1 of 1

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0076
Examination Date:	08/06/12
Waste Container ID:	S816374
Video/Audio Recorded Media Number:	LA-HERTR-12-0076 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-1472-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt: 216.5 kg. Tare Wt: 60.1 kg. Net Wt: 156.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner -Vented, Lead Lined Drum
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	70 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 8616374

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

Section 4: Packaging Material and Waste Material Parameters		
Packaging Material:		Estimated Weight (kg)
Steel (ST):		27.7
Plastics (PP):	Plastic Liner Bag and 90mil Liner and Lid	9.4
Others:	Lead Liner	23.0
Total Packaging Weight:		60.1
Waste Material Parameter:		Estimated Weight (kg)
Iron-based Metal / Alloys (IM):		
Aluminum-based Metals / Alloys (AM):		
Other Metals (OM):		
Other Inorganic Materials (OI):		
Cellulosics (C):		
Rubber (R):		
Plastics (waste materials) (XPM):		4.0
Organic Matrix (OR):		
Inorganic Matrix (IN):		152.4
Soils (S):		
Total WMP Weight:		156.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 8816374

Section 5: RTR Summarize Questions answered YES will be authored in the comments section of this document	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?	☐	☑
RH TEAMPAC		
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-1472-12

RTR Operator:

Aaron Elliott		08/06/12
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: March 4 2013

Container No. (5.[1])	S816374					
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])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	17.82 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Gabe Romero, 236973
CCP (Print) Z#

Reviewed By: Rick Jagielski, 246088
CCP (Print) Z#

Comments: Per email all containers have 72 filters - Gabe Romero

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 3.4.13
Waste Handling Operator (print) Signature Z# Date

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130304c\
Data File : S816374.D
Acq On : 4 Mar 2013 1:38 pm (#1); 4 Mar 2013 1:36 pm (#2)
Operator : GR
Sample :
Misc : 55 GAL LFL THROUGH FILTER UNOBSTRUCTED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 04 13:41:54 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Feb 26 13:17:30 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
2) Methane	3.750	GC1	2335	17.82	ppmv	100

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

H2-CH4.M Mon Mar 04 13:42:09 2013 UNIT12

6-27-13

0600 Assuming WCRRF Operations center - C Velarde
0601 Assuming OCO under instruction. G. Espinoza
0603 Starting outside rounds
0620 Starting inside Rounds.
0621 Item #3 UnSAT FR in place. OK to proceed.
0641 Item #63 OOS POD in place ok to proceed.
0645 Inside/outside Rounds Complete.
0656 Inside/outside Rounds reviewed by SOS.
0712 Mode change performed, TA-50-69 and WCRR Yard in Operations
0800 RCT notified OPS Center that filter plug on daughter drum popped off. SOS has been notified.
0805 Permission granted to lower vehicle access barrier.
0810 Operator notified OPS Center that liquids were found in the box from drum left bagged on over night. IH and SOS notified
0827 Operators Continuing to process drum.
0915 vehicle access gates have been restored shipment out of WCRRF site Complete.
0937 Bagging off/Bagging on S 8116900.
1005 Bag on/off Complete.
1105 Lowering vehicle access barrier.
1120 Bagging off 1 daughter, bagging on daughter #2.
1137 Bag off Complete.
1140 Turning over OCO duties to C Velarde. GE 237720
1141 Assuming full WCRRF Operations Center - C Velarde
1142 Starting to unload vehicle transport trailer.
1225 movement to transportainers from transport vehicle is complete
1330 Starting movement out of 50-69
1347 Completed movement out of 50-69
1500 1510 6-27-13 Bagging off 9816900 Bagging on 9816440.
1524 Bag on, Bag off complete
1527 Starting inside rounds
1549 Inside rounds complete
1553 RCT advised OPS center that airlock is hot from activities [illegible]

6-27-13 Continued from previous page - Cleland

1738 - Bagging of last drum of the day.

Bag off is complete

mode change complete 50-69 and WCRRF yard in warm standby.

1830 end of day WCRRF Operations center secure Cleland

no further entries.

PROJECT NAME 6-27-13 NOTEBOOK NO.

0600 Assumed the WCRR SOM position [signature]
0615 Attended the pre job briefing conducted by the SOS. SOS discussed shoe policy and reporting injuries through the operation center (notifications).
0700 Shift brief with T454 SOM.
0706 Turning over SOM duties to John Guadagnoli. [signature]
0706 Assumed the SOM duties [signature]
0712 Mode Change Complete WCRR yard 50-69 from WARM/WARM to Operations/Operations.
0810 Inside operators notify the Ops Center that the parent drum had dropped liquid onto the glovebox floor. The parent drum was ~~not~~ left as with the lid closed from the prior night. IH, SOS were notified. OM was notified. [initials] 6-27-13
0825 Upon evaluation by ES/IH, and discussion with the inside lead operator, a slab bag off bag with absorbant will be placed under the lid, and lid removed. The drippage on the glovebox floor 3-4 inch (looks like pancake dough) will be placed into the bag (secondary containment.
0827 Operations continue to process the parent drum.
0845 Completed walk down (MDV) of WCRRF yard with ES/IH, observed personnel performing transfer to Transport vehicle. All PPE were worn by operators safe and compliant. proper ladder use to enter the transport vehicle was utilized. The roll-step ladder was tagged out of service due to bent support rail. The mens toilet was noted - do not use - maintenance was notified. There was a smell of propane in the yard, and further investigation determined that Arctic Facility personnel utilized the forklift with propane in the parking lot.
0853 The OM approved work package 00448096-01 to perform load Testing of the lift table. The extended package is good through Sept 27th, 2013.
1200 Daily call in conducted, status to PM on WCRRF -
1257 Completed walk thru of WCRRF Boundary with PM. Evaluated lights being set up to support Night shift starting Monday and ensured portable plugs 500 watt and extension cords were available (2 sets noted complete and ready) adjustments of one light to point to the Morgan is recommended. Additional follow up will be conducted with planner on extinguishers for all units.
1401 Supported in the transfer of the small refrigerator from ES/IH office to AREA 6
1510 Completed walkdown of positioning lights with EWMO, maintenance crafts, all adjustments were made to the positioning and light angles. Start up will be on Monday Evening secondary containment is noted under the units (catch pan with oil dry). Measurements were taken at back gate opening, and over 12' exist to allow emergency vehicles to access. For maintenance, additional fire extinguishers are not required.
1527 Reviewed two weeks of RCER logs and signed off with second review conducted by EWMO.
D Three parents generated to Daughter.
812 Mode Change Complete WCRR Yard 50-69 from Operations/Operations to WARM/WARM
1820 Secured the SOM position [signature]

no further Entries this page

[signature]

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

6/27/13 WCRR 505 Log Book

0600 Assuming 505 position for the day. Jim Jay
0615 Starting Pre-Job. Safety Topic discussing LAVE-shoe Policy
Processing Parent that was left bagged on overnight.
2 55 gallon drum Parents and 2 85 gallon drum Parents inside for processing. 1 shipment out and 1 shipment in today.
0640 Concluded Pre-Job brief
0655 Reviewed and signed rounds
0712 Mode change WCRR yard and 50-69 are in Operations.
0938 Bagging off Parent that was left bagged on overnight
Bagging on first Parent for the day.
1005 Bag on Bag off complete
1120 Bagging off one daughter, bagging on second daughter and continuing to process Parent
1132 Bag off complete
1500 Bagging off first Parent, Bagging on second Parent
1524 Bag on Bag off complete.
1530 Late Entry 1300 Operators breaking for lunch. 1400 Operators returning from lunch.
1741 Bagging off last drum for the day.
1745 Late entry 1652 reviewed and signed rounds.
1812 Mode change WCRR yard and 50-69 are in WARM
1845 Securing 505 position for the day. Jim Jay

No further entries on this page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0081
Examination Date:	7/3/2013
Waste Container ID:	93902
Video/Audio Recorded Media Number:	LA-HERTR-13-0081 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 107.0 kg Tare Wt.: 33.4 kg Net Wt.: 73.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 93902

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	
R:	
XPM:	Plastic bags, 90 mil liner lids
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	67.6
Soils (S):	
Total WMP Weight:	73.6

CCP Radiography Data Sheet

Waste Container ID: 93902

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		7/3/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93902	Count Sequence Number:	16135
Operator:	DCLTD231\Operator		
Assay Start:	7/8/2013 10:40:14 AM		
Description 1:	2LANDA1191		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 73.6 kg	Net:	73.6 kg
Container:	Volume: 208.0 l	Full:	55.0 %
Density:	0.640 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16135	Batch Number:	2LANDA1191
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93902	Analysis Date:	7/8/2013

Net Weight	73600.0 g		
Pu mass	2.43E+000	+-	4.04E-001 g
TRU Alpha Activity	2.97E+000	+-	1.51E+000 Ci
TRU Activity Concentration	4.04E+004	+-	2.05E+004 nCi/g
Pu-239 Equivalent Activity	2.98E+000	+-	1.51E+000 Ci
Pu-239 FGE	2.30E+000	+-	4.03E-001 g
Decay heat	9.89E-002	+-	5.04E-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	5.70E-007
U233	<LLD	<LLD	0.00E+000	3.67E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.21E-006
NP237	3.94E-002	2.81E-005	4.96E-006	1.96E-006
PU238	2.22E-004	3.85E-003	8.71E-004	4.23E-004
U238	<LLD	<LLD	0.00E+000	9.35E-006
PU239	2.28E+000	1.43E-001	2.53E-002	1.57E-002
PU240	1.46E-001	3.35E-002	7.58E-003	3.68E-003
AM241	8.04E-001	2.79E+000	1.51E+000	3.26E-002
PU241	2.83E-003	2.94E-001	6.66E-002	3.23E-002
PU242	4.86E-004	1.93E-006	4.37E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 7-15-13

ITR: Jim Barton Date: 7/17/13

Automated Independent Technical Review

Count Sequence Number: 16135 Batch Number: 2LANDA1191
Counter ID: HENC #2
Container ID: 93902
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Curium/Californium Neutron Analysis complete with warnings.	
- The Cm/Cf Mass Variance is negative, Cm/Cf Mass Uncertainty set to zero so analysis could continue.	Ok
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
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
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chambers Date: 7-9-13

Waste Container ID: **93902**

BDR Number: **LA13FG12061**

Sampling Date: **7/12/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	69.65	
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\130712c\
Data File : 93902.D
Acq On : 12 Jul 2013 2:00 pm (#1); 12 Jul 2013 1:59 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 12 14:04:25 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	1.907	GC1	19867m	69.65	ppmv	

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0081
Examination Date:	7/3/2013
Waste Container ID:	93903
Video/Audio Recorded Media Number:	LA-HERTR-13-0081 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.: 136.0 kg Tare Wt.: 33.4 kg Net Wt.: 102.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 93903

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hand tool

AM:

OM: Scrap lead

OI:

C: Leather gloves, tape roll

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	3.8
Other Inorganic Materials (OI)	
Cellulosics (C):	0.3
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	92.4
Soils (S):	
Total WMP Weight:	102.6

CCP Radiography Data Sheet

Waste Container ID: 93903

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		7/3/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93903	Count Sequence Number:	23156
Operator:	D3PW2DK1\operator		
Assay Start:	7/3/2013 1:55:53 PM		
Description 1:	1LANDA1803		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 102.6 kg	Net:	102.6 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.820 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23156	Batch Number:	1LANDA1803
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:	93903	Analysis Date:	7/3/2013

Net Weight	102600.0 g		
Pu mass	4.36E+000	+-	2.03E+000 g
TRU Alpha Activity	7.32E+000	+-	3.85E+000 Ci
TRU Activity Concentration	7.13E+004	+-	3.75E+004 nCi/g
Pu-239 Equivalent Activity	7.33E+000	+-	3.85E+000 Ci
Pu-239 FGE	4.15E+000	+-	1.90E+000 g
Decay heat	2.44E-001	+-	1.29E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.39E-001	9.93E-005	2.02E-005	4.02E-006
PU238	3.99E-004	6.91E-003	3.21E-003	3.43E-005
PU239	4.09E+000	2.57E-001	1.20E-001	1.28E-003
PU240	2.61E-001	6.01E-002	2.79E-002	2.98E-004
AM241	2.01E+000	7.00E+000	3.85E+000	8.69E-002
PU241	5.08E-003	5.28E-001	2.46E-001	2.62E-003
PU242	8.72E-004	3.46E-006	1.61E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.18E-006
U233	<LLD	<LLD	0.00E+000	7.54E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.24E-006
U238	<LLD	<LLD	0.00E+000	2.07E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 7-11-13

ITR: _____ Date: 7-12-13

Automated Independent Technical Review

Count Sequence Number: 23156 Batch Number: 1LANDA1803
Counter ID: MCS HENC #1
Container ID: 93903
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/3/2013

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; 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 Chamber Date: 7-11-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93903**

BDR Number: **LA13FG12060**

Sampling Date: **7/11/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	51.61	
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\130711C\
Data File : 93903.D
Acq On : 11 Jul 2013 1:03 pm (#1); 11 Jul 2013 1:01 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 13:22:19 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	14722m	51.61	ppmv	

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0081
Examination Date:	7/3/2013
Waste Container ID:	93904
Video/Audio Recorded Media Number:	LA-HERTR-13-0081 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 97.5 kg Tare Wt.: 33.4 kg Net Wt.: 64.1 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:	25 %

CCP Radiography Data Sheet

Waste Container ID: 93904

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead, batteries

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	29.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	34.1
Soils (S):	
Total WMP Weight:	64.1

CCP Radiography Data Sheet

Waste Container ID: 93904

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		7/3/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93904	Count Sequence Number:	16136
Operator:	DCLTD231\Operator		
Assay Start:	7/8/2013 11:21:47 AM		
Description 1:	2LANDA1191		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 64.1 kg	Net:	64.1 kg
Container:	Volume: 208.0 l	Full:	25.0 %
Density:	1.230 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:	16136	Batch Number:	2LANDA1191
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93904	Analysis Date:	7/8/2013

Net Weight	64100.0 g		
Pu mass	1.98E+000	+-	5.54E-001 g
TRU Alpha Activity	1.38E+001	+-	7.80E+000 Ci
TRU Activity Concentration	2.15E+005	+-	1.22E+005 nCi/g
Pu-239 Equivalent Activity	1.38E+001	+-	7.80E+000 Ci
Pu-239 FGE	1.94E+000	+-	5.54E-001 g
Decay heat	4.61E-001	+-	2.61E-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	1.48E-006
U233	<LLD	<LLD	0.00E+000	8.89E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.50E-006
NP237	1.56E-001	1.11E-004	2.85E-005	4.76E-006
PU238	1.81E-004	3.14E-003	1.03E-003	9.01E-004
U238	<LLD	<LLD	0.00E+000	2.37E-005
PU239	1.86E+000	1.17E-001	3.48E-002	3.35E-002
PU240	1.19E-001	2.73E-002	8.99E-003	7.84E-003
AM241	3.93E+000	1.37E+001	7.80E+000	6.55E-002
PU241	2.31E-003	2.40E-001	7.90E-002	6.89E-002
PU242	3.97E-004	1.57E-006	5.18E-007	0.00E+000
AM243	1.26E-003	2.54E-004	6.57E-005	6.59E-006

Errors quoted at 1.000 sigma

Operator: D E R C Date: 7-15-13

ITR: Ann Barton Date: 7/17/13

Automated Independent Technical Review

Count Sequence Number: 16136 Batch Number: 2LANDA1191
Counter ID: HENC #2
Container ID: 93904
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/8/2013

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	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Results are marked as invalid.	

Comments	Disposition
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
Density is outside range (0.02 to 2.10 g/cc) or fill height is below 30%.	Fill height acceptable, neutron results applied.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chandler Date: 7-15-13

Waste Container ID: **93904**

BDR Number: **LA13FG12060**

Sampling Date: **7/11/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	38.46	
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\130711C\
Data File : 93904.D
Acq On : 11 Jul 2013 12:54 pm (#1); 11 Jul 2013 12:52 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 13:00:16 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	1.907	GC1	10972m	38.46	ppmv	

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

S816440

S816440

Container Profile 770926

File Options Reports Help

S816440

770926	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

S816440

- S816440
  - 93910—EMPTY
  - 93909

Task History

Transfer Details

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

Working Copy
Date 4/27/13 a

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S816440

6.2[4] Date Processed: 6-27-13

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: 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: Brandon Chavez [signature] 1201 7421 6-27-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: S816440	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	417.0 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)	417.0 lb
6.2[7]	(S) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S816440

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93909			
10.1[4]	Daughter Drum Filter No.	KM-560		N	
10.1[4]	Daughter Drum Bag Filter No.	L-6507			
10.1[4]	Daughter Drum Purchase Order No.	501103		A	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.	N			
	Date of Manufacture				
10.2[5]	POC ID No	A		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			A	
10.3[5][A]	Free Liquid Volume/Units	3 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	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	N		
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.: S816440

Comments: Salts, sludge, kitty litter, plastic

11.1[1] Performed By: Brandon Chavez / [signature] [illegible] / 16-27-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [signature] 122452 / 7/18/13 0522
SOS or designee (print) Signature Z # Date/Time

Working Copy
JC 6-25-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238025
Manufacture Date: 15

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

	Filtered Vent	2-in. Bung
M&TE No.:	100214	038369
Cal. Expiration Date:	12/15/13	12-15-13
Tolerance:	+/-4% cw & +/-8% ccw	+/-5% cw & +/-6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL 1556
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: IAN MARQUEZ / [signature] Z76208 / 6-25-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: IAN MARQUEZ / [signature] Z76208 / 6-25-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Jerez / [signature] 122421 / 7/11/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: BC6-22-13 ~~90~~ 93910

7.[24] Overpack drum closure ring torque wrench information:

M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ± 3% cw ± 6% ccw

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

Performed By: Brandon Chavez / [signature] 120/1170 6-27-13
Waste Handling Technician (print) Signature Z # Date

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

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

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[35][D] 85-gal overpack drum gross weight (lb): 184.4 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 120/1170 6-27-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Tevez / [signature] 122/1172 7/18/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 93909

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6 C DVC-1-5-25 PVC
Serial #: L-6507
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 #: KM-560
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw ± 6% ccw	Tolerance:	±3% cw ± 6% ccw

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

[x] Yes [ ] No

Print Name: MICHAEL MONTOYA Signature [signature] Z#: 191352

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 76.0
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191352 Date: 6/25/13

Verifier Print: Brandon Clover Verifier Sign: [signature] Z#: 204742 Date: 6-28-13

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

DRUM ID#: 93909

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

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

Tolerance ±3%CW ±6%CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 168.4

Scale ID#: 018065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: ~~Brandon Chavez~~ JOE QUINTANA Date 6-27-13

Verifier Print/Sign: Joe Q Date: 6/27/13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S816440 Container Type: 55-GAL Gross Weight (lbs): 405

Inner Seal #: 010097 Filter Prefix: None Filter Serial #: None

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: No BDR

TWSR Comments: LEACHED SOLIDS

Total PE-Ci Activity: 1.05E+00 Equivalent Combustible PE-Ci: 3.93E-01 AM-241 PE-Ci: 8.50E-02

Total Fissile Gram Equivalents: 11.6 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 5/29/2012 Comment: >1% Liquid. Doesn't match AK.

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 we 11/24/12

TRUCON Code: None Production Control Comments: Nitrate Salts apply multiple EPA codes

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

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts
Net Wt: 345# Generator info shows 1 item of nitrate salts, weighing 262#. No RTR BDR available for review. Nitrate salts typically packaged in plastic bags, can contain unidentified liquids. RTR PS shows presence of liquids + inconsistent waste stream description. Nitrate salts require repack w/ admixture. No chemicals identified; nitrate salts carry waste codes for chromium, lead, + mercury.

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

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: USE Proper PPE. Follow procedure for ratio of kitty litter to be added for Nitrate Salts.

Performed By: G Mr / / 149235 / 6-2-13
TRU Remediation Operations (Print) Signature Z Number Date

Jose Perez / Jose Perez / 221452 / 6-9-13

IHS REVIEW: RS 206362 12.17.12

Discardable Waste Log Sheet

DrumID: 010097

Item#	DrumID	Net (kg)	Matrix	M Code	RHE	HIT	Auth	Remarks
1	DXFS 404 F1	119.09	NITRATE SALTS		12.29	52	5/11	
		119.09 kg						

1 2 / 2 1 3 3 1

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: Jan 29 2013

Container No. (5.[1])	S816440					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	115.17 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A 1-30-13

5.[7] Certified CCP Technician:

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

Reviewed By: Nathan Wales (CCP (Print)) 1235566 (Z#)

Comments: n/a

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

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

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S816440.D
Acq On : 29 Jan 2013 1:20 pm (#1); 29 Jan 2013 1:19 pm (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 13:26:03 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	1.933	GC1	32529m	115.17	ppmv	

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

H2-CH4.M Tue Jan 29 13:26:12 2013 UNIT12

6-27-13

0600 Assuming WCRRF Operations center Cutlerville
0601 Assuming OCO under instruction. G. Espinoza
0603 Starting outside rounds
0620 Starting inside Rounds
0621 Item #3 UNSAT FR in place OK to proceed.
0641 Item #63 COS POD in place ok to proceed. ...
0645 Inside/outside Rounds Complete
0656 Inside/outside Rounds reviewed by SOS.
0712 Mode Change performed, TA-50 W9 and WCRR Yard in Operation
0800 RCT notified OPS Center that filter plug on daughter drum popped off SOS has been notified.
0805 Permission granted to lower vehicle access barrier,
0810 Operator notified OPS Center that liquids were found in the box from drum left bagged on over night IH and SOS notified
0827 Operators Continuing to process drum
0915 vehicle access gates have been restored shipment out of WCRRF site Complete
0937 Bagging off/Bagging on S 816900
1005 Bag on/off Complete
1105 Lowering vehicle access barrier.
1120 Bagging off 1 daughter, bagging on daughter #2.
1137 Bag off Complete.
1140 Turning over OCO duties to C Velarde. GE 231722
1141 Assuming full WCRRF Operations Center Cutlerville
1142 Starting to unload vehicle transport trailer.
1235 movement to transportation from transport vehicle is Complete
1335 Starting movement out of 51 W9
1349 Completed movement out of 51 W9
1500 1st W-27-13 Bagging off 9816900 Bagging on 9816440
1524 Bag on Bag off Complete
1587 Starting inside rounds
1549 Inside rounds complete
1553 RCT advised OPS Center that [illegible]

1713 Continued from previous page - Cleland

1738 - Bagging of last drum of the day

Bag off is complete

mode change complete 50-69 and DCCCF yard in warm standby

End of day DCCCF Operations center, Devine - Cleland

operations

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6-27-13

0600 Assumed the WCRR SOM position. [signature]
0615 Attended the pre-op briefing conducted by the SOS. SOS discussed safety policy and reporting injuries through the operation center (notifications).
0700 Shift brief with TA54 SOM.
0706 Turning over SOM duties to John Guadagnoli. [signature]
0706 Assumed the SOM duties [illegible]
0712 Made change complete WCRR yard SOM from area/[illegible] to Operations / Operations.
0730 Inside operators notify the Operators that the parent drum had dropped liquid onto the glove box floor. The parent drum was left as with the lid closed from the prior night. It was secured and [illegible]
0745 Upon conferencing by ES/IH and discussion with the inside lead operator, a step bag off bag a the drum and will be placed under the lid, and lid removed. The drippage on the glove box floor 3-4 inch (looks like pancake batter) will be placed into the bag (secondary containment.
0827 Operators continue to process the parent drum.
0845 Completed walkdown (WCR) of WCRR yard with ES/IH, observed personnel performing transfer to transport vehicle. Office area in operators safe and compliant, pallet rates are [illegible] for the transport vehicle is efficient. The roll-off hauling is frequent enough to avoid overfill. The men's toilet was noted [illegible] maintenance was notified. There was a small amount of propane in the yard, [illegible] determined that [illegible] personnel cleaned the forklift and propane in the parking lot.
0853 Recommended [illegible] to perform load testing of the lift truck. The calibration gauge is good through Sept 27th, 2013.
[illegible] Daily call is conducted, [illegible] to PM on [illegible]
0857 Completed walkthru of WCRR Boundary with FM. Ex lighted lights being set up to support night shift staffing, [illegible] and [illegible] portable plays [illegible] and extension cords are available (2 sets noted complete and ready.) Adjustments of the light to point to the morgan is recommended. Additional follow up will be conducted with planner on extinguishers for all sites.
[illegible] Supported in the transfer of the [illegible] from ES/IH office to [illegible]
1510 Completed walkdown of perimeter lights with [illegible] maintenance crew, and adjustments were made to the perimeter and right angles. Follow up will be on Monday. Evening secondary containment is noted under the [illegible] (catch pan and [illegible]). The [illegible] are taken at back gate opening, and are easy to allow emergency vehicles to access if needed, additional fire extinguishers are not required.
1527 Removed two [illegible] from legs and signed off with site [illegible] and [illegible].
[illegible] Three [illegible] generated to Daughtry.
[illegible] Made change complete WCRR yard SOM from Operations / Operations to [illegible] [illegible]
[illegible] Secured the SOM position. [signature]

1-10-13

No further entries this page.
[signature]

6/27/13 UCRR 505 Log Book

0600 Assuming 505 position for the day. Jim Jay
0605 Starting Pre-Job Safety Topic discussing Drive-Safe Policy
Processing Parent that was left bagged on overnight.
2 55 gallon drum Parents and 2 85 gallon drum Parents inside for processing. 1 shipment out and 1 shipment in today.
0640 Concluded Pre-Job brief
0655 Reviewed and signed rounds
0712 Mode change UCRR yard and 50-69 are in Operations.
0938 Bagging off Parent that was left bagged on overnight
Bagging on first Parent for the day.
1005 Bag on Bag off complete
1130 Bagging off one daughter, bagging on second daughter and continuing to process Parent
1157 Bag off complete
1500 Bagging off first Parent, Bagging on second Parent
1524 Bag on Bag off complete.
1530 Late Entry 1300 Operators breaking for lunch. 1430 Operators returning from lunch.
1711 Bagging off last drum for the day
1745 Late entry 1652 reviewed and signed rounds.
1812 Mode change UCRR yard and 50-69 are in WARM
1845 Securing 505 position for the day. Jim Jay

No further entries on this page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0081
Examination Date:	7/3/2013
Waste Container ID:	93909
Video/Audio Recorded Media Number:	LA-HERTR-13-0081 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 212.0 kg Tare Wt.: 33.4 kg Net Wt.: 178.6 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: 93909

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, 90 mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	35.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	135.0
Soils (S):	
Total WMP Weight:	178.6

CCP Radiography Data Sheet

Waste Container ID: 93909

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		7/3/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93909	Count Sequence Number:	23160
Operator:	D3PW2DK1\operator		
Assay Start:	7/8/2013 9:41:47 AM		
Description 1:	1LANDA1804		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 179.0 kg	Net:	179.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
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

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23160
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93909

Batch Number: 1LANDA1804
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 7/8/2013

Net Weight	179000.0 g		
Pu mass	1.11E+001	+-	2.75E+000 g
TRU Alpha Activity	3.22E+000	+-	1.33E+000 Ci
TRU Activity Concentration	1.80E+004	+-	7.44E+003 nCi/g
Pu-239 Equivalent Activity	3.24E+000	+-	1.33E+000 Ci
Pu-239 FGE	1.05E+001	+-	2.59E+000 g
Decay heat	1.06E-001	+-	4.44E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.66E-002	3.33E-005	6.99E-006	2.24E-006
PU238	1.02E-003	1.76E-002	4.37E-003	3.44E-005
PU239	1.04E+001	6.56E-001	1.63E-001	1.28E-003
PU240	6.67E-001	1.53E-001	3.80E-002	2.99E-004
AM241	6.89E-001	2.39E+000	1.32E+000	4.97E-002
PU241	1.30E-002	1.35E+000	3.34E-001	2.63E-003
PU242	2.23E-003	8.84E-006	2.19E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.10E-007
U233	<LLD	<LLD	0.00E+000	4.33E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.31E-006
U238	<LLD	<LLD	0.00E+000	1.21E-005

Errors quoted at 1.000 sigma

Operator: D. P. [illegible] Date: 7-11-13

ITR: [illegible] Date: 7-12-13

Automated Independent Technical Review

Count Sequence Number: 23160 Batch Number: 1LANDA1804
Counter ID: MCS HENC #1
Container ID: 93909
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; 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 Chamber Date: 7-9-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93909**

BDR Number: **LA13FG12061**

Sampling Date: **7/12/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	70.87	
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\130712c\
Data File : 93909.D
Acq On : 12 Jul 2013 1:41 pm (#1); 12 Jul 2013 1:40 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 12 13:46:02 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.900	GC1	20217m	70.87	ppmv	

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

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S816469

S816469

Container Profile 750523

File Options Reports Help

S816469

750523	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

S816469

S816469
- 94035—Empty
- 94034
- 94033
- 94032

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
33.3329851666667	%			

Working Copy
Date: 7-22-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5816469

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

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

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

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

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

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

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

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

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

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

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

Performed By: Brandon Chaez / 1204712 7-22-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S8166469

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 446.0 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) ~~446~~ 446.0 lb BC 7-22-13

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.: 581646 9

	Daughter Drums				
10.1[4]/10.2[4]	Daughter Drum No.	94032	94033		
10.1[4]	Daughter Drum Filter No.	KL-638	KL-639	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6896	L-8144	A	
10.1[4]	Daughter Drum Purchase Order No.	50103	50103		
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.	60cpvc1S2Spvc			
	Serial No.	L-6859			
	Date of Manufacture	1-13		N	
10.2[5]	POC ID No	94034			
10.2[7][B]/10.2[6]	POC Item Description	Scotts Kitty litter		A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BC 204742			
10.2[14]	POC Assembly Gross Weight (lb)	384.2			
10.2[15]	POC Rad. Survey Results (mrem/hr)	2000			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A	N A		
10.3[5][A]	Free Liquid Volume/Units	2 gal	2 gal		
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead	Lead		X
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	N	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	70%	50%		
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic	plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S816469

Comments: nitrate salts, kitty litter, plastic, lead, Hex-Armor

11.1[1] Performed By: Brandon Chavez / Brandon Chavez 1249217 7-23-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G. Mz / D. Mz 1492351 7/24/13 0815
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 7-8-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038367
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	±1% cw ±6% ccw	±3% cw ±6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: 32-1966
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 Chaver / [signature] [illegible] 7-8-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon Chaver / [signature] [illegible] 7-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: GMK / [signature] 114935 7/24/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 7-22-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94035

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3%cw ±6%ccw

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

Performed By: Brandon Chaez / [signature] / Z# 1347172 / 7-22-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[35][D] 85-gal overpack drum gross weight (lb): 174.8 lb

Comments: N/C

8.1[1] Performed By: Brandon Chaez / [signature] / Z# 1347172 / 7-22-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk / [signature] / Z# 1492751 / 7/24/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 94032

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234766
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BGP
Model #: 6cpx1.52Spvc
Serial #: L-68996
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-638
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100816	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	10-200	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: Brandon Chavez Signature: [signature] Z#: 204742

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 75.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Brandon Chavez Operator Sign: [signature] Z#: 204742 Date: 7-15-13

Verifier Print: JOE QUINTANA Verifier Sign: [signature] Z#: 239987 Date: 7/22/13

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

BL 7-22-13

DRUM ID#: ~~94037~~ 94032

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9/1/13

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

--- Tolerance ±3% CW ±6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 281.8

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: Brandon Chavez Date 7-22-13

Verifier Print/Sign: Joe Quintana Date: 7/22/13

JQ

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

Drum ID#: 94033

1. Drum/Lid Assembly

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

RECORD drum information:
Purchase Request #: 501103
Lot #: 0234766
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: 6PUC-LS-28VC
Serial #: 1C-8149
Date of Manufacture: 3-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: Nucfil
Model #: 0190S
Serial #: EL-639
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: Justin Cofer Signature: [signature] Z#: 266436

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

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

Operator Print: Justin Cofer Operator Sign: [signature] Z#: 266436 Date: 7-10-13
Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 201712 Date: 7-22-13

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

DRUM ID#: 94033

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 # : 03#373

Cal expiration date: 9-11-13

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

--- Tolerance ± 3% conv ± 6% conv

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): 211.6

Scale ID#: 019665

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Brandon Chavez Date: 7-22-13

Verifier Print/Sign: JOE QUINTANA Date: 7/22/13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S816469 Container Type: 55-GAL Gross Weight (lbs): 439

Inner Seal #: 010096 Filter Prefix: None Filter Serial #: None

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0100

TWSR Comments: LEACHED SOLIDS

Total PE-Ci Activity: 2.35E+00 Equivalent Combustible PE-Ci: 8.83E-01 AM-241 PE-Ci: 1.91E-01

Total Fissile Gram Equivalents: 26.0 Total Surface Dose Rate (mrem/hr): 6

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

NCR RTR/NDA Comment: CCP: Review-The sum of estimated weights for each WMP does not total correctly for total WMP weight.

RTR Pre-Screen Date: 5/1/2012 Comment: >4 L Sealed Container, Slip Top Cans

Certified RTR Comment: 4 GAL of liquid between 24 and 32 inches

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack

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

TRUCON Code: None Production Control Comments: Nitrate Salts, apply mixture & EPA codes

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

WDP Engineering

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts
Net Wt: 379# Generator info shows 4 items of nitrate salts; weights range from 21-146#. RTR BDR shows plastic bags + homogenous solids. It also shows prohibited liquids + lead lined drum. No chemicals identified; nitrate salts carry waste codes for chromium, lead, + mercury. Nitrate salts require repack with admixture

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

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: USE Proper PPE Follow procedure for ratio of kitty litter to be added to Nitrate Salts.

Performed By: [illegible] / [illegible] / 149235 / 6-2-13
TRU Remediation Operations (Print) Signature Z Number Date

Jose Jerez / Jose Jerez / 221452 / 6-9-13

IHS REVIEW: RS 226362 12.17.12

Discardable Waste Log Sheet

DrumID: 010096

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS 405 F1	66.13	NITRATE SALTS		13.52	52	5/11	
2	DXFS 406 F1	20.45	NITRATE SALTS		5.11	52	5/11	
3	DXFS 407 F1	28.64	NITRATE SALTS		5.02	52	5/11	
4	DXFS 408 F1	9.55	NITRATE SALTS		3.97	52	5/11	
		124.77 kg						

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0100
Examination Date:	9/18/2012
Waste Container ID:	S816469
Video/Audio Recorded Media Number:	LA-HERTR-12-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[ ] No [X] Yes NCR No.: NCR-LANL-1642-12 NCR No.: ~~N/A~~ TSH 9-27-12 NCR-LANL-1029-12 TSH 9-27-12

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.: 200.0 kg Tare Wt.: TSH 9-20-12 ~~58.1~~ 60.1 TSH 9-20-12 kg Net Wt.: TSH 9-20-12 ~~141.9~~ 139.9 TSH 9-20-12 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: [X] No [ ] Yes Mechanical Vent: [ ] No [X] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [ ] No [X] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: S816469

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):Rigid Liner/Lid, LINER BAG 7SH 9-20-12	7SH 9-20-12 9.4 ~~7.4~~ 7SH 9-20-12
Other: Fiberboard (CP)	23.0
Total Packaging Weight	7SH 9-20-12 60.1 ~~58.4~~ 7SH 9-20-12
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):	~~138.9~~ 136.9 7SH 9-20-12
Soils (S):	7SS 9-20-12
Total WMP Weight:	7SH 9-27-12 ~~141.9~~ 139.9 7SH 9-27-12

CCP Radiography Data Sheet

Waste Container ID: S816469

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

Comments: NCR-LANL-1642-12 PER CCP-SD-LANL-55 INCONSISTENCIES ASSOCIATED WITH THESE PACKAGING CONFIGURATIONS (RIGID LINER WITH OR WITHOUT LEDS) WILL NOT DISQUALIFY THE CONTAINER FROM MEETING THE WASTE STREAM DESCRIPTION. TSH 9-20-12

NCR-LANL-1029-12 TSH 9-27-12

RTR Operator:		
	Thad Hasselstrom	9-27-12
	Thad Hasselstrom	9-20-12
Thad Hasselstrom	Thad Hasselstrom	9/18/2012
Print Name	Signature	Date

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: Jan 29 2013

Container No. (5.[1])	S816469					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	373.41 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A 1-30-13

5.[7] Certified CCP Technician:

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

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

Comments: n/a

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

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

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S816469.D
Acq On : 29 Jan 2013 3:02 pm (#1); 29 Jan 2013 3:00 pm (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 15:06:26 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	105464m	373.41	ppmv	

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

H2-CH4.M Tue Jan 29 15:06:32 2013 UNIT12

7-22-13
0600 Assuming WCRRF operations center - Orlando
0602 Starting outside rounds.
0607 Item #3 unsat, FSR in place okay to proceed
0611 starting inside rounds.
0615 Pre job briefing being conducted by SOS.
0630 Pre job has been concluded
0633 Item #63 is OOS, POD in place, okay to proceed.
0638 Inside rounds complete
0700 Rounds have been signed off by SOS.
0715 Mode change performed TA50-69 and WCRRF yard now in operations
0725 Starting movement into 50-69.
0740 movement into 50-69 is complete
0830 Bagging on S8164469
0842 Bag on is complete.
1012 Bagging off 1 daughter and 1 PIC and continuing to process
1035 Bag on, Bag off complete
1126 Bagging off, Bagging on S8164644
1155 Bag on, Bag off complete
1300 Operators notified operations center that they are having problems getting the ring bolt off and are requesting the SOS.
1335 Assuming WCRRF operatins center in training Randy Royal
1336 Operators were able to remove bolt from drum lid and will countinue with operations.
1441 Operators ~~Bagging~~ RR.07/22/13 Bagging off one daughter and ~~Countin~~ RR.07/22/13 Continuing to process.
1458 Bag off complete ~~Countinu~~ RR 07/22/13 continuing to process
1501 Starting out side rounds.
1503 Item #3 UNSAT FSR in place OK to proceed.
7-22-13 1517 Completed out side rounds.
1556 Starting movement of 4 Drums into 50-69
1610 Movement complete into 50-69.
1626 Starting inside Rounds.
1635 Item #63 is OOS Pod in place OK to continue

07/22/13 Continued from previous page. Randy Roybal
1705 Completed inside Rounds.
1709 Movement out of 50-69 Complete.
1713 Rounds ~~Signed~~ 07/22/13 RR Signed off by SOS.
1722 Bagging off, Bagging on 5823153
1800 Bag on Bag off Complete.
1807 Performed Shift turn over with OCO Gerald Espinoza.
Randy Roybal, Clarissa Velarde

No Further entries this page. RR 07/22/13

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

Continue on next page

7/22/13 WCRF SOS LOG BOOK

0600 Assuming SOS Position [signature]

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

0638 Concluded shift brief

0700 Reviewed Inside and outside Rounds.

[illegible] 7-22-13

0715 Made change Complete WCRRF In operations.

0725 Starting Move Into facility

0746 Move In Complete

0830 Bagging on 5816469

0842 Bag on Complete

1012 Bags off / daughter And POC And Continuing to Process

1055 Bag on/off Complete

1126 Bagging off, Bagging on 5816664

1155 Bag on/off Complete

1300 Operators Notified operation's Center having Problem Removing Bolt entering facility to check out

1336 Operator have removed bolt And will continue

1441 Bagging off / daughter And continue Operating

1458 Bag off Complete

1501 Started Inside Rounds

1556 Starting Move In of 4 drums

1610 Movement Complete

1626 Started Inside Rounds

1700 Moving out of 50-69

1705 Moving out Complete

1713 Signoed off Inside And outside Rounds

1722 Bagging off. Bagging on 5823153

1800 Completed Bag off bag on

1805 Turning over SOS Position To Clayton Mullins [signature]

no further entries on this Page

7/22/13 WCRR SOS Log Book

1806 Assuming SOS position. CA

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

1840 Completed Pre-Job.

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

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

2140 Bagging off 1 daughter, bagging on a second.

2220 Bag off/on complete.

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

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

0008 Bag off complete.

0223 Starting movement out of 50-69

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

0250 Movement out of 50-69 complete.

0420 De-nesting and bag on complete.

0537 Signed off on the rounds.

0604 Station 4 right hand needs to be changed.

0610 Turning over SOS position to Gilbert Martinez. CA

RIG

No Further Entries on this Page

19 7-22-13

7-22-~~23~~ 13

0600 Assumed the WCRR SOM position [signature]

0640 Completed attending the pre-job brief conducted by the SOS (Gilbert). Updates were provided to the operators and RCTs regarding the facility status and the inner roll up door requires manual movement. The WCG filter will be evaluated for changing on FRIDAY. Round/DP will be reviewed. The safety topic included rotation of personnel when the inner roll up door is opened. ~~SH [illegible] 7-23-13~~ WCRR-SH-13-003 R2 MANUAL DRUM Movement was discussed. Roles and responsibilities were assigned.

0700 Performed call in to TA 54 SOM PDD.

0715 Mode Change - Yard - transitioned from WARM to Operations and 50 as Facility transitioned from COLD to Operations.
Upon review of the Rounds, the WCG D/P is noted at -0.8" - Satisfactory -

0740 Operations completed the movement into 52-69 - facility - 4 drums total.

0842 Operations complete the 1st bag on of drum S 816469

0900 Discussed with P+T transfers on Tuesday and FRIDAY transfers out. P+T will make available 2 trucks as needed.

1012 Operations initiate bagging off ID and IP

1035 Bagging off is noted completed

1024 Operations initiate bagging on S 816664

1220 Completed the daily update phone call with the OM, PM, and Area G - SOM.

1410 Operator reported stripping the present drum bolt on

1545 Completed discussion and review of TRU drums to be received at WCRR facility tomorrow and SOS/RPI supervisor identified 10 drums to be received. Five drums were dropped based upon dose/multiple PDC generation and re-do inventory to be conducted at the end of the week.

1625 Obtained gamma characterization results, noting that the drums within the transportainer, which were assayed indicate they are LLW - results were forwarded to Radiation Inventory for adjustments. Follow up will be required.

1721 Operations completed bag offs generating 3 daughters and bagging on Parent S823153

1751 EP-DIV-AP-20080, R0 Energy Lockout/Tagout Administrative Controls Procedure is effective today. Changes were made in the SOM/TA Logbook.

1800 Operations report Bag On completed.

1805 Completed Energy Shift Turnover Checklist with oncoming Night shift SOM. and turned over SOM duties

1811 Secured the SOM position [signature]

Entries this page
[signature]

PROJECT NAME 7/22/13 Night Shift NOTEBOOK NO

1811 Reviewed Shift Turnover Checklist and assumed WCRR SOM position.

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

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

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

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

2140 Operators are bagging off 1 daughter.

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

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

0015 Operators breaking for lunch.

0115 Resuming operations.

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

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

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

No further entries this page

Best Available Copy

7/23 13

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0094
Examination Date:	7/24/2013
Waste Container ID:	94032
Video/Audio Recorded Media Number:	LA-RTR2-13-0094 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 127.5 kg Tare Wt.: 33.4 kg Net Wt.: 94.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	85 %

CCP Radiography Data Sheet

Waste Container ID: 94032

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal socket, metal hardware

AM:

OM: Scrap lead

OI:

C:

R:

XPM: 90 mil liner lid, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.8
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	28.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	9.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	56.3
Soils (S):	
Total WMP Weight:	94.1

CCP Radiography Data Sheet

Waste Container ID: 94032

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

RTR Operator:

Michael Simmons		7/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94032	Count Sequence Number:	23321
Operator:	D3PW2DK1\operator		
Assay Start:	7/29/2013 12:41:03 PM		
Description 1:	1LANDA1817		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 94.1 kg	Net:	94.1 kg
Container:	Volume: 208.0 l	Full:	85.0 %
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: 23321
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 94032

Batch Number: 1LANDA1817
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 7/29/2013

Net Weight	94100.0 g		
Pu mass	1.37E+001	+-	2.88E+000 g
TRU Alpha Activity	6.76E+000	+-	9.22E-001 Ci
TRU Activity Concentration	7.19E+004	+-	9.80E+003 nCi/g
Pu-239 Equivalent Activity	6.79E+000	+-	9.22E-001 Ci
Pu-239 FGE	1.29E+001	+-	2.70E+000 g
Decay heat	2.24E-001	+-	3.07E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.73E-002	6.95E-005	1.09E-005	2.97E-006
PU238	1.25E-003	2.17E-002	4.56E-003	3.40E-005
PU239	1.28E+001	8.08E-001	1.70E-001	1.27E-003
PU240	8.21E-001	1.89E-001	3.97E-002	2.96E-004
AM241	1.65E+000	5.74E+000	9.05E-001	1.17E-001
PU241	1.59E-002	1.65E+000	3.48E-001	2.59E-003
PU242	2.74E-003	1.09E-005	2.29E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.82E-007
U233	<LLD	<LLD	0.00E+000	5.63E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.63E-006
U238	<LLD	<LLD	0.00E+000	1.67E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 7-31-13

ITR: _____ Date: 8-1-13

Automated Independent Technical Review

Count Sequence Number: 23321 Batch Number: 1LANDA1817
Counter ID: MCS HENC #1
Container ID: 94032
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/29/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	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: 7-30-13

Waste Container ID: **94032**

BDR Number: **LA13FG12068**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	129.92	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130730c\
Data File : 94032.D
Acq On : 30 Jul 2013 2:07 pm (#1); 30 Jul 2013 2:06 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 01 14:59:19 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	37060m	129.92	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-RTR2-13-0094
Examination Date:	7/24/2013
Waste Container ID:	94033
Video/Audio Recorded Media Number:	LA-RTR2-13-0094 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 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:	45 %

CCP Radiography Data Sheet

Waste Container ID: 94033

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	52.1
Soils (S):	
Total WMP Weight:	63.1

CCP Radiography Data Sheet

Waste Container ID: 94033

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

RTR Operator:

Michael Simmons		7/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94033	Count Sequence Number:	23317
Operator:	D3PW2DK1\operator		
Assay Start:	7/29/2013 9:50:48 AM		
Description 1:	1LANDA1817		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 63.1 kg	Net:	63.1 kg
Container:	Volume: 208.0 l	Full:	45.0 %
Density:	0.670 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23317	Batch Number:	1LANDA1817
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94033	Analysis Date:	7/29/2013

Net Weight	63100.0 g		
Pu mass	9.58E+000	+-	1.82E+000 g
TRU Alpha Activity	4.72E+000	+-	2.18E+000 Ci
TRU Activity Concentration	7.49E+004	+-	3.45E+004 nCi/g
Pu-239 Equivalent Activity	4.74E+000	+-	2.18E+000 Ci
Pu-239 FGE	9.05E+000	+-	1.71E+000 g
Decay heat	1.56E-001	+-	7.27E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	7.86E-002	5.61E-005	1.01E-005	2.42E-006
PU238	8.77E-004	1.52E-002	2.89E-003	3.43E-005
PU239	8.99E+000	5.66E-001	1.08E-001	1.28E-003
PU240	5.75E-001	1.32E-001	2.51E-002	2.98E-004
AM241	1.16E+000	4.01E+000	2.17E+000	4.85E-002
PU241	1.11E-002	1.16E+000	2.20E-001	2.61E-003
PU242	1.92E-003	7.61E-006	1.45E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.61E-007
U233	<LLD	<LLD	0.00E+000	4.56E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.32E-006
U238	<LLD	<LLD	0.00E+000	1.39E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 7.31.13

ITR: _____ Date: 8-1-13

Automated Independent Technical Review

Count Sequence Number: 23317 Batch Number: 1LANDA1817
Counter ID: MCS HENC #1
Container ID: 94033
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/29/2013

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

Expert Review by: Sherri Clemmer Date: 7-30-13

Waste Container ID: **94033**

BDR Number: **LA13FG12068**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	32.34	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130730c\
Data File : 94033.D
Acq On : 30 Jul 2013 1:46 pm (#1); 30 Jul 2013 1:44 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 01 14:52:21 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	9226m	32.34	ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0087
Examination Date:	7/24/2013
Waste Container ID:	94034
Video/Audio Recorded Media Number:	LA-HERTR-13-0087 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 174.5 kg Tare Wt.: 145.1 kg Net Wt.: 29.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 94034

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),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):	27.4
Soils (S):	
Total WMP Weight:	29.4

CCP Radiography Data Sheet

Waste Container ID: 94034

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		7/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94034	Count Sequence Number:	16266
Operator:	DCLTD231\Operator		
Assay Start:	7/29/2013 11:23:58 AM		
Description 1:	2LANDA1201		
Description 2:	POC - 174.5kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 29.4 kg	Net:	29.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.743 kg /l		

System Configuration

Counter:	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: 16266
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 94034

Batch Number: 2LANDA1201
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 7/29/2013

Net Weight	29400.0 g		
Pu mass	4.46E+000	+-	1.41E+000 g
TRU Alpha Activity	3.51E+000	+-	6.17E-001 Ci
TRU Activity Concentration	1.19E+005	+-	2.10E+004 nCi/g
Pu-239 Equivalent Activity	3.52E+000	+-	6.17E-001 Ci
Pu-239 FGE	4.23E+000	+-	1.33E+000 g
Decay heat	1.17E-001	+-	2.06E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.79E-002	3.42E-005	6.58E-006	2.27E-006
PU238	4.09E-004	7.07E-003	2.24E-003	3.52E-005
PU239	4.19E+000	2.64E-001	8.35E-002	1.31E-003
PU240	2.68E-001	6.16E-002	1.95E-002	3.07E-004
AM241	9.16E-001	3.18E+000	6.11E-001	9.83E-002
PU241	5.19E-003	5.40E-001	1.71E-001	2.69E-003
PU242	8.94E-004	3.55E-006	1.12E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.15E-007
U233	<LLD	<LLD	0.00E+000	4.17E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.40E-006
U238	<LLD	<LLD	0.00E+000	9.65E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 7.31.13

ITR: [signature] Date: 8.1.13

Automated Independent Technical Review

Count Sequence Number: 16266 Batch Number: 2LANDA1201
Counter ID: HENC #2
Container ID: 94034
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/29/2013

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

Expert Review by: Sheri Chamberlin Date: 7-30-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94034**

BDR Number: **LA13FG12103**

Sampling Date: **9/26/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	34.56	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130926c\
Data File : 94034.D
Acq On : 26 Sep 2013 1:35 pm (#1); 26 Sep 2013 1:33 pm (#2)
Operator : SA
Sample :
Misc : POC THROUGH DRUM FILTER-NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 26 13:38:57 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.900	GC1	9857m	34.56	ppmv	

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

S816664

S816664

Container Profile 771775

File Options Reports Help

S816664

771775	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

S816664

S816664
- 94038 – EMPTY
- 94037
- 94036

Task History

Transfer Details

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

7-22-13 cw

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S816664

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

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

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

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

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

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

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

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

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

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

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

Performed By: [illegible] [illegible] 127[illegible]6 7-22-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5816664

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 455.0 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) 455.0 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.: 5816664

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94036	94037		
10.1[4]	Daughter Drum Filter No.	KL-497	KL-495	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-8139	L-8142		
10.1[4]	Daughter Drum Purchase Order No.	501103	501103		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N/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	1 galon			
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A	lead shielding		
10.3[9][A]	PCB-contaminated Waste Description	N/A		N/A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comments	See comments	N/A	
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	7-22-13 100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Stab out Bags Brush King Kitty Litter	Stab out Bags Kitty Litter Hex Bags		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S816664

Comments: Room trash, plastic, stub out bags, one galon of PH-2 liquid & cannot be neutralized, kitty litter, Nitrate Salts Hum Ring, Hex Arm gloves

11.1[1] Performed By: [illegible] / [illegible] 1228826 / 7-22-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martinez / [illegible] 1149235 / 7/29/12 0828
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 7-8-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	±1%cw ±6%ccw	±3%cw ±6%ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1265
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] Z# [illegible] 7-8-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon chavez / [signature] Z# [illegible] 7-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G Mk / [signature] Z# 149225 7/24/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 7-22-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94038

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ± 3% CW ± 6% CCW

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

Performed By: [illegible] [illegible] [illegible] 7-22-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[35][D] 85-gal overpack drum gross weight (lb): 184.4 lb

Comments: N/C

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

8.1[7] Reviewed By: [illegible] [illegible] [illegible] 7/24/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 99036

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234-766
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 #: 6CPAIC 1.5-25PAIC
Serial #: L-81.39
Date of Manufacture: 3-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: K1-497
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: ±9%CW ±6%CCW

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

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

5. Weigh Drum Assembly

RECORD weight information
Tare wtight (lbs) 76.2
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191352 Date: 7-08-13

Verifier Print: Federico Robledo Verifier Sign: [signature] Z#: 225626 Date: 7-22-13

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

DRUM ID#: 94036

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 8-11-13

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

--- Tolerance ±3% CW ±6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 318.8

Scale ID#: 049665

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 7-22-13

Verifier Print/Sign: R. Hollingsworth Date: 7-22-13

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

Drum ID#: 94037

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234766
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: ACPVC 1.5-25 PVC
Serial #: 1-5156
Date of Manufacture: 3-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCELL
Model #: 019.06
Serial #: KL-495
Date of Manufacture: 11-11

RECORD torque wrench information:

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

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

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

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 76.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191352 Date: 7-08-13
Verifier Print: Frederic [illegible] Verifier Sign: [signature] Z#: 225226 Date: 7-22-13

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

DRUM ID#: 94037

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

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

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

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 378.0

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [signature] Date 7-22-13

Verifier Print/Sign: [signature] Date: 7-22-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S816664 Container Type: 55-GAL Gross Weight (lbs): 423

Inner Seal #: 010931 Filter Prefix: None Filter Serial #: None

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0095

TWSR Comments: LEACHED SOLIDS

Total PE-Ci Activity: 1.14E+00 Equivalent Combustible PE-Ci: 4.28E-01 AM-241 PE-Ci: 9.27E-02

Total Fissile Gram Equivalents: 12.6 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 11/6/12

NCR RTR/NDA Comment: LANL: remediate-4 Gallons of liquid between 24 and 32 Inches

RTR Pre-Screen Date: 3/14/2012 Comment: >4 L Sealed Container; doesn't match waste stream

Certified RTR Comment: 4 gallons of liquid between26-36"

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

Security Determination: ✓ Green Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split Repack

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

TRUCON Code: None Production Control Comments: Nitrate Salts, apply mixture EPA codes

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

WDP Engineering

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

Processing Determination: ☑ Accept Reject

WDP Engineering Comments: Nitrate Salts
Net Wt: 363# Generator info shows 2 items of Nitrate salts, with weights of 89# & 194#. RTR BDR shows plastic bags & homogeneous solids. It also shows prohibited liquids & lead lined drum. Nitrate salts require repack w/ admixture. No chemicals identified, nitrate salts carry waste codes for ~~chromium~~, lead, & mercury.

Performed By: Valerie Rhodes / Valerie Rhodes / 115209 / 12/12/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: USE Proper PPE. Use proper ratio of kitty litter to waste in accordance with procedure.

Performed By: G. Mh / [signature] / 149235 / 6-2-13
TRU Remediation Operations (Print) Signature Z Number Date

Jose Jerez / [signature] / 221452 / 6-9-13

IHS REVIEW: AB 206362 12.17.12

Discardable Waste Log Sheet

DrumID: 010931

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-411-FB	88.18	NITRATE SALTS		10.55	52	5/11	
2	IXFS-412-FA	40.46	NITRATE SALTS		2.85	52	5/11	
		128.64 kg						

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0095
Examination Date:	8/30/2012
Waste Container ID:	S816664
Video/Audio Recorded Media Number:	LA-HERTR-12-0095 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[ ] No [X] Yes NCR No.: NCR-LANL-1634-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 203.5 kg Tare Wt.: 60.1 kg Net Wt.: 143.4 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: [X] No [ ] Yes Mechanical Vent: [ ] No [X] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [ ] No [X] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: S816664

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):	27.7
Plastics (PP):Rigid Liner/Liner lid/Liner Bag	9.4
Other: Lead Lined (LP)	23.0
Total Packaging Weight	60.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM).	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	141.4
Soils (S).	
Total WMP Weight:	143.4

CCP Radiography Data Sheet

Waste Container ID: S816664

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	[X] Yes [ ] No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	[ ] Yes [X] No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	[X] Yes [ ] No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	[ ] Yes [X] No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	[ ] Yes [X] No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	[ ] Yes [X] No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	[ ] Yes [X] No
Is there an indication of wastes containing explosives or compressed gases?	[ ] Yes [X] No
Is there an indication of PCBs liquids?	[ ] Yes [X] No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	[ ] Yes [X] No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	[ ] Yes [X] No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	[ ] Yes [X] No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	[ ] Yes [X] No
Are there sealed containers GREATER than 4 liters?	[ ] Yes [X] No
Are there indications of inadequate protection for heavy and/or sharp objects?	[ ] Yes [X] No
Comments: NCR-LANL-1634-12	

RTR Operator:

Aaron Elliott		8/30/2012
Print Name	Signature	Date

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: Jan 29 2013

Container No. (5.[1])	S8166664					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	155.60 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A 1304

5.[7] Certified CCP Technician:

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

Reviewed By: Nathan Wales (CCP (Print)) 1238866 (Z#)

Comments: n/a

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

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

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

Quantitation Report (QT Reviewed)

Inst Name : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S816664.D
Acq On : 29 Jan 2013 1:42 pm (#1); 29 Jan 2013 1:40 pm (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 13:46:01 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Oct 04 08:07:46 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.930	GC1	43946m	155.60	ppmv	

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

H2-CH4.M Tue Jan 29 13:46:06 2013 UNIT12

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

07/22/13 Continued from previous page. Randy Roybal
1705 Completed inside Rounds.
1709 Movement out of 50-69 Complete.
1713 Rounds ~~Signed~~ 07/22/13 RR Signed off by SOS.
1722 Bagging off, Bagging on 5823153
1800 Bag on Bag off Complete.
1807 Performed Shift turn over with OCO Gerald Espinoza.
RR Randy Roybal, Clarissa Velarde

No Further entries this page.
RR 07/22/13

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

Continue on next page

7/22/13 WERF SOS LOG BOOK

0600 Assuming SOS Position [signature]

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

0638 Concluded shift brief

0700 Reviewed Inside and outside Rounds.

[illegible] 7-22-13

0715 Mode change Complete WERF In operations.

0725 Starting Move Into facility

0740 Move In Complete

0830 Bagging on 5816469

0842 Bag on Complete

1012 Bags off / daughter And POC And Continuing to Process

1055 Bag on/off Complete

1126 Bagging off, Bagging on 5816664

1155 Bag on/off Complete

1300 Operator's Notified operation's Center having Problem removing Bolt entering facility to check out

1336 Operator have removed bolt And will continue

1441 Bagging off / daughter And continue operating

1458 Bag off Complete

1501 Started Inside Rounds

1556 Starting Move In of 4 drums

1610 Movement Complete

1626 Started Inside Rounds

1700 Moving out of 50-69

1705 Moving out Complete

1713 Signed off Inside And outside Rounds

1722 Bagging off. Bagging on 5823153

1800 Completed Bag off bag on

1805 Turning over SOS Position To Clayton Mullins [signature]

no Further entries on this Page

7/22/13 WCRR SOS Log Book

1806 Assuming SOS position. CA

1818 Starting Pre-Job, discussed inner roll up door manual raise/lower, de-nesting and ~~[illegible]~~ e.m. 7-22-13 being short staffed.

1840 Completed Pre-Job.

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

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

2140 Bagging off 1 daughter, bagging on a second.

2220 Bag off/on complete.

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

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

0008 Bag off complete.

0223 Starting movement out of 50-69

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

0250 Movement out of 50-69 complete.

0420 De-nesting and bag on complete.

0537 Signed off on the rounds.

0604 Station 4 right hand needs to be changed.

0610 Turning over SOS position to Gilbert Martinez. CA

RIG

No Further Entries on this Page

13 7-22-13

7-22-~~23~~ [illegible]

0600 Assumed the WCRR SOM position [illegible]

0640 Completed attending the pre-job brief conducted by the SOS (Gilbert). Updates were provided to the operators and RCTs regarding the facility status and the inner roll up door requires manual movement. The WCG filter will be evaluated for changing on FRIDAY. Round/DP will be reviewed. The safety topic included rotation of personnel when the inner rollup door is opened. ~~SH [illegible] 7-23-13~~ WCRR-SH-13-003 R2 MANUAL DRUM Movement was discussed. Roles and responsibilities were assigned.

0730 Performed call in to TA 54 SOM POD.

0715 Mode Change - Yard - transitioned from WARM to Operations and 50 as Facility transitioned from COLD to Operations.
Upon review of the Rounds, the WCG D/P is noted at -0.85 - Satisfactory -

0740 Operations completed the movement into 52-69 - facility - 4 drums total.

0842 Operations complete the 1st bay on of drum S 816469

0900 Discussed with P+T transfers on Tuesday and FRIDAY transfers out. P+T will make available 2 trucks as needed.

1012 Operations initiate bagging off ID and IP

1035 Bagging off is noted completed

1024 Operations initiate bagging on S 816664

1220 Completed the daily update phone call with the DM, PM, and Area G - SOM.

1410 Operator reported stripping the present drum bolt on

1545 Completed discussion and review of TRU drums to be received at WCRR facility tomorrow and SOS/RM Supervisor identified 10 drums to be received. Five drums were dropped based upon dose/multiple PDC generation and re-do inventory to be conducted at the end of the week.

1625 Obtained summa characterization results, noting that the drums within the transportainer, which were assayed indicate they are LLW - results were forwarded to Radiation Inventory for adjustments. Follow up will be required.

1721 Operations completed bag offs generating 3 daughters and bagging on Parent S823153

1751 EP-DIV-AP-20080, R0 Electro Lockout/Tagout Administrative Controls Procedure is effective today. Changes were made in the LO/TO Logbook.

1800 Operations report Bag On completed.

1805 Completed Evening Shift Turnover Checklist with oncoming Nightshift SOM. and turned over SOM duties

1811 Secured the SOM position [illegible]

No more entries this page

[illegible]

PROJECT NAME 7/22/13 Night Shift NOTEBOOK NO.

1811 Reviewed Shift Turnover Checklist and assured WCRR SOM position.

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

1815 Attended pre shift brief conducted by SOS. Safety topics were ladder safety by IH and SOM discussed fitness for duty. Crew is operating at near minimum staffing - SOS will see if Day Shift can provide any additional operators. Covered manual operation of inner rollup door, plan is to denest all 5 drums @ one time due to forklift requirements w/ inner door operation. Discussed safe configuration / re-nesting if required. Shift Order WCRR-SH-13-003 R.2 Manual Drum Movements in effect and being extended to 7/23/13 1830.

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

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

2140 Operators are bagging off 1 daughter.

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

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

0015 Operators breaking for lunch.

0115 Resuming operations.

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

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

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

No further entries this page

Best Available

7/23 13

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0094
Examination Date:	7/24/2013
Waste Container ID:	94036
Video/Audio Recorded Media Number:	LA-RTR2-13-0094 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 145.0 kg Tare Wt.: 33.4 kg Net Wt.: 111.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 94036

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Drum ring

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	102.1
Soils (S):	
Total WMP Weight:	111.6

CCP Radiography Data Sheet

Waste Container ID: 94036

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		7/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94036	Count Sequence Number:	23320
Operator:	D3PW2DK1\operator		
Assay Start:	7/29/2013 11:56:36 AM		
Description 1:	1LANDA1817		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 112.0 kg	Net:	112.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.670 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23320	Batch Number:	1LANDA1817
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94036	Analysis Date:	7/29/2013

Net Weight	112000.0 g		
Pu mass	2.55E+000	+- 4.34E-001	g
TRU Alpha Activity	1.15E+000	+- 5.23E-001	Ci
TRU Activity Concentration	1.03E+004	+- 4.67E+003	nCi/g
Pu-239 Equivalent Activity	1.16E+000	+- 5.23E-001	Ci
Pu-239 FGE	2.41E+000	+- 4.33E-001	g
Decay heat	3.80E-002	+- 1.75E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.25E-007
U233	<LLD	<LLD	0.00E+000	2.41E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.45E-007
NP237	1.98E-002	1.42E-005	2.58E-006	1.27E-006
PU238	2.33E-004	4.04E-003	8.95E-004	3.51E-004
U238	<LLD	<LLD	0.00E+000	6.37E-006
PU239	2.39E+000	1.50E-001	2.72E-002	1.31E-002
PU240	1.53E-001	3.51E-002	8.07E-003	3.05E-003
AM241	2.77E-001	9.62E-001	5.22E-001	2.91E-002
PU241	2.96E-003	3.08E-001	7.07E-002	2.67E-002
PU242	5.10E-004	2.02E-006	4.65E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 7.31.13

ITR: _____ Date: 8-1-13

Automated Independent Technical Review

Count Sequence Number: 23320 Batch Number: 1LANDA1817
Counter ID: MCS HENC #1
Container ID: 94036
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/29/2013

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

Expert Review by: Sheri Chambers Date: 7-30-13

Waste Container ID: **94036**

BDR Number: **LA13FG12068**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	8.15	U
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130730c\
Data File : 94036.D
Acq On : 30 Jul 2013 1:52 pm (#1); 30 Jul 2013 1:51 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 13:56:15 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

(#) = 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-13-0087
Examination Date:	7/24/2013
Waste Container ID:	94037
Video/Audio Recorded Media Number:	LA-HERTR-13-0087 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 171.5 kg Tare Wt.: 33.4 kg Net Wt.: 138.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 94037

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	114.1
Soils (S):	
Total WMP Weight:	138.1

CCP Radiography Data Sheet

Waste Container ID: 94037

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		7/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94037	Count Sequence Number:	16265
Operator:	DCLTD231\Operator		
Assay Start:	7/29/2013 10:41:18 AM		
Description 1:	2LANDA1201		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 138.0 kg	Net:	138.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
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:	16265	Batch Number:	2LANDA1201
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94037	Analysis Date:	7/29/2013

Net Weight	138000.0 g		
Pu mass	1.46E+001	+-	3.65E+000 g
TRU Alpha Activity	5.62E+000	+-	2.52E+000 Ci
TRU Activity Concentration	4.07E+004	+-	1.82E+004 nCi/g
Pu-239 Equivalent Activity	5.65E+000	+-	2.52E+000 Ci
Pu-239 FGE	1.38E+001	+-	3.42E+000 g
Decay heat	1.85E-001	+-	8.40E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.80E-002	4.86E-005	1.04E-005	2.75E-006
PU238	1.34E-003	2.32E-002	5.78E-003	3.55E-005
PU239	1.37E+001	8.63E-001	2.15E-001	1.32E-003
PU240	8.77E-001	2.02E-001	5.03E-002	3.09E-004
AM241	1.30E+000	4.53E+000	2.51E+000	4.15E-002
PU241	1.70E-002	1.77E+000	4.41E-001	2.71E-003
PU242	2.93E-003	1.16E-005	2.90E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.22E-007
U233	<LLD	<LLD	0.00E+000	5.08E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.30E-006
U238	<LLD	<LLD	0.00E+000	1.39E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: ~~7.31.13~~ DS 7.31.13 7.31.13

ITR: _____ Date: 8.1.13

Automated Independent Technical Review

Count Sequence Number: 16265 Batch Number: 2LANDA1201
Counter ID: HENC #2
Container ID: 94037
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/29/2013

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

Expert Review by: Sheri Chamberlin Date: 7-30-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94037**

BDR Number: **LA13FG12068**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	8.15	U
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130730c\
Data File : 94037.D
Acq On : 30 Jul 2013 2:58 pm (#1); 30 Jul 2013 2:57 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 15:02:12 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

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

S816667

S816667

Container Profile 770325

File Options Reports Help

S816667

770325	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

S816667

S816667
- 94143 - EMPTY
- 94142
- 94141

Task History

Transfer Details

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

8/7/13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5811667

6.2[4] Date Processed: 8-07-13

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

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

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

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

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

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

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

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

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

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

Performed By: Brad Gallegos / Bri Hallinger / 2457129 / 8-07-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5816667

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 462.9 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 462.9 lb

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

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

N/A

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5816467

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94141	94142		
10.1[4]	Daughter Drum Filter No.	KL-472	KL-453		
10.1[4]	Daughter Drum Bag Filter No.	L-8117	L-8173		
10.1[4]	Daughter Drum Purchase Order No.	501103	501103		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
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	2 GALLONS	1 LITER		
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	LEAD SHIELDING		
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	90%	95%		
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS, KITTY LITTER	BAG OUT STUBS, KITTY LITTER		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S8W6667

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, KITTY LITTER, ACID NEAUTRALIZER, LEAD SHIELDING

11.1[1] Performed By: B. Gallegos / BRIAN GALLEGOS / 2[illegible]129 8-07-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [illegible] R21452 / 8-14-13 0411
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

7-24-13

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

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

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: JL-1806
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: Federico Arellano / [signature] / 1228526 / 7-26-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: NC

8.1[1] Performed By: Federico Arellano / [signature] / 1228526 / 7-26-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Jerez / [signature] / 221452 / 8-14-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 8/7/13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94143

7.[24] Overpack drum closure ring torque wrench information:

M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: Brian Gallegos / / /
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): 181.6 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / [signature] / 221124 8-07-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez / [signature] / 221452 / 8-14-13
Supervisor or designee (print) Signature Z # Date

Best Available Copy

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

Drum ID#: 94141

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 #: 50 1103
Lot #: 0334766
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 #: LCPVC 1.5 25 PVC
Serial #: C5119
Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: MUCTSL
Model #: 0190 5
Serial #: KL 472
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	058369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-16-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+/- 6% acc	Tolerance:	+/- 3% acc

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

[x] Yes [ ] No

Print Name: Ian Mackenzie Signature: [signature] Z#: Z76205

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 78.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Ian Mackenzie Operator Sign: [signature] Z#: Z76205 Date: 8-8-13

Verifier Print: Brian Gallegos Verifier Sign: [signature] Z#: Z607129 Date: 8-07-13

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

DRUM ID#: 94141

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 #: 03875

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): 320.6

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 8-07-13

Verifier Print/Sign: MICHAEL MONTOYA Date: 8/07-13

Best Available Copy

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

Drum ID#: 94142

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234766
Date of Manufacture: n

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 #: 6EPWCL.525PVC
Serial #: L 8173
Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: KL433
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%cm ±6%ccw	Tolerance:	±3%cm ±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 wtght (lbs) 78.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

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

Verifier Print: Brian Gallegos Verifier Sign: [signature] Z#: 267129 Date: 8-07-13

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

DRUM ID#: 94142

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 #: 038375

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): 333.6

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 8-07-13

Verifier Print/Sign: [illegible] Date: 8-07-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S816667 Container Type: 55-GAL Gross Weight (lbs): 451

Inner Seal #: 010920 Filter Prefix: None Filter Serial #: None

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: No BDR

TWSR Comments: LEACHED SOLIDS

Total PE-Ci Activity: 1.80E+00 Equivalent Combustible PE-Ci: 6.74E-01 AM-241 PE-Ci: 1.46E-01

Total Fissile Gram Equivalents: 19.9 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 9/19/2012 Comment: 2L of liquid at 20"

Certified RTR Comment: None

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

Security Determination: ✓ Green Yellow

Remediation Determination: VE ✓ PID Split Repack

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

TRUCON Code: None Production Control Comments: Nitrate Salts, apply mixture & EPA codes

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

WDP Engineering

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

Processing Determination: ✓ Accept Reject

WDP Engineering Comments: Nitrate Salts
Net Wt: 391# Generator info shows 3 items of nitrate salts; weights range from 56-145#. No RTR BDR available to review. Nitrate salts are typically packaged in plastic bags & can contain undocumented liquids. RTR PS shows presence of liquids. Nitrate salts require repack w/ admixture. No chemicals identified, nitrate salts carry waste codes for chromium, lead & mercury

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

TRU Remediation Operations

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

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

Processing Determination: ✓ Accept Reject

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

Performed By: G Mt / G Mt / 114975 / 6-2-13
TRU Remediation Operations (Print) Signature Z Number Date

Jose Jerez / Jose Jerez / 221452 / 6-9-13

HS REVIEW: RB 206362 12.17.12

Discardable Waste Log Sheet

DrumID: 010920

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-409-F1	54.09	NITRATE SALTS		10.49	52	5/11	
2	IXFS-410-F1	25.45	NITRATE SALTS		6.6	52	5/11	
3	IXFS-411-FA	65.91	NITRATE SALTS		4.01	52	5/11	
		145.45 kg						

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: Feb 21 2013

Container No. (5.[1])	S816667					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Nathan Wales (CCP (Print)) / 2388666 (Z#)

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

Comments:
N/a

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

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

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) / Julie Gallegos (Signature) / 176905 (Z#) / 2-21-13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130221c\
Data File : S816667.D
Acq On : 21 Feb 2013 2:44 pm (#1); 21 Feb 2013 2:42 pm (#2)
Operator : NW
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED 72 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 21 14:48:14 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Feb 21 08:46:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Target Compounds Qvalue

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

H2-CH4.M Thu Feb 21 14:48:21 2013 UNIT12

08-7-13
0555 Assuming WCRRF operations center OCC position - Clerk
0602 Assuming WCRRF operations center in training Randy Royal.
0615 SOS Starting Pre Job.
0640 Pre Job complete.
0745 Atending all hands safety meeting.
1030 Returned Back from all hands meeting
1035 Atending Briefing For cut Bags. Talked about different scenarios of how Bags could have been Compromised.
1100 Sending in Crew to TA 50-69 to look For Burs of any abnormal conditions that may be causing cut of scraps on Bags.
1132 Starting movement out of 50-69.
1152 Movement ~~into~~ OUT RR 08/07/13 50-69 complete.
1347 mode change performed TA 50-69 and WCRRF Yard now in operations.
1426 Starting inside Rounds.
1435 Bagging on S816667.
1447 Bag on complete.
1449 Item #63 is OOS, POD in place ok to proceed.
1456 Starting outside Rounds
1457 Item #3 is ~~OOS~~ RR 08/07/13 unSAT, FSR in place ok to proceed.
1458 Inside Round's complete.
1515 outside Round's complete.
1527 Bagging off 1 daughter Bagging on 1 daughter and continuing to process.
1545 Rounds signned off
1548 Bag off for 1st daughter complete.
1610 Starting movement into 50-69 From transportainers.
1635 Movement into 50-69 is complete.
1703 Bagging off 1 Daughter Bagging on S813601
1737 Notified By tech 15 that Operators were not able to perform Bag on Because Drum lift is cutting Bags.
1801 Notified by Som that operators will be useing an 85 castor with a 55 drum. to Resolve Problem with Bag's Being torn by Drum Lift.
1815 Performed shift turnover with OCC Gerald Espinoza [illegible]
no further entries this page.

8-7-13 DAYSHIFT

0600 Reviewed the shift Turnover Checklist, and assumed the WCRR SOM position [illegible] Reviewed and approved the dayshift watchbill

0635 Completed the pre-job brief with the SOS (Gilbert). Inspecting bags was the safety topic and to be looking for areas/sharps that could create a bag cut. Notification was made to QA to support in investigation of cut bags. There are no transfers scheduled for today, P&T are scheduled for class. Operations will be attending an all hands brief from 0800 to 1000 hrs.

0705 Completed the daily call in with AREA-G-SOM - daily POD call in.

1025 All personnel return from the All Hands Safety Presentation

1040 OM and SOM met with personnel in the break trailer to discuss potential changes during inspection and prepping of bag on bags. Operations were requested to review all steps of the process and look for sharp edges.

1100 Operations entered 50/69 to re prep parent and save cut bag for QA

1230 Completed the noon call-in with PM/OM/AREA G SOM. Additional information was provided by operators inspecting the staging and prepping of drums inside 50/69. A shift order will be implemented to include: Prep drums as needed, Only 2 liquid drums on secondary containment, and Utilize cheesecloth to check for Burrs on the Parent drums if Burrs are located, tape over them. It was noted that complacency and housekeeping were contributors to the bag holes

1310 The SOM initiated a SHIFT ORDER, WCRR-SH-13-005 R0 - Precautions provided to Prevent BAG TEARS and provided to the SOS for briefing operators.
In addition WCRR Facility Standing Order EP-WCRR-50-1171, R0 was entered into the Ops Center Standing Order / Timely Orders logbook, effective today.

1347 Mode Change: 50/69 and YARD Transition from WARM/WARM to Operations/Operations

1435 Operators initiate bag on of Parent drum 5816669 -

1447 Operators report bag on completed.

1527 Bagging off 1 daughter and Bagging on an additional and continue processing

1548 Bagging off reported complete by inside Operations

1610 Operations are moving 4 drums into 50/69 Facility - Parents

1701 Operations initiate Bag off of daughter and Bag On of Parent 5813601

1737 Inside Operators report trouble with belly band straps NOT fitting around the drum.

1749 Notification is made to the OM and CSE

1755 SOM and SOS investigate and ensure taking measurements (suggested by SOM)

(continued next page)

no further entries this page [illegible]

8/7/13 WCRR SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief went over Bay Issues And contamination Issues From night Prior Also went over Slip's trips And Falls stay focused. All Hand's Meeting This morning 8-10 am.

0640 Concluded shift brief. QA was contacted to check bags operators have been having many Tears on bags need to evaluate Further.

0745 leaving to Attend All Hand's meeting At NSSB Building.

10.16 Returned From All Hand Meeting.

1035 Attended meeting with OM, SOM and operators to see the Reasoning behind Ripped bags operators gave several Potential area's.

1110 Meeting Concluded going to split up crews to see If we can Find the Area of concern For rips. sent half of the operators to check all bags that were prepped prior to check If our cabinet or staging area Is a concern also sending In operators to check Inside 50-69 For Potential burrs on drums or on pert on WC6 also checking doughnut for burrs or sharps.

1118 Operators entering 50-69 to check For potential sharps. That could Rip. snag. puncture etc a bag.

1310 shift creeper put In place for prepping drums as needed. As well as only 2 liquid drums on containment pallet At any one Time. WCRR-SH-13-005 Rev 0 Also Reviewed ~~[illegible]~~ GM 8-7-13 GM standing order EP-WCRR-50-1177, R0 TA 50-69 MAR De-Inventory Determination

1347 Mode change Complete WCRRF In operations.

1435 bagging on 5816667

1447 Bag on Complete

1527 bagging off 1 daughter Bagging on another

1545 Reviewed Inside And outside Rounds.

1549 Bag on/off Complete.

1800 Shift turnover with Clayton mullins [illegible]

no Forms earlier on this

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0100
Examination Date:	8/14/2013
Waste Container ID:	94141
Video/Audio Recorded Media Number:	LA-RTR2-13-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 145.5 kg Tare Wt.: 33.4 kg Net Wt.: 112.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 94141

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):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	104.1
Soils (S):	
Total WMP Weight:	112.1

CCP Radiography Data Sheet

Waste Container ID: 94141

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

RTR Operator:

Eric Lyles		8/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94141	Count Sequence Number:	16393
Operator:	DCLTD231\Operator		
Assay Start:	8/15/2013 1:19:14 PM		
Description 1:	2LANDA1212		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 112.0 kg	Net:	112.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.720 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: 16393
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 94141

Batch Number: 2LANDA1212
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 8/15/2013

Net Weight	112000.0 g		
Pu mass	9.49E+000	+-	2.33E+000 g
TRU Alpha Activity	7.01E+000	+-	1.18E+000 Ci
TRU Activity Concentration	6.26E+004	+-	1.06E+004 nCi/g
Pu-239 Equivalent Activity	7.02E+000	+-	1.18E+000 Ci
Pu-239 FGE	8.71E+000	+-	2.12E+000 g
Decay heat	2.31E-001	+-	3.93E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.32E-001	9.32E-005	1.76E-005	4.06E-006
PU238	6.56E-003	1.12E-001	2.75E-002	1.74E-004
PU239	8.63E+000	5.35E-001	1.31E-001	8.30E-004
PU240	8.03E-001	1.82E-001	4.47E-002	2.83E-004
AM241	1.80E+000	6.18E+000	1.18E+000	6.71E-002
PU241	1.19E-002	1.23E+000	3.02E-001	1.91E-003
PU242	3.62E-002	1.43E-004	3.51E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.42E-007
U233	<LLD	<LLD	0.00E+000	7.46E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.55E-006
U238	<LLD	<LLD	0.00E+000	1.54E-005
AM243	2.16E-003	4.33E-004	8.18E-005	5.60E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 8-23-13

ITR: _____ Date: 8-23-13

Automated Independent Technical Review

Count Sequence Number: 16393
Batch Number: 2LANDA1212
Counter ID: HENC #2
Container ID: 94141
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 8/15/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 8/22/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94141**

BDR Number: **LA13FG12081**

Sampling Date: **8/21/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	117.85	
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\130821c\
Data File : 94141.D
Acq On : 21 Aug 2013 10:03 am (#1); 21 Aug 2013 10:02 am (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NUCFIL-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 21 10:08:15 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	1.907	GC1	33616m	117.85	ppmv	

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0100
Examination Date:	8/14/2013
Waste Container ID:	94142
Video/Audio Recorded Media Number:	LA-RTR2-13-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 151.0 kg Tare Wt.: 33.4 kg Net Wt.: 117.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 94142

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	107.6
Soils (S):	
Total WMP Weight:	117.6

CCP Radiography Data Sheet

Waste Container ID: 94142

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

Comments: N/A

RTR Operator:

Eric Lyles		8/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94142	Count Sequence Number:	16380
Operator:	DCLTD231\Operator		
Assay Start:	8/14/2013 1:17:50 PM		
Description 1:	2LANDA1211		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 118.0 kg	Net:	118.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
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:	16380	Batch Number:	2LANDA1211
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94142	Analysis Date:	8/14/2013

Net Weight	118000.0 g		
Pu mass	7.96E+000	+- 1.59E+000	g
TRU Alpha Activity	8.51E+000	+- 4.27E+000	Ci
TRU Activity Concentration	7.21E+004	+- 3.61E+004	nCi/g
Pu-239 Equivalent Activity	8.51E+000	+- 4.27E+000	Ci
Pu-239 FGE	7.26E+000	+- 1.58E+000	g
Decay heat	2.82E-001	+- 1.42E-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	8.93E-007
U233	<LLD	<LLD	0.00E+000	6.30E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.99E-006
NP237	1.18E-001	8.32E-005	1.62E-005	3.29E-006
PU238	5.31E-003	9.08E-002	7.14E-002	5.13E-003
U238	<LLD	<LLD	0.00E+000	1.52E-005
PU239	7.19E+000	4.46E-001	9.80E-002	2.52E-002
PU240	7.21E-001	1.64E-001	4.49E-002	9.25E-003
AM241	2.28E+000	7.81E+000	4.26E+000	4.96E-002
PU241	4.18E-003	4.30E-001	1.26E-001	2.43E-002
PU242	3.26E-002	1.29E-004	5.95E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 8-15-13

ITR: Jim Barton Date: 8/19/13

Automated Independent Technical Review

Count Sequence Number: 16380
Batch Number: 2LANDA1211
Counter ID: HENC #2
Container ID: 94142
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 8/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	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: 8/15/13

Waste Container ID: **94142**

BDR Number: **LA13FG12075**

Sampling Date: **8/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	132.54	
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\130815c\
Data File : 94142.D
Acq On : 15 Aug 2013 3:06 pm (#1); 15 Aug 2013 3:04 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER-NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 15 15:11:44 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	1.907	GC1	37806m	132.54	ppmv	

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

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S816773

S816773

Container Profile 749786

File Options Reports Help

S816773

749786	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

S816773 — S816773
- 93869
- 93870 — EMPTY

Task History

Transfer Details

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

Working Copy
Date: 6-22-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S816773

6.2[4] Date Processed: 06-22-13

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

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

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

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

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 07-31-11

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
6-22-13 JS

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

Performed By: James Sedl / [signature] 1116662 / 06-22-13
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: SE16773

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 446.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 446.8 lb

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S816773

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93869			
10.1[4]	Daughter Drum Filter No.	Km-567			
10.1[4]	Daughter Drum Bag Filter No.	L-6861			
10.1[4]	Daughter Drum Purchase Order No.	501103			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☐ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☐ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	2 GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING			
10.3[9][A]	PCB-contaminated Waste Description	N A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic STUB OUTS			

N/A

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S816773

Comments: Nitrate Salts, Plastics, Kitty litter, 2 Gal of Absorbed Water, lead Shielding + Room Trash

11.1[1] Performed By: James Sw [signature] 1166621 06-21-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martinez [signature] 149235 1/5/13 0700
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 6/19/13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501 D12
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.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	±4% cw ± 6% ccw	±3% cw ± 6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1870
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 / 6/19/13
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: Michael Montoya / [signature] / 191352 / 6/19/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 240092 / 7/30/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 6-22-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 93870

7.[24] 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 & +/-6% ccw

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

Performed By: James S. [illegible] / [signature] 116662 / 06-22-13
Waste Handling Technician (print) Signature Z # Date

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

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

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 07-31-13

7.[35][D] 85-gal overpack drum gross weight (lb): 180.6 lb

Comments: Nk

8.1[1] Performed By: James S. [illegible] / [signature] 116662 / 06-22-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 240092 7/30/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 4-21-13

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

Drum ID#: 93869

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 #: 501163
Lot #: 0239765
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC-L52SPVC
Serial #: L-6861
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 #: KM567
Date of Manufacture: 11-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4%cw ±6%ccw	Tolerance:	±3%cw ±6%ccw

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

[x] Yes [ ] No

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

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 75.6
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Brandon Chavez Operator Sign: [signature] Z#: 204742 Date: 6-21-13

Verifier Print: James Sa[illegible] Verifier Sign: [signature] Z#: 116662 Date: 6-22-13

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

DRUM ID#: 93869

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 +1.3cw+ 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): 486.2

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [signature] Date: 6-22-13

Verifier Print/Sign: B.L. Holley Date: 6-22-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S816773 Container Type: 55-GAL Gross Weight (lbs): 308

Inner Seal #: 010979 Filter Prefix: None Filter Serial #: None

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

TWSR Comments: LEACHED SOLIDS

Total PE-Ci Activity: 1.59E+00 Equivalent Combustible PE-Ci: 5.97E-01 AM-241 PE-Ci: 1.29E-01

Total Fissile Gram Equivalents: 17.6 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: LANL: remediate-2 Gallons of prohibited liquid in plastic bags from 16" to 32".

RTR Pre-Screen Date: 3/19/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 28

Certified RTR Comment: Prohibted liquid

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack

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

TRUCON Code: None Production Control Comments: Nitrate Salts apply mixture & EPA codes

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: 248# Generator info shows 3 items of nitrate salts; weights range from 50-130#. RTR BDR shows plastic bags + homogeneous solids. It also shows prohibited liquids + lead lined drum. Nitrate salts require repack w/ admixture. No chemicals identified; nitrate salts carry waste codes for chromium, lead, + mercury

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

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: USE Proper PPE. Use proper ratio of kitty litter to waste in accordance with procedure.

Performed By: G Mt (TRU Remediation Operations (Print)) / [signature] (Signature) / 149235 (Z Number) / 6-2-13 (Date)

Jose Jerez / Jose Jerez / 221452 / 6-9-13

HS Review: RB 206362 12.17.12

Discardable Waste Log Sheet

DrumID: 010979

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-424-F1	57.73	NITRATE SALTS		4.6	52	5/11	
2	IXFS-428-F1	59.09	NITRATE SALTS		3.71	52	5/11	
3	IXFS-429-F1	22.73	NITRATE SALTS		10.37	52	5/11	
		139.55 kg						

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0094
Examination Date:	8/29/2012
Waste Container ID:	S816773
Video/Audio Recorded Media Number:	LA-HERTR-12-0094 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[ ] No [X] Yes NCR No.: NCR-LANL-1630-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 201.0 kg Tare Wt.: 60.1 kg Net Wt.: 140.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [ ] No [X] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [ ] No [X] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: S816773

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, 90 MIL Liner with Liner Lid	9.4
Other: Lead Lined (LP)	23.0
Total Packaging Weight	60.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	136.9
Soils (S):	
Total WMP Weight:	140.9

CCP Radiography Data Sheet

Waste Container ID: S816773

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

Comments: Per CCP-SO-LANL-55 Inconsistencies associated with these packaging configurations (90 MIL. Liner with Liner Lid) will not disqualify the container from meeting the waste stream description. NCR-LANL-1630-12

RTR Operator:

Eric Lyles		8/29/2012
Print Name	Signature	Date

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: March 5 2013

Container No. (5.[1])	S816773					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55					
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])	131.56 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

n/a 3/5/13

5.[7] Certified CCP Technician:

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

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

Comments: n/a

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

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

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z #) 3-5-13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130305c\
Data File : S816773.D
Acq On : 5 Mar 2013 1:37 pm (#1); 5 Mar 2013 1:36 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GAL DRUM THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 05 13:45:02 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	2425431	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2167535	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.313	GC1	32505m	131.56 ppm	

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

Vocgas.m Thu Mar 07 08:46:59 2013

6-22-13

0600 Assuming WRRF Operations center - C Delaude
0606 Starting outside rounds.
0610 Item #3 is unsat FSE in place okay to proceed.
0617 The job briefing being conducted by SOS.
0622 Completed outside rounds.
0645 ~~0620~~ 0623 Starting inside rounds.
0727 Item #3 is OOS, POD in place okay to proceed.
0730. Late entry at 0718 Operator and RCT responding ops center of alarms at 0648 on 6-21-13 stating loss of power can failure. Today at 0718 alarm stating that Can startup failure.
0740 Operator notifying ops center of active alarms on HVA-001 low low flow, FE-002 low and low low flow, FE-003 low and low-low flow. Entering LCO 3.3.1 and 3.3.2 to shut down and restart ventilation. CSE has been notified. Also entered 3.0
0826 Starting ventilation shutdown.
0827 mister alarm acknowledged.
0836 Ventilation is shutdown.
0853 Starting up ventilation.
0856 Ventilation has been restarted
1843 Operators notifying ops center that all readings are in normal range.
0905 Exiting LCO 3.3.1 and 3.3.2, 3.0
0905 Rounds have been signed off SOS
0915 mode change has been performed 50.59 and WRRF yard now in operations.
1004 Bagging on 9816773
1013 Bag on complete
1027 Electricians have accepted transfer switch, they have confirmed it did turn on
1344 Notified by SOS of a WCG high high pressure, FE-002 low low flow, HVA low low & low, RIN 102 high pressure & high high pressure, Entering EP-WCRR-RIN-ARP-0401, ~~402~~ 403, 404, 410 and 409-411
-continued on next page-

-Continued [illegible] from previous page - Ckelande
1346 entering LCO 3.0, 3.3.1 and 3.32, SDS, SOM, OM have been notified.
1500 Shutting down ventilation
1502 Ventilation is shut down.
1504 mister alarm acknowledge.
1505 Starting up ventilation
1506 ventilation back up
1511 all ventilation readings are normal.
1513 RCT's will be conducting post ventilation smears.
1515 Exiting, EP-WCRF-RM-ARP 404, 409, 410, 411 and 412. LCO 3.0, 3.3.1 and 3.32 have also been lifted.
1517 Starting inside rounds.
1524 Item #43 is OOS, POD in place okay to proceed.
1531 Starting outside rounds
1534 Item #3 is unsat, FSR in place okay to proceed
1537 Inside rounds complete.
1545 Outside rounds complete
1550 RCT's notifying operations center that post ventilation smears are NDA.
1554 Okay to resume operations per OM
1559 late entry 1344. SDS notified operations center that they are still performing a bag off. all inventory will be placed in a safe configuration and they will be following RCT instructions. Then they will perform a controlled exit. cc
1600 late entry at 1342, bagging off S8816733 [illegible] S8816733, bagging on S8620088. cc.
1604 Bagging off daughter of S8816733 and S8620088
1726 Bag off complete.
1750 Rinsing of S8620088
1800 Rinsing is complete.
1805 Starting movement out of SC-69
1840 Completed movement out of SC-69
1841 mode change performed TRSC-69 in cold, WCRF yard in warm standby
1/13 1851 End of day (SCRF notifications) as after occurred

241 PROJECT NAME 6-22-13 NOTEBOOK NO.

0600 Reviewed the previous shift turnover and assumed the WCRR SOM position. [signature]

0615 Pre-job briefing conducted by SOS. Discussed the outage scheduled for 54, 196, 37 and 34 not to affect 84, 50-69. SM discussed 2 person rule requirements when using the 41" step ladder inside 50-69.

0710 OCO reported that during morning rounds it was discovered on the PLC (Allen Bradley) that at the alarm history panel it showed an alarm for "Loss of Power" on 6-21-13 at 1848 hrs. Operator performing rounds indicated ventilation was running "normal", although alarm history indicated that on 6-22-13 0718 there was a "fan start up failure" and a "loss of Power". The operator checked the active alarms panel and it indicated that HVA001, FE002 and FE003 are had low and low low flow alarms. The operator didn't witness the PLC go off for any of these alarms. Operations exited 50-69 until further investigation was conducted.

0720 RP-1 reported that during RMTs this morning they noticed that the CAMs had a low flow alarm indicating that the vacuum pumps probably shut off sometime last night or early morning.

0725 SOM called CSE and briefed him to alarm history and active alarms. CSE and SOM agree on shutting down ventilation and re-starting.

0730 OM notified of alarms and alarm (active). OM agrees on shut down / startup of ventilation.

0740 OCO entering 3.3.1, 3.3.2, and 3.0 to allow shutdown / startup of ventilation in WARM standby mode.

0750 RP-1 installing parts on WCG to support shutdown / startup of ventilation.

0826 Shutdown of ventilation complete.

0831 Startup of ventilation complete. All readings reported normal.

0832 RP1 performing post smears / surveys after ventilation shutdown / startup.

0900 SOM reviewed shutdown / startup procedure. All readings on ventilation within normal range.

0903 OCO exiting LCO's 3.3.1, 3.3.2, 3.0.

0905 Late entry 0830 L. Mojica notified OCO of power outage affecting bldg's 196, 37, 54. 0900 reported by L. Mojica outage complete. (gw)

0935 Notified DOE D. Rodriguez of alarm history / active alarms.

0936 Late entry 0915 - Mode change complete. WCRR YARD / 50-69 from WARM / WARM to OPERATIONS / OPERATIONS. (gw).

1016 Electrician going into building to look at transfer switch history.

@ 6-22-13

1028 Electrician ~~visited~~ exited building and notified OCD and SOM that the transfer switch history shows last nights event. The power dispatch verified its nothing on their end.
1030 Late entry 1004- Bagging on first drum. (gd)
1344 Notified by OCD that the following alarms are going off inside 50-69. WCG high high pressure FE002 low low flow, HVA 001 Low Low and Low flow Room 103 high pressure and high high pressure. OCD entering EP-WCRR-RM-ARP's 0401 0404, 0410, 0409, 0411. Personnel inside the facility are in air ~~purity~~ purifying respirator and finishing off a bag off/ bagin of a parent drum to place facility and waste in a safe configuration.
1346 OCD entering LCO's 3.0, 3.3.1 and 3.3.2.
1355 OM notified by SOM, CSE notified.
1425 New information gathered from RP-1 supervisor. During bagin/bagoff of parent drum RP1 noticed the bag on bag was a little crinkled. No obvious holes were identified. Bag was placed in the proper configuration
1435 OM and CSE were updated on new information obtained. Per CSE alarms might have occured because of crinkled bag but not certain
1450 Per OM, CSE, RP-1, SOM ventilation will be shutdown/startup.
1500 Shutting down ventilation.
1506 Starting up ventilation.
1511 Reported that all ventilation readings are normal.
1513 RP-1 Conducting post smears/surveys.
1515 Exiting EP-WCRR-RM-ARP's 404 409, 410, 411 and 412. Exiting LCO's 3.0, 3.3.1, and 3.3.2. Left message for DOE D. Rodriguez.
1550 RP-1 reported all post smears/surveys are NDA.
1554 Per OM okay to proceed with operations.
1600 Notified by E.S. SOS that the operators do not feel comfortable with proceeding with normal operations, until MSS comes out and troubleshoot/repair the system.
1605 OM notified. OM advised to bag off daughter to allow placement of safe configuration on the WCG.
1610 SOM discussed with SOS and RP-1 supervisor. Operations feel comfortable with placing WCG in the safest configuration. Daughter drum will be bagged off. Parent drum contains large amounts of liquid and therefore will be bagged off as well.
1644 Operations beginning bagoffs.
1728 Operations completed bagoffs.
1750 Operations beginning re-nesting for parent drum bagged off
1800 Operations completed re-nesting.

PROJECT NAME 6.22.13 continued. NOTEBOOK NO.

1830 All waste has been removed from bldg. 50-69.
1840 Mode change complete. WORK PARTS/50-69 from OPERATIONS/OPERATIONS to WARM/~~HOT~~ COLD.
1845 Securing the SOM position. Jeanne Fernandez @6.22.13

No further entries this page.

SIGNATURE Jeanne Fernandez DATE 6-22 20 13
READ AND UNDERSTOOD DATE 20

WCRR SOS Log Book

6-22-13

0600 Assuming SOS position for the day. Jim J.

0615 Starting Pre-Job. Safety Topic Discussed Accident on I-25 this morning by Hollywood Casino. Stressing the importance of staying awake when driving, pull over if you are having a hard time staying awake. Notify supervision if you feel un safe or to tired to drive so that arrangements can be made

0635 Pre-Job Completed

0707 Operator performing inside rounds that there appears to have been an alarm with ventilation and CAM alarms during the night. SOM notifying the OM and CSE of the situation. CSE recommending shutting down ventilation and restarting to ensure that all systems are operating normal and clear alarms that happened overnight. Operator performing the rounds states that all ventilation systems are normal.

0740 Entering LCO's 3.0, 3.3.1 and 3.3.2 for shutting down ventilation, 50-69 is in WARM

0830 Operators shutting down ventilation

0843 Operator re started ventilation, all readings are normal on ventilation system. All alarms have been cleared.

0903 Exiting LCO's

0905 Reviewed and signed rounds

0915 WCRR Yard and 50-69 are in operations mode.

1012 Bag on of first Parent drum is complete

1200 Operators breaking for lunch. Also notifying one that we are out of Pb strips.

1344 Operations center being notified of ventilation alarms during Bag on

1346 Entering LCO 3.0, 3.3.1 and 3.3.2 and ARP's

1500 Shutting down ventilation

1502 Ventilation shut down

1506 Ventilation is back all readings are normal. Exiting ARP's

1550 RCT's notifying operations center that post ventilation surveys are complete.

1511 [illegible]

WCRR SOS Log Book

6/22/15

1600 Operators notifying that they do not feel comfortable with the ventilation the way it's operating within the last couple of days and alarms. Notified Energy Solutions Operations Manager of the status and the concerns. Explained the concerns to the SOM and she contacted the CAWC gal. Per OM we can bag off and pause for ventilation to be looked at.

1644 Bagging off daughter and Parent that was bagged on

1728 Bag off complete

1750 ~~Re~~ Nesting Parent that was bagged on into an 85 gallon so it can be moved out to get building into CAID for maintenance to work on troubleshooting the system tomorrow.

1800 Nesting complete

1835 Movement out of 50-69 is complete.

1840 Mode change complet WCRR yard is in WARM 50-69 is in CAID.

1850 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-HERTR-13-0079
Examination Date:	6/28/2013
Waste Container ID:	93869
Video/Audio Recorded Media Number:	LA-HERTR-13-0079 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 221.0 kg Tare Wt.: 33.4 kg Net Wt.: 187.6 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: 93869

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):	12.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	167.6
Soils (S):	
Total WMP Weight:	187.6

CCP Radiography Data Sheet

Waste Container ID: 93869

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

RTR Operator:

Michael Simmons		6/28/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93869	Count Sequence Number:	23152
Operator:	D3PW2DK1\operator		
Assay Start:	7/3/2013 10:14:44 AM		
Description 1:	1LANDA1803		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 188.0 kg	Net:	188.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.900 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23152
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93869

Batch Number: 1LANDA1803
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 7/3/2013

Net Weight	188000.0 g		
Pu mass	1.28E+001	+-	3.38E+000 g
TRU Alpha Activity	4.05E+000	+-	1.73E+000 Ci
TRU Activity Concentration	2.15E+004	+-	9.19E+003 nCi/g
Pu-239 Equivalent Activity	4.08E+000	+-	1.73E+000 Ci
Pu-239 FGE	1.28E+001	+-	3.18E+000 g
Decay heat	1.33E-001	+-	5.77E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	7.67E-002	5.48E-005	1.18E-005	2.79E-006
PU238	1.17E-003	2.03E-002	5.35E-003	3.46E-005
PU239	1.20E+001	7.54E-001	1.99E-001	1.29E-003
PU240	7.67E-001	1.76E-001	4.66E-002	3.01E-004
AM241	8.91E-001	3.10E+000	1.72E+000	6.30E-002
PU241	1.49E-002	1.55E+000	4.10E-001	2.64E-003
PU242	2.56E-003	1.02E-005	2.68E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.08E-007
U233	<LLD	<LLD	0.00E+000	5.37E-003
U234	1.63E-002	1.03E-004	3.86E-005	0.00E+000
U235	1.17E+000	2.56E-006	9.54E-007	2.36E-006
U238	<LLD	<LLD	0.00E+000	1.24E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 7-11-13

ITR: _____ Date: 7-12-13

Automated Independent Technical Review

Count Sequence Number: 23152 Batch Number: 1LANDA1803
Counter ID: MCS HENC #1
Container ID: 93869
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/3/2013

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

Expert Review by: Sheri Chamberlin Date: 7-8-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93869**

BDR Number: **LA13FG12060**

Sampling Date: **7/11/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	102.02	
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\130711C\
Data File : 93869.D
Acq On : 11 Jul 2013 12:24 pm (#1); 11 Jul 2013 12:23 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 11 12:36:19 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	29101m	102.02	ppmv	

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

15

S816828

S816828

Container Profile 764351

File Options Reports Help

S816828

764351	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

S816828

S816828
- 93868 – EMPTY
- 93867
- 93866

Task History

Transfer Details

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

ATTACHMENT 1
Page 1 of 4

6-11 1:36

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S816828

6.2[4] Date Processed: 6-21-13

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

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

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

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

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

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

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

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

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

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

Performed By: BRIAN GALLEGOS / Brian Gallegos / 267129 / 6-21-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S816828

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 409.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 409.8 lb

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

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

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S816828

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93866	93867	N	A
10.1[4]	Daughter Drum Filter No.	Km-550	Km-545		
10.1[4]	Daughter Drum Bag Filter No.	L-6506	L-6854		
10.1[4]	Daughter Drum Purchase Order No.	501103	501103		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No		N	A	
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	1 gal	1 gal	N	A
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A	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%	90%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic	Plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: SB16828

Comments: Nitrate Salts, Plastic, Kitty Litter, lead Shielding Hex Armor Gloves, & Room Trash

11.1[1] Performed By: James Sahl / [signature] 1116662 / 06-21-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Clayton Mullen / [signature] 1240092 / 7/30/13 2111
SQS or designee (print) Signature Z # Date/Time

Working Copy
Date: 6-19-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501012
Lot No.: 0233945
Manufacture Date: 2012

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: EL-358
Manufacture Date: 5/11

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 / 6/19/13
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: Michael Montoya / [signature] / 191352 / 6/19/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 240092 / 7/30/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 6-21-13 cw

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 938688

7.[24] 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 + +/-6% ccw

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

Performed By: James Sandoval / [signature] / 1116462 / 06-21-13
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: 07-31-13

7.[35][D] 85-gal overpack drum gross weight (lb): 188.2 lb

Comments: N/A

8.1[1] Performed By: James Sandoval / [signature] / 1116462 / 06-21-13
Waste Handling Technician (print) / Signature / Z # / Date

8.1[7] Reviewed By: [signature] 8/3/13 / [signature] / 149235 / 8/3/13
Supervisor or designee (print) / Signature / Z # / Date
Gilberto Martinez

#4A

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

Drum ID#: 93866

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
- [ ] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: CCPVC 1.5 2 SPVC
Serial #: 6-6556
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: MULPEL
Model #: 019-05
Serial #: KM 550
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	03869
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% or +/-6%	Tolerance:	+/-5% or +/-6%

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

[x] Yes [ ] No

Print Name: Ian Mawrence Signature: [signature] Z#: Z6670

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

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

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

Operator Print: Ian Mawrence Operator Sign: [signature] Z#: Z6705 Date: 6-19-13

Verifier Print: James Sell Verifier Sign: [signature] Z#: 116662 Date: 06-21-13

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

DRUM ID#: 93866

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) 260.4

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [signature] Date 06-21-13

Verifier Print/Sign: [signature] Date: 6-21-13

#4B

Date: 6-19-13

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

Drum ID#: 93867

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: GDVC 1.5 25PVC
Serial #: L-6854
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: MC FIL
Model #: 01405
Serial #: KM 545
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	03869
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% rdg +/- 6% rng	Tolerance:	+/- 3% rdg +/- 6% rng

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

[x] Yes [ ] No

Print Name: Jon Manuel Signature: [signature] Z#: 276708

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 75.8
File ID # 019066

- [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: Jon Manuel Operator Sign: [signature] Z#: 276708 Date: 6-19-13

Verifier Print: Tonny Sandal Verifier Sign: [signature] Z#: 116667 Date: 06-21-13

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

DRUM ID#: 93867

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 +/-2% 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): 359.2

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [signature] Date: 06-21-13

Verifier Print/Sign: [signature] Date: 6-21-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S816828 Container Type: 55-GAL Gross Weight (lbs): 415

Inner Seal #: 010339 Filter Prefix: None Filter Serial #: None

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0053

TWSR Comments: LEACHED SOLIDS

Total PE-Ci Activity: 1.40E+00 Equivalent Combustible PE-Ci: 8.68E-03 AM-241 PE-Ci: 1.59E-01

Total Fissile Gram Equivalents: 13.8 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: LANL: remediate-Prohibited Item

RTR Pre-Screen Date: 4/19/2007 Comment: Impenetrable Obj. - Scrap lead on RTR BDR VR 12/12/12

Certified RTR Comment: 6 Gallons of liquid in the bottom of the drum

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack

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

TRUCON Code: None Production Control Comments: VR 12/12/12 Nitrate Salts, apply mixture + EPA codes Material split, package MT42 separately from MT52

Performed By: Julie Gallegos / Julie Gallegos / 176905 / 9.11.12
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: 355# Generator info shows 3 items of nitrate salts; weights range from 42-179# RTR BDR shows lead shielding, plastic bag + homogeneous solids. It also shows prohibited liquids. Nitrate salts require repack w/ admixture. No chemicals identified. Nitrate salts carry waste codes for chromium, lead, + mercury

Performed By: Valerie Rhodes / Valerie Rhodes / 142009 / 12/12/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: USE proper PPE. Follow procedure for ratio of kitty litter to waste for Nitrate Salts.

Performed By: G Mk / G M / 149235 / 6-2-13
TRU Remediation Operations (Print) Signature Z Number Date

Jose Jerez / Jose Jerez / 221452 / 6-9-13

HS Review: AB 206362 12.17.12

Discardable Waste Log Sheet

DrumID: 010339

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS 432 FC	19.09	NITRATE SALTS		3.01	52	5/11	
2	DXFS 433 F1	26.38	NITRATE SALTS		0.58	42	2/11	
3	DXFS 434 FA	81.36	NITRATE SALTS		11.57	52	5/11	
		126.83 kg						

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0053
Examination Date:	06/28/12
Waste Container ID:	S816828
Video/Audio Recorded Media Number:	LA-HERTR-12-0053 C
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-1164-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt: 183.5 kg. Tare Wt: 35.1 kg. Net Wt: 148.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Mechanical Vent
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	50 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: S810825

Section 3: Container Inventory and Comments (Detailed descriptions)
Lead Shielding
Plastic bags
Homogeneous solid material

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP): 90mil Liner and Lid	7.4
Others:	0.0
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	13.0
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	131.4
Soils (S):	
Total WMP Weight:	148.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: S810628

Section 5: RTR Summary (Questions answered YES will be explained in the Comments block provided in Section 7)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code(s))?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH 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-1164-12

RTR Operator:

Michael Simmons	[signature]	06/28/12
Print Name	Signature	Date

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: Jan 29 2013

Container No. (5.[1])	9816828					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	136.55 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A 1-30-13

5.[7] Certified CCP Technician:

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

Reviewed By: Nathan Wales (CCP (Print)) 1238666 (Z#)

Comments: n/a

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

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

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S816828.D
Acq On : 29 Jan 2013 2:47 pm (#1); 29 Jan 2013 2:46 pm (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 14:52:34 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	1.933	GC1	38567m	136.55	ppmv	

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

H2-CH4.M Tue Jan 29 14:52:39 2013 UNIT12

06-21-13

0600 Assuming WCRRF operations center outside
0611 Starting outside rounds.
0615 Pre job being conducted by SDS.
0625 Item #3 is unsat FSR in place OK to proceed.
0628 Starting inside rounds
0629 Outside rounds completed.
0659 Rounds signed off by SDS.
0722 mode change performed TA50-69 and WCRRF yard in operations.
0727 Starting staging of drums for area G shipment Permission granted to lower vehicle access gates.
0728 Operators continuing to process drum 9855530.
0808 Bagging off 9855530, bagging on 9802441
0827 Permission granted to restore vehicle access gates, shipment to area G complete
0852 Bag on, Bag off complete.
0902 Bagging off 1 daughter.
0950 Starting movement into 50-69.
1014 movement complete into 50-69
1039 Bagging off 9802441, bagging on 9855867
1104 Bag on, Bag off complete
1215 Bagging off 9855867, bagging on 9816828
1241 Bag on, Bag off complete.
1304 Operator notifying operations center that inner vehicle bay door was hit with extra pallet left on the floor. RCT's, SOM and OM notified.
1310 RCTs and SDS have stated no damage was done to the door.
1519 Starting movement out of 50-69.
1551 movement out of 50-69 complete
1635 Starting inside and outside rounds
1651 Completed outside rounds.
1653 Item #63 is OCS, PCO in place OKay to proceed.
1708 Bagging off last drum.

06-21-13
1734
1757
1830

1621-13 — Continued from previous page (Melinda)
1734 Bag off to complete.
1757 Mode change performed TA50-69 and WCRRF yard warm standby.
1830 End of day WCRRF operations center secure - (Melinda).

JJ —

No further entries this page

PROJECT NAME 6-21-13 WCRR SOM LOG NOTEBOOK NO.

0600 ASSUMED WCRR SOM DUTIES FOR 6-21-13.
0615 PRE JOB
0640 MGMT CALL IN
0700 TASK SHIFT BRIEF
0722 MODE CHANGE AT WCRR: WARM/WARM TO OPERATIONAL/OPERATIONAL FOR SITE/50-69.
0808 FINISHED PARENT FROM THE NIGHT BEFORE (S855530) AND BEGAN ANOTHER (S802641).
0937 SHIPPED TO AREA 6
0902 REVIEWED TIMELY ORDER BOOK AND ASSOCIATED SHIFT ORDER (SH-WRR-003 R2)
1735 BAGGED IFP LAST DRUM. REMEDIATE 4 PARENTS, 8 DAUGHTERS AND 1 POC. THIS INCLUDES THE PARENT LEFT ON LAST NIGHT (INCLUDING DAUGHTERS).
1757 MODE CHANGE AT WCRR: OPERATION/OPERATION TO WARM/WARM FOR SITE FACILITY
1805 SECURE SOM SHIFT.

NO FURTHER ENTRIES

SIGNATURE

6/21/13

WCRR SOS Log Book

0600 Assuming SOS position for the day. [illegible]
0605 Reviewed log Book and SOS turnover
0615 Starting Pre Job brief. ~~Operator br~~ JJ 6-21-13 IH briefing about ladder being used for shipments in and out also briefing to ladders being used inside of the facility using two man rule. One shipment scheduled out today. Finish processing parent that was bagged an overnight, Continue processing parents. Bioassay kits, TLD's and Dosimeters, ensure that they are turned in timely.
0640 Concluded Pre-Job
0658 Reviewed and signed rounds.
0722 Made Change, WCRR yard and 50-69 are in operations mode.
0806 Bagging off first Parent that was left Bagged an overnight Bagging on second parent for the day.
0826 Shipment out Complete.
0900 Bagging off one daughter from first parent, bagging on second daughter and continuing to process.
0916 Bag off complete
1027 Bagging off one daughter and one POC, Bagging off second daughter, Bagging on third ~~daughter 1~~ JJ 6-21-13 Parent for the day.
1100 Bag on Bag off complete.
1215 Bagging off third parent bagging on fourth parent
1241 Bag on Bag off complete.
1304 Operators notifying operations center that when operators were moving in a pallet with empty drums, they hit a pallet that was in there pushing it up against the inner rollup door. Opened it and closed it, stuck a little bit and manually raised and lowered it then electrically. Need to monitor
1708 Bagging off last Parent for the day generated two daughter
1734 Bag off complete.
1757 Made Change WCRR yard and 50-69 in WARM-
1815 Securing SOS position for the day. [illegible]

CCP Radiography Data Sheet

Section 1: General Information	
[ ] RTR Examination [ ] RTR Replicate Scan [X] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0088
Examination Date:	6/27/2013
Waste Container ID:	93866
Video/Audio Recorded Media Number:	LA-RTR2-13-0088 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.: 118.5 kg Tare Wt.: 33.4 kg Net Wt.: 85.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: 93866

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags, 90 mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	12.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	73.1
Soils (S):	
Total WMP Weight:	85.1

CCP Radiography Data Sheet

Waste Container ID: 93866

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 Independent Observation agrees with the Original Scan.

RTR Operator:

Benito Maestas		6/27/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93866	Count Sequence Number:	23115
Operator:	D3PW2DK1\operator		
Assay Start:	6/28/2013 9:37:32 AM		
Description 1:	1LANDA1800		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 85.1 kg	Net:	85.1 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.630 kg /l		

System Configuration

Counter:	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: 23115
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93866

Batch Number: 1LANDA1800
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 6/28/2013

Net Weight	85100.0 g		
Pu mass	1.44E+000	+- 2.44E-001	g
TRU Alpha Activity	1.04E+000	+- 5.03E-001	Ci
TRU Activity Concentration	1.23E+004	+- 5.91E+003	nCi/g
Pu-239 Equivalent Activity	1.05E+000	+- 5.03E-001	Ci
Pu-239 FGE	1.32E+000	+- 2.20E-001	g
Decay heat	3.46E-002	+- 1.68E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.22E-002	8.74E-006	1.56E-006	1.05E-006
PU238	5.41E-004	9.36E-003	1.58E-003	6.87E-005
PU239	1.30E+000	8.19E-002	1.38E-002	6.01E-004
PU240	8.68E-002	2.00E-002	3.37E-003	1.46E-004
AM241	2.68E-001	9.31E-001	5.02E-001	2.39E-002
PU241	3.87E-003	4.02E-001	6.78E-002	2.95E-003
PU242	4.99E-002	1.98E-004	3.34E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.35E-007
U233	<LLD	<LLD	0.00E+000	1.99E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.15E-007
U238	<LLD	<LLD	0.00E+000	9.91E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 7-9-2013

ITR: [signature] Date: 7-10-13

Automated Independent Technical Review

Count Sequence Number: 23115 Batch Number: 1LANDA1800
Counter ID: MCS HENC #1
Container ID: 93866
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 6/28/2013

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-42,52.
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: 7/9/13

U14

Waste Container ID: **93866**

BDR Number: **LA13FG12057**

Sampling Date: **7/2/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	25.68	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130702c\
Data File : 93866.D
Acq On : 2 Jul 2013 1:01 pm
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NUCFIL-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 13:06:27 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	7325m	25.68	ppmv	

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

23

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0079
Examination Date:	6/28/2013
Waste Container ID:	93867
Video/Audio Recorded Media Number:	LA-HERTR-13-0079 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.: 163.0 kg Tare Wt.: 33.4 kg Net Wt.: 129.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 93867

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):	36.5
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	85.0
Soils (S):	
Total WMP Weight:	129.6

CCP Radiography Data Sheet

Waste Container ID: 93867

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

RTR Operator:

Michael Simmons		6/28/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93867	Count Sequence Number:	23121
Operator:	D3PW2DK1\operator		
Assay Start:	6/28/2013 2:53:26 PM		
Description 1:	1LANDA1800		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 130.0 kg	Net:	130.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.830 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

1-10-13
036

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23121
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93867

Batch Number: 1LANDA1800
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 6/28/2013

Net Weight	130000.0 g	
Pu mass	4.65E+000 +-	9.91E-001 g
TRU Alpha Activity	2.62E+000 +-	1.25E+000 Ci
TRU Activity Concentration	2.02E+004 +-	9.60E+003 nCi/g
Pu-239 Equivalent Activity	2.65E+000 +-	1.25E+000 Ci
Pu-239 FGE	4.24E+000 +-	9.87E-001 g
Decay heat	8.69E-002 +-	4.17E-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	4.84E-007
U233	<LLD	<LLD	0.00E+000	3.54E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.05E-006
NP237	3.79E-002	2.71E-005	5.58E-006	1.82E-006
PU238	1.74E-003	3.02E-002	7.79E-003	2.17E-003
U238	<LLD	<LLD	0.00E+000	2.38E-005
PU239	4.20E+000	2.64E-001	6.21E-002	1.90E-002
PU240	2.80E-001	6.43E-002	1.77E-002	4.62E-003
AM241	6.52E-001	2.26E+000	1.25E+000	3.85E-002
PU241	1.25E-002	1.29E+000	3.47E-001	9.30E-002
PU242	1.61E-001	6.38E-004	1.73E-004	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 7-9-2013

ITR: _____ Date: 7-10-13

Automated Independent Technical Review

Count Sequence Number: 23121 Batch Number: 1LANDA1800
Counter ID: MCS HENC #1
Container ID: 93867
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 6/28/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-42,52.
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: 7/9/13

AA 7-10-13
038
~~1134~~

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93867**

BDR Number: **LA13FG12058**

Sampling Date: **7/3/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	70.08	
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\130703c\
Data File : 93867.D
Acq On : 3 Jul 2013 11:01 am (#1); 3 Jul 2013 10:59 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: Jul 03 11:05:39 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.900	GC1	19990m	70.08	ppmv	

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

S816837

S816837

Container Profile 747460

File Options Reports Help

S816837

747460	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

S816837

- S816837
  - LA00000068490 – EMPTY
  - LA00000068578 – WIPP
  - LA00000068567 – LANL
    - LASB02221

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	LA00000068567	0.0	kg

ATTACHMENT 1
Page 1 of 4

10-30-13

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S816837

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

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

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

4.1[6][B] Parent Waste Container RCRA Designations: 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.: 019265
Cal. Due Date: 10-14-14

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

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

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

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

Performed By: James Sadl / [signature] / 116667 / 10-30-13
Waste Handling Tech (print) / Signature / Z # / Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S816837

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 411.6 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 411.6 lb

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

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

Initials Z# Date

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

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S810837

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68578	68567		
10.1[4]	Daughter Drum Filter No.	LM-827	LM-838	N	
10.1[4]	Daughter Drum Bag Filter No.	L-11517	L-4745	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)			N	
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				A
10.3[5][A]	Free Liquid Volume/Units	2 GALLONS	2 LITERS		
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	LEAD SHIELDING		
10.3[9][A]	PCB-contaminated Waste Description	N A	N A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	40%		
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER	KITTY LITTER		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S816837

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, KITTY LITTER, LEAD SHIELDING, HEX ARMOR GLOVES

11.1[1] Performed By: BRIAN GALLEGOS / Brian Gallegos / 267129 10-30-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins / CM / 240092 / 10/31/13 0304
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9-24-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238367
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038.369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	+/- 4% cw +/- 6% ccw	+/- 3% cw +/- 6% ccw

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: SL-904
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 Hernandez / [signature] 1228026 9-26-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/c

8.1[1] Performed By: Frederico Hernandez / [signature] 1228026 9-26-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] 1240082 10/31/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-30-13
Working Copy
Date: 10-30-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 608490

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

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

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

Performed By: Brian Gallegos / Bri Gallegos / 2671129 10-30-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 167.4 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / Bri Gallegos / 2671129 10-30-13
Waste Handling Technician (print) Signature Z # Date

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

Working Copy
Date: 10-24-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68567

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.: 6epvc 1.5-2 epvc
Serial No.: ~~10-24-13 10284~~ L-6745
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 in. lbs.	10-80
Tolerance:	+4% cw +6% ccw	+3% cw +6% ccw

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

Performed By: Steven Mondragon / Steven Mondragon / 100271 / 10-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019DS
Serial No.: LM838
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.: 68567

Comments: N/C

5.[35] Performed By: Brian Gallegos / Bri Gallegos / 2671249 / 10·30·13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / CM / 2400914 / 10/31/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-30-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68567

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

M&TE No.: 036245
Cal. Expiration Date: 8-05-14
Range in ft-lb: 14-80
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 / B. Hunsinger / 247129 / 10-30-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 08567

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 202.8 lbs

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

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS / Brian Gallegos / 261129 / 10-30-13
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Clayton Mullins / CA / 240092 / 10/31/13
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 1
Page 1 of 2

Date: 10-24-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68578

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.: 6CPVC1.5-2SPVC
Serial No.: L11517
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	±5% 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 / Brian Gallegos / 267129 / 10-24-13
Honored Smith / Honored Smith / 1226778 / 10/24/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-827
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): 7.6 lbs

5.[34][E] Drum ID No.: 68578

Comments: N/C

		Brian Gallegos	[signature]	267124	10-24-13
5.[35]	Performed By:	Howard Smith	H Smith	1222778	10/24/13
		Operator (print)	Signature	Z #	Date
7.1[4]	Reviewed By:	Clayton Mullins	[signature]	1240094	10/31/13
		Supervisor or designee (print)	Signature	Z #	Date

Working Copy
Date: 10-30-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68578

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 / B. Holley / 267129 10-30-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68578

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 378.6 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: BRIAN GALLEGOS / Bri Gallegos / 267229 / ~~10-30-13~~ 10-30-13 Date 10-30-13 BG
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / CM / 241096 / 10/31/13
Supervisor or designee (print) Signature Z # Date

Inspected S972

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S816837 Container Type: STEEL DRUM (55 GAL) Gross Weight (lbs): 416.745
Total PE-Ci Activity: 1.05E+00 Equivalent Combustible PE-Ci: 3.93E-01
Total Fissile Gram Equivalents: 1.16E+01 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

RTR pre-screen indicates ~ 4 gallons of free liquid throughout drum and @ the bottom.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~ 237 lbs. and generator data shows 4 items of nitrate salts with weights ranging from ~ 2-133 lbs.

Performed By: Susan Ramsey (LTP-PTS (Print)) | Signature | 100681 (Z#) | 7/30/13 (Date)

IHS Representative

Potential IHS Safety Risks: May contain lead, chromium, mercury and be gas free liquids

Performed By: Johnny Smallwood (IHS Representative (Print)) | Signature | Z# | 7-31-13 (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)) | Valerie Rhodes (Signature) | 112609 (Z#) | 8/5/13 (Date)

TRU Remediation Operations

Potential Safety Risks: USE Proper PPE And Kitty Litter Ratio

Performed By: (TRU Operations (Print)) | Signature | 149235 (Z#) | 8/12/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with hands. Use tools when possible to handle waste. Use Hexarmour gloves during processing.

Approved By: Jose Jerez (OM or designee (Print)) | Signature | 221452 (Z#) | 8-12-13 (Date)

Discardable Waste Log Sheet

DrumID: 011379

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-434-FB	60.68			2.7	52	5/11	
2	IXFS-435-F1				5.71	52	5/11	
3	IXFS-436-F1				0.93	52	5/11	
4	IXFS-437-F1	46.83			2.96	52	5/11	
		107.51 kg						

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 5/28/13

Container No. (5.[1])	S814837					
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])	4.75 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	358.08 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: Gabe Romero (CCP (Print)), 236973 (Z #)

Reviewed By: Rick Jagielski (CCP (Print)), 266088 (Z #)

Comments:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), Susan S. Ramsey (Signature), 100681 (Z #), 5/28/13 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130528c\
Data File : S816837.D
Acq On : 28 May 2013 11:40 am (#1); 28-May-13, 11:39:34 (#2)
Operator : GR
Sample :
Misc : 55 GAL DRUM THROUGH UNOBSTRUCTED NucFil-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 11:48:55 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	3.591	96	5360682	201.25	ppmv	0.02
15) Chlorobenzene-d5	5.923	117	4418809	177.00	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.605	GC1	2545	358.08	ppmv	100
12) Benzene	3.271	78	91036	4.75	ppmv	99

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

vocgas.m Tue May 28 11:50:09 2013

10-30-13

0412 Answering w CERF operations center - Orlando
0415 Pre-job being conducted by SOS.
0645 Pre job conducted by SOS.
0715 going off site to attend mandatory safety meeting
0840 returning from safety meeting
0935 mode change performed TA50-69 and WCRRF yard now in operational.
0940 late entry at 845 operators can not enter change room due to work being performed on door. CK
1115 Operators entering to continue processing
1322 Bagging off, Bagging on 9816837
1350 Bag on, Bag off complete
1455 Starting inside rounds.
1502 Starting outside rounds
1510 Item 13 is OOS, POD in place okay to proceed, Per CSE documentation.
1515 Inside rounds complete
1518 Outside rounds complete
1540 Bagging off 2 daughters, Bagging on 9832320
1620 Bag on, Bag off complete.
1629 Starting movement into 50-69
1645 Rounds signed off by SOS.
1647 Conditional ~~release~~ release hold tag place on vehicle barriers by CSE no additional controls required the system is operable.
1654 movement into 50-69 is complete.
1712 Starting movement out of 50-69
1735 Bagging off 1 daughter, 1 POD and bagging on 1 daughter.
1740 movement out 50-69 complete.
1800 Bag on, Bag off is complete.
11-30-13 1803 Relieved by CCO Terri Coleman - Orlando
no further entries this page

10-30-13

1803 Assuming WCRR operating center. [illegible]

1815 Pre-job and turnover with morning shift being conduct[illegible] a Safety topic - Don't wear dark safety glasses in the dark performing duties or even walking around outside.

1858 Pre job concluded.

1918 Operators entering 5069 to resume operations.

1945 RCRA inspections have been completed for today.

~~2030~~ JC 10-30-13

2012 Operators notifying ops center of an ~~unidentified~~ JC 10-30-13 unidentified liquid found on the mat of the work station at station 2. SOS, SOM and IH notified. Operator 54 state that he was getting ready to get onto the WCG to begin to sweep the floor of the WCG when he noticed the drop of liquid about the size of a quarter. He states that he took a hold of the glove and pulled out slightly and another drop of liquid fell onto the mat on the work station. Per RCT's, all are performing a controlled exit.

2030 SOM notified OM.

2032 Discussion being held regarding path forward. There are currently no elevated CAMS or alarming CAMS. IH will be entering with an RCT to determine if there are any VOC's associated with the liquid. RCT's will mask the floor for contamination.

2109 RCT and IH entering 5069 to see if IH can identify any VOC's

2140 IH states that the liquid had already evaporated and he was not able to evaluate it. The RCT's will take smears for precautionary measures.

2221 Per RCT, all smears showed no activity.

2234 Operators entering 5069 to resume operations.

2324 Bagging off 1 daughter, bagging on S816692

2347 Bag off/on complete.

0000 ~~12~~ JC 10-31-13 Operators out for lunch.

0111 Operators back from lunch.

0305 Bagging off 1 daughter, bagging on another daughter.

0310 Beginning outside rounds.

Continued on next page. [illegible]

Best Available Copy

10-30 13 DAYSHIFT

0610 Reviewed the shift turnover checklist and assumed the WERR SOM position John Lewelgoch

0647 Completed attending the pre-job brief conducted by the SOS (Darrel) The safety topic was driving and be cautious of others. Facility status was discussed and Roles and responsibilities assigned. The facility is in warm mode 5E/69 and yard. The area is in a safe configuration. There are no transfers going out or to be received. Gamma spec is scheduled for today. The SOS discussed Vehicle Barrier requirements and safety class vs safety significants. All personnel are required to attend the Safety meeting Scheduled at 0730

0708 Completed daily call in for FOD updates with AREA G

0850 All personnel returned from the safety meeting.

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

0930 Made change: WERR yard and 5E/69 Facility transition from

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

1030 Discussed the work in the vault and notified PM of status.

1105 Operators initiated dressing out

1115 Operators entered safety facility to process and will rotate thru lunch

1120 Conducted room facility call in w/ the SOM, PM, and Engr.

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

1322 Inside Operations report bag off of daughter and parent, and bag on of parent drum 5E16837.

1354 Inside Operations report bag off and bag on completed

1500 Completed review of TEN ACPs and separated validation with OCCS.

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

1541 Inside Operations report bagging off 2 daughters and bagging on 1 Parent 5E832320.

1630 CSE (R. Griffis) requested to place a conditional release hold tag on the Vehicle Barrier Connecting Cable - Noting: no additional controls required. The system is operable. The CR expiration date is 4-30-14 - Copy provided to OCCS.

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

(Continued on next page)

10-30-13 DAYSHIFT

1602 Conducted shift turnover with oncoming SOM and reviewed turnover checklist. Current drum on glove box. Parent generated 1 daughter and 1 POC which is bagged off. The Parent drum is 5832320

1610 Relieved by the oncoming SOM. R. Axtell [illegible]

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

10/30/13 Night Shift

1810 Reviewed shift turnover checklist, approved and posted Night shift Operations watchbill, assumed WCRR SOM position.

1851 Prejob brief was conducted by SOS, ES/IH Safety topic covered daily Start Safe message of time change. Briefed the active shift orders and discussed AC's and SAC's for the daily TSR selected topic. Talked about current conditions of the WCG. Operators/RCT's brought up the issue of while processing some operators have been sweating through their PPE into the inside of the WCG gloves. RP-1 will provide direction on whether to change PPE, gloves or continue to process. 10/30/13

1945 RCRA inspections are completed. Operator reported TID was missing from spill kit under canopy in WCRR yard. Contents were inventoried and TID replaced.

2012 Notified by OCO that operators identified a spot on the platform under station #2 glove about a quarter in size that a liquid fell onto. Operator noticed that there was a small amount of liquid inside one of the gloves @ station #2. Operators performing a controlled exit from 50 vg. All CAMs are reading normal.

2020 Input from SOS and IH w/ operators statements that personnel working @ station #2 have been intensly sweating due to labor intensive processing. Operators had also recently sprayed cleaner on the outside of the WCG for window cleanup. Suspect one of these two sources therefore not entering Liquid Release EOP.

2030 Notified OM

2045 Conducted meeting w/ SOS, operators, RP-1 and IH for path forward. IH will monitor liquid for pH and VOC's. RP-1 will survey area and into glove w/ liquid. Initial entry per RWP will be w/ respirators and double Anti C's.

2140 IH conducted assessment and determined that all liquid had evaporated. VOC monitoring of area on floor and inside glove proved negative. RP-1 will conduct surveys.

2231 RP-1 reported that all surveys of station #2 gloves and surround areas were ND A.

continued on next page

10/30/13 Night Shift continued

2347 Completed all bag offs for parent # 5832320 (2 daughters and 1 POC total). Bagged on 5816692.

10/31/13 0000 Operators breaking for lunch

0111 Resuming operations

0321 Completed bag off of 1 daughter - continuing to process

0539 Completed bagoffs for parent # 5816692 (2 daughters total) Bagged on 5824208.

10/31/13 0610 Relieved by J. Bandagnolo as WCRR SOM.

No further entries this page

10/30/13 WCRRF SOS Log Book

0600 Assumed SOS position DtB

0615 Pre job briefing. ~~Briefed HPS~~ Briefed to job hazards Slips, Trips, Falls, Pinch Points Time change and how it can effect you. Stay focused while working. Make sure the horse tail is tight before it is cut. Proper wearing of your PPE and how important that is. Reviewed TSR question on vehicle barrier Briefed to Shift orders

0635 Pre job brief completed.

0705 Turn over SOS position to Gilbert Martinez DtB

0706 Assuming SOS Position [illegible] operators will be Attending All hands meeting.

0435 All operators back from Mandatory meeting

0845 Operators noted unable to get their PPE due to Floor Crews working. In Change Room will be accessible In about 1½ hour.

0935 Mode change Complete WCRRF In operators.

1045 Operators Able to Enter Change Room and dress out

1115 Operators Entering 50-69 Continuing to Process

1322 Bagging off/on 3816837

1350 Bag on/off complete

1455 Starting Rounds.

1540 Bagging off 2 daughters Bagging on 5832320

1620 Bag on/off complete

1624 Starting Move Into 50-69

1645 Reviewed Inside And outside Rounds

1647 Conditional Release tag Placed on Vehicale Barriers by CBE System Is operable

1654 Move In Complete

1712 Starting move out of 50-69

1735 Bag of Daughter And Pec bagging on Another Daughter.

1740 Movement out of 50-69 Complete

1802 Bag on/off complete.

1808 Relieved by Clayton Mullins [illegible]

no further entries on this page

10/30/13 WCRRF SOS Log Book

1803 Assumed SOS position. CA

1816 Starting Pre-Job with brief from day shift, also discuss wearing proper PPE. Discussed the shift orders.

1848 Pre-Job complete.

2012 Operators notify that an unidentified liquid has been found on the work platform a station 2. SOM and IH have also been notified. Tech. 54 states ~~Ta~~ cm 10-30-13 that he was attempting to clean station 2 gloves, prior to use, when he noticed the drop of liquid, about the size of a quarter, on the work platform. He states that he took ahold of the glove, right hand station 2, and pulled it out slightly he noticed another drop of liquid fell onto the platform. All operators and RCT's performing a controlled exit.

2030 SOM notified OM.

2032 Discussion with all personnel regarding path forward. Currently there are no elevated CAM's or alarming CAM's. Personnel to re-enter 50-69 after RWP brief will be 2 RCT's, IH and 1 operator.

2109 RCT's, operator and IH entering 50-69.

2140 IH states that the liquid has evaporated, there fore, he was unable to evaluate it. RCT's taking smears as a precaution.

2231 RCT's state that all smears NDA.

2234 Operators resuming operations.

2324 Bagging off daughter, bagging on 5816692.

2347 Bag off/on complete.

0304 Bagging off 1st daughter, bagging on a 2nd.

0310 Bag off/on complete.

0503 Signed off on the rounds.

0505 Bagging off 2nd daughter, bagging on 5824208.

0536 Bag off/on complete.

0607 Turning over SOS position to Gilbert Martinez. CA 10/31/13

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-14-0004
Examination Date:	1/13/2014
Waste Container ID:	68567
Video/Audio Recorded Media Number:	LA-HERTR-14-0004 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 92.0 kg Tare Wt.: 33.4 kg Net Wt.: 58.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	40 %

CCP Radiography Data Sheet

Waste Container ID: 68567

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM: Scrap lead

OM:

OI:

C:

R: Leaded rubber gloves

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	31.6
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	5.0
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	20.0
Soils (S):	
Total WMP Weight:	58.6

CCP Radiography Data Sheet

Waste Container ID: 68567

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

RTR Operator:

Eddie Rios	Eddie Rios	1/13/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68567	Count Sequence Number:	24110
Operator:	D3PW2DK1\operator		
Assay Start:	1/14/2014 3:58:50 PM		
Description 1:	1LANDA1890		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 58.6 kg	Net:	58.6 kg
Container:	Volume: 208.0 l	Full:	40.0 %
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:	24110	Batch Number:	1LANDA1890
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:	68567	Analysis Date:	1/14/2014

Net Weight	58600.0 g		
Pu mass	4.90E+000	+-	1.00E+000 g
TRU Alpha Activity	1.28E+000	+-	5.06E-001 Ci
TRU Activity Concentration	2.19E+004	+-	8.63E+003 nCi/g
Pu-239 Equivalent Activity	1.29E+000	+-	5.06E-001 Ci
Pu-239 FGE	4.62E+000	+-	9.41E-001 g
Decay heat	4.19E-002	+-	1.68E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.55E-002	1.09E-005	2.04E-006	1.03E-006
PU238	4.47E-004	7.65E-003	1.56E-003	3.25E-005
PU239	4.60E+000	2.85E-001	5.83E-002	1.21E-003
PU240	2.94E-001	6.67E-002	1.37E-002	2.83E-004
AM241	2.69E-001	9.23E-001	5.02E-001	1.79E-002
PU241	5.57E-003	5.74E-001	1.17E-001	2.44E-003
PU242	9.81E-004	3.88E-006	7.93E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.12E-007
U233	<LLD	<LLD	0.00E+000	1.89E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.19E-007
U238	<LLD	<LLD	0.00E+000	7.05E-006

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 1-15-14

ITR: [illegible] Date: 1/20/14

Automated Independent Technical Review

Count Sequence Number: 24110
Batch Number: 1LANDA1890
Counter ID: MCS HENC #1
Container ID: 68567
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/14/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Analysis Status: Override enabled; data marked not available but were used. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors. Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50	Ok Not data affecting, neutron results applied.

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

Expert Review by: Sheri Chamberlin Date: 1-15-14

Waste Container ID: **68567**

BDR Number: **LA14FG2007**

Sampling Date: **1/21/2014**

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

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140121c\
Data File : 68567.D
Acq On : 21 Jan 2014 12:53 pm (#1); 21-Jan-14, 12:52:36 (#2)
Operator : DE
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 21 13:01:24 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	3.542	96	2878838	205.75	ppmv	0.02
15) Chlorobenzene-d5	5.855	117	2284702	177.50	ppmv	0.00

Target Compounds Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0125
Examination Date:	11/7/2013
Waste Container ID:	68578
Video/Audio Recorded Media Number:	LA-RTR2-13-0125 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 172.0 kg Tare Wt.: 33.4 kg Net Wt.: 138.6 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: 68578

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, 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):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	120.5
Soils (S):	
Total WMP Weight:	138.6

CCP Radiography Data Sheet

Waste Container ID: 68578

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

Comments: N/A.

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	11/7/2013
Print Name	Signature	Date

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

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

Item ID:            68578              Count Sequence Number:  23812
Operator:           D3PW2DK1\operator
Assay Start:        11/8/2013   1:41:22 PM
Description 1:      1LANDA1862
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       139.0   kg        Net:   139.0 kg
Container:          Volume:    208.0   l        Full:    90.0 %
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:	23812	Batch Number:	1LANDA1862
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68578	Analysis Date:	11/8/2013

Net Weight	139000.0 g			
Pu mass	6.00E+000	+-	1.25E+000	g
TRU Alpha Activity	2.78E+000	+-	1.28E+000	Ci
TRU Activity Concentration	2.00E+004	+-	9.22E+003	nCi/g
Pu-239 Equivalent Activity	2.80E+000	+-	1.28E+000	Ci
Pu-239 FGE	5.67E+000	+-	1.25E+000	g
Decay heat	9.16E-002	+-	4.26E-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	5.01E-007
U233	<LLD	<LLD	0.00E+000	3.93E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.20E-006
NP237	4.63E-002	3.26E-005	6.27E-006	2.03E-006
PU238	5.48E-004	9.37E-003	2.40E-003	5.40E-004
U238	<LLD	<LLD	0.00E+000	1.04E-005
PU239	5.63E+000	3.49E-001	7.74E-002	2.01E-002
PU240	3.60E-001	8.17E-002	2.15E-002	4.71E-003
AM241	6.83E-001	2.34E+000	1.28E+000	4.70E-002
PU241	6.88E-003	7.09E-001	1.87E-001	4.09E-002
PU242	1.20E-003	4.75E-006	1.25E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 11/11/13

ITR: Marsha Gr Date: 11-12-13

Automated Independent Technical Review

Count Sequence Number: 23812 Batch Number: 1LANDA1862
Counter ID: MCS HENC #1
Container ID: 68578
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/8/2013

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

Expert Review by: Sheri Chambers Date: 11-11-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68578**

BDR Number: **LA13FG2117**

Sampling Date: **11/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	116.37	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	2.26	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131115c\
Data File : 68578.D
Acq On : 15 Nov 2013 2:23 pm (#1); 15-Nov-13, 14:23:08 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 14:31:50 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	4218479	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3307524	177.50 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.610	GC1	875m	116.37 ppmv	
12) Benzene	3.219	78	33704	2.26 ppmv	99

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

S816890

S816890

Container Profile 754192

File Options Reports Help

S816890

754192	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

S816890

S816890
- LA00000068534 – EMPTY
- LA00000068569
- LA00000068557

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
49.99	%			

Working Copy
Date: 10-30-13 jl

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5816890

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

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

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

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

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

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

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

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

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

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

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

Performed By: Adam Segovia / Adam Segovia / 1276702 / 10-30-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5816890

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

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 408.0 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.: 5816890

	Daughter Drums				
10.1[4]/10.2[4]	Daughter Drum No.	68569	68557		
10.1[4]	Daughter Drum Filter No.	LM 830	Km-764	N	A
10.1[4]	Daughter Drum Bag Filter No.	L-6747	L-10282		
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	N/A	N		
10.3[5][A]	Free Liquid Volume/Units	2 GALLONS	A	N	
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding	Lead Shielding		A
10.3[9][A]	PCB-contaminated Waste Description			N A-	
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 (%)	80%	80%		A
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Stuff bags	Kitty Litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5818890

Comments: One poly liner lid, Nitrate salts, Plastic, Kitty litter lead shielding,

11.1[1] Performed By: James Smith, [signature] 1116662, 10-30-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, [signature] 1240092, 10/31/13 0312
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 10-4-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

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

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: JL-1050
Manufacture Date: 10-11

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

5. [11] Performed By: Justin Coler / [signature] 1266431 10-4-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Justin Coler / [signature] 1266431 10-4-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] 1240096 10/31/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-30-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68534

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: James Smith / [signature] 1116662 / 10-30-12
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 168.8 lb

Comments: N/C

8.1[1] Performed By: James Smith / [signature] 1116662 / 10-30-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 1240091 / 10/31/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-24-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68569

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 - 23PVC
Serial No.: L-6747
Manufacture Date: 2013

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 (Operator (print)) [signature] (Signature) 191352 (Z #) 10/24/13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-830
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.: 68569

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA [signature] 191352 10/24/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 240091 10/31/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date: 102413 K

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68569

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

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

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

Performed By: James Schl / [signature] / [illegible] / 10-30-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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.: 68569

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 293.0 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 Sobel (Operator (print)) [signature] (Signature) 11662 (Z #) 10-30-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 240092 (Z #) 10/31/13 (Date)

Working Copy
Date: 10-24-13 gr

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68557

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.: 6cpv1.5-2spvc
Serial No.: L-10282
Manufacture Date: 5-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200 in-lb	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: GERALD ESPINOZA / [signature] 231720 10-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM 764
Manufacture Date: 11-12

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

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

5.[30] Scale File ID number: 0190165

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.: 68557

Comments: N/C

5.[35] Performed By: GERALD ESPINOZA / [signature] / 1237726 / 10-24-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 240096 / 10/31/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-30-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68557

6.[9] Drum closure ring torque wrench information:
M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16 - 80
Tolerance: +/- 3% cw + +/- 6% cw

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

Performed By: James S M [signature] 116661 10-30-13
Operator (print) Signature Z # Date

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	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.: 68557

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 341.2 lbs

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

Comments: N/C

6.[32] Performed By: James Sa[illegible] / [signature] 1116621 10-30-13
Operator (print) Signature Z# Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 1240096 10/31/13
Supervisor or designee (print) Signature Z# Date

Inspected SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S816890 Container Type: STEEL DRUM (55 GAL) Gross Weight (lbs): 412.335
Total PE-Ci Activity: 9.81E-01 Equivalent Combustible PE-Ci: 3.68E-01
Total Fissile Gram Equivalents: 1.01E+01 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

RTR pre-screen indicates ~ 4 gallons of free liquid, sealed container > 4L, & unvented liner

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~ 281 lbs. and generator data shows 4 items of nitrate salts with weights ranging from ~ 19 - 160 lbs.

Performed By: Susan Ramsey (LTP-PTS (Print)) | Signature | 100681 (Z#) | 7/30/13 (Date)

IHS Representative

Potential IHS Safety Risks: Many contain lead, chromium, mercury, 4 gal of liquids

Performed By: Tiffany Sandlund (IHS Representative (Print)) | Signature | 241659 (Z#) | 7-31-13 (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 | 112607 (Z#) | 8/5/13 (Date)

TRU Remediation Operations

Potential Safety Risks: USE Proper PPE And Kitty Litter Ratio

Performed By: B Martinez (TRU Operations (Print)) | Signature | 1149235 (Z#) | 8/12/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with hands. Use hexarmor gloves during processing. Use tools when possible to handle waste.

Approved By: Jose Perez (OM or designee (Print)) | Signature | 221452 (Z#) | 8-12-13 (Date)

Discardable Waste Log Sheet

DrumID: 011384

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS-438-F1	72.73	NITRATE SALTS		4.86	52	11	
2	DXFS-439-F1	8.63	NITRATE SALTS		2.18	53	11	
3	DXFS-440-FA	33.95	NITRATE SALTS		2.08	52		
4	DXFS-441-F1	12.5	NITRATE SALTS		1.75	53	11	
		127.81 kg						

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	S81690					
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 N/A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	2.16 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	204.08 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

Reviewed By: Nathan Wales (CCP (Print)), 238566 (Z #)

Comments:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), Susan S. Ramsey (Signature), 100681 (Z #), 5/20/13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S816890.D
Acq On : 11 Apr 2013 12:33 pm (#1); 11 Apr 2013 12:32 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 12:40:53 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	2028180	206.00 ppm	0.00
15) Chlorobenzene-d5	5.940	117	1815840	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.227	GC1	50425m	204.08 ppm	
12) Benzene	2.880	78	11094	2.16 ppm	94

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

Vocgas.m Thu Apr 11 12:41:07 2013

TABLE OF CONTENTS

NAME WCRR SOS Log Book

NOTEBOOK NO. 10/29/13

PAGE	ENTRY	DATE
1	1816 -> Assuming SOS position. CA	
2	1818 -> Starting Pre-Job, discussed driving with time change	
3	as well as the weather change. Also briefed to the ~~standing~~ 10-29-13	
4	shift orders as well as went over design features and	
5	ISI's.	
6	1856 -> Pre-Job complete.	
7	2035 cm 10-29-13 ~~1914~~ -> Starting movement out of 50-69.	
8	2056 -> Movement out complete.	
9	2240 -> Bagging off 1st daughter, bagging on a 2nd.	
10	2257 -> Bag off/on complete.	
11	2305 -> Starting movement into 50-69.	
12	2312 -> Movement in complete.	
13	0237 -> Bagging off 2nd daughter, bagging on 5816890.	
14	0249 -> Signed off on the rounds.	
15	0305 -> Bag off/on.	
16	0525 -> Bagging off 1st daughter, bagging on a 2nd.	
17	0535 -> Bag off/on complete.	
18	0546 -> WCG in a safe configuration, lid on parent and no waste	
19	in box.	
20	0555 -> Mode change complete, WCRRF yard and 50-69 are now in	
21	Warm Standby.	
22	0615 -> Turning over SOS position with Darrell Blain. CA	
23		
24		
25		
26	No Further Entries	
27		
28		
29		
30	on	
31		
32		
33	this	
34		
35	Page	
36		
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38		
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40		

10-29-13

0609 Assuming WCRRF operations center Orlando
0615 Pre job being conducted by SOS
0643 Pre job concluded.
0726 Starting movement into 50-69
0743 movement into 50-69 is complete.
0745 mode change performed TA50-69 and WCRRF yard now in warm standby for glove changes on station 2 and 1 left and Right.
0830 Starting glove changes on station 1 and 2 left and Right.
0841 Starting movement ~~to transport vehicle~~ CV 10-29-13 out of 50-69.
0852 movement out of 50-69 complete.
0855 Lowering vehicle access gates to start loading vehicle ~~access gates~~ CV 10-29-13 transport tractor for movement to area G.
0938 Vehicle access gates have been restored movement out of WCRRF is complete
0944 Glove changes have been completed.
0953 mode change performed TA50-69 and WCRRF yard now in operations
1133 Bagging on 3825902, Bagging off 3804989
1200 Bag on, Bag off complete
1445 Starting outside rounds
1450 Being released by RCO Howard Smith - Orlando
1451 ASSUMING OPERATION CENTER HA SMITH
1459 STARTING INSIDE ROUNDS
1508 OUTSIDE ROUNDS COMPLETED
1519 ITEM #63 OOS, OKAY TO PROCEED PER CSE DOCUMENTATION
1521 INSIDE ROUNDS COMPLETED
1543 BAGGING OFF S825902 BAGGING ON S825730
1544 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SOS
1630 RCT SUPERVISION INFORMED OPS CENTER ABOUT PERSONAL CONTAMINATION ON PPE OF TECH 31, ~~FITTING~~ HS 10/29/13 OPERATORS WILL FINISH BAGGING OFF AND THEN DECONTAMINATE

- CONTINUED ON NEXT PAGE - HASMITH

10-29-13

1646 RP-1 NOTIFIED OPERATIONS CENTER CONTAMINATION NOTED AT 1800 DPM'S BUT WITH TAPE PRESS WAS REDUCED TO LESS THAN 200 DPM'S. THE AREA WAS COVERED WITH TAPE BAG OFF/~~BAG ON~~ HS 10-29-13 WAS COMPLETED TO PLACE PROCESS IN SAFE CONFIGURATION. LARGE AREA SWIPES WERE PERFORMED ON FLOOR. NO CONTAMINATION WAS DETECTED. ALL CAMS WERE NORMAL. ALL PERSONELL USED HAND & FOOT MONITORS AND REPORTED NDA. OPERATORS WERE ASKED TO STAY IN THE BUILDING DURING SURVEY. SURVEYS ARE BEING PERFORMED BY RCT'S.
CONTAMINATION WAS NOTED ON THE GRIPS OF THE CUTTER APPROXIMATELY 500 DPM. ALL PERSONNEL REMAIN IN RESPIRATORS.

1658 RP-1 REPORTS - RCT'S ARE SURVEYING RESPIRATORS. THE OPERATORS WILL BE SURVEYED OUT AND GO THROUGH THE PCM2 TO ENSURE NO SKIN CONTAMINATION

1715 THE OPERATOR WAS CLEARED THROUGH PCM2 - NO CONTAMINATION.

1724 RP-I REPORTS ALL RESPIRATOR SURVEYS AND FLOOR SURVEYS WERE NDA/WITHIN LIMITS

1740 OPERATIONS RESUMED IN THE PROCESS

1803 BAG ON/BAG OFF COMPLETE

1811 OPERETORS EXIT BUILDING

10-29-13 1811 BEING RELIEVED BY OCO TERRI COLEMAN - G SMITH

RLG

NO FURTHER ENTRIES ON THIS PAGE

10-29-13
1811 Assuming WCRR operations center - JColeman
1815 Pre-job and turnover with morning shift being conducted. Safety topic - paying attention to your driving, and weather changing.
1855 Pre-job concluded.
1914 Operators entering 50-69 to begin operations on drum S825730
2035 Initiating a drum movement from 50-69 to a transportainer.
2056 Drum movement out of 50-69 complete.
2240 Bagging off 1 daughter, bagging on another daughter.
2257 Bag off/on complete.
2305 Initiating a drum movement from transportainer to 50-69.
2312 Drum movement into 50-69 complete.
10-30-13 0000 Operators out for lunch.
0115 Operators back from lunch.
0150 Beginning outside rounds.
0205 Beginning inside rounds.
0222 Item #63 is OOS, okay to proceed per CSE documentation.
0225 Outside rounds complete. Inside rounds complete.
0237 Bagging off 1 daughter, bagging on S816890.
0305 Bag off/on complete.
0430 Late entry - at 0238, both rounds reviewed by SOS.
0525 Bagging off 1 daughter, bagging on another daughter.
0535 Bag off/on complete. Everything is in a safe configuration.
0555 Mode changed to warm in WCRRF yard and 50-69 due to the safety meeting this morning (monthly).
10-31-13 0612 Being relieved by OCO Clarissa DeLarde, JColeman

No further entries this page.

10-29-13 DAYSHIFT (Cont.)

1201 Participated with teleconference call, with Production Control, OM, SOMs and J. Vigil. Updates were provided, regarding facility

1356 Completed review and sign off of the Operator AID LOGBOOK, Quarterly and Monthly.

1543 Operators report bagging off S825902 and bagging on S825730

1630 RP-1 supervisor notified the Operations Center of an Operator noted contaminated on his Right wrist PPE sleeve, identified after daughter drum bagg off routine smear of hands/arms.

1646 RP-1 reports contamination noted at 1800dpm and with tape press's, it was brought down to < 200 dpm, the area was covered with tape bag off/bag on was completed (of the daughter drum) to place the evolution in a safe configuration.
LAS was performed on the floor - no contamination detected.
CAMs were reported normal
All personnel went thru the Hand Foot monitor and reported NDA
All personnel were reminded to stay in one are during surveys.
Survey are being performed by RCTs.
Contamination was noted on the grips of the cutter (500dpm)
All personnel will remain in respirators.

1658 RP-1 reports - RCTs are surveying respirators, The Operator will be surveyed out and go thru the PCM2 to ensure no skin contamination.

1715 The operator was cleared through the PCM2 - No contamination.

1724 RP-1 reports all respirator surveys and floor surveys were NDA/within limits
Upon obtaining results, operations is approved to continue bag offs
The old cutter was thrown away and new cutter provided.

1745 Complete follow up with WCATs wall to wall inventory - provided input to OM - all noted sat - Empty containers to be scanned in ARETIC on upon entry after prepping in 50/69, In addition verification of current procedures and forms - utilized - Notified DM,

1803 All bag offs were conducted successfully and Parent Drum S825730 was Bagged on

1815 Completed shift turn over with oncoming SOM. Relieved of WCRR SOM duties by R. Axtell [signature]

No further Entries this page.
[signature]

10-29-13 Day shift

0610 Reviewed the shift turnover checklist and assumed the WCRR SOM position for Guadagnoli

0645 Completed attending the pre-job brief conducted by the SOS - (Gilbert) Discussed shift turnover, noting stations #1 left hand and station #2 right and left hand require changing. There is one transfer scheduled out. The ES/PM, discussed Fire Suppression, and Tank Capacity. RCTs disussed bag on of parents and to ensure the bag is ~~[illegible]~~ long enough. The RCT noticed yesterday that one pigtail during bagoff was short. Training of new operators was discussed and the use of the ALARA Center to support in bag offs. Arrangements will be required to utilize the center. Safety message is to watch out for each other.

0708 Completed the daily AREAG call in with SOM updating PED status.

0740 Inside operators report stations 1 and stations 2 require changing both pair.

0745 Mode Change WCRR Yard and SO/LG transition from Operations/Operations to WARM/WARM

0747 late entry for 0743, Operators complete the move in of 3 Parent drums - 5832320, 5825730, and 5825902.

0801 Initiated meeting with CSE (Crawford) (procedure writer) R. Smart and J. Vigil.

0921 Reviewed and approved WO# 468539-02 - Equipment Servicing to have crafts initiate work on the snow blower.

0940 The transfer out was completed, 15 drums total.

0944 Inside Operators report glove changes - were noted completed.

0953 Mode Change: WCRR YARD and SO/LG Facility transition from WARM/WARM to Operations/Operations.

1045 Completed debrief with FAL REP (R. Torres). He reviewed past critical lifts and record keeping, Noted ATTACHMENT 1 of DOP-0233, step 4.3.[5][B] should be marked N/A only applicable when 300 PEG or greater are in the WCG. Also with Procedure DOP-0236 - ATTACHMENT 1 for unloading SWB or 85 Gal Drum, when de-nesting, the title of ATTACHMENT 1 is worded - WCRRF WCG critical lift Plan Concurrence sheet As a suggestion, the WCG should be removed. Notification was made to the SOS. The SOM provided information to the procedure writer R. Smart.

1115 Completed extending Shift Orders WCRR-SH-13-003 R2 Manual Drum Movements and WCRR-SH-13-005 R0 Precautions to Prevent Bag Tears; through ~~WCRR~~ 11-05-13.

1132 Inside Operations report bagging off and bagging on PARENT 5825902

1200 Operations Complete the bag on, and continued to process.

(Continued on Next Page)

10/29/13 Night Shift

1815 Reviewed shift turnover checklist, approved and posted Nightshift operations watchbill and assumed WCRR SOM position.

1850 Attended prejob brief conducted by SOS. Day shift SOS and operators / RCT's conducted turnover w/ night shift personnel. ES/IH safety topic covered driving safety. Discussed Design Features and ISI requirements @ WCRR for TSR related topic. Briefed actived shift orders and talked about current condition of WCG. Requested when operators are prepping empties in Arctic that location assigned is 50-37 until drums are actually moved into 50-69.

2056 Completed movement of 7 drums out of 50-69 to transportainer

2257 Completed bag off of 1 daughter - continuing to process

2312 Operators moved 3 drums from transportainers into 50-69.

10/30/13 0000 Operators breaking for lunch

0115 Resuming operations

0305 All bag offs completed for parent # 5825730 (2 daughter total) Bagged on drum # 5816890.

0522 Reviewed AM round sheets and signed off compliance tracking worksheet.

0525 Late Entry @ 0315 Verified that empty 85 gal drums w/ Item ID #'s 10180412 and 10180413 are in 50-69. Neither drum has been used for receiving room trash. [illegible]

0535 Completed bagging off 1 daughter - continuing to process in regard to placing WCG in a Safe Configuration - Parent on glovebox is reported to be ≈ 50% full. Lid is being placed back on parent drum - all other waste is out of glovebox.

0555 Completed Mode Change! WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

10/30/13 0607 Relieved by J. Guadagnoli as SOM.

No further entries this page
[illegible]

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0123
Examination Date:	11/5/2013
Waste Container ID:	68557
Video/Audio Recorded Media Number:	LA-RTR2-13-0123 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 155.0 kg Tare Wt.: 33.4 kg Net Wt.: 121.6 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: 68557

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	95.6
Soils (S):	
Total WMP Weight:	121.6

CCP Radiography Data Sheet

Waste Container ID: 68557

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

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	11/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68557	Count Sequence Number:	23789
Operator:	D3PW2DK1\operator		
Assay Start:	11/6/2013 9:42:21 AM		
Description 1:	1LANDA1860		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 122.0 kg	Net:	122.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
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: 23789
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68557

Batch Number: 1LANDA1860
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 11/6/2013

Net Weight	122000.0 g	
Pu mass	8.96E+000 +-	2.29E+000 g
TRU Alpha Activity	5.94E+000 +-	2.90E+000 Ci
TRU Activity Concentration	4.87E+004 +-	2.38E+004 nCi/g
Pu-239 Equivalent Activity	5.97E+000 +-	2.90E+000 Ci
Pu-239 FGE	8.40E+000 +-	2.12E+000 g
Decay heat	1.96E-001 +-	9.64E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.05E-002	6.38E-005	1.32E-005	2.66E-006
PU238	1.39E-003	2.38E-002	6.07E-003	4.81E-005
PU239	8.33E+000	5.16E-001	1.32E-001	1.04E-003
PU240	6.17E-001	1.40E-001	3.57E-002	2.83E-004
AM241	1.53E+000	5.26E+000	2.90E+000	5.26E-002
PU241	1.34E-002	1.38E+000	3.51E-001	2.78E-003
PU242	3.41E-003	1.35E-005	3.44E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.82E-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	1.50E-006
U238	<LLD	<LLD	0.00E+000	1.41E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 11/11/13

ITR: [illegible] Date: 11-11-13

Automated Independent Technical Review

Count Sequence Number: 23789 Batch Number: 1LANDA1860
Counter ID: MCS HENC #1
Container ID: 68557
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/6/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
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: 11-7-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68557**

BDR Number: **LA13FG2117**

Sampling Date: **11/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	137.12	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	2.81	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131115c\
Data File : 68557.D
Acq On : 15 Nov 2013 10:41 am (#1); 15-Nov-13, 10:40:56 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 10:49:39 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.545	96	4304050	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.848	117	3381431	177.50 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.617	GC1	1031m	137.12 ppmv	
12) Benzene	3.222	78	42801	2.81 ppmv #	94

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0124
Examination Date:	11/6/2013
Waste Container ID:	68569
Video/Audio Recorded Media Number:	LA-RTR2-13-0124 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 133.0 kg Tare Wt.: 33.4 kg Net Wt.: 99.6 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: 68569

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R: Leaded rubber gloves

XPM: Plastic bags, 90 Mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	5.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	84.6
Soils (S):	
Total WMP Weight:	99.6

CCP Radiography Data Sheet

Waste Container ID: 68569

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

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

RTR Operator:

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

NDA 2000 Assay Report

Item Information

Item ID:	68569	Count Sequence Number:	23791
Operator:	D3PW2DK1\operator		
Assay Start:	11/6/2013 3:51:56 PM		
Description 1:	1LANDA1860		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 99.6 kg	Net:	99.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.640 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23791	Batch Number:	1LANDA1860
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:	68569	Analysis Date:	11/6/2013

Net Weight	99600.0 g		
Pu mass	1.72E+000	+-	3.65E-001 g
TRU Alpha Activity	2.84E+000	+-	4.82E-001 Ci
TRU Activity Concentration	2.85E+004	+-	4.84E+003 nCi/g
Pu-239 Equivalent Activity	2.84E+000	+-	4.82E-001 Ci
Pu-239 FGE	1.62E+000	+-	3.63E-001 g
Decay heat	9.40E-002	+-	1.60E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	7.81E-009	1.08E-006	5.96E-007	0.00E+000
CS137	1.24E-008	1.08E-006	5.96E-007	5.56E-007
U233	<LLD	<LLD	0.00E+000	3.81E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.19E-006
NP237	6.16E-002	4.34E-005	7.65E-006	1.98E-006
PU238	2.67E-004	4.57E-003	1.22E-003	8.13E-004
U238	<LLD	<LLD	0.00E+000	9.64E-006
PU239	1.60E+000	9.90E-002	2.25E-002	1.76E-002
PU240	1.18E-001	2.68E-002	7.17E-003	4.78E-003
AM241	7.89E-001	2.71E+000	4.82E-001	4.84E-002
PU241	2.56E-003	2.64E-001	7.07E-002	4.70E-002
PU242	6.54E-004	2.58E-006	6.91E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Sam Barton Date: 11/11/13

ITR: [illegible] Date: 11-11-13

Automated Independent Technical Review

Count Sequence Number: 23791 Batch Number: 1LANDA1860
Counter ID: MCS HENC #1
Container ID: 68569
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/6/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis 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: 11-7-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68569**

BDR Number: **LA13FG2117**

Sampling Date: **11/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	119.29	
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\131115c\
Data File : 68569.D
Acq On : 15 Nov 2013 12:55 pm (#1); 15-Nov-13, 12:55:08 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 13:03:45 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	3.584	96	4478432	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.881	117	3539101	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.618	GC1	897m	119.29 ppmv	

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