55 ENTERED

Los Alamos
NATIONAL LABORATORY
EST. 1943

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

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

Date: SEP 11 2014
Symbol: ENV-DO-14-0255
LAUR: 14-26872
Locates Action No.: Not Applicable

RECEIVED
SEP 11 2014
NMED
Hazardous Waste Bureau

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

Dear Mr. Kieling:

Subject: Transmittal of Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 13

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

The June 10, 2014, email received from Tim Hall, NMED, included a request for additional information for 267 original nitrate salt-bearing waste containers generated by the Permittees and all resulting repackaged/remediated containers. This submittal includes remediation and repackaging documentation for daughter containers resulting from the repackaging and remediation of the 267 original nitrate salt-bearing waste containers and is the thirteenth 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 eleven (11) of the original 267 parent waste containers and all associated daughter and granddaughter waste containers. The enclosed documentation for each parent waste container is separated by a tab and documentation for the daughter containers are highlighted within each tab by colored pages. These parent containers and their daughter and granddaughter containers were listed in the *Nitrate Salt Drums with Associated Waste Stream and Location Data for 267 Original Parent and 707 Current/Remediated Daughter Containers* table (as revised and submitted to the NMED on July 17, 2014).

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

Sincerely,

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

Sincerely,

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

AMD:GET:MPH:LVH/lm

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 13

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

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

Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 13
ENV-DO-14-0255
LA-UR-14-26872

September 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 13

ENV-DO-14-0255

LA-UR-14-26872

Date: SEP 1 1 2014

ParentID	Intermediate Daughters	PKG_ID	Overpacked Into
S845201	90892	92241	
S845201	90893	92667	
S845338		68495	
S845338		68496	
S846037		68454	SB02096
S846037		68479	
S846037		68483	
S846055		68510	
S846055		68571	
S846055		68579	
S846088		68545	
S846088		68548	
S846096		68427	
S846096		68499	
S846096		68502	
S846107		68318	
S846107		68333	
S846107		68334	
S846132		69188	SB50018
S846132		69193	SB50041
S846132		69195	SB50032
S846168		68316	
S846168		68330	
S846168		68345	
S846168		68346	
S846172		68376	
S846172		68413	
S846195		68338	
S846195		68448	
S846660		68399	
S846660		68415	
S846660		68447	

S845201

S845201

Container Profile 753904

File Options Reports Help

S845201

753904	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

S845201

- S845201
  - 90894 - EMPTY
  - 90893
    - 92668 - EMPTY
    - 92667
  - 90892
    - 92243 - EMPTY
    - 92241

Task History

Transfer Details

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

Working Copy
Date: 2-9-12

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5845201

6.2[4] Date Processed: 2-9-12

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

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

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

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

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

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

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

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

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

Performed By: GERALD ESPINOZA / Gerald Espinoza 1237720 2-9-12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 361 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 120 lb

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: 5845201

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 481 lb

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	90892		N	
10.1[4]	Daughter Drum Filter No.	CL-1331		A	
10.1[4]	Daughter Drum Bag Filter No.	LL-2216			
10.1[4]	Daughter Drum Purchase Order No.	415090			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	NUCLEAR			
	Model No.	034DA			
	Serial No.	LL-843			
	Date of Manufacture	12-11			
10.2[5]	POC ID No	90893			
10.2[7][B]/10.2[6]	POC Item Description	SALTS PLASTIC			
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	LL-243			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	CM 240092			
10.2[14]	POC Assembly Gross Weight (lb)	416.8			
10.2[15]	POC Rad. Survey Results (mrem/hr)	302		N	
10.3[3][A]	Approx. Containerized Liquid Vol./Units	2 GAL		A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING			
10.3[5][A]	Free Liquid Volume/Units	3 GAL			
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[12]/ 10.5[5]	Daughter Drum % Full (%)	90%			
10.5[4]	Description Waste Added During Processing	PLASTIC ABSORBANT			

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: 5845201

Comments: SALTS, PLASTIC, LEAD, LIQUID

11.1[1] Performed By: Gerald Espinoza / [signature] / 1237720 / 2-9-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Anthony Vigil / [signature] / 1184864 / 2-23-12 0856
SOS/SOM (print) Signature Z # Date/Time

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

85-Gallon Overpack ID Number 90894

RECORD Drum Filter information:	N
Filter ID Number:	A
Date of Manufacture:	

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

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

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

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

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

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

Drum lid ring ends touching: ☐ YES ☑ NO

Technician Name (print)	Signature	Initials	Z#	Date
Gerald Espinoza	Gerald Espinoza	GE	237720	2-9-12
Clayton Mullins	[illegible]	CM	240092	2/9/12

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

Drum ID#: 90892

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 #: 415090
Lot #: 0220644
Date of Manufacture: 2011

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: NFT
Model #: 3-036-SPVC
Serial #: LL-226
Date of Manufacture: 12/11

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 01903
Serial #: LL-1831
Date of Manufacture: 3/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040695	M&TE ID #:	040691
Cal Expiration Date:	9/12/12	Cal Expiration Date:	9/12/12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	+/-390CW +/-690CCW	Tolerance:	+/-390CW +/-690CCW

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

[x] Yes [ ] No

Print Name: L M Montaño Signature L M Montaño Z#: 85042

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 76.2 lbs
File ID #: 019065

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

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [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: L M Montaño Operator Sign: L M Montaño Z#: 085042 Date: 2/7/12

Verifier Print: Gerald Espinoza Verifier Sign: [signature] Z#: 237720 Date: 2-9-12

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

DRUM ID#: 90892

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓Mount lid with filter directly over drum seam.

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

✓Engage bolt and nut and torque per manufactures instructions

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

✓Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 5-30-12

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

--- Tolerance ±3% CW ±6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 329.2

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: GERARDO ESPINOZA Date: 2-9-12

Verifier Print/Sign: Jaime Sabal Date: 2.9.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S845201 Container Type: 85-GAL Gross Weight (lbs): 414
Inner Seal #: 019501 Filter Prefix: LAVC Filter Serial #: 04793
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 1.09E+01 Equivalent Combustible PE-Ci: 4.08E+00 AM-241 PE-Ci: 1.06E+00
Total Fissile Gram Equivalents: 106.9 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): None
NCR RTR/NDA Comment: AK Review-Non-cemented Evap Salt
RTR Pre-Screen Date: 7/24/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 24
Certified RTR Comment: None

Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VE ☐ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Roc

Performed By: R. W. Jones (Production Control (Print)) Signature: R. W. Jones Z Number: 117434 Date: 12-1-11

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Leached solids - nitrate salts
Net wt: 354 lb. Eleven items; heaviest weighs ~57 lb while others range from 8 lb to 49 lb.
55 gal drum overpacked into 85 gal drum
May require RWP for >1000 and <10000 mrem/hr @ 30 cm
Drums w/ nitrate salts may have undocumented solids
Total SNM mass is 116 g.

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 12/11/11

TRU Remediation Operations

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

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

Performed By: [illegible] (TRU Remediation Operations (Print)) Signature: [illegible] Z Number: [illegible] Date: 12/12/11

Noncertified TRU Waste Drum Item Information

DrumID: 019501

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX932000FA		15.680	NITRATE SALTS		3.75	53	6/14	G468	
2	LR2FA		8.240	NITRATE SALTS		2.36	52	6/14	G468	
3	RR4-VRFA		7.720	NITRATE SALTS		5.45	52	6/14	G468	
4	OX94-1-FA		[redacted]	NITRATE SALTS		17.2	53	6/14	G468	
5	OX95-6-FA		15.000	NITRATE SALTS		38.25	53	6/14	G468	
6	LR3-FA		10.900	NITRATE SALTS		5.18	52	6/14	G468	
7	LR7-FA		7.720	NITRATE SALTS		3.63	52	6/14	G468	
8	G468-SALT		3.410	NITRATE SALTS		18.12	52	6/14	G468	
9	OX96-9-FA		25.680	NITRATE SALTS		15.57	53	6/14	G468	
10	OX96-RA		4.550	NITRATE SALTS		0.8	53	6/14	G468	
11	LR-10-FA		7.270	NITRATE SALTS		5.16	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.7

Material Type	SNM (grams)	Items Net Wt (kg)
52	39.9	45.26
53	75.57	83.31
Totals	115.47	128.57

SR 1

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/26/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Sara Aragon	Sara Aragon	1237975	1-31-11

Container No. (7.[1]):	S843962	S845201	S844213
Container Type (SWB, 110/85/55-gal) (7.[1]):	55 gal	55 gal	55 gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1])	S843962	S845201	S844213
Hydrogen Reading (ppm) (7.[10])	290.00 ppm	470.21 ppm	447.14 ppm
Methane Reading (ppm) (7.[10])	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11])	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][e]/7.[9][G][a])	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][e]/7.[9][G][a])	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a])	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a])	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a])	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

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

11.1[1] Performed By: Alicia Herrera / [signature] 198850 / 1/31/11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT
- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

11.1[7][B]/ Reviewed By: Kenny Romero Kenny Romero 111786 / 1/31/11
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110126c\
Data File : S845201.D
Acq On : 26 Jan 2011 3:46 pm (#1); 26-Jan-11, 15:45:22 (#2)
Operator : EL
Sample :
Misc : 55 GAL DRUM FROM 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 26 16:01:35 2011
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Mon Jan 10 10:28:07 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.671	96	7655216	205.50	ppmv	0.04
15) Chlorobenzene-d5	6.000	117	6385442	182.75	ppmv	0.04
Target Compounds						Qvalue
1) Hydrogen	1.643	GC1	3679	470.21	ppmv	100

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

vocgas.m Wed Jan 26 16:02:03 2011

2-8-12
~~2-8-11~~ 2-8-11

0000 Assuming WCRRF operations center Orlando
0001 Started inside rounds
0010 Item #60 is OOS per CSE documentation OK to proceed.
0030 Completed inside rounds and started outside rounds
0048 Completed outside rounds
0750 Mode change performed we are now in operations
0750 Starting movement out of 50-69
0800 Starting to process drum 3843962
0830 movement out of 50-69 complete
0927 bagging off 3843962 and 3 PDCs, bagging on 3833261
1104 Bagging off 3833261 and 3 PDCs, bagging on 3823194
1325 Operators introducing absorbant into tray thru introductory part.
1329 Completed introducing absorbant.
1344 Starting movement into 50-69
1412 movement completed into 50-69.
1434 starting movement out of 50-69.
1448 Starting to denest drums.
1459 movement complete out of 50-69
1526 Completed denesting drums and bagging on 3845201, bagging off 3823194 and 15 PDCs.
1535 Starting inside rounds
1549 Item 61 on rounds is OOS per CSE documentation OK to proceed.
1553 Inside rounds completed.
1613 Inside and outside rounds signed off by SOS
1632 Mode change performed we are now in warm
1648 end of day. WCRRF operations center secure Orlando

no further entries this page

72-9-12 PROJECT NAME _____ NOTEBOOK NO. _____

~~2-9-12~~ @ 2-9-12

0600 Assuming ACPF operations center Chelande
0615 Outside rounds started
0624 Starting inside rounds.
0634 Item 60 in rounds is OOS. Per CSE documentation OK to proceed.
0640 Inside rounds completed
0643 Outside rounds completed.
0711 Inside and outside rounds signed off by SOS.
0793 mode change performed we are now in operations.
0800 Starting to process drum 3845201
0833 Stack monitoring being performed.
0840 Starting movement from transportation to transport vehicle.
0907 Bagging off 3845201 and PDC bagging on 3832155.
0931 movement complete from ~~transportation vehicle~~ #4 transportation to transport vehicle. vehicle access gates have been restored.
0949 Starting movement ~~out of~~ into @ 2-9-12 50-69 from transportation
0951 Notified by SOS during bag out operations daughter bag out filter has fallen off no contamination has been detected. SOM has been notified.
1003 Completed movement into 59-69.
1004 SOM notified QA and QA instructing that it is OK to continue operations per our compensatory measures currently in place. QA will be performing further testing on bags.
1010 CCP confirmed OK to continue with drum OK to ship drum will not need to NCR drum.
1010 ~~per~~ not notified ops center that when filter on bag came a piece of tape was immediately placed on opening. Tape was removed within minutes and some contamination was detected levels were below 200dpm. RWP limits were not exceeded.
1313 Starting to decist 5 drums.
1400 Bagging on 3823187 and bagging off ~~3803~~ @ 2-9-12 3832155 and 2 PDCS.
1421 bag off complete.
1415 Operators reporting to SOS absent filter starting to peel off on another bag during bag off. no contamination detected.
1558 Starting movement out 50-69.
515 Starting inside rounds
1525 Starting outside rounds
526 ~~1530~~ Item #60 on rounds is OOS. Per CSE documentation OK to proceed.

SIGNATURE Continued on next page DATE Chelande 20

2.8.12

0600 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. (Jeremiah Hernandez)

0620 Attended pre-job briefing conducted by Shift Operations Supervisor. Energy Solutions manager came by to talk to operators about the use of absorbant.

0730 Mode change complete WCRR YARD and 50-69 from WARM to OPERATIONS.

1300 Meeting at 50-146 to discuss WCRR shift work. Energy Solutions will be bringing in 4 additional operators on 2.9.12 and 3 additional operators in two weeks. Second SOM needs to get qualified and 4 additional KCTs need to be on hand. Anticipated date for 12 hour work day schedule change is March 5, 2012.

1500 Attended a meeting at TA46 conference room to discuss an internal assessment team coming up to WCRR and WMF. The team will be asking "fresh eyes on safety". Team will discuss any issues identified with SOM personnel.

1632 Mode change complete WCRR YARD and 50-69 from OPERATIONS to WARM standby mode.

1700 Securing the watch. (Jeremiah Hernandez)

Jeremiah Hernandez

Jeremiah Hernandez 2.8.12

SIGNATURE READ AND UNDERSTOOD DATE

0600 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. [illegible]
0615 Attended the pre-job briefing conducted by Shift Operations Supervisor. Concerns brought up by operators was the amount of liquid in the drums and the amount of absorbant being used per manufacture instructions. SOS will follow through with manufacture and will speak with Energy Solutions on ordering additional absorbant.
0625 Mode change complete. WCRR YARD and 50-69 from WARM to OPERATIONS.
0951 Reported by the operation center and SOS that operations personnel notified them that while they were bagging ~~out of~~ a daughter drum, the operator removed the tape from the nuclie filter and the filter came off. The operator was following their procedure as written and all compensatory measures from standing order were being followed. No LAMs were reported of elevated and no contamination was detected. The bag was immediately placed back on to the daughter drum.
1004 SOM spoke to QA Robert Trujillo ~~that~~ regarding nuclie bags and incident that occurred inside 50-69 with a torn filter. He advised that as long as the compensatory measures were in place and being followed and because this was the first bag from the batch that operation had encountered bad operation should resume as usual. He will notify his management and will follow up with a phone call if anything changes.
1006 SOM notified on-call nuclie bag issue. He concurred with QA recommendations. SOM spoke with RP-I supervisor and she concurred as well.
1020 QA Robert Trujillo followed up with a phone call and he said his management concurred with forward. He also said he might come by today to look at nuclie bags in ARTIC. He recommends that operations follows up with any new issues identified with bags with QA.
1032 SOM spoke with SOS and requested she follow up with visiting prepping operations in ARTIC and ensuring nothing has changed.
1040 Reported by an RCT that when filter on bag came off a piece of tape was immediately placed on opening. Bag was removed within minutes and some contamination

2-8-12
0605 Reviewed SOS Turn over Assuming Position
0615 Shift Brief Conducted with over the use of waste
LWR Haz issues with transportation Doors and revised
RWP's
0915 Shift brief Conducted
0730 ~~1615~~ 2-8-12 Mode Change Complete WCRR Yard And 50-69
IN Operations Mode
1618 Mode Change Complete WCRR Yard And 50-69
In warm
1630 End of Shift Securing SOS Position

GD
2/10/12

No further entries on this page

247

PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

2.9.12

0602 Reviewed SOS Turnover Assuming SOS Position

0615 Shift brief Conducted.

0700 Shift brief Concluded

0711 Reviewed inside and outside Rounds

0723 Mode change Complete WCRR Yard And SO-69 IN Operations mode.

0951 notified by Inside personal that during bag out operation A Filter tape was peeled off and top layer off filter was peeled of SOS notified operators ok to continue do to All comp. measures In place for this Issue.

1010 CCP Notified ok to use bag as is no further action neccesary to ship

1040 notified by RCT That during bag off operation off of the drum above There was contamination detected of 200dpm well ~~bellow~~ below RWP limit.

1215 Securing SOS Position

1215 Reviewed SOS Turnover Assuming SOS Position

1400 WENT WITH QA TO LOOK AT FILTERS ON NUCFIL BAGS. WE DETERMINED THAT MAYBE USING A SMALLER TAPE ON FILTER WILL HELP!

1445 NOTIFIED ~~NSA~~ THAT ANOTHER BAG HAD INTEGRETY ISSUES.

1633 REVIEWED INSIDE AND OUTSIDE ROUNDS

1634 MODE CHANGE COMPLETE WE ARE IN ~~WARM~~ WARM MODE.

1640 END OF SHIFT SECURING WCRR SOS POSITION.

GMD 2/10/12

No Further entries on this page.

SIGNATURE _____ DATE _____ 20 ____

READ AND UNDERSTOOD _____ DATE _____ 20 ____

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90892

6.2[4] Date Processed: 10-24-12

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

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

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

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

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

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

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

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

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

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

Performed By: Brian Gallegos / B. Gallegos 626177 10-24-12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 90892	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	323.2 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	123.0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	446.2 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

ATTACHMENT 1

Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90892

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92241			
10.1[4]	Daughter Drum Filter No.	AM-830		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-4224			
10.1[4]	Daughter Drum Purchase Order No.	416265			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)	N/A			
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units		N/A		
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS			
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER BAG OUT STUBS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90892

Comments: PLASTIC, SALTS, KITTY LITTER, LEAD, PPE, CHEESE CLOTH, METAL CAN, METAL BANDING

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 247129 / 10-23-12
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Jose Jerez / [signature] / 221452 / 10-25-12 0937
SOS or designee (print) Signature Z# Date/Time

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: HL-792
Manufacture Date: 8-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	021651
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Steven Mondragon / Steven Mondragon 1104746 10-23-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mondragon / Steven Mondragon 1104746 10-23-12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] 1221452 10-25-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-24-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92243

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

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

Performed By: BRIAN GALLEGOS / Bri [signature] / [illegible] 10-23-12
Waste Handling Technician (print) Signature Z# Date

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

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

7.[36][B] Platform scale serial number: 019005
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 164.6 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / Bri [signature] / [illegible] 10-24-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] / 122142 10-25-12
Supervisor or designee (print) Signature Z# Date

Working Copy

Date: 10-18-12

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

Drum ID#: 922411

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 416265
Lot #: 022223
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPV 1.5-2.5 PVC
Serial #: 6-4229
Date of Manufacture: 6/12

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

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

4. Install Lid/Drum Filter

- [ ] 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 #: 209 DS
Serial #: HM-B30
Date of Manufacture: 4/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	02464	M&TE ID #:	02151
Cal Expiration Date:	10-19-12	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±4% of rdg ±6 dgts	Tolerance:	±3% of rdg ±6 dgts

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

[x] Yes [ ] No

Print Name: [illegible] Signature: [illegible] ZS: 189822

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs) 76.4
File ID #: 019045

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

6. Label Drum Assembly

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

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

Operator Print: [illegible] Operator Sign: [illegible] ZS: 189822 Date: 10-18-12

Verifier Print: BRIAN GALLEGOS Verifier Sign: [illegible] ZS: 267129 Date: 10-24-12

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

DRUM ID#: 922411

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 040329

Cal expiration date: 3-15-2013

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

Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 364.6

Scale ID#: 019006 5

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Brian Gallegos Date: 10-24-12

Verifier Print/Sign: Steven Montgomery Date: 10-24-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

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Production Control

Container ID: 90892 Container Type: 55-GAL Gross Weight (lbs): 329

Container Seal #: None Filter Prefix: None Filter Serial #: CL-1331

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

TWSR Comments: PARENT #S845201

Total PE-Ci Activity: 5.44E+00 Equivalent Combustible PE-Ci: 2.04E+00 AM-241 PE-Ci: 5.30E-01

Total Fissile Gram Equivalents: 53.5 Total Surface Dose Rate (mrem/hr): 11

EPA Code(s): D008 D007 D009 NR 10/9/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 6/27/2012 Comment: Impenetrable, S5000

Certified RTR Comment: None

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

Security Determination: ✓ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☒ Repack

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

TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009. Nitrate salts mixed with Waste/oil 770® from previous repack campaign. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan B. Ramsey Z Number: 100681 Date: 9/4/12

WDP Engineering

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts/debris

Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign. This resulting daughter 55-gal drum may contain nitrate salts or a combination of nitrate salts and debris. RTR PS identifies impenetrable item(s) (likely homogeneous nitrate salts or debris such as lead). Nitrate salts may contain undocumented liquids (requiring adjustment to the admixture/nitrate salt ratio). Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 1000 + < 10000 mrem/hr

Net Wt: 260 lb

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 10/9/12

TRU Remediation Operations

Valerie Rhodes

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

Other Specific Safety Concerns: Do not push or press on waste. Use Heavy duty gloves when processing waste.

Processing Determination: ☑ Accept ☐ Reject

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

Performed By: Joe Jaez (TRU Remediation Operations (Print)) Signature: Joe Jaez Z Number: 122452 Date: 10-11-12

OK # 249750 10/15/12

IHS review: AB 206262 10.11.12

Noncertified TRU Waste Drum Item Information

DrumID: 019601

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	NT	Auth (Pg/Ln)		Comments
1	OX932000FA		15.880	NITRATE SALTS		3.75	53	6/14	G468	
2	LR3FA		8.240	NITRATE SALTS		2.36	52	6/14	G468	
3	RR4-VRFA		7.770	NITRATE SALTS		5.45	52	6/14	G468	
4	OX94-1-FA		[redacted]	NITRATE SALTS		17.2	53	6/14	G468	
5	OX95-6-FA		15.000	NITRATE SALTS		38.25	53	6/14	G468	
6	LR3-FA		10.900	NITRATE SALTS		5.18	52	6/14	G468	
7	LR7-FA		7.730	NITRATE SALTS		3.63	52	6/14	G468	
8	G468-SALT		3.410	NITRATE SALTS		18.12	52	6/14	G468	
9	OX96-9-FA		25.680	NITRATE SALTS		18.57	53	6/14	G468	
10	OX96-RA		4.550	NITRATE SALTS		0.8	53	6/14	G468	
11	LR-10-FA		7.270	NITRATE SALTS		5.16	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.7

Material Type	SNM (grams)	Items Net Wt (kg)
52	39.9	45.26
53	75.57	83.31
Totals	115.47	128.57

ATTACHMENT 1

Page 1 of 1

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

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

Container No. (5.[1])	908417					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-gal					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

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

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

Comments: None

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

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

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90892.D
Acq On : 5 Oct 2012 2:16 pm (#1); 5 Oct 2012 2:15 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM THROUGH 19DS-UNOBSTRUCTED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 14:24:06 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.259	96	2358746	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2131284	179.50 ppm	0.00

Target Compounds Qvalue

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

Vocgas.m Fri Oct 05 14:24:27 2012

PROJECT NAME _____ NOTEBOOK NO. _____

10-24-12

0700 Assuming WCRRF operations Center - CWilands
0711 Starting outside rounds
0731 Starting inside rounds.
0746 Sample for 10-24-12 completed outside, on 10-24-12 inside rounds
0782 Inside and outside rounds signed off by SOS
0730 Attending mandatory monthly safety meeting
0846 late entry at 0846 SOM was notified by contamination on gloves on bag on pot. levels below disp. limits.
0847 Rots notifying SOM it will be OK to go into operations.
0901 mode change performed TASD 69 and WCRRF yard now in operations
0950 Bagging on 90925
1014 Starting movement into SD-69
1017 bag on 90 complete
1050 movement into SD-69 complete.
1104 Starting movement out of SD 69.
1159 Starting bag off of 90925 and bagging on 90892
1235 bag on and bag off complete
1245 Operators exiting for lunch break.
1335 Operators entering TASD 69 to continue processing.
1440 Starting inside rounds
1500 Completed inside rounds and starting outside rounds
1520 Completed outside rounds starting bag off of 90892
1540 bag off complete.
1555 Shift turnover with OCO Teri Coleman - CWilands
1556 Assuming WCRR operations center - JCleeman
1557 Mode change complete We are now in warm standby.
1630 End of day. Operations secure - JCleeman

No further entries this page

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

10/24/12

0600 Reviewed shift turnover checklist and assumed SOM duties
0645 Notified by RP-1 supervisor that during RMI's identified >10 < 20 dpm on WCG bag on port. Will recount smears to see if radon.
0730 Attended monthly safety brief.
0847 RP-1 supervisor reported no decay of smear - OK to proceed w/ operations but will have operators wipe down area and re-survey.
0901 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.
1035 Requested by Operations PIC via SOS that hex armour gloves to be ~~[illegible]~~ 10/24/10 put into WCG via introductory port. Discussed w/ RP-1 supervision and decided best way to introduce would be to bag off parent and introduce on the re-bag on. Need for hex armour's was covered on pre job.
1112 Released WO # 449794-09 FY13 PF Electrical Shop Support to allow PF-4 electrical workers to work on lathe in Bldg 50-54. Contacted scheduling to put on our emerge log. LO/TO will use machine shop procedures and devices.
400 Attended weekly ALARA meeting. WCG window replacements, Doses @ WCRR, Lead vests, replace partial inventory over next few years. Current cumulative dose for WCRR is ≈ 2300 mrem
1455 Reviewed the 50-69 Structural Design Integrity Inspection Report completed by CSE. Identified that roof was not inspected and CSE reported as SAT. He reported that roof access is not allowed due to changes in fall protection but he saw no evidence of leakage, etc from inside inspection.
1557 Completed mode change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.
1630 Secured SOM position.

LO 11-5-12

No further entries this page.

10/24 12

10-24-12 UXRR 505 Log Book

0600 Assuming 505 position. Jan Jy

0605 Starting Pre-Job brief. WSST safety meeting this morning. Continuing to process SP# 72

0630 Concluded Pre Job Brief

0702 Rounds signed off

0901 MODE Change. To Operations

1230 Crew breaking for lunch. No RCT support available to cover second crew.

11-14-12 1330 Crew going in for processing second drum

1521 Inside and outside rounds signed off.

1557 Mode Change complete. To WARM

10-24-12 1640 Securing 505 position for the day. Jan Jy

1649

No further entries on this page

CCP Radiography Data Sheet

S 845201

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0012
Examination Date:	1/25/2013
Waste Container ID:	92241
Video/Audio Recorded Media Number:	LA-RTR2-13-0012 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-0398-13 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 165.5 kg Tare Wt.: 33.4 kg Net Wt.: 132.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92241

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C: Fiberboard, cloth material

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	13.0
Other Inorganic Materials (OI)	
Cellulosics (C):	12.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	100.1
Soils (S):	
Total WMP Weight:	132.1

CCP Radiography Data Sheet

Waste Container ID: 92241

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

Comments: NCR-LANL-0398-13

RTR Operator:

Michael Simmons		1/25/2013
Print Name	Signature	Date

S845201

NDA 2000 Assay Report

Item Information

Item ID:	92241	Count Sequence Number:	23546
Operator:	D3PW2DK1\operator		
Assay Start:	9/6/2013 9:36:57 AM		
Description 1:	1LANDA1837		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 132.0 kg	Net:	132.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.710 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23546
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 92241

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

Net Weight	132000.0 g		
Pu mass	6.47E+001	+-	1.10E+001 g
TRU Alpha Activity	1.36E+001	+-	4.71E+000 Ci
TRU Activity Concentration	1.03E+005	+-	3.57E+004 nCi/g
Pu-239 Equivalent Activity	1.38E+001	+-	4.71E+000 Ci
Pu-239 FGE	6.15E+001	+-	1.02E+001 g
Decay heat	4.43E-001	+-	1.56E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.51E-001	1.07E-004	1.99E-005	3.79E-006
PU238	1.36E-002	2.33E-001	3.97E-002	5.95E-005
PU239	5.96E+001	3.69E+000	6.29E-001	9.44E-004
PU240	4.92E+000	1.12E+000	1.90E-001	2.85E-004
AM241	2.50E+000	8.59E+000	4.67E+000	7.28E-002
PU241	1.16E-001	1.20E+001	2.04E+000	3.05E-003
PU242	3.43E-002	1.36E-004	2.31E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.34E-007
U233	<LLD	<LLD	0.00E+000	7.55E-003
U234	3.20E-002	1.99E-004	5.60E-005	0.00E+000
U235	2.28E+000	4.93E-006	1.39E-006	3.04E-006
U238	<LLD	<LLD	0.00E+000	4.49E-005
AM243	3.55E-004	7.09E-005	1.37E-005	9.69E-006

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 9.9.13

ITR: Jim Barton Date: 9/10/13

Automated Independent Technical Review

Count Sequence Number: 23546
Batch Number: 1LANDA1837
Counter ID: MCS HENC #1
Container ID: 92241
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 9/6/2013

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

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

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92241**

BDR Number: **LA13FG12093**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	369.12	
74-82-8	Methane	9.63	U
67-56-1	Methanol	77.42	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	23.64	
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.62	
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	5.78	
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130913c\
Data File : 92241.D
Acq On : 13 Sep 2013 1:53 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 14:03:47 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.063	96	8312883	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6207597	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.900	GC1	105292m	369.12	ppmv	
4) Methanol	0.824	31	34006m	77.42	ppmv	
7) Acetone	1.357	58	52283	23.64	ppmv	98
12) Benzene	3.717	78	21303	0.62	ppmv	98
17) Toluene	5.577	92	145022	5.78	ppmv	95

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

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90293

6.2[4] Date Processed 1-22-13

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

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

4.1[6][B] Parent Waste Container RCRA Designations: D003, 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 (ISR [illegible])
☑ 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 MBT-LX in WCG (SAC 5.10.1.7.1)
☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established (> 300 PE C 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 674 lb
☐ YES ☑ NO ☐ N/A

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

Performed By: Brian Gallegos B. Gallegos 126712 1-22-13
Waste Handling Tech (print) Signature I.D. # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90893

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 418.6 lb

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

6.2[5][B] Total Parent Drum Weight (lb) 418.6 lb
6.2[6]

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

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

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90893

	Daughter Drums				
10.1[4]/10.2[4]	Daughter Drum No.	926667			
10.1[4]	Daughter Drum Filter No.	JL-1113	N		
10.1[4]	Daughter Drum Bag Filter No.	L-3136		A	
10.1[4]	Daughter Drum Purchase Order No.	501011			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3.11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions (Initial and Z#)			A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	6 oz.			
10.3[7][A]	Opaque/Non-penetrable Item Description:	N	N		
10.3[9][A]	PCB contaminated Waste Description	A			
10.3[9][B]	PCB Item ID No				
10.3[10]	Remaining Waste Description	SEE COMMENTS			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90893

Comments: ROOM TRASH, POC LIDS, CARD BOARD, PLASTIC, SALTS, KITTY LITTER, ACID NEAUTRALIZER

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

11.1[7] Reviewed By: GMK [signature] 149335 1-24-13 1015
SOS or designee (print) Signature Z # Date Time

ATTACHMENT 2
Page 1 of 1

1-17-13

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
Purchase Order No.: 413724
Lot No.: 210114
Manufacture Date: 10

5.[8] Overpack filtered vent information:
Manufacturer: NOC 6.1
Model No. 6.3
Serial No.: 12-61
Manufacture Date: 9-11

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

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

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

Performed By: Michael Romero Michael Romero 183723 / 1-17-13
Waste Handling Technician (print) Signature Z # Date

5.[13] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)] 120 in-lb

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

Comments: N/C

8.1[1] Performed By: Michael Romero Michael Romero 183723 / 1-17-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: G Mk D Mk 14835 / 1-24-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92663

7.[25] Overpack drum closure ring torque wrench information.
M&TE No.: 035367
Cal. Expiration Date: 3-16-13
Range in ft-lb: 10-80
Tolerance: ±3% out of cal

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

Performed By: Brian Gallegos / B. Gallegos / 267829 / 1-22-13
Waste Handling Technician (print) Signature Z # Date

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

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

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 1-22-13

7.[36][D] 85-gal overpack drum gross weight (lb): 323.4 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / B. Gallegos / 267829 / 1-22-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: GMh / [signature] / 149235 / 1-24-13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92467

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 #: 561011
Lot #: 623378
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with arrow 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 #: [illegible]
Serial #: [illegible]
Date of Manufacture: 6-12

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

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard/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 Mark Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
Manufacturer: Nagel
Model #: 019DS
Serial #: JG-1113
Date of Manufacture: 10/11

RECORD torque wrench information:

Filter torque wrench:
MSTE ID #: 040614
Cal Expiration Date: [illegible]
Range (ft-lbs or in-lbs): [illegible]
Tolerance: [illegible]

Jam Nut / Bung torque wrench:
MSTE ID #: 035369
Cal Expiration Date: 12-19-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: [illegible]

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Justin Lopez Signature: [signature] ID#: 266436

5. Weigh Drum Assembly

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

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

6. Label Drum Assembly

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

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

Operator Print: Justin Lopez Operator Sign: [signature] ID: 266436 Date: 1-19-13
Verifier Print: Brian Gallegos Verifier Sign: [signature] ID: 267129 Date: 1-22-13

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

DRUM ID#: 92667

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam

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

✓ Engage bolt and nut and torque per manufacturer instructions.

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

✓ Tighten jam nut.

Record torque wrench information

MT&E #: 038367

Cal expiration date: 7-16-13

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

Tolerance ±3% ~~±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.): 303

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: R. Bailey Date: 1-22-13

Verifier Print/Sign: Don Pechacek Date: 01-22-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

12

Production Control

Container ID: 90893 Container Type: POC Gross Weight (lbs): 417

Container Seal #: None Filter Prefix: None Filter Serial #: EL-322; EL-417

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

TWSR Comments: PARENT #S845201 SERIAL #WTS12STD-865

Total PE-Ci Activity: 5.44E+00 Equivalent Combustible PE-Ci: 2.04E+00 AM-241 PE-Ci: 5.30E-01

Total Fissile Gram Equivalents: 53.5 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: Green Yellow

Remediation Determination: VE PID Split Repack

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

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

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

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan B. Ramsey Z Number: 100681 Date: 9/10/12

WDP Engineering

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

Processing Determination: Accept Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt: 107 lb. Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 1000 t. < 10,000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 10/3/12

TRU Remediation Operations

Waste Container Information Evaluated Less Than 170 lbs RTR Video Available

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

Processing Determination: Accept Reject

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

Performed By: Jose Jaen (TRU Remediation Operations (Print)) Signature: Jose Jaen Z Number: 221452 Date: 10-11-12

OK Z# 249750 10/19/12

HS REVIEW RB 306262 10/4/12

Noncertified TRU Waste Drum Item Information

DrumID: 019601

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	AMM (g)	HT	Auth (Pg/Ln)		Comments
1	OX93200OPA		15.680	NITRATE SALTS		3.72	52	6/14	G468	
2	LR2PA		8.240	NITRATE SALTS		2.36	52	6/14	G468	
3	RR4-VKPA		7.220	NITRATE SALTS		5.45	52	6/14	G468	
4	OXP4-1-PA		[redacted]	NITRATE SALTS		37.2	53	6/14	G468	
5	OXP5-6-PA		15.000	NITRATE SALTS		18.25	53	6/14	G468	
6	LR3-PA		10.900	NITRATE SALTS		5.18	52	6/14	G468	
7	LR7-PA		7.720	NITRATE SALTS		2.63	52	6/14	G468	
8	G468-SALT		3.410	NITRATE SALTS		18.12	52	6/14	G468	
9	OXP6-9-PA		25.680	NITRATE SALTS		16.57	53	6/14	G468	
10	OXP6-RA		4.550	NITRATE SALTS		0.8	53	6/14	G468	
11	LR-10-PA		7.270	NITRATE SALTS		5.16	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.7

Material Type	AMM (grams)	Items Net Wt (kg)
52	39.9	45.26
53	75.57	83.31
Totals	115.47	128.57

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	908093					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PCC					
Filtered Vent Type (5.[1])	19 DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	187.52 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

Performed By: SARA ARAGON 237475
CCP (Print) Z #

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

Comments: Per attached email, Container has been verified as PCC

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

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

6.1[3] Performed By: SUSAN RAMSEY, [signature] 100681 10/11/12
Waste Handling Operator (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90893.D
Acq On : 5 Oct 2012 2:59 pm (#1); 05-Oct-12, 14:58:47 (#2)
Operator : NW
Sample :
Misc : 55 gallon LFL drum through 019DS,unobstructed (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 15:07:08 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Sep 05 10:53:25 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.633	96	6297511	201.25 ppmv	0.09
15) Chlorobenzene-d5	5.946	117	5649493	177.00 ppmv	0.07
Target Compounds					Qvalue
1) Hydrogen	1.615	GC1	1326	187.56 ppmv	100

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

Best Available Copy

1-22-13
0600 Assuming WCRRF operations [illegible]
0615 The job briefing being conducted by SRS.
0625 Starting inside rounds and outside rounds
0644 The job is secured
0659 Item 41 OOS, POD in place, OK to proceed with rounds
0702 Inside rounds complete ~~0702~~ 01-22-13
0715 Inside and outside rounds signed off by OOC.
0720 Notified by Operators that station 1 right and left hand gloves will need to be changed out per RCT's.
0734 RCT's having some problems with berthold reading OK smears to be counted prior to starting glove changes.
0758 Starting glove changes on station 1.
0928 Completed glove changes on station 1
0930 Mode change performed SL-6 and WCRRF yard in operations.
0932 Starting to dunest and will be bagging on 9 193083
0951 Permission granted to back vehicle [illegible] for loading of transport vehicle
0959 Dunesting and bag on is complete.
1005 PPE Check is set.
1052 bagging off 9793083 and POC bagging on 110896
1057 Vehicle access gates have been restored, movement to transport vehicle is complete.
1120 bag on, bag off complete, PPE check is complete
1217 bagging off 90896, bagging on 90893, PPE check is set
1234 bag on, bag off complete, PPE Check is set
1400 Starting movement into SL-6
1411 Notified by Operators water liquid in drum in PL-6 3 Notifying SRS. Operators will be introducing nitrogen on next bag off. PPE Check is set
1532 bagging off 90893, bagging on 90900 ppe check is set
1600 Starting inside rounds
1610 Starting outside rounds
1629 Item 41 is OOS POD in place, OK to continue
continued on next page

Int

1/22/13

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

No further entries this date

1/22

1-22-13 WCRKR SOS LOG BOOK

0600 Assuming SOS Position [signature]
0610 Conducted shift Brief Safety tone seat belts.
0645 Concluded shift Brief
0716 Reviewed Inside and outside Rounds. operators entering Facility need to change out Gloves in Station 1 before Going to operations mode
0739 notified by Inside RCT's They are having Problems with breakhold waiting for smears prior to Glove Changes.
0815 ok to proceed ~~[illegible]~~ Per RCT's breakhold ok
0858 Started Glove Change.
0928 completed Glove Change
0930 Mode Change Complete WCRKF In operations
0932 Dressing 2 drum and bagging on 5793683
1025 PPE Check
1052 bagging off and bagging on 90896
1120 PPE Check
1207 bagging off and bagging on 90893 PPE Check
1234 PPE Check
1430 notified by Inside personal a drum with liquid in box had a PH of 3 Making In a acid bagged In neutralizer and remidiated the Issue
1532 bagging off and bagging on 90900 PPE Check
1650 Inside and outside Rounds Complete.
1745 ~~1755~~ bagged off last drum of day.
1758 Mode Change Complete WCRKF In warm
1-22-13 1630 end of shift Securing SOS Position [signature]
PPG

No further entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0043
Examination Date:	3/13/2013
Waste Container ID:	92667
Video/Audio Recorded Media Number:	LA-RTR2-13-0043 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 128.5 kg Tare Wt.: 33.4 kg Net Wt.: 95.1 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: 92667

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard

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):	18.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	15.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	58.1
Soils (S):	
Total WMP Weight:	95.1

CCP Radiography Data Sheet

Waste Container ID: 92667

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

Comments:N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	3/13/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92667	Count Sequence Number:	21963
Operator:	D3PW2DK1\operator		
Assay Start:	2/1/2013 10:13:04 AM		
Description 1:	1LANDA1706		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 95.1 kg	Net:	95.1 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.540 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

09
VW 3/27/13

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 21963
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92667

Batch Number: 1LANDA1706
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 2/1/2013

Net Weight	95100.0 g		
Pu mass	7.54E+001	+-	1.07E+001 g
TRU Alpha Activity	1.99E+001	+-	1.99E+000 Ci
TRU Activity Concentration	2.09E+005	+-	2.09E+004 nCi/g
Pu-239 Equivalent Activity	2.05E+001	+-	1.99E+000 Ci
Pu-239 FGE	6.99E+001	+-	9.64E+000 g
Decay heat	6.51E-001	+-	6.59E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.58E-001	1.13E-004	1.79E-005	3.60E-006
PU238	4.52E-002	7.82E-001	1.11E-001	1.39E-004
PU239	6.80E+001	4.28E+000	6.06E-001	7.63E-004
PU240	6.88E+000	1.58E+000	2.24E-001	2.82E-004
AM241	3.81E+000	1.32E+001	1.88E+000	2.36E-003
PU241	3.34E-001	3.48E+001	4.93E+000	6.20E-003
PU242	1.66E-001	6.59E-004	9.35E-005	0.00E+000
CO60	1.61E-010	1.84E-007	3.95E-008	1.08E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.61E-007
U233	<LLD	<LLD	0.00E+000	7.30E-003
U234	2.07E-002	1.31E-004	4.22E-005	0.00E+000
U235	1.48E+000	3.25E-006	1.04E-006	2.89E-006
U238	<LLD	<LLD	0.00E+000	4.52E-005
AM243	5.00E-004	1.01E-004	1.71E-005	9.89E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 3/26/13

ITR: [signature] Date: 3-26-2013

010
VW 3/27/13

Automated Independent Technical Review

Count Sequence Number: 21963
Batch Number: 1LANDA1706
Counter ID: MCS HENC #1
Container ID: 92667
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 2/1/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Expert review is recommended; the following validity tests failed: Pu239 weight percent is outside limits [92.5, 95.0].	MGA valid. Pu239 percent consistent with AK. Mix of MT-53,52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: RRamman Date: 3-26-13 011 VLU 3/27/13

NDA 2000 Assay Report

Item Information

Item ID:	92667	Count Sequence Number:	21963
Operator:	D3PW2DK1\operator		
Assay Start:	2/1/2013 10:13:04 AM		
Description 1:	1LANDA1706		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 95.1 kg	Net:	95.1 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.480 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

SUPERCEDED

VW 3/27/13

O11A

~~09~~

VW 3/27/13

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	21963	Batch Number:	1LANDA1706
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:	92667	Analysis Date:	2/1/2013

Net Weight	95100.0 g		
Pu mass	7.54E+001	+-	1.07E+001 g
TRU Alpha Activity	1.99E+001	+-	1.99E+000 Ci
TRU Activity Concentration	2.09E+005	+-	2.09E+004 nCi/g
Pu-239 Equivalent Activity	2.05E+001	+-	1.99E+000 Ci
Pu-239 FGE	6.98E+001	+-	9.64E+000 g
Decay heat	6.51E-001	+-	6.59E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.45E-001	1.04E-004	1.54E-005	3.31E-006
PU238	4.52E-002	7.82E-001	1.[illegible]E-001	1.39E-004
PU239	6.80E+001	4.28E+000	[illegible]E-001	7.63E-004
PU240	6.88E+000	1.58E+000	2.24E-001	2.82E-004
AM241	3.81E+000	1.32E+001	1.88E+000	2.36E-003
PU241	3.34E-001	3.48E+00[illegible]	4.93E+000	6.20E-003
PU242	1.66E-001	6.59E-00[illegible]	9.35E-005	0.00E+000
CO60	1.52E-010	1.74E-00[illegible]	3.61E-008	1.02E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.03E-007
U233	<LLD	<LLD	0.00E+000	6.71E-003
U234	1.86E-002	1.18E-004	3.77E-005	0.00E+000
U235	1.33E+000	2.91E-006	9.33E-007	2.64E-006
U238	<LLD	<LLD	0.00E+000	4.26E-005
AM243	4.93E-004	9.95E-005	1.53E-005	9.09E-006

SUPERCEDED VW 3/27/13

Errors quoted at 1.000 sigma

Operator: [signature] Date: 2-5-13

ITR: [signature] Date: 2-5-2013

011B
~~10~~
VW 3/27/13

Automated Independent Technical Review

Count Sequence Number: 21963 Batch Number: 1LANDA1706
Counter ID: MCS HENC #1
Container ID: 92667
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/1/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	No 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 Expert review is recommended; the following validity tests failed:	MGA valid.
Pu239 weight percent is outside limits [92.5, 95.0].	Pu239 percent consistent with AK. Mix of MT-53,52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

SUPERCEDED
VW 3/27/13

Expert Review by: Sheri Chambers Date: 2-3-13

11C
VW 3/27/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92667**

BDR Number: **LA13FG12078**

Sampling Date: **8/19/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	351.67	
74-82-8	Methane	9.63	U
67-56-1	Methanol	95.39	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	27.16	
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.57	
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.66	
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	6.08	
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130819C\
Data File : 92667.D
Acq On : 19 Aug 2013 10:00 am
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 19 10:08:58 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.067	96	9548794	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6909593	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.903	GC1	100315	351.67 ppmv	100
4) Methanol	0.824	31	48132	95.39 ppmv	100
7) Acetone	1.354	58	69011	27.16 ppmv	96
10) Methyl Ethyl Ketone	2.841	72	16263	2.57 ppmv	88
12) Benzene	3.717	78	25934	0.66 ppmv #	69
17) Toluene	5.577	92	169777	6.08 ppmv	96

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

S845338

S845338

Container R: 747316

File Options Reports Help

S845338

747316	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

S845338

S845338

- LA00000068440 – EMPTY
- LA00000068496
- LA00000068495

Working Copy
Date: 10-2-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5845338

6.2[4] Date Processed: 10-2-13

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

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

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

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

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-19-14

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

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

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

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

Performed By: Justin Cyler / 1266938 10-2-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 5845338	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	495 C lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	52 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	495 C lb
6.2[7]	(S) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[17][D]	Drum lift hinge pin retaining clip replaced.	Initials Z# Date

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

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5845338

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68496	68495	N	A
10.1[4]	Daughter Drum Filter No.	LM-370	LM-276		
10.1[4]	Daughter Drum Bag Filter No.	L-10291	L-10302		
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	N	N	A	
	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	3 Gallons	1/2 Gallon	N	A
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding	lead Shielding		
10.3[9][A]	PCB-contaminated Waste Description	N			
10.3[9][B]	PCB Item ID No.	A			
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 (%)	90%	75%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastics, Absorbents	Plastic Kitty Litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5545338

Comments: Lead shielding, Nitrate Salts, Liquid was a Ph-of 3 was treated w/ acid Neutralizer to reach a Ph-of 6

11.1[1] Performed By: Justin Cafoc
Waste Handling Tech (print) Signature Z # 1266486 Date 10-1-13

11.1[8] Reviewed By: Gilbert Martin
SOS or designee (print) Signature Z # 149235 Date/Time 10.3.13 1558

Working Copy
Date: 9-18-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0258363
Manufacture Date: 13

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

	Filtered Vent	2-in. Bung
M&TE No.:	100214	058509
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	+/-4% cw +/-6% ccw	+/-3% cw +/-6% ccw

Overpack filtered vent information:

Manufacturer: MACFIL
Model No.: 013
Serial No.: JZ-923
Manufacture Date: 01/11

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

5. [11] Performed By: IAN MANUEL / [signature] / 276709 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

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

5. [18] 2-in. bung plug torque value: 50 ft-lb

Comments:

8.1[1] Performed By: IAN MANUEL / [signature] / 276709 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / [signature] / 149355 / 10-2-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 10-2-13 a

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68440

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 037418
Cal. Expiration Date: 03-06-14
Range in ft-lb: 10-80
Tolerance: +/-3% cw + +/-6% ccw

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

Performed By: James Sa[illegible] [signature] 116662 10-2-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 178.4 lb

Comments: N/C

8.1[1] Performed By: James Sa[illegible] [signature] 116662 10-2-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martin [signature] M. J 149275 10-3-13
Supervisor or designee (print) (Signature Z # Date

Working Copy
Date: 10-1-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68495

5.[3] Drum information:
Purchase Order No.: 501576
Lot No.: 0240999
Manufacture Date: 2013

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

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

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

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

Performed By: [illegible] [illegible] 191352 10/01/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 DS
Serial No.: LM-276
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.: 68495

Comments: NK

5.[35] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 10/01/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 149235 / 10.3.13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68495

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

M&TE No.: 037418
Cal. Expiration Date: 03 06 14
Range in ft-lb: 10-80 lbs
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 Sudal [signature] 1166621 10 2-13
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: James Sudal [signature] 1166621 10-2 13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68495

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 249.4 lbs

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

Comments: N/C

6.[32] Performed By: James Sinkul [signature] N14621 10-2-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] N14225 10-3-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-1-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68496

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 60PVC 1.5-2SPVC
Serial No.: L-10291
Manufacture Date: 5/13

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

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

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

Performed By: MICHAEL MONTOYA [signature] A91352 / 10/01/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 910 PS
Serial No.: LM-370
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.: 68496

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 10/01/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 149335 / 10-3-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date:_____

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68496

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

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

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

Performed By: Justin Cyer / [signature] / 1268481 / 10-2-13
Operator (print) / Signature / Z # / Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68446

6.[26] Scale File ID number: 014065

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

6.[28] Drum gross weight: 3954 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 Sedal [signature] 111621 10-2-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 149255 10.3.13
Supervisor or designee (print) Signature Z # Date

1437 SP78

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S845338 Container Type: 55-GAL Gross Weight (lbs): 441
Inner Seal #: 019565 Filter Prefix: LAVC Filter Serial #: 02837
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM 434
Total PE-Ci Activity: 9.45E+00 Equivalent Combustible PE-Ci: 3.54E+00 AM-241 PE-Ci: 8.98E-01
Total Fissile Gram Equivalents: 99.3 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 4/28/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 22
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☒ Liquid ☒ Pressurized Container ☑ Impenetrable Item ☒ Other
Security Determination: ✔ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

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

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 381# Generator info shows, 14 items of nitrate salts; weights range from 3 - 45#, No RTR BDR, Nitrate salts are typically packaged in plastic bags; undocumented liquids &/or aerosols may be present. RTR PS shows prohibited liquids & impenetrable object(s), No chemicals identified. Applicable waste codes are for chromium, lead, & mercury. Nitrate salts require repack w/ admixture

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112607 Date: 1/18/13

TRU Remediation Operations

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

Performed By: Gmt (TRU Remediation Operations (Print)) Signature: Gmt Z Number: 174835 Date: 6/19/13
Jose Jerez 221452 6/22/13
1145 Revised Jolene Amellal CSP, may contain Pb, Hg + Cr
1-29-19

Noncertified TRU Waste Drum Item Information

DrumID: 019565

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	OX97-11FA		16.820	NITRATE SALTS	9.59	[redacted]	54	6/14	G468
2	LR-12FA		5.680	NITRATE SALTS		[redacted]	52	6/14	G468
3	OX98-15FA		12.950	NITRATE SALTS		3.73	52	6/14	G468
4	RR-14-FA		8.180	NITRATE SALTS		4.34	52	6/14	G468
5	LR-16-FA		11.140	NITRATE SALTS		4.62	52	6/14	G468
6	LR-18-FA		12.730	NITRATE SALTS		5.3	52	6/14	G468
7	OX99-19FA		17.270	NITRATE SALTS		4.18	52	6/14	G468
8	G468-2		1.590	NITRATE SALTS		5.63	52	6/14	G468
9	LR21A		6.590	NITRATE SALTS		4.66	52	6/14	G468
10	OX100-22A	(??)	20.230	NITRATE SALTS	35.1	[redacted]	[redacted]	6/14	G468
11	LR24A		5.680	NITRATE SALTS		5.44	52	6/14	G468
12	RR25A		3.410	NITRATE SALTS		9.09	52	6/14	G468
13	LR28A		8.180	NITRATE SALTS		0.27	52	6/14	G468
14	LR29VRA		11.140	NITRATE SALTS		6.16	52	6/14	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 200.

Material Type	SNM (grams)	Items Net Wt (kg)
32	36.1	20.23
52	61.29	104.54
54	4.59	16.82
Totals	101.98	141.59

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])	S845338					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	073					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT N/A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	2896.70 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), [signature] (Signature), 100686 (Z#), 5/20/13 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S845338.D
Acq On : 11 Apr 2013 12:08 pm (#1); 11-Apr-13, 12:07:46 (#2)
Operator : SA
Sample :
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 073 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 12:16:46 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.529	96	4986000	201.25	ppmv	-0.04
15) Chlorobenzene-d5	5.868	117	4191715	177.00	ppmv	-0.03
Target Compounds						Qvalue
1) Hydrogen	1.601	GC1	20588m	2896.70	ppmv	

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

vocgas.m Thu Apr 11 12:16:55 2013

10-2-13 Continued from previous page. Coleman
0349 Bagging off 1 daughter, bagging on drum #845338.
0411 Bag-off/on complete. Operations in a pause due to an elevated CAM.
HG 0418 CAM readings normal, resuming operations.
0453 Initiating a drum movement from 5069 ~~on~~ TC 10-2-13 to a ~~transportat~~ TC 10-2-13 transportainer.
0505 Beginning inside rounds.
0522 Item #63 is OOS, okay to proceed per CSE documentation.
0529 Inside rounds complete.
0542 Late entry at 0513, drum movement completed. (TC)
0535 Both rounds reviewed by SOS.
10-2-13 0604 Relieved by OO Claussa Blade, Coleman

No further entries this page

10-2-13

0404 Looming WDRRF operations center - Crolandes.
0413 Pre job being performed by SOS
0436 Pre job has been concluded.
0450 Operators entering SD-69.
0800 Bagging off 1 daughter, Bagging on 1 daughter, continuing to proceed.
0825 Bag on, Bag off is complete. Cams CV10-2-13 are elevated, Cam C2 at 0.6 DAC has. All other cams are normal. LAS surveys are NDA.
0839 Cam in normal range operators continuing to proceed
0940 Bagging off, Bagging on 9910170
1015 Bag on, Bag off complete
1156 Bagging off 1 daughter, Bagging on 1 daughter.
1219 Bag on of 1 daughter complete.
1410 Operators notifying operations center the copper piping is coming loose over the glovebox. SOS and SOM have been notified.
1422 SOS and SOM have determined that copper piping is OK and stable, FSR will be submitted.
1437 FSR#112542 submitted for copper piping repair.
1503 Bagging off 1 daughter 1 POC, Bagging on 9843528
1520 Starting movement into 50-69.
1540 movement into 50-69 is complete.
1550 Bag on, Bag off complete
1604 Starting inside rounds.
1615 starting movement out of 50-69.
1630 Item #63 is OOS, PCD in place okay to proceed per CSE
1634 Inside rounds complete.
1706 Starting outside rounds.
1717 Bagging off 1 daughter, Bagging on another
1723 Item 79 is unsat FSR in place, OK to proceed.
1734 Bag on, Bag off complete continuing to proceed
1735 Rounds signed off by SOS.
1801 842 Being relieved by DCO Terri Coleman - CRolandes
119

no further entries this page

10/1/13 Night Shift Continued

10/2/13 0018 Operators breaking for lunch.

0118 Resuming operations.

0149 Completed movement of 3 drums into 50-69 for processing.

0221 Completed bag off of 1 POC, continuing processing

0411 Completed bag offs of parent # 5845299 (2 daughters + 1 POC total) and bag on of 5845338. RP-1 reported elevated CAM reading.

0418 CAM reading returned to normal.

0445 Late Entry @ 1907 (10-1-13) Operators entering 50-69 for processing 5864318 and Stationary Fire Watch is set.

0513 Drum Movement completed of 4 drums from 50-69 to transportainers.

10/2/13 0608 Relieved by J. Gandagnoli as SOM.

No further entries this page
LAG

10-2-13 Day shift

0605 Reviewed the shift turnover checklist and assumed the SOM position John Gendagnol

0613 Reviewed and approved the day shift watch bill. Procedure driven work released

0630 Completed attending the pre-job brief conducted by the SOS (Gilbert) The safety topic was to stay focused and ensure no distractions. RP-1 discussed Lessons Learned, with Hi dose drums, rotation of personnel, use of lead blankets, and utilize time and distance. An operator noted the cutter was getting sticky, as a result, day shift will replace the cutter. Currently there are 4 spots open in the transportainer. Per shift turnover, we will need supplies for the glove box and gloves will require checking.

0710 Completed am phone call with area G SOM status ing POD activities.

0713 Completed extending shift order WCRR-SH-13-005 R0 - Provide precautionary Instructions to Prevent Bag Tears, through 10-9-13.

0801 Inside Operations initiated bag off of 1 daughter and bag on, and continue processing parent 5845338.

0825 Bag on and Bag off complete, CAM ~~[illegible]~~ C2 was elevated and noted at 0.6 DAC - all other CAMs are normal - LAS surveys are ND4 -

0839 CAM-C2 noted in normal range operations will continue to process

0940 Bagging off - Bagging On 5910170

1015 Bag on and Bag off Complete and 2 daughters generated from 5845338

1145 Inside operations report bag on of a daughter and bag off completed and continue to process.

1225 Completed the daily Facility update with OM, PM an ES/PM and SOM.

1235 PST arrives to obtain RWP brief in preparation of tomorrows transfer.

1317 Reviewed and approved WO# 00458847-01 50-84(A) LAE (SHUTDOWN) Air Cond.

1410 Inside operations report that the copper piping holding the air head is loose. The piping was taped to secure (safe configuration) FSR-112562 submitted.

1503 Inside Operations initiate Bag on of 1 daughter and Bag off of another and initiate bagging on 5843528

1520 Outside Operations initiate movement in of 3 Parents into 50/69 facility.

1550 Bag on/Bag off noted completed.

1600 Completed ensuring consumable/SS supplies inventory was conducted and supplies ordered. Obtained 1" slings to support denesting. Certifications provided to the OCO and SOM. Som ensured secured in Level B storage.

(Continued on Next Page)

10/1/13 Continued from previous page. CMillis
2301 SOM concurrs with course of action.
2331 Starting movement out of 50-69.
2336 Bagging off 1st daughter, bagging on a POC.
2339 Move out of 50-69 complete.
2350 Bag off/on complete.
0208 Bagging off POC, bagging on 2nd daughter.
0221 Bag off/on complete.
0349 Bagging of 2nd daughter, bagging on. 5845338.
0411 Bag off/on complete, unable to depost right away due to a CAM slightly elevated.
HCG 0417 CAM's down to normal levels, able to depost.
0453 Starting movement out of 50-69.
0513 Move out of 50-69 complete.
0535 Signed off on the rounds.
0615 Relieved by Gilbert Martinez. CA 10/2/13

No Further Entries on this page

10.2.08 WCRC SOS LOG BOOK

0600 Assuming SOS Position [signature] M.J.

0615 Conducted Shift Brief discussed Current condition with off going crew.

0636 Concluded shift brief.

0650 Operators entering 50-69.

0800 Bagging off 1 daughter, Bagging on Another.

0825 Bagging on bagging off complete Cam Elevated Cam C2 At 0.6 DAC hrs. LAs are NDA.

0839 Cam back to normal Continuing to process

0940 Bagging off bagging on S910170

1015 Bag on/off complete

1156 Bagging off one daughter bagging on Another

1219 Bag on/off Complete

1410 Operators notified of Copper piping going to Air Samplers was resting on Glove Box. Sam was notified

1422 Sam ~~and myself~~ made determination on Piping It was taped ~~off~~ up FSR Put In To Remain.

1437 FSR #12512 Submitted to replace Copper Piping

1503 bagging off 1 daughter 1 POC bagging on S843528

1520 Starting movement Into 50-69

1540 Moves Complete

1550 Bag on/off complete

1606 Starting Rounds.

1615 Starting move out of 50-69

1717 Bagging off 1 daughter bagging on Another

1734 Bag on/off complete

1735 Reviewed Inside And outside Rounds

1800 Operators Exited 50-69

RM 1815 Relieved by Clayton Mullins [signature]

no further entries on this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68495
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 113.0 kg Tare Wt.: 33.4 kg Net Wt.: 79.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 68495

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hand tool

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	69.6
Soils (S):	
Total WMP Weight:	79.6

CCP Radiography Data Sheet

Waste Container ID: 68495

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

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68495	Count Sequence Number:	16614
Operator:	DCLTD231\Operator		
Assay Start:	10/23/2013 12:20:46 PM		
Description 1:	2LANDA1233		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 79.6 kg	Net:	79.6 kg
Container:	Volume: 208.0 l	Full:	60.0 %
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:	16614	Batch Number:	2LANDA1233
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68495	Analysis Date:	10/23/2013

Net Weight	79600.0 g		
Pu mass	6.00E+001	+-	1.02E+001 g
TRU Alpha Activity	1.91E+001	+-	2.35E+000 Ci
TRU Activity Concentration	2.40E+005	+-	2.95E+004 nCi/g
Pu-239 Equivalent Activity	1.96E+001	+-	2.35E+000 Ci
Pu-239 FGE	5.47E+001	+-	9.13E+000 g
Decay heat	6.27E-001	+-	7.76E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.71E-001	1.21E-004	2.12E-005	2.04E-006
PU238	7.00E-002	1.20E+000	2.03E-001	2.69E-004
PU239	5.39E+001	3.34E+000	5.66E-001	7.50E-004
PU240	5.64E+000	1.28E+000	2.17E-001	2.88E-004
AM241	3.88E+000	1.33E+001	2.26E+000	2.99E-003
PU241	2.83E-001	2.91E+001	4.94E+000	6.54E-003
PU242	1.66E-001	6.54E-004	1.11E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.28E-007
U233	<LLD	<LLD	0.00E+000	7.72E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.95E-006
U238	<LLD	<LLD	0.00E+000	3.42E-005
AM243	6.02E-004	1.20E-004	2.14E-005	1.12E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/24/13

ITR: _____ Date: 10·24·13

Automated Independent Technical Review

Count Sequence Number: 16614 Batch Number: 2LANDA1233
Counter ID: HENC #2
Container ID: 68495
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/23/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Expert review is recommended; the following validity tests failed: Pu239 weight percent is outside limits [92.5, 95.0].	MGA valid. Pu239 percent consistent with AK. Mix of MT-52,54.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok

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

Expert Review by: Sheri Chamberlin Date: 10-24-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68495**

BDR Number: **LA13FG2107**

Sampling Date: **10/28/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	391.53	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131028c\
Data File : 68495.D
Acq On : 28 Oct 2013 11:10 am (#1); 28-Oct-13, 11:10:09 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 28 11:18:39 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	3.562	96	5304651	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.868	117	4122926	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.615	GC1	2944	391.53 ppmv	100

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68496
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 162.5 kg Tare Wt.: 33.4 kg Net Wt.: 129.1 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:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68496

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	116.1
Soils (S):	
Total WMP Weight:	129.1

CCP Radiography Data Sheet

Waste Container ID: 68496

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	[signature]	10/22/2013
Print Name	Signature	Date

5845338

NDA 2000 Assay Report

Item Information

Item ID:	68496	Count Sequence Number:	16622
Operator:	DCLTD231\Operator		
Assay Start:	10/24/2013 9:59:05 AM		
Description 1:	2LANDA1234		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 129.0 kg	Net:	129.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.780 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:	16622	Batch Number:	2LANDA1234
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68496	Analysis Date:	10/24/2013

Net Weight	129000.0 g		
Pu mass	6.05E+001	+-	1.22E+001 g
TRU Alpha Activity	1.57E+001	+-	5.67E+000 Ci
TRU Activity Concentration	1.21E+005	+-	4.39E+004 nCi/g
Pu-239 Equivalent Activity	1.57E+001	+-	5.67E+000 Ci
Pu-239 FGE	5.61E+001	+-	1.22E+001 g
Decay heat	5.11E-001	+-	1.88E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.13E-006
U233	<LLD	<LLD	0.00E+000	1.04E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.20E-006
NP237	1.73E-001	1.22E-004	2.41E-005	2.67E-006
PU238	5.53E-002	9.46E-001	2.37E-001	1.21E-002
U238	<LLD	<LLD	0.00E+000	4.57E-005
PU239	5.57E+001	3.46E+000	7.55E-001	4.43E-002
PU240	4.44E+000	1.01E+000	2.24E-001	1.29E-002
AM241	2.99E+000	1.02E+001	5.61E+000	7.79E-002
PU241	7.49E-002	7.71E+000	1.70E+000	9.89E-002
PU242	1.58E-001	6.26E-004	1.44E-004	0.00E+000
AM243	6.96E-004	1.39E-004	2.79E-005	1.41E-005

Errors quoted at 1.000 sigma

Operator: Jim Burton Date: 11/4/13

ITR: [illegible] Date: 11-4-13

Automated Independent Technical Review

Count Sequence Number: 16622 Batch Number: 2LANDA1234
Counter ID: HENC #2
Container ID: 68496
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/24/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Expert review is recommended; the following validity tests failed: Normalized fit value (1.23) is greater than allowed (1.15). Fit value (4.79) is greater than allowed (2.50). Pu239 weight percent is outside limits [92.5, 95.0]. Note: The measured and declared isotopics are inconsistent.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK

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

Expert Review by: _____ Date: 11/4/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68496**

BDR Number: **LA13FG12108**

Sampling Date: **10/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	497.79	
74-82-8	Methane	9.63	U
67-56-1	Methanol	50.17	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131025c\
Data File : 68496.D
Acq On : 25 Oct 2013 1:28 pm (#1); 25 Oct 2013 1:27 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 13:47:16 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.063	96	7768400	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5746974	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	141994m	497.79	ppmv	
4) Methanol	0.831	31	20594	50.17	ppmv	100

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

26

S846037

S846037

Container 768117

File Options Reports Help

S846037

768117	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

S846037

- S846037
  - LA00000068479
  - LA00000068454
    - LASB02096
  - LA00000068483
  - LA00000068521 - EMPTY

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 10-3-13

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S846037

6.2[4] Date Processed: 10-03-13

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

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

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

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

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

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

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

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

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

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

Performed By: James Scal / [signature] / 1 [illegible] / 10-03-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S846037

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 402.6 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 424.6 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 , N/A , N/A
EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S846037

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68483	68454	68479	
10.1[4]	Daughter Drum Filter No.	LM-287	LM252	LM296	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-6721	L-6795	L-10315	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578	501578	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N/A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	0	0	0	N/A
10.3[5][A]	Free Liquid Volume/Units	8 gallons	0	0	
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	LEAD SHIELDING	LEAD SHIELDING	
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A	N/A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See COMMENTS	SEE COMMENTS	SEE COMMENTS	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	80%	90%	95%	
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic & Kitty litter	PLASTIC Kitty Litter	PLASTIC Kitty litter	

ATTACHMENT 1
Page 4 of 4

10-3-13 JS

4.1[6][B] Parent Waste Container No.: SE46037 SE46037

Comments: NITRATE SALTS, PLASTIC, LEAD SHIELDING, 5 gallons of liquid.

11.1[1] Performed By: GERALD ESPINOZA [signature] Z377201
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Jerez [signature] 122452 10-4-13 0405
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

Date: 10-2-13

5.[3] Overpack drum information:

Purchase Order No.: 10/2/13 501563
Lot No.: 0238367
Manufacture Date: 2013

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-931
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 / 10/02/13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/A

8.1[1] Performed By: MICHAEL MONTOYA / [signature] 191352 / 10/02/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Perez / [signature] 1227521 / 10-4-13
Supervisor or designee (print) Signature Z # Date

Working copy
Date: 10-3-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68521

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

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

Performed By: Melinda Stewart / Melinda Stewart 1277269 10-3-13
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): 169.4 lb

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA / [signature] 1231129 10-3-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez / [signature] 1221452 10-4-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-26-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68479

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240 999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6 CPVC 1.5-2 SPVC
Serial No.: L-1035
Manufacture Date: 5-13

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

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

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

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

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 DS
Serial No.: LM-296
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.: 68479

Comments: N/C

5.[35] Performed By: Frederick Arbuloty | [signature] | 1228261 | 9-26-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Jose Perez | [signature] | 1214521 | 10-4-13
Supervisor or designee (print) | Signature | Z # | Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date:_____

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68 479

6.[9] Drum closure ring torque wrench information:
M&TE No.: 037418
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
Tolerance: +-3% CW + 7-6% CCW

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

Performed By: Melinda Stewart / Melinda Stewart / 272268 / 10-3-13
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.: 68479

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 305.6 lbs

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

Comments: N/C

6.[32] Performed By: Melinda Stewart (Operator (print)) Melinda Stewart (Signature) 127868 (Z #) 10-3-13 (Date)

7.1[4] Reviewed By: Joe Jerez (Supervisor or designee (print)) (Signature) R21452 (Z #) 10-4-13 (Date)

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET 9/23/13 HS

5.[34][E] Drum ID No.: 68454

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPUL 1.5-2 5PUL
Serial No.: L-6795
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	12-18-15
Range in ft-lb:	40-200	10-80
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: JAN MARWICK / [signature] 1276705 9-23-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: 9/23/13 ~~019065~~ NUCFil
Model No.: 0190S
Serial No.: LM-252
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.: 68454

Comments: N/A

5.[35] Performed By: JAV MARQUEZ | [signature] | Z276204 | 9-23-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Jose Jarez | [signature] | 1221521 | 10-4-13
Supervisor or designee (print) | Signature | Z # | Date

ATTACHMENT 2
Page 1 of 2

COPY

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 684554

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

M&TE No.: 073418
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
Tolerance: ±3% CW + ±6% CCW

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

Performed By: Melinda Stewart / Melinda Stewart / 127268 / 10-3-13
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.: 68454

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 308.0 lbs

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

Comments: N/C

6.[32] Performed By: Melinda Stewart (Operator (print)) | Melinda Stewart (Signature) | R2T7LB (Z #) | 10-3-13 (Date)

7.1[4] Reviewed By: Dave Seyer (Supervisor or designee (print)) | [signature] (Signature) | R214521 (Z #) | 10-4-13 (Date)

Working Copy
Date: 9-24-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68483

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: DOP
Model No.: 6 CMC 15-2 SAK
Serial No.: L-6721
Manufacture Date: 1/13

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

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

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

Performed By: Frederick [illegible] | [illegible] 122[illegible] 9-26-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 DS
Serial No.: LM-287
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.: 68483

Comments: N/C

5.[35] Performed By: Frederick [illegible] | [illegible] 1228824 9-26-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Perez | [illegible] 122152 | 10-4-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date:_____

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68483

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

M&TE No.: 037418
Cal. Expiration Date: 3-6-2014
Range in ft-lb: 10-80
Tolerance: ±3% cw + ±6% ccw

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

Performed By: GERALD ESPENOLA / [signature] / Z# 2317201 / Date
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 100 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.: 68483

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 285.0 lbs

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

Comments: N/C

6.[32] Performed By: Melinda Stewart (Operator (print)) Melinda Stewart (Signature) 1277265 (Z #) 10-3-13 (Date)

7.1[4] Reviewed By: Joe Jerez (Supervisor or designee (print)) (Signature) 2214521 (Z #) 10-4-13 (Date)

143772

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846037 Container Type: 85-GAL Gross Weight (lbs): 435
Inner Seal #: 019699 Filter Prefix: LAVC Filter Serial #: 00857; 01943
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 1.32E+01 Equivalent Combustible PE-Ci: 4.95E+00 AM-241 PE-Ci: 1.07E+00
Total Fissile Gram Equivalents: 145.9 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 2/6/2007 Comment: Impenetrable Obj,
Certified RTR Comment: None

Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☑ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1:2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones — Production Control (Print) — Signature — 117434 Z Number — 1-12-12 Date
SUSAN S. RAMSEY — Signature — 100681 Z Number — 10/31/12 Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 375lb. Generator info shows waste consists of eight items (likely plastic bags) of nitrate salts ranging in weight from 7.5 lb to 61lb. Waste packaged into 55 gal drums. Nitrate salts may contain free liquids.

May require RWP for >1000 and < 10,000 mrem/hr @ 30 cm.

Performed By: Valerie Rhodes — WDP Engineering (Print) — Signature — 112609 Z Number — 3/3/12 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 when processing waste.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper mixture of kitty litter to waste in accordance with the procedure.
Performed By: Jose Jorez — TRU Remediation Operations (Print) — Signature — 221452 Z Number — 11-29-12 Date

OK Z# 249150 12/11/12
IHS Review [illegible] CSP, may contain Pb, Hg, Cr.
11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 019699

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	LR-109NW1		17.050	NITRATE SALTS		15.75	52	6/14	G468	
2	LR-110NE1		8.640	NITRATE SALTS		9.48	52	6/14	G468	
3	OX122111NE		20.910	NITRATE SALTS		41.64	52	6/14	G468	
4	OX122111NW		19.320	NITRATE SALTS		15.67	52	6/14	G468	
5	OX123112NE		27.500	NITRATE SALTS		39.52	52	6/14	G468	
6	OX123112NW		19.770	NITRATE SALTS		16.27	52	6/14	G468	
7	RR113VRNW1		3.410	NITRATE SALTS		3.67	52	6/14	G468	
8	LR114NW1		23.870	NITRATE SALTS		12.8	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 197.3

Material Type	SNM (grams)	Items Net Wt (kg)
52	154.8	140.47
Totals	154.8	140.47

72
MR
6.10.12

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 2/23/12

Container No. (5.[1])	86544	87583	5846088	84732	5846037	53130
Filtered Vent Type (5.[1])	72	72	72	72	72	72
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	2522.34 ppm	Ø ppm	Ø ppm	8.19 ppm	Ø ppm	Ø ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	108.97 ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm

5.[7] Certified CCP Technician:

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

Reviewed By: Gabe Romero (CCP (Print)) 236973 (Z#)

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

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

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

6.1[2][B]/ 6.1[3] Performed By Alicia Herrera (Waste Handling Operator (print)) [signature] 198450 (Z#) 2/28/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120223c\
Data File : S846037.D
Acq On : 23 Feb 2012 2:07 pm (#1); 23-Feb-12, 14:07:21 (#2)
Operator : GR
Sample :
Misc : 55 GAL DRUM FROM INSIDE 85 GAL OVERPACK (72) (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 23 14:18:18 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Oct 18 13:58:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.700	96	6725681	209.00 ppmv	0.07
15) Chlorobenzene-d5	6.019	117	5250880	185.50 ppmv	0.07

Target Compounds	Qvalue

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

vocgas.m Thu Feb 23 14:18:27 2012

0313
0410 Assuming WCRRF CCC position - Crelando
0617 Pre job being conducted by SCS
0633 ~~0633~~ 0633 3-13 Pre job concluded.
0750 Bagging off and bagging 9846096
0808 Permission granted to lower vehicle acc
DOR movement to transport vehicle
0829 Bag on, bag off complete
0906 mode change being performed - TA50-69 and w
yard in warm standby.
0916 Starting glove changes on station 3 and 7 righ
and left.
0945 vehicle access gates have been restored, m
complete to transport vehicle
1000 Glove changes are complete on station 3 a
1010 mode change performed TA50-69 and WCRR
yard now in operations.
1113 Bagging off 1 daughter, Bagging on another
1130 Bag on, Bag off complete.
1136 Vehicle access gates have been restored.
1137 late entry Permission granted to lower ve
access gates DOR loading of transport vehic
1100 - Crelando.
1139 movement out of WCRRF is complete.
1427 Starting movement into 50-69.
1442 movement into 50-69 is complete
1540 Permission granted to lower vehicle acc
gates to unload transport vehicle.
1557 Starting to denest 9846037
1633 Denesting is complete, Bagging off Bagging o
~~9840370~~ 3-13 9846037.
1706 Bag on, Bag off is complete.
1720 Starting inside rounds.
1723 Starting outside rounds.
1730 Item # 43 w CCS, PCD in place ready to process
CSE documentation.
- Continued on next page - Crelando

3-13 - Continued from previous page - [illegible]
1730 Vehicle access gates have been restored, movement out of 50cr431303 transport vehicle to transportation is complete.
1740 Item #19 is unsat, FSR in place okay to proceed.
1743 Starting movement out of 50-49
1744 Unsat rounds complete.
1746 10-3-13 Completed movement out of 50-49
1817 Being released by DOD Terri Coleman - [illegible]

no further entries this page.

10-3-13

1817 Assuming WCRR operations center. JCOemar
1828 Pre-job being conducted by SOS.
1840 Pre-job concluded.
1918 Operators entering 50-69 to resume operations on drum #-S846037.
2046 Initiating a drum movement from transportainer to 50-69.
2055 Bagging off 1 daughter, bagging on another daughter.
2104 Bag off/on complete
2109 Drum movement complete.
2129 Bagging off 1 daughter, bagging on another daughter.
2140 Bag off/on complete.
2226 Operators currently in a pause, they have not found the dose sheet associated with their next drum to be bagged on (90971). Also, they are low on absorbant.
2238 The dose sheet has been located. Pause ended.
2241 Bagging off 1 daughter, bagging on 90971.
2316 Bag off/on complete.
2333 Operators out for lunch.
10-4-13 0031 Operators back from lunch.
0103 Bagging off last daughter of the day.
0105 Beginning outside rounds.
0119 Item #19 is unsat, okay to proceed, FSR in place.
0120 Bag off complete. Operators cleaning WCF.
0122 Beginning inside rounds.
0140 Item #63 is OOS, okay to proceed per CSE documentation.
0145 ~~0140~~ JC 10-4-13 Inside rounds complete.
0153 Initiating a drum movement from 50-69 to a transportainer
0204 Operators report that the lights have gone out in the high bay and 50-69-103 (RCT area).
0206 Drum movement out of 50-69 complete. All inventory has been removed from 50-69.
0223 Mode changed to Cold in 50-69 and warm in WCRR yard.
Continued on next page - JCOemar

10-3-13 DAYSHIFT

0613 Obtained and reviewed shift turnover checklist and assumed the WCRR SOM position John Anadagnoli

0614 Completed review and approved the day shift operations watchbill.

0625 Completed attending the pre-job brief conducted by the SOS (Gilbert) The safety topic was to wear proper PPE and to stay focused, there are a lot of distractions and personnel need to watch out for each other. There are two transfers scheduled out and one scheduled in. Operations discussed the 85 gallon drum grabber - ensure its gripping when using and zip ties are breaking. Ensure they are secure and RCTs discussed tears could occur during bag on's and bag off's. Excellent awareness of exchange and sharing information noted. Discussed current shift orders in place.

0715 Completed the Facility POD Status phone call with AREA-G.

0750 Inside operators initiate bagging off and bagging on Parent 5846096 Parent drum 5824967 from night shift has generated 2 daughters

0829 Operations completed Bag offs and Bag Ons.

0906 Mode Change 50/69 and Yard Transition from Operations/Operations to WARM/WARM due to glove changes required per RCT. Glovebox WCG is in safe configuration.

0911 P&T completes inspection and labelling of 40 drums to be transfered on two transfer vehicles to Area G. P&T inspections started at 0805 hrs. Two transfer vehicles are staged, one ready to load at the gate. Operators initiate moves.

0916 Inside Operators initiate glove changes on Station 3 and Station 7, both pair.

0950 Issues were identified with the 2ND transfer to AREA G - associated with LCNTs. Waste help was notified for input. The CAM was notified that an error message off LSE PEL, is non-compliant to receive in G.

1010 Mode Change: 50/69 and Yard transition from WARM/WARM to Operations/Operations.

1049 The LCNTs issue has resolved noting the non-compliant drums were required to be changed to yes compliant by Waste help for acceptance to AREA G. P&T is checking with AREA G for acceptance of 2ND transfer after lunch if not delivered prior to lunch.

1158 Completed attending the weekly Project Status meeting.

1245 P&T arrives to perform the transfer / remove from WCRR and transfer vehicle to AREA G

1330 CSE/Fire protection arrives to perform combustible loading surveillance.

1350 Weeds in the MDA-C were observed being cut.

1422 CSE/Fire protection exited facility and completes the walkdown, report forthcoming.

1427 Movement into WCRRF being initiated.

1442 Movement into facility Completed.

(Continued on Next page)

10-3-13 Day shift (cont)

1541 Outside operations initiate transfer from the transfer vehicle to the transportainer (14 drums total). Two drums are noted to have higher than normal dose. Drum S823016 reads 10.3 mr at 3ft and S854616 reads 19.3 mr at 3ft.

1618 Provided Email to Mr D. Christensen requiding D002 code attached to daughters (68501, 68494 and POC 68426) per Parent 5910170-SEDs requesting evaluation of D002 code. These drums will be on hold at WCRR until we recieve information from Programs.

1620 Late entry for 1557 inside operations report initiating denesting

1630 The lock to the transportainer 195 Broke, the OCO was notified, and another administrative lock was pulled from the safe to utilized. The same key will be used for the administrative lock.

1633 Inside operations report of denesting S846037 (pinhole lid drum) and application of RTV, and initiating bag on of Parent S846037

1705 Bag off and Bag On - was reported completed

1736 Outside operations report the transfer to the transportainer is completed.

1745 Outside operations initiate a move out of the facility to the transportainers

1749 SOM updates logbook identifying during the day, Empty containers were received, and filtered bags - (documentation/pedigree for ML-2 and drum POs) were provided to the Operations Center for file

1805 Initiated the shift turnover checklist with the oncoming SOM.

1813 Outside operations complete the movement to the transportainer.

1815 Relieved of SOM duties by R. Artell [illegible]

No further Entries this page
[illegible] 10-3-13

10/3/13 Night Shift

1815 Reviewed Shift turnover checklist, night shift operations watchbill was approved and posted @ 1814, assumed WCRR SOM position.

1820 Attending pre-job brief conducted by SOS, Safety Stand message carried by ES-IH regarding head injuries and staying focused. Good practice noted of having day shift SOS, RP-1 lead and operators performing turnover @ pre-job brief. Discussed going to Cold @ end of shift for MSS activity starting Friday AM.

2104 Completed bag off of 1 daughter - continuing to process.

2109 Completed move in of 1 drum to 50-69 for processing.

2140 Completed bag off of 2nd daughter - continuing to process

2200 Notified by SOS that Kitty litter/absorbent inventory is almost gone - have enough to finish current drum bagged on but not for next drum. J. Jerez is trying to locate and obtain more. OM notified.

RM 10/3/13 ~~2220~~

2310 ~~2244~~ 10/3/13 All bag offs are complete for parent # 5846037 (3 daughters total). Bagged on drum # 90971 (SP-2) requiring reprocessing due to liquids. Additional absorbent was obtained to complete this drum but not a SP-72 drum.

2333 Operators breaking for lunch

10/4/13 0031 Resuming operations.

0120 Bag off complete of 1 daughter for 90971 - drum is finished.

0204 Operators reported loss of lighting in 50-69 in the High bay and RCT areas (Rooms 104 & 103)

0204 Completed movements of all drums from 50-69 to transportainers. 50-69 is deinventoried.

0218 Investigated lighting issue in 50-69 - lights in room 103 returned as energized - Room 104/High bay lights remain off.

0223 Completed Mode Change: WCRR Yard / 50-69 from Operations / Operations to Warm / Cold.

0245 SOS has directed operators to prep 55 and 85 gal drums in Arctic

10/4/13 0603 Relieved by J. Guadagnoli as SOM.

No further entries this page

LRG

10-3-13

WCRR SOS LOG Book

GM 10-3-13 ~~0600~~ 0610 Assuming SOS position

0615 Conducted shift brief got turnover from off going shift

0633 Concluded shift brief.

0750 Bagging off / on 5846096

0808 Starting shipment out of ~~50-69~~ GM 10-3-13 WCRRF

0829 Bag on/off complete.

0906 Mode Change complete WCRRF In warm need to change Gloves on stations 3 and 7 bathlands

0916 Started Glove changes

0945 shipment out complete.

1000 Glove Changes complete

1010 Mode change complete WCRRF In operations

1113 Bagging off 1 daughter bagging on Brother

1130 Bags on/off complete

1131 Late entry started 2nd shipment out of ~~50-69~~ GM 10-3-13 WCRRF @ 1100.

1136 shipment out complete

10-3-13 ~~1427~~ GM ~~1428~~ Starting Movement Into 50-69

1442 Movement In Complete.

1540 Starting shipment Into WCRRF

1557 Starting Denesting Process 5846037

1633 Denesting Complete Bag on 5846037

10-3-13 1706 Bag on/off complete.

1720 Starting Rounds

1736 Shipment In to 50-69 Complete

1743 Starting Move out of 50-69

1753 Reviewed Inside and outside Rounds

1816 Movement out of 50-69 complete

1820 Relieved by Clayton Mullins

No Further entries on this Page

10/3/13 WCRR SOS Log Book
1821 Assuming SOS position. CA
1824 Starting Pre-Job with turnover with day shift.
Also discussed good housekeeping.
1845 Pre-Job complete.
2000 Relieved by Jose Jerez. CA 10/3/13
2000 Assuming SOS position. Turned over with Clayton Mullins. [illegible]
2046 Starting drum movement from Transportainer to 50-69
2055 Bagging off 1 daughter, Bagging on another daughter and continuing to process
2104 Bag off complete
2109 Drum movement complete
2129 Bagging off one daughter bagging on another and continuing to process
2140 Bag off complete
2226 Operators on pause due to next parent to process not having dose sheet with it 90971, they are also low on kitty litter for processing SP72 waste stream. Per procedure waste needs a 3 to 1 mixture
2238 Pause ended, operators continuing to process.
2241 Bagging off third daughter and will be bagging on Parent 90971
2316 Bag off complete.
2330 Operators breaking for lunch.
0020 Operators returning from lunch will continue to process remainder of Parent 90971, they will not be bagging on another Parent due to not having enough kitty litter to continue processing.
0103 Bagging off final daughter for the shift.
0120 Bag off complete.
0223 Mode change, WCRR yard is in WRPM 50-69 is in COLD all TRU waste has been moved out of 50-69.
0230 Rounds complete and signed
0530 Securing SOS position for the day. [illegible]

No further entries on this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68454
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 140.0 kg Tare Wt.: 33.4 kg Net Wt.: 106.6 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:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68454

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):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	97.6
Soils (S):	
Total WMP Weight:	106.6

CCP Radiography Data Sheet

Waste Container ID: 68454

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

Comments: N/A

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68454	Count Sequence Number:	16613
Operator:	DCLTD231\Operator		
Assay Start:	10/23/2013 11:29:28 AM		
Description 1:	2LANDA1233		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 107.0 kg	Net:	107.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
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:	16613	Batch Number:	2LANDA1233
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68454	Analysis Date:	10/23/2013

Net Weight	107000.0 g		
Pu mass	2.08E+002	+- 4.94E+001	g
TRU Alpha Activity	2.83E+001	+- 4.28E+000	Ci
TRU Activity Concentration	2.65E+005	+- 4.00E+004	nCi/g
Pu-239 Equivalent Activity	2.88E+001	+- 4.28E+000	Ci
Pu-239 FGE	1.96E+002	+- 4.64E+001	g
Decay heat	9.10E-001	+- 1.38E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.81E-001	1.28E-004	2.24E-005	3.36E-006
PU238	1.90E-002	3.25E-001	7.73E-002	3.53E-005
PU239	1.95E+002	1.21E+001	2.88E+000	1.31E-003
PU240	1.25E+001	2.84E+000	6.73E-001	3.08E-004
AM241	3.80E+000	1.30E+001	3.10E+000	1.42E-003
PU241	2.39E-001	2.47E+001	5.86E+000	2.68E-003
PU242	4.17E-002	1.65E-004	3.91E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.13E-006
U233	<LLD	<LLD	0.00E+000	1.31E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.71E-006
U238	<LLD	<LLD	0.00E+000	3.17E-005
AM243	6.37E-003	1.27E-003	2.24E-004	2.14E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/24/13

ITR: _____ Date: 10-24-13

Automated Independent Technical Review

Count Sequence Number: 16613 Batch Number: 2LANDA1233
Counter ID: HENC #2
Container ID: 68454
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/23/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	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. 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.	Ok
MCA Deadtime greater than the upper limit of 50.0%.	No spectral distortion observed. Spectrum valid.

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Pu239 FGE >200g with 2*TMU but <325g.

Expert Review by: Sheri Chamberlin Date: 10-24-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68454**

BDR Number: **LA13FG2110**

Sampling Date: **10/31/2013**

S846037

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	640.36	
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\131031c\
Data File : 68454.D
Acq On : 31 Oct 2013 1:52 pm (#1); 31-Oct-13, 13:51:57 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 31 14:00:58 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	5797354	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.865	117	4286895	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.615	GC1	4815m	640.36 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68479
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 138.5 kg Tare Wt.: 33.4 kg Net Wt.: 105.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68479

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	93.1
Soils (S):	
Total WMP Weight:	105.1

CCP Radiography Data Sheet

Waste Container ID: 68479

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

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68479	Count Sequence Number:	23751
Operator:	D3PW2DK1\operator		
Assay Start:	10/30/2013 9:29:52 AM		
Description 1:	1LANDA1856		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 105.0 kg	Net:	105.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.720 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23751	Batch Number:	1LANDA1856
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:	68479	Analysis Date:	10/30/2013

Net Weight	105000.0 g		
Pu mass	4.93E+001	+-	7.98E+000 g
TRU Alpha Activity	8.16E+000	+-	2.52E+000 Ci
TRU Activity Concentration	7.77E+004	+-	2.40E+004 nCi/g
Pu-239 Equivalent Activity	8.26E+000	+-	2.52E+000 Ci
Pu-239 FGE	4.76E+001	+-	7.50E+000 g
Decay heat	2.64E-001	+-	8.34E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.28E-002	5.84E-005	1.10E-005	2.94E-006
PU238	4.50E-003	7.70E-002	1.25E-002	3.33E-005
PU239	4.62E+001	2.87E+000	4.64E-001	1.24E-003
PU240	2.96E+000	6.71E-001	1.09E-001	2.90E-004
AM241	1.32E+000	4.54E+000	2.47E+000	6.24E-002
PU241	5.66E-002	5.83E+000	9.44E-001	2.52E-003
PU242	9.87E-003	3.90E-005	6.31E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.04E-007
U233	<LLD	<LLD	0.00E+000	6.55E-003
U234	2.50E-002	1.56E-004	4.68E-005	0.00E+000
U235	1.78E+000	3.85E-006	1.16E-006	2.73E-006
U238	<LLD	<LLD	0.00E+000	2.20E-005
AM243	2.18E-003	4.37E-004	8.32E-005	8.66E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/31/13

ITR: _____ Date: 11-4-13

Automated Independent Technical Review

Count Sequence Number: 23751 Batch Number: 1LANDA1856
Counter ID: MCS HENC #1
Container ID: 68479
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/30/2013

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

Expert Review by: Sheri Chandler Date: 10-31-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68479**

BDR Number: **LA13FG2110**

Sampling Date: **10/31/2013**

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

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131031c\
Data File : 68479.D
Acq On : 31 Oct 2013 2:27 pm (#1); 31-Oct-13, 14:26:59 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 31 14:35:34 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.548	96	5023447	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.858	117	3884534	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-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68483
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 129.5 kg Tare Wt.: 33.4 kg Net Wt.: 96.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68483

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Tape roll

R:

XPM: Plastic bag, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	4.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	89.0
Soils (S):	
Total WMP Weight:	96.1

CCP Radiography Data Sheet

Waste Container ID: 68483

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

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

S846037

NDA 2000 Assay Report

Item Information

Item ID:	68483	Count Sequence Number:	16627
Operator:	DCLTD231\Operator		
Assay Start:	10/24/2013 3:09:03 PM		
Description 1:	2LANDA1234		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 96.1 kg	Net:	96.1 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.660 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:	16627	Batch Number:	2LANDA1234
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68483	Analysis Date:	10/24/2013

Net Weight	96100.0 g		
Pu mass	2.73E+001	+-	5.23E+000 g
TRU Alpha Activity	7.18E+000	+-	2.82E+000 Ci
TRU Activity Concentration	7.47E+004	+-	2.93E+004 nCi/g
Pu-239 Equivalent Activity	7.24E+000	+-	2.82E+000 Ci
Pu-239 FGE	2.73E+001	+-	5.23E+000 g
Decay heat	2.35E-001	+-	9.36E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.41E-007
U233	<LLD	<LLD	0.00E+000	9.01E-003
U234	3.43E-002	2.13E-004	6.43E-005	0.00E+000
U235	2.44E+000	5.28E-006	1.59E-006	4.29E-006
NP237	9.59E-002	6.76E-005	1.21E-005	1.96E-006
PU238	2.49E-003	4.26E-002	1.06E-002	8.38E-004
U238	<LLD	<LLD	0.00E+000	1.70E-005
PU239	2.56E+001	1.59E+000	3.23E-001	3.12E-002
PU240	1.64E+000	3.71E-001	9.21E-002	7.30E-003
AM241	1.51E+000	5.18E+000	2.80E+000	7.70E-002
PU241	3.13E-002	3.23E+000	8.00E-001	6.35E-002
PU242	5.46E-003	2.16E-005	5.35E-006	0.00E+000
AM243	3.20E-003	6.40E-004	1.15E-004	1.38E-005

Errors quoted at 1.000 sigma

Operator: Ann Barton Date: 11/4/13

ITR: [illegible] Date: 11.4.13

Automated Independent Technical Review

Count Sequence Number: 16627
Batch Number: 2LANDA1234
Counter ID: HENC #2
Container ID: 68483
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 10/24/2013

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

Expert Review by: _____ Date: 11/4/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68483**

BDR Number: **LA13FG2107**

Sampling Date: **10/28/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	364.93	
74-82-8	Methane	142.14	U
67-56-1	Methanol	37.35	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131028c\
Data File : 68483.D
Acq On : 28 Oct 2013 10:59 am (#1); 28-Oct-13, 10:59:06 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 28 11:07:51 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.565	96	5338808	205.75	ppmv	0.05
15) Chlorobenzene-d5	5.868	117	4120005	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.615	GC1	2744m	364.93	ppmv	
4) Methanol	0.880	31	15935	37.35	ppmv	100

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

22

S846088

S846088

Container Profile 753999

File Options Reports Help

S846088

753999	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation

Genealogy

S846088

- S846088
  - LA00000068545
  - LA00000068548
  - LA00000068527 — EMPTY

Working Copy
Date: 10-24-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S8460088

6.2[4] Date Processed: 10-24-13

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

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

4.1[6][B] Parent Waste Container RCRA Designations: 10-25-13 ~~N/A~~ D007, D008, D009

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

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

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

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

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

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

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

Performed By: Frederick Ashlock / [signature] / 122626 / 10-24-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S 846088

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 500.4 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 583.4 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S846088

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68545	68548		
10.1[4]	Daughter Drum Filter No.	LM-303	LM 372	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10341	L-10299		A
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N	A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	3GALLONS			
10.3[5][A]	Free Liquid Volume/Units	2gALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHEETING	LEAD SHEETING		
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%	70%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty litter stubouts	PLASTIC kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S846088

Comments: Nitrate salts, plastic, kitty litter, lead

11.1[1] Performed By: GERALD ESPINOZA / [signature] / 1237729 / 10/24/13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Darrel L. Blain / [signature] / 1218069 / 10/29/13 0655
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: 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-1035
Manufacture Date: 10-11

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

5. [11] Performed By: Brandon Chavez / [signature] 204742
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 204742 / 10-4-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Darrel L. Blain / [signature] 218069 10/25/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-24-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68527

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

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

Performed By: Frederico [illegible] / [illegible] 1238826 10-24-13
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): 163.4 lb

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA / [illegible] 1232720 10/24/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Darrel L. Blain / [illegible] 1218041 10/25/13
Supervisor or designee (print) Signature Z # Date

UET Working Copy
Date: 11-21-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68545

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2SPVC
Serial No.: L-10341
Manufacture Date: 6/13

1 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: MARCHAEL MONTOYA / [signature] 191352 / 10/21/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-303
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.: 68545

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA [signature] 191352 / 10/21/13
Operator (print) Signature Z# Date

7.1[4] Reviewed By: [signature] 10-25-13 Darrel L. Blair [signature] 1218069 10/25/13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68545

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

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

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

Performed By: Frederico Arbolata / [signature] / 1228826 / 10-24-13
Operator (print) / Signature / Z # / Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68545

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 433.8 lbs

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

Comments: N/C

6.[32] Performed By: Edward Martinez (Operator (print)) [signature] (Signature) 1239911 (Z #) 10-24-13 (Date)

7.1[4] Reviewed By: Darrell L. Blain (Supervisor or designee (print)) [signature] (Signature) 1218019 (Z #) 10/25/13 (Date)

UE Working Copy

Date: 10-21-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68548

5.[3] Drum information:
Purchase Order No.: 301578
Lot No.: 240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: 130P
Model No.: 6CPVC1.5-2SPVC
Serial No.: L-10299
Manufacture Date: 5/13

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

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

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

Performed By: BRIAN GALLEGOS / B. Gallegos / 267129 10-21-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-372
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.: 68548

Comments: N/c

5.[35] Performed By: BRIAN GALLEGOS / Bri Gallegos / 267129 10-21-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Darrel L. Blain / [signature] / 218019 10/25/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68548

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

M&TE No.: 037418
Cal. Expiration Date: 03/06/2014
Range in ft-lb: 10-80
Tolerance: +/-3% cw and +/-6% CCW

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

Performed By: Eduard Martinez (Operator (print)) [signature] (Signature) 123911 (Z #) 10-24-13 (Date)

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 608548

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 340.0 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: GERALD ESPINOZA (Operator (print)) [signature] (Signature) 1237720 (Z #) 10 24 13 (Date)

7.1[4] Reviewed By: Darrell L Blain (Supervisor or designee (print)) [signature] (Signature) 1278019 (Z #) 10/25/13 (Date)

Working Copy
Date: 10-24-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5846088

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

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

6.3[18] Prepared parent 55-gal drum weight (lb): 500.4

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

Comments: N/C

8.1[1] Performed By: Frederick Bellinger / [signature] 1228820 10-24-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Darrel L. Blain / [signature] Z18069 10/25/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Darrel L. Blain / [signature] Z18069 10/25/13 0700
SOS/SOM or designee (print) Signature Z # Date Time

1937 72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846088 Container Type: 85-GAL Gross Weight (lbs): 525
Inner Seal #: 019542 Filter Prefix: LAVC Filter Serial #: 00207
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 1.65E+01 Equivalent Combustible PE-Ci: 6.19E+00 AM-241 PE-Ci: 2.67E+00
Total Fissile Gram Equivalents: 183.2 Total Surface Dose Rate (mrem/hr): 3
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 2/1/2007 Comment: NA
Certified RTR Comment: None

Prohibited Items: ☒ Sealed > 4 Liters ☒ Liquid ☒ Pressurized Container ☒ Impenetrable Item ☑ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1:2 volumes of Kitty Litter/zeolite must be mixed with 1:0 volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: R. W. Jones Z Number: 117434 Date: 1.10.12

WDP Engineering

SUSAN S. RAMSEY Signature: Susan S. Ramsey Z Number: 100681 Date: 10/31/12

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 465 lb. Generator info shows waste consists of 22 items (likely plastic bags) of nitrate salts ranging in weight from 3.5 lb to 59 lb. Waste packaged into 55 gal drum. Nitrate salts may contain free liquids.

May require RWP for >1000 and <10,000 mrem/hr @ 30 cm

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 5/2/12

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves when processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Jose Perez (TRU Remediation Operations (Print)) Signature: Jose Perez Z Number: 221452 Date: 11-29-12

Z# 249750 12/11/12
IHS Review. Johnny Amalkwood CSP, may contain Pb, Hg, Cr
11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 019542

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	LCU118N101		5.950	NITRATE SALTS		1710.	81	9/	G468	
2	LCU12-895		6.290	NITRATE SALTS		11.96	53	6/14	G468	
3	LCU12-895		6.290	NITRATE SALTS		2500.	12	9/	G468	
4	LCU12-895		6.280	NITRATE SALTS		1600.	81	9/	G468	
5	UOX9-95NE1		14.320	NITRATE SALTS		7.93	53	6/14	G468	
6	LCU13103NE		1.590	NITRATE SALTS		1.45	53	6/14	G468	
7	LCU13103NE		1.590	NITRATE SALTS		300.	12	9/	G468	
8	LCU13103NE		1.590	NITRATE SALTS		300.	81	9/	G468	
9	LCU14119NE		1.880	NITRATE SALTS		5.6	54	6/14	G468	
10	LCU14119NE		1.870	NITRATE SALTS		3300.	81	9/	G468	
11	LCU (ILLEGIBLE)		14.310	NITRATE SALTS		33.03	54	6/14	G468	
12			14.310	NITRATE SALTS		1.4E4	12	9/1	G468	CANNOT READ
13			14.310	NITRATE SALTS		1350.	81	9/	G468	CANNOT READ
14	UOX7-555A		13.990	NITRATE SALTS		5.98	53	6/14	G468	
15			4.090	NITRATE SALTS		10.5	53	6/14	G468	CANNOT READ
16			4.090	NITRATE SALTS		1340.	12	9/1	G468	CANNOT READ
17	NAX8-71NE1		26.820	NITRATE SALTS		22.72	54	6/14	G468	
18	UOX8-71NW1		14.550	NITRATE SALTS		22.36	54	6/14	G468	
19	LCU1170NW1		5.950	NITRATE SALTS		13.01	53	6/14	G468	

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
20	LCU1170NW1		5.950	NITRATE SALTS		1280.	12	9/	G468	
21	LCU1513NW		7.160	NITRATE SALTS		10.77	54	6/14	G468	
22	LCU15132NW		7.160	NITRATE SALTS		600.	12	9/	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 238.1

Material Type	SNM (grams)	Items Net Wt (kg)
12	19990.	39.39
53	50.83	46.23
54	94.48	64.72
81	8260.	30.00
Totals	28395.	180.34

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HR
6.10.12

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 2/23/12

Container No. (5.[1])	86544	87583	5846088	84732	5846037	53130
Filtered Vent Type (5.[1])	72	72	72	72	72	72
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	522.34 ppm	Ø ppm	Ø ppm	8.19 ppm	Ø ppm	Ø ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	100.97 ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm

5.[7] Certified CCP Technician:

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

Reviewed By: Gabe Romero (CCP (Print)) 236973 (Z#)

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

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

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

6.1[2][B]/ 6.1[3] Performed By: Alicia Herrera (Waste Handling Operator (print)) [signature] 198150 (Z#) 2/28/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120223c\
Data File : S846088.D
Acq On : 23 Feb 2012 12:45 pm (#1); 23-Feb-12, 12:44:52 (#2)
Operator : GR
Sample :
Misc : 55 GAL LFL FROM INSIDE 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 23 12:55:39 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Oct 18 13:58:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.638	96	7030623	209.00	ppmv	0.00
15) Chlorobenzene-d5	5.951	117	5382254	185.50	ppmv	0.00

Target Compounds	Qvalue

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

vocgas.m Thu Feb 23 12:56:00 2012

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10-24-13

0553 Assuming WCRR operations center - JColeman
0600 Beginning outside rounds.
0617 Pre-job being conducted by SOS. Rebriefed to shift orders.
0621 Beginning inside rounds.
0622 Outside rounds complete.
0637 Pre-job concluded.
0643 Item #63 is OOS, okay to proceed per CSE documentation.
0645 Inside rounds complete.
0752 Both rounds reviewed by SOS.
0753 ~~0744~~ JC 10-24-13 Initiating a drum movement from 50-69 to a transportainer.
0758 Drum movement complete.
0805 Mode change complete. WCRRF yard and 50-69 are now in operations.
0810 Denesting 2 drums and then bagging on 5851426.
0914 Denesting and bag on complete.
1028 Bagging off / daughter, bagging on another daughter.
1048 Bag on complete.
1156 Bagging off, bagging on 5846088
1220 Bag off / on complete.
1348 Bagging off / daughter, bagging on another daughter.
1408 Bag off / on complete.
1419 Notified by tech 38 that the LL salvage drum that was recapped and moved into 50-69 is leaking from the cap again. RCT's have stated it is known rain water. SOS, SOM notified as well as IH.
1423 Per lead RCT, they will absorb the liquid and proceed with operations.
1536 Operators and RCT's donning respirators to absorb the liquid on the LL drum.
1557 Beginning outside rounds.
1621 Outside rounds complete
1622 Operators have completed absorbing liquid on the LL drum
1648 Beginning inside rounds.
1731 Item #63 is OOS, okay to proceed per CSE documentation
Continued on next page - JColeman

10-24-13 Continued from previous page - Coleman
1742 Bagging off final drum of the day.
1809 Bagoff completed.
1819 Mode change complete. We are now in Warm Standby in WCRRF yard and 50-69.
1820 Both rounds reviewed by SOS.
10-24-13 1830 End of day. OCO position secured. Coleman

No further entries this page.

2-24-13

0535 Assumed the WCRR SOM Position John Guadagnolo

0639 Completed attending the pre job brief conducted by the SOS (Clayton) the shift orders were discussed / read to operators. Currently there are no scheduled transfers in or out of WCRR. The operators were questioned by DOE / on ISIs, ACs, SRs, and Design Features. 50% of the questions were incorrectly responded. The SOS discussed drums to be processed today. Also 1 LLW drum will be brought in to remove rain water, and complete filling with waste. The Safety topic was carbon monoxide.

0705 Completed daily phone call to AREAS to update the POD

0730 Discussed with CM and FAC REP. weekly extensions of shift Orders -

0805 Made Change - WCRR YARD and 5069 Facility transition from WARM/WARM to Operations / Operations.

0823 Completed walkdown of the WCRR YARD reviewing growth of weeds and location. The crafts will require scheduling for weed cutting on the next maintenance scheduled day. Observed operators de-nesting the first drum with slings.

0914 Inside operations report de-nesting completed. (two drums) Bag on completed.

0922 SOM exits WCRRF to attend Lockin schedule, notification made to CM-OCC.

1005 SOM returns to WCRRF. notification made to Operations Center.

1017 Conducted debrief with FAC REP (Dalton) she questioned the posting (non existent) existing 5069 - Rm 104 - High Bay AREA. RCT supervisor - not available at time of exit.

1027 Operators report bagging off 1 daughter and bagging on another.

1048 Bag on Completed -

1156 Operations reported bagging off daughter and bagging on S8460B8

1220 Bag off noted complete

1423 LLW drum entered facility and liquid was completed being absorbed on plastic shower cap - noted - liquid - rain water

1536 Upon opening LLW drum, it was 80% full - top off with room trash and oil dry / kitty litter was added to the drum.

1630 Turned the SOM position over to R. Axtell John Guadagnolo

1630 Assumed WCRR SOM position.

1742 Bagging off last drums of the day

1809 All bag offs completed - WCG is in safe configuration.

1819 Made change completed: WCRR yard / Bldg 5069 from Operations / Operations to Warm / Warm.

1830 Secured the SOM position.

10/24/13 WCRR SOS Log Book

0600 Assuming SOS position. CA

0615 Starting Pre-Job discussed carbon monoxide safety at home. Also went over both standing orders as well went over TSR related.

0638 Pre-Job complete.

0752 Signed off on the rounds.

0805 Mode change complete, WCRRF yard and 50-69 are now in Operations.

0810 Denesting 2 drums, bagging on 5851426.

0914 ~~Dene~~ 10-24-13 cm Denesting and bag on complete.

1028 Bagging off 1st daughter, bagging on a 2nd

1048 Bag off/on complete.

1156 Bagging off 2nd daughter, bagging on 5846088

1220 Bag off/on complete.

1348 Bagging off 1st daughter, bagging on a 2nd.

1408 Bag off/on complete.

1419 Notified by tech 38 that the low level salvage drum that was recapped and moved into 50-69 is leaking from the cap again. RCT's have stated the liquid is known to be rain water.

1423 Per lead RCT, the operators will absorb the liquid in respirators as a pre-caution. Will then proceed with operations.

1622 Liquid has been absorbed with the low level drum.

1742 Bagging off ~~2nd~~ cm 10-24-13 2nd daughter to complete processing.

1809 Bag off complete.

1812 Late entry @ 0753 starting movement out of 50-69. C Mullins

1813 Late entry @ 0758 move out complete. C Mullins

1819 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.

1820 Signed off on the rounds.

1822 Securing SOS position for the day. CA

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0132
Examination Date:	12/2/2013
Waste Container ID:	68545
Video/Audio Recorded Media Number:	LA-RTR2-13-0132 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 196.5 kg Tare Wt.: 33.4 kg Net Wt.: 163.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

CCP Radiography Data Sheet

Waste Container ID: 68545

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	155.0
Soils (S):	
Total WMP Weight:	163.1

CCP Radiography Data Sheet

Waste Container ID: 68545

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

RTR Operator:

Benito Maestas		12/2/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68545	Count Sequence Number:	16796
Operator:	DCLTD231\Operator		
Assay Start:	12/3/2013 2:30:59 PM		
Description 1:	2LANDA1248		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 163.0 kg	Net:	163.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.780 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:	16796	Batch Number:	2LANDA1248
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68545	Analysis Date:	12/3/2013

Net Weight	163000.0 g		
Pu mass	9.75E+001	+- 3.00E+001	g
TRU Alpha Activity	1.83E+001	+- 7.56E+000	Ci
TRU Activity Concentration	1.12E+005	+- 4.64E+004	nCi/g
Pu-239 Equivalent Activity	1.89E+001	+- 7.59E+000	Ci
Pu-239 FGE	1.08E+002	+- 2.83E+001	g
Decay heat	5.93E-001	+- 2.49E-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	1.15E-006
U233	<LLD	<LLD	0.00E+000	1.10E-002
U234	4.36E-001	2.71E-003	5.40E-004	0.00E+000
U235	3.11E+001	6.72E-005	1.34E-005	6.56E-006
NP237	1.42E-001	1.00E-004	1.98E-005	2.75E-006
PU238	3.57E-002	6.10E-001	6.44E-001	5.49E-003
U238	1.33E+004	4.46E-003	8.84E-004	1.16E-004
PU239	8.68E+001	5.38E+000	1.74E+000	4.84E-002
PU240	1.02E+001	2.31E+000	2.44E+000	2.08E-002
AM241	2.91E+000	9.98E+000	6.91E+000	1.28E-001
PU241	3.63E-001	3.74E+001	3.95E+001	3.37E-001
PU242	1.66E-001	6.57E-004	6.93E-004	0.00E+000
AM243	1.66E-003	3.32E-004	6.57E-005	1.63E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 12-4-13

ITR: Sam Barton Date: 12/9/13

Automated Independent Technical Review

Count Sequence Number: 16796 Batch Number: 2LANDA1248
Counter ID: HENC #2
Container ID: 68545
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source perturbation out of limits.	Neutron results suspect. Gamma results applied.
Add-a-Source Calibration exceeds Upper Limit.	
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Add-a-Source reals correction factor is above calibration upper limit.	Not data affecting, gamma results applied.
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-54,53.
Results are marked as invalid.	

Comments	Disposition
Section 5 - Gamma Analysis Analysis Status: No errors. U-235 mass is greater than the upper limit of 10.0 g. Total U mass is greater than the upper limit of 500.0 g.	 U235 verified by AK and gamma spectrum. U235/U238 verified by AK. Results valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

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

Waste Container ID: **68545**

BDR Number: **LA13FG2124**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	405.10	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131206C\
Data File : 68545.D
Acq On : 6 Dec 2013 12:40 pm (#1); 06-Dec-13, 12:39:59 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 06 12:49:00 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.578	96	3867585	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.878	117	3049735	177.50	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.604	GC1	3046m	405.10	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-RTR2-13-0132
Examination Date:	12/2/2013
Waste Container ID:	68548
Video/Audio Recorded Media Number:	LA-RTR2-13-0132 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 154.0 kg Tare Wt.: 33.4 kg Net Wt.: 120.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68548

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic sheeting

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	4.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	114.6
Soils (S):	
Total WMP Weight:	120.6

CCP Radiography Data Sheet

Waste Container ID: 68548

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

RTR Operator:

Benito Maestas		12/2/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68548	Count Sequence Number:	16797
Operator:	DCLTD231\Operator		
Assay Start:	12/3/2013 3:15:57 PM		
Description 1:	2LANDA1248		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 121.0 kg	Net:	121.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.830 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16797	Batch Number:	2LANDA1248
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68548	Analysis Date:	12/3/2013

Net Weight	121000.0 g		
Pu mass	8.29E+001	+- 2.46E+001	g
TRU Alpha Activity	1.65E+001	+- 2.56E+000	Ci
TRU Activity Concentration	1.36E+005	+- 2.12E+004	nCi/g
Pu-239 Equivalent Activity	1.71E+001	+- 2.57E+000	Ci
Pu-239 FGE	8.90E+001	+- 2.46E+001	g
Decay heat	5.36E-001	+- 8.29E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.16E-006
U233	<LLD	<LLD	0.00E+000	1.11E-002
U234	3.11E-001	1.93E-003	4.03E-004	0.00E+000
U235	2.22E+001	4.80E-005	1.00E-005	6.26E-006
NP237	1.12E-001	7.88E-005	1.61E-005	2.84E-006
PU238	3.03E-002	5.19E-001	1.87E-001	6.10E-003
U238	2.12E+004	7.12E-003	1.46E-003	1.38E-004
PU239	7.37E+001	4.57E+000	1.51E+000	5.37E-002
PU240	8.67E+000	1.97E+000	7.07E-001	2.31E-002
AM241	2.75E+000	9.44E+000	1.93E+000	1.98E-001
PU241	3.09E-001	3.18E+001	1.14E+001	3.74E-001
PU242	1.41E-001	5.58E-004	2.01E-004	0.00E+000
AM243	8.04E-004	1.61E-004	3.33E-005	1.46E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 12-4-13

ITR: _____ Date: 12/9/13

Automated Independent Technical Review

Count Sequence Number: 16797 Batch Number: 2LANDA1248
Counter ID: HENC #2
Container ID: 68548
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-54,53.
Section 5 - Gamma Analysis Analysis Status: No errors. U-235 mass is greater than the upper limit of 10.0 g. Total U mass is greater than the upper limit of 500.0 g.	U235 verified by AK and gamma spectrum. U235/U238 verified by AK. Results valid.

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

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

Waste Container ID: **68548**

BDR Number: **LA13FG2125**

Sampling Date: **12/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	205.08	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131209c\
Data File : 68548.D
Acq On : 9 Dec 2013 1:37 pm (#1); 09-Dec-13, 13:36:19 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 09 13:45:01 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.584	96	3730845	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.881	117	2963864	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.612	GC1	1542m	205.08 ppmv	

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

S846096

S846096

Container F 768390

File Options Reports Help

S846096

768390	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

S846096

S846096

- LA00000068443 - Empty
- LA00000068499
- LA00000068502
- LA00000068427

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
26.99	%			

Working Copy
Date: 10-3-13 10-2-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: ~~S846096~~ 10-3-13 S846096

6.2[4] Date Processed: 10-3-13

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

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

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

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

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

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

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

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

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

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

Performed By: [illegible] | [signature] 123[illegible] | 10-3-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S846096

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 434.2 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 515.2 lb

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

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

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

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

ATTACHMENT 1

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4.1[6][B] Parent Waste Container No.: S846096

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68499	68502		
10.1[4]	Daughter Drum Filter No.	LM-374	LM-364	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-10292	L-10294		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	GNCFF-2SHL			
	Serial No.	L-6743			
	Date of Manufacture	1-13			
10.2[5]	POC ID No	68427			
10.2[7][B]/10.2[6]	POC Item Description	Nitrate Salt, Plastic		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)	501 MR			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[5][A]	Free Liquid Volume/Units	6 gallons	5 gallons		
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		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100 %	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Plastic Stab out Bags Glove Box Gloves	Kitty litter Stab out Bags		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S846096

Comments: Nitrate Salts, Plastics, 1-poly lid
1-steel drum lid Rag, 6 gallons PH 1 liquid neutralized,
kitty litter, glove box gloves

11.1[1] Performed By: James Sabol [signature] 1616662 10-03-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [signature] 1422335 10-9-13 0830
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 9-18-13

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238567
Manufacture Date: 15

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:	12-18-15	12-18-15
Tolerance:	+/- 4% cw +/- 2% ccw	+/- 3% cw +/- 6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-903
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] 276286 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: IAN MARQUEZ / [signature] 276286 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / [signature] 145235 10-9-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 10-3-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68443

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

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

Performed By: [signature] 1111621 10-3-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 170.2 lb

Comments: N/C

8.1[1] Performed By: James S. [signature] 1111621 10-3-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez [signature] 149231 10-5-13
Supervisor or designee (print) Signature Z # Date

~~Working Copy~~
Date: 10-1-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68499

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5 - 2SPVC
Serial No.: L-10292
Manufacture Date: 5/13

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

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

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

Performed By: MICHAEL MONTGOMERY / [signature] 191352 / 10/01/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 DS
Serial No.: LM-374
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.: 68499

Comments: N/C

5.[35] Performed By: MICHAEL MONTAÑA / [signature] 191352 / 10/01/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 149235 / 10-9-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date:_____

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68499

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

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

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

Performed By: Frederick Archuleta / [signature] / 1228826 / 10-3-13
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	N
Range in ft-lb:	A	A
Tolerance:		

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

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

6.[17][C] 2 in. bung plug torque value: _____ 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.: 68499

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

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

6.[28] Drum gross weight: 305 4 lbs

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

Comments: N/C

6.[32] Performed By: Federico Hidalgo [signature] 1225841 10-5-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 145231 10-5-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-1-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68502

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 60PVC 1.5-35PVC
Serial No.: L-10294
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:	20-200	10-80
Tolerance:	±4%cw ±6%ccw	±3%cw ± 6%ccw

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

Performed By: MICHAEL MONTOYA [signature] Z91353 10/01/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-364
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: 09065

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.: 68502

Comments: N/C

5.[35] Performed By: Michael Montoya / [signature] Operator (print) Signature Z # 491352 Date 10/4/13

7.1[4] Reviewed By: Gilbert Martinez / [signature] Supervisor or designee (print) Signature Z # 149287 Date 10-9-13

Working Copy
Date:_____

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68502

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

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

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

Performed By: [illegible] | [illegible] 122088 | 10-3-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68502

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 4558 lbs

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

Comments: N/C

6.[32] Performed By: Federico Abeleta / [signature] 1228504 10-3-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] [illegible] 10-5-13
Supervisor or designee (print) Signature Z # Date

1437
SP77

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846096 Container Type: 85-GAL Gross Weight (lbs): 480
Inner Seal #: 019637 Filter Prefix: LAVC Filter Serial #: 01356
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 8.81E+00 Equivalent Combustible PE-Ci: 3.31E+00 AM-241 PE-Ci: 7.15E-01
Total Fissile Gram Equivalents: 97.3 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 7/23/2007 Comment: Impenetrable Obj.
Certified RTR Comment: None
Prohibited Items: ■ Sealed > 4 Liters ■ Liquid ■ Pressurized Container ✓ Impenetrable Item ✓ Other
Security Determination: ✓ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / [signature] / 100681 / 11/20/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 420#. Generator info shows 6 items of nitrate salts, with weights ranging from 34-89#. NO RTR BDR available for review. RTR PS shows impenetrable item(s). Nitrate salts are typically packaged in plastic bags; other debris often present. Nitrate salts carry waste codes for lead, chromium, + mercury. Repack with admixture is required. Undocumented liquids may be present.

Performed By: Valerie Rhodes / Valerie Rhodes / 112601 / 1/2/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

✓ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.
Performed By: Jose Jerez / [signature] / 221452 / 2-5-13
TRU Remediation Operations (Print) Signature Z Number Date

ROBIN SHULT [signature] 277298 2-11-13
HS Review RB 206302 11.26.12 NOTES: D007 - chromium
D008 = lead

Noncertified TRU Waste Drum Item Information

DrumID: 019637

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	LR121NE1		28.520	NITRATE SALTS		10.09	52	6/14	G468	
2	LR121NW1		15.450	NITRATE SALTS		3.01	52	6/14	G468	
3	OX125122NW		25.910	NITRATE SALTS		28.88	52	6/14	G468	
4	OX125122NE		26.600	NITRATE SALTS		20.51	52	6/14	G468	
5	OX126123NE		21.480	NITRATE SALTS		10.9	52	6/14	G468	
6	DS128NE1		40.340	NITRATE SALTS		30.01	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 217.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	103.4	158.30
Totals	103.4	158.30

ATTACHMENT 1

Page 1 of 1

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

5.[1] Sample Date: 1/19/11

Container No. (5.[1])	S846096					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-gal overpacked in 85-gal					
Filtered Vent Type (5.[1])	77					
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])	937.44 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 — 238866
CCP (Print) Z #

Reviewed By: _____
CCP (Print) Z #

Comments:

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

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

6.1[3] Performed By: SUSAN S. RAMSEY, [signature] [illegible] 11/27/12
Waste Handling Operator (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/19/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date

CCP (Print)	Signature	Z #	Date

Container No. (7.[1]):	S853733	S846096	S833438
Container Type (SWB, 110/85/55-gal) (7.[1]):	55 gal	55 gal	55 gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
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NOTE *Filtered vent data may be captured on a support organization data sheet.*

Container Number (7.[1]):	S853733	S846096	S833438
Hydrogen Reading (ppm) (7.[10]):	Ø ppm	939.94 ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

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

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 1/24/11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT
- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110119c\
Data File : S846096.D
Acq On : 19 Jan 2011 12:34 pm (#1); 19 Jan 2011 12:33 pm (#2)
Operator : EL
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM FROM 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 19 12:42:10 2011
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.249	96	4688027	209.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	3886307	184.00 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.356	GC1	238008	939.94 ppm	100

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

Vocgas.m Wed Jan 19 12:42:30 2011

10-3-13

0410 Assuming WCRRF OCC position - Cleland

0617 Pre job being conducted by SOS

0633 ~~0633~~ 10-3-13 Pre job concluded.

0750 Bagging off and bagging 3846096

0808 Permission granted to lower vehicle acc
DOR movement to transport vehicle

0829 Bag on, Bag off complete

0906 Mode change being performed - TA50-69 and W
yard in warm standby.

0916 Starting glove changes on station 3 and 7 righ
and left.

0945 Vehicle access gates have been restored, m
complete to transport vehicle

1000 Glove changes are complete on station 3 a

1010 Mode change performed TA50-69 and WCRRF
yard now in operations.

1113 Bagging off 1 daughter, Bagging on another

1130 Bag on, Bag off complete.

1136 Vehicle access gates have been restored.

1137 Late entry Permission granted to lower ve
access gates DOR loading of transport vehic
1100 - Cleland.

1139 Movement out of WCRRF is complete.

1427 Starting movement into 50-69.

1442 Movement into 50-69 is complete

1540 Permission granted to lower vehicle acce
gates to unload transport vehicle

1557 Starting to denest 3846037

1633 Denesting is complete, Bagging off Bagging o
~~3840370~~ 10-3-13 3846037.

1706 Bag on, Bag off is complete.

1720 Starting inside rounds.

1723 Starting outside rounds.

1730 Item # 43 is CCS, PCD in place okay to proceed
CSE documentation.

- Continued on next page - Cleland

10-3-13 - Continued from previous page - [illegible]
1736 vehicle access gates have been restored, movement out of 50 ~~CR 43~~ 10-3-13 transport vehicle to transportation is complete.
1740 Item #19 is unsat, FSR in place okay to proceed.
1743 Starting movement out of 50-69
1744 Unsafe rounds complete.
1816 ~~1816~~ 10-3-13 Completed movement out of 50-69
1817 Being relieved by DCO Terri Coleman - [illegible]

no further entries this page

10-3-13 DAYSHIFT

0613 Obtained and reviewed shift turnover checklist and assumed the WCRR SOM position John Lendagnola

0614 Completed review and approved the day shift operations watchbill.

0625 Completed attending the pre-job brief conducted by the SOS (Gilbert) The safety topic was to wear proper PPE and to stay focused, there are a lot of distractions and personnel need to watch out for each other. There are two transfers scheduled out and one scheduled in. Operations discussed the 85 gallon drum grabber - ensure its gripping when using and zip ties are breaking. Ensure they are secure and RCTs discussed tears could occur during bag on's and bag off's. Excellent awareness of exchange and sharing information noted. Discussed current shift orders in place.

0715 Completed the Facility POD status phone call with AREA-G.

0750 Inside operators initiate bagging off and bagging on Parent S846096 Parent drum S824967 from night shift has generated 2 daughters

0829 Operations completed Bag offs and Bag Ons.

0906 Mode Change 50/69 and Yard Transition from Operations/Operations to WARM/WARM due to glove changes required per RCT. Glovebox WCG is in safe configuration.

0911 P&T completes inspection and labelling of 40 drums to be transfered on two transfer vehicles to Area G. P&T inspections started at 0805 hrs. Two transfer vehicles are staged, one ready to load at the gate. Operators initiate moves.

0916 Inside Operators initiate glove changes on Station 3 and station 7, both pair.

0950 Issues were identified with the 2ND transfer to AREA G - associated with WCRTs. Waste help was notified for support. The OM was notified that an error message of LOC REC; is non-compliant to receive in G.

1010 Mode Change: 50/69 and Yard transition from WARM/WARM to Operations/Operations.

1049 The WCRTs issue was resolved noting the non-compliant drums were required to be changed to yes compliant by Waste help for acceptance to AREA G. P&T is checking with AREA G for acceptance of 2ND transfer after lunch if not delivered prior to lunch.

1158 Completed attending the weekly Project Status meeting.

1245 P&T arrives to perform the transfer / remove from WCRR and transfer vehicle to AREA G

1330 CSE/Fire protection arrives to perform combustible loading surveillance.

1350 Weeds in the MDA-C were observed being cut.

1422 CSE/Fire protection exited facility and completes the walkdown, report forthcoming.

1427 Movement into WCRRF being initiated.

1442 Movement into facility Completed.

(Continued on Next Page)

10-3-13 Day shift (cont)

1541 Outside operators initiate transfer from the transfer vehicle to the transportainer (14 drums total). Two drums are noted to have higher than normal dose. Drum S823016 reads 10.3 mr at 3ft and S854616 reads 19.3 mr at 3ft.

1618 Provided Email to Mr D. Christensen regarding D002 code attached to daughters (68501, 68494 and POC 68426) per Parent 5910170-SEDs requesting evaluation of D002 code. These drums will be on hold at WCRR until we recieve information from Programs.

1620 Late entry for 1557 inside operations report initiating denesting

1630 The lock to the transportainer 195 Broke, the OCO was notified, and another administrative lock was pulled from the safe to utilized. The same key will be used for the administrative lock.

1633 Inside operations report of denesting S846037 (pinhole lid drum) and application of RTV, and initiating bag on of Parent S846037

1705 Bag off and Bag On - was reported completed

1736 Outside operations report the transfer to the transportainer is completed.

1745 Outside operations initiate a move out of the facility to the transportainers

1749 SOM updates logbook identifying during the day, Empty containers were received, and filtered bags - (documentation/pedigree for ML-2 and drum POs) were provided to the Operations Center for file.

1805 Initiated the shift turnover checklist with the oncoming SOM.

1813 Outside operations complete the movement to the transportainer.

1815 Relieved of SOM duties by R. Artell [signature]

No further Entries this page
[signature] 10-3-13

10-3-13

WCRR SOS LOG Book

Gm 10-3-13 ~~0600~~ 0610 Assuming SOS position

0615 Conducted shift brief got turnover from off going shift

0633 Concluded shift brief.

0750 Bagging off / on S846096

0808 Starting shipment out of ~~50-69~~ Gm 10-3-13 WCRRF

0829 Bag on/off complete.

0906 Mode change complete WCRRF In warm need to change Gloves on stations 3 and 7 both/hands

0916 Started Glove changers

0945 shipment out complete.

1000 Glove Changers complete

1010 Mode change complete WCRRF In operations

1113 Bagging off 1 daughter bagging on Brother

1130 Bags on/off complete

1131 Late entry started 2nd shipment out of ~~50-69~~ Gm 10-3-13 WCRRF @ 1100.

1136 shipment out complete

10-3-13/1427 Gm ~~1427~~ Starting Movement Into 50-69

1442 Movement In Complete.

1540 Starting shipment Into WCRRF

1557 Starting Denesting Process S846037

1633 Denesting Complete Bag on S846037

10-3-13 1706 Bag on/off Complete.

1720 Starting Rounds

1736 Shipment In to 50-69 Complete

1743 Starting Move out of 50-69

1753 Reviewed Inside And outside Rounds

1816 Movement out of 50-69 complete

1820 Relieved by Clayton Mullins

No Further entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68427
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 156.5 kg Tare Wt.: 145.1 kg Net Wt.: 11.4 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: 68427

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	9.4
Soils (S):	
Total WMP Weight:	11.4

CCP Radiography Data Sheet

Waste Container ID: 68427

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68427	Count Sequence Number:	16615
Operator:	DCLTD231\Operator		
Assay Start:	10/23/2013 1:20:21 PM		
Description 1:	2LANDA1233		
Description 2:	POC 156.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 11.4 kg	Net:	11.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.652 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:	16615	Batch Number:	2LANDA1233
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68427	Analysis Date:	10/23/2013

Net Weight	11400.0 g		
Pu mass	7.17E+000	+-	3.28E+000 g
TRU Alpha Activity	1.44E+000	+-	6.62E-001 Ci
TRU Activity Concentration	1.26E+005	+-	5.81E+004 nCi/g
Pu-239 Equivalent Activity	1.46E+000	+-	6.62E-001 Ci
Pu-239 FGE	6.76E+000	+-	3.28E+000 g
Decay heat	4.68E-002	+-	2.19E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.90E-007
U233	<LLD	<LLD	0.00E+000	2.92E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.58E-007
NP237	1.73E-002	1.22E-005	2.17E-006	6.85E-007
PU238	6.55E-004	1.12E-002	5.68E-003	2.96E-004
U238	<LLD	<LLD	0.00E+000	9.30E-006
PU239	6.73E+000	4.17E-001	2.03E-001	1.10E-002
PU240	4.30E-001	9.76E-002	4.95E-002	2.58E-003
AM241	2.67E-001	9.15E-001	6.29E-001	3.72E-002
PU241	8.24E-003	8.49E-001	4.31E-001	2.24E-002
PU242	1.44E-003	5.67E-006	2.88E-006	0.00E+000
AM243	3.30E-004	6.60E-005	1.18E-005	4.34E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/24/13

ITR: _____ Date: 10.24.13

Automated Independent Technical Review

Count Sequence Number: 16615 Batch Number: 2LANDA1233
Counter ID: HENC #2
Container ID: 68427
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/23/2013

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

Expert Review by: Sheri Chamberlin Date: 10-24-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68427**

BDR Number: **LA13FG2115**

Sampling Date: **11/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	590.49	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131113c\
Data File : 68427.D
Acq On : 13 Nov 2013 2:42 pm (#1); 13-Nov-13, 14:42:00 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 13 14:50:30 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.535	96	4382580	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3421583	177.50 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.547	GC1	4440m	590.49 ppmv	

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

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11-14-13

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68499
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 138.5 kg Tare Wt.: 33.4 kg Net Wt.: 105.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68499

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Closure ring

AM:

OM: Scrap lead

OI:

C:

R: Leaded rubber gloves

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	5.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	89.1
Soils (S):	
Total WMP Weight:	105.1

CCP Radiography Data Sheet

Waste Container ID: 68499

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

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68499	Count Sequence Number:	16623
Operator:	DCLTD231\Operator		
Assay Start:	10/24/2013 10:44:19 AM		
Description 1:	2LANDA1234		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 105.0 kg	Net:	105.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.630 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16623	Batch Number:	2LANDA1234
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68499	Analysis Date:	10/24/2013

Net Weight	105000.0 g		
Pu mass	2.50E+001	+-	4.60E+000 g
TRU Alpha Activity	4.29E+000	+-	1.28E+000 Ci
TRU Activity Concentration	4.09E+004	+-	1.22E+004 nCi/g
Pu-239 Equivalent Activity	4.33E+000	+-	1.28E+000 Ci
Pu-239 FGE	2.44E+001	+-	4.29E+000 g
Decay heat	1.39E-001	+-	4.24E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.37E-002	3.78E-005	6.57E-006	1.33E-006
PU238	9.09E-003	1.56E-001	2.86E-002	1.24E-004
PU239	2.33E+001	1.45E+000	2.66E-001	1.15E-003
PU240	1.66E+000	3.76E-001	6.92E-002	3.00E-004
AM241	6.75E-001	2.31E+000	1.25E+000	4.74E-002
PU241	2.43E-002	2.50E+000	4.59E-001	1.99E-003
PU242	3.22E-002	1.27E-004	2.33E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.79E-007
U233	<LLD	<LLD	0.00E+000	5.37E-003
U234	2.12E-002	1.32E-004	2.70E-005	0.00E+000
U235	1.51E+000	3.26E-006	6.68E-007	1.83E-006
U238	<LLD	<LLD	0.00E+000	1.67E-005
AM243	6.61E-004	1.32E-004	2.32E-005	7.73E-006

Errors quoted at 1.000 sigma

Operator: Ami Barton Date: 11/4/13

ITR: [illegible] Date: 11-4-13

Automated Independent Technical Review

Count Sequence Number: 16623
Batch Number: 2LANDA1234
Counter ID: HENC #2
Container ID: 68499
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 10/24/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	OK
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	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: 11/4/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68499**

BDR Number: **LA13FG12108**

Sampling Date: **10/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	175.39	
74-82-8	Methane	9.63	U
67-56-1	Methanol	30.57	U
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131025c\
Data File : 68499.D
Acq On : 25 Oct 2013 1:40 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 13:49:23 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.063	96	7674925	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5665165	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.907	GC1	50031m	175.39 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-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68502
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 207.0 kg Tare Wt.: 33.4 kg Net Wt.: 173.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68502

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	151.6
Soils (S):	
Total WMP Weight:	173.6

CCP Radiography Data Sheet

Waste Container ID: 68502

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

Comments: N/A

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

S846096

NDA 2000 Assay Report

Item Information

Item ID:	68502	Count Sequence Number:	23733
Operator:	D3PW2DK1\operator		
Assay Start:	10/28/2013 2:30:25 PM		
Description 1:	1LANDA1854		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 174.0 kg	Net:	174.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.880 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23733	Batch Number:	1LANDA1854
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68502	Analysis Date:	10/28/2013

Net Weight	174000.0 g		
Pu mass	8.43E+001	+- 3.05E+001	g
TRU Alpha Activity	1.58E+001	+- 6.95E+000	Ci
TRU Activity Concentration	9.05E+004	+- 3.99E+004	nCi/g
Pu-239 Equivalent Activity	1.59E+001	+- 6.95E+000	Ci
Pu-239 FGE	8.35E+001	+- 3.05E+001	g
Decay heat	5.11E-001	+- 2.30E-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	1.26E-006
U233	<LLD	<LLD	0.00E+000	1.25E-002
U234	8.80E-002	5.47E-004	1.45E-004	0.00E+000
U235	6.27E+000	1.36E-005	3.58E-006	5.59E-006
NP237	2.19E-001	1.54E-004	3.27E-005	5.65E-006
PU238	7.70E-003	1.32E-001	5.35E-002	1.64E-003
U238	<LLD	<LLD	0.00E+000	4.36E-005
PU239	7.91E+001	4.90E+000	1.89E+000	6.12E-002
PU240	5.06E+000	1.15E+000	4.71E-001	1.43E-002
AM241	2.79E+000	9.57E+000	6.67E+000	2.49E-001
PU241	9.68E-002	9.97E+000	4.09E+000	1.24E-001
PU242	1.69E-002	6.66E-005	2.73E-005	0.00E+000
AM243	3.90E-003	7.81E-004	1.67E-004	1.64E-005

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 10-30-13

ITR: [illegible] Date: 10-31-13

Automated Independent Technical Review

Count Sequence Number: 23733 Batch Number: 1LANDA1854
Counter ID: MCS HENC #1
Container ID: 68502
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/28/2013

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.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

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

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68502**

BDR Number: **LA13FG2108**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	348.71	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131029c\
Data File : 68502.D
Acq On : 29 Oct 2013 2:20 pm (#1); 29-Oct-13, 14:20:02 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 14:28:27 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.561	96	5115756	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.871	117	3990149	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.621	GC1	2622m	348.71 ppmv	

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

S846107

S846107

Container Profile 768469

File Options Reports Help

S846107

768469	TBD-TRU	T-TTRU-TEMP	Active	Decom

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC

Genealogy

S846107

- S846107
  - LA00000068333
  - LA00000068318
  - LA00000068359 — Empty
  - LA00000068334

Working Copy
Date: 9/10/13 HSa

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S846107

6.2[4] Date Processed: 9-10-13

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

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

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

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

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

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

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

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

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb: BC 9-10-13
☑ 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] Z04742 / 9-10-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S846107

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 454.2 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 454.2 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S846107

		Daughter Drums		EM 9-11-13	
10.1[4]/10.2[4]	Daughter Drum No.	68318	68334	~~68337~~ 68333	N/A
10.1[4]	Daughter Drum Filter No.	KL-447	KL-532	KL537	
10.1[4]	Daughter Drum Bag Filter No.	L-8230	L-8240	L-6695	
10.1[4]	Daughter Drum Purchase Order No.	501321	501321	501321	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer		N/A		
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	~~Nitrate salt~~ EM 9-11-13		N/A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		N/A		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	2 gal	N/A		
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead	lead	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 comment	See Comments	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	50%	80%	80%	N/A
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic stubout bags Kittylitter	Plastic stubout bags Kittylitter	stub out bags Hot Armors Kitty Litter	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5846107

Comments: Liquid, Lead, kitty litter, nitrate salts, stub outs, and Hex armor gloves

11.1[1] Performed By: Edward Martinez / [signature] / 1239111 / 9-11-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: G Nyh / [signature] / 1149235 / 9/16/13 0755
SOS or designee (print) Signature Z # Date/Time

Date: 7-10-13

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:

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	0387269
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 -1815
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 MARQUET / [signature] 127670 / 7-10-13
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 MARQUET / [signature] 127670 / 7-10-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G Mk / [signature] 149275 / 9/16/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 9/10/13 KSa

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68359

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

M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-86
Tolerance: ±3% cw ±6% ccw

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

Performed By: Brandon Chavez / [signature] 1204742 / 9-11-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 169.6 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 1204742 / 9-11-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk / [signature] 1492351 / 9/12/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 68318

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501321
Lot #: 03537720
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: GCPVC 1.5-25 PVC
Serial #: L-8230
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 #: 019 DS
Serial #: KL 447
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100216
Cal Expiration Date: 12-15-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±4.4% cw ±6.6% ccw

Jam Nut / Bung torque wrench:
M&TE ID #: 033369
Cal Expiration Date: 12-15-13
Range (ft-lbs or in-lbs): 10-50
Tolerance: ±3.1% cw ±6.6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: IAN MANUEL Signature: [signature] Z#: 276708

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: IAN MANUEL Operator Sign: [signature] Z#: 276708 Date: 8-15-13

Verifier Print: Brandon Clower Verifier Sign: [signature] Z#: 204712 Date: 9-10-13

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

DRUM ID# 68318

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): 216.6

Scale ID#: 029065

✓ 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 Chaver Date 9-11-13

Verifier Print/Sign: Joe Quintana Date: 9/11/13

EM 9-11-13

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

Drum ID#: ~~683333~~ 68333

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501321
Lot #: 03377720
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: GCPVC115-25PVC
Serial #: ~~6893~~ 2-6695
Date of Manufacture: 01/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 01905
Serial #: KC 537
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100516
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/- 4% CW +/- 4% CCW

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

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: IAN MACKLEY Signature: [signature] Z#: 276708

5. Weigh Drum Assembly

RECORD weight information
Tare wtght (lbs) 76
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 MACKLEY Operator Sign: [signature] Z#: 276708 Date: 8-15-13
Verifier Print: ADAM SEGOVIA Verifier Sign: [signature] Z#: 276702 Date: 9-11-13

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

EM 9-11-13

DRUM ID#: ~~68337~~ 68333

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.): 255.0

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 9-11-13

Verifier Print/Sign: Joe Quintana Date: 9/11/13

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

Drum ID#: 68334

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501321
Lot #: 0237290
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: GCPVL 7.5-25 OVC
Serial #: L-82810
Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCAIR
Model #: 01905
Serial #: KL 532
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:	12-15-13	Cal Expiration Date:	12-15-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+/- 4% CW +.6% CCW	Tolerance:	+/- 3% CW +.6% CCW

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

☑ Yes ☐ No

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

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (lbs) 76.0
File ID #: 019065

- ☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: IAN MARQUEZ Operator Sign: [signature] Z#: 276708 Date: 9-15-13

Verifier Print: ADAM SEGOVIA Verifier Sign: [signature] Z#: 276702 Date: 9-10-13

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

DRUM ID# 68334

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) ~~308~~ 308.8 BC 9/11/13

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 Chavez Date 9-11-13

Verifier Print/Sign: Joe Quintana Date: 9/11/13

Date: 91043jr

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S846107

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

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

6.3[18] Prepared parent 55-gal drum weight (lb): 454.2

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

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA [signature] 237720 9-10-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk , D M 149255 9/16/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: G Mk , D M 149255 9/16/13 0710
SOS/SOM or designee (print) Signature Z # Date Time

1937
SP77

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846107 Container Type: 85-GAL Gross Weight (lbs): 470
Inner Seal #: 019638 Filter Prefix: LAVC Filter Serial #: 00962
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 1.50E+01 Equivalent Combustible PE-Ci: 5.62E+00 AM-241 PE-Ci: 1.22E+00
Total Fissile Gram Equivalents: 165.5 Total Surface Dose Rate (mrem/hr): 5
EPA Code(s): [redacted] D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 11/29/2006 Comment: Impenetrable Obj,
Certified RTR Comment: None
Prohibited Items: ■ Sealed > 4 Liters ■ Liquid ■ Pressurized Container ✓ Impenetrable Item ✓ Other
Security Determination: ✓ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / [signature] / 100681 / 11/20/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 410#. Generator info shows 8 items of nitrate salts, with weights ranging from 5-78#. No RTR BDR available for review. RTR PS shows impenetrable item(s). Nitrate salts are typically packaged in plastic bags; other debris commonly present. Applicable waste codes for lead, chromium, & mercury. Repack w/ admixture is required. Undocumented liquids may be present.

Performed By: Valerie Rhodes / Valerie Rhodes / 126051 / 1/7/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use Heavyweight gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.
Performed By: Jose Perez / [signature] / 221452 / 2-5-13
TRU Remediation Operations (Print) Signature Z Number Date

ROBIN SAULT RS 272955 2-11-13

IHS REVIEW RS 260362 11.26.12 NOTES. D007 Chromium
D008 Lead

Noncertified TRU Waste Drum Item Information

DrumID: 019638

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	RR127VRNW1		4.320	NITRATE SALTS		8.27	52	6/14	G468	
2	DS128NW1		35.220	NITRATE SALTS		10.33	52	6/14	G468	
3	OX127133NE		27.610	NITRATE SALTS		26.57	52	6/14	G468	
4	LR130NW1		20.230	NITRATE SALTS		36.49	52	6/14	G468	
5	LR131NE1		21.020	NITRATE SALTS		10.08	52	6/14	G468	
6	MX129NE1		17.500	NITRATE SALTS		51.64	52	6/14	G468	
7	OX127133NW		24.320	NITRATE SALTS		21.14	52	6/14	G468	
8	RR134NE1		2.500	NITRATE SALTS		11.3	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 213.

Material Type	SNM (grams)	Items Net Wt (kg)
52	175.82	152.72
Totals	175.82	152.72

019638

SP72

UFI

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/13/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Gabe Romero	[redacted]	1286773	1-26-11
	/	/	/

Container No. (7.[1]):	S843995 LS	S846107 LS	S822723 OK
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S843995	S846107	S822723
Hydrogen Reading (ppm) (7.[10]):	1207.41 ppm	2306.70 ppm	766.98 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

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

11.1[1] Performed By: Alicia Herrera, [signature] 198450 1/24/11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ Reviewed By: Kenny Romero Kenny Romero 111886 1/26/11
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

Inst Name : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110113c\
Data File : S846107.D
Acq On : 13 Jan 2011 12:55 pm (#1); 13-Jan-11, 12:55:06 (#2)
Operator : EL
Sample :
Misc : 55 GAL LFL DRUM FROM 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 13 13:03:38 2011
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Mon Jan 10 10:28:07 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.639	96	8590804	205.50	ppmv	0.00
15) Chlorobenzene-d5	5.961	117	7438214	182.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.654	GC1	18048	2306.70	ppmv	100

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

vocgas.m Thu Jan 13 13:03:53 2011

9/10/13 WCCR SOS LOG BOOK

0600 Assuming SOS Position A. [illegible] m.p.
0615 Conducted Shift Brief Discussed Adjusments made on Lift, Shipments, and Crit safety limits.
0646 Concluded shift brief
0721 Operators entering 50-69 For Processing.
0836 bagging off / Daughter Bagging on A POC
0858 bag off Complete
0942 Operator notified of A cam Alarm In 50-69 Entering EP-WCRR-RM-ARP-0407, operator exiting to change room
0944 SOM notified of Alarm.
0947 Ops manager notified Cam was #6 back side of GBE
1000 Notified by RCT Cam at 326.5 DAC Gm Assays 38 3678.7 CPM Alpha. Also operators were not in Respirator will need to Perform nasal's on all that were Inside 50-69 non of these Individuals will be Allowed back till Results return from HPal. RPO will be Generated.
1010 Ops Manager will notify DOE and Feed.
1011 RCT will smear Change out Room and Brief to RWP For reentry
1024 RCTs entering 50-69
1030 RCTs Advised that change Room NDA
1212 All Results From nasals NDA
1214 Exiting EP-WCRR-RM-ARP-0407 Room Has been Approved For reentry waiting on RCT's to change out Cam. Prior to operations
1315 Per CM ok to resume operations
1351 notified by operators roof leaking near scale Instructed to Put mop bucket to catch liquid.
1400 Bagging of 2 Pocs bagging on 1 daughter
1432 Bag off complete
1534 Bagging off / on 584407
1549 Started Rounds
1557 Bag on/off complete.
1702 Reviewed Inside and outside Rounds

Continued on next page

9/6/13 Continued from next Page
1722 Starting move In to 50-64
1742 Move In Complete on 9/6/13
1745 Movement out ~~of~~ of 50-64 started
1755 Move out Complete
HH 1811 Conducted Shift turn over with Clayton Mullins [illegible]

no

Further

entries

on

this

Page

9/10/13 WCRR SOS Log Book

1810 Assuming SOS position. CT

1815 Sending two operators inside to relieve day shift, drum still draining liquid.

1850 Starting Pre-Job, drum ~~stoop~~ cm 9-10-13 stopped draining both operators and 1 RCT exiting 50-69 to attend pre-job. Discussed keeping an eye out for leaks, new and old, and puddles on the floor.

1915 Pre-Job complete.

2034 Operators notify that there are leaks in the respirator room now.

2059 Bagging off 1st daughter, bagging on a 2nd.

2120 Bag off/on complete.

2243 Bagging off 2nd daughter, bagging on a 3rd.

2303 Bag off/on complete.

0300 RCT's notify that not only is PCM out of service, but 2 instruments one on the berthold and on above station 1 of WCG, as well as the HFM at the highbay step off pad, are all acting up.

RM

- 0436 Bagging off 3rd daughter, de-nesting and bagging on 5851682.

0500 Unable to bag on, notified by RCT's that 3 smears were above NDA after de-nesting. Operators will have to pull up old plastic and wipe down area and the lay new plastic. Unable to perform bag off/on.

0610 Relieved by Gilbert Martinez 9/11/13. CT

No further entries on this page.

9-10-13 DAYSHIFT (Cont)

IS WAITING IN THE WINGS (NOT ONSITE) TO REPAIR THE PCM BY SWAPPING A FOOT DETECTOR OUT.

1528 BAGGING OFF PARENT DISCUSSED AT 1300. WILL CONTINUE TO BAG ON NEXT DRUM, LEAVE LID ON, AND CALL PAUSE TO FIX PCM. HOWEVER. IF TECHS ARE NOT AVAILABLE AT THAT ~~B~~ JJ 9-10-13 POINT CREW WILL CONTINUE PROCESSING DRUM. REPAIRS TO PCM WILL HAVE TO BE TOMORROW.

1557 TURN OVER SOM DUTIES TO GUADAGNOLI.

1557 Assumed the SOM duties from Guadagnoli.

1600 Per RP1 the PCM-2 technicians were not available to support changing out the PCM plate. As a result, operations will continue to process

~~WIP late entry for 1558 - Operations completed bag off and bag on of~~

Parent drum SE46107, and initiate processing

1710 Extended shift order - WCRR-SH-13-003-R2 "Manual Drum Movements to 9-17-13

1722 Outside operations initiated a movement out and transfer of 4 Parents in.

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

1815 Secured the day shift SOM position from Guadagnoli.

No further Entries this Page

Best Available Copy

9/10/13 Night Shift

1815 Reviewed shift turnover checklist and assumed the WCRR SOM position.

1822 Approved and posted Nightshift Operations watchbill. 2 operators relieved off going shift in 50-69 due to drum bagged on the WCG.

1843 All personnel mustered at 50-196 for pre job brief. Discussed current conditions inside 50-69 - safety issue is remaining leaking into facility in areas previously identified - near the platform scale and the GBE door. Personnel working inside are to be aware of slipping hazards

2034 Operators identified water leaking into the WCRR respirator room from the ceiling.

2045 Identified that Versa-Lift located in Arctic does have a current inspection sticker. Verified that FSE Rob Plonski had evaluated it for combustible loading prior to bringing into facility. Have e-mail stating it would ↑ combustible loading from 0.55 lb/ft^2 to 0.57 lb/ft^2 - still below limit SOS will have operators move in when people available.

2120 Completed bagging off 1 daughter - continue processing of 5846107

2303 Completed bagging off another daughter - continuing to process

9/11/13 0030 Operators breaking for lunch

0150 Resuming operations.

0300 RP-1 personnel reported that they are having problems with additional survey equipment inside 50-69 @ Station #1 on WCG, the step off pad @ the High Bay and the meter located ontop of the Berthold in the High Bay. These are in addition to the PCM. They suspect electrical supply voltage may be the problem and would like electrician support to investigate.

0320 SOS identified that the torque wrench being used in 50-69 goes out of cal at end of day. Have one in Arctic for backup but will turnover to day shift ~~SOM~~ 9/11/13 SOS to calibrate and re

0525 Notified by SOS that RP-1 had 3 elevated smears on floor during decasting operations - highest reading 50 dpm/100cm^2 alpha. Operators will pull up plastic and wipe down floor on areas prior to resurvey.

Continued next page →

9-10-13 CONTINUED FROM PREVIOUS PAGE H SMITH

1219 OPERATORS WAITING FOR RCT'S TO REPLACE CAMS A6
ALL SURVEYS WERE NDA IN ROOM 102 BLDG 50-69

1815 PER DM OPERATORS OK TO RETURN TO TA50-69.
ONCE BAG OFF AND BAG ON OF NEXT DRUM
IS WE WILL GO TO WARM STANDBY MODE
FOR PCM WORK

1351 NOTIFIED BY OPERATOR ROOF IN TA50-69 STILL
CLEARING BY SCALES, WILL NOTIFY SOS AND SOM

1400 BAGGING OFF 2 PDCS BAGGING ON A DAUGHTER,
CONTINUING ON SAME DRUM

1432 BAG ON BAGOFF COMPLETE

1534 BAGGING OFF & BAGGING ON S84607

1545 STARTING OUTSIDE ROUNDS

1551 BAG ON BAG OFF COMPLETE

1601 ITEM 19 OUTSIDE ROUNDS UNSAT, FSR IN PLACE, OKAY
TO CONTINUE PER CSE ~~DOCUMENT~~ 9/10/13 HS DOCUMENTATION

1604 STARTING INSIDE ROUNDS

1610 OUTSIDE ROUNDS CONCLUDED

1624 INSIDE ROUNDS COMPLETED

1629 LATE ENTRY. 1618 ITEM #63 INSIDE ROUNDS OOS. OKAY
TO PROCEED, PER CSE DOCUMENTATION HSMITH

1702 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SOS

1722 BEGIN MOVEMENT FROM TA50-194/75 TO TA50-69

1748 MOVEMENT INTO TA50-69 IS COMPLETE

1749 BEGIN MOVEMENT INTO ~~TA-50-69~~ 9/10/13 HS TA50-194/75
INTO ~~TA50-9~~ 9/10/13 HS TA50-69

1805 ~~1755~~ 9/10/13 HS MOVEMENT INTO TA50-69 COMPLETE

9-10-13 SHIFT TURNOVER WITH OCO TERRI COLEMAN HSMITH

NO FURTHER ENTRIES ON THIS PAGE

9-10-13
1806 Assuming WCRR operations center: McCleman
1815 Pre-job being conducted by SOS
1835 Pre-job concluded.
1920 Operators entering 50-69 to process drum #S846107.
2034 Operators report leaks in the respirator room now.
2059 Bagging off 1 daughter, bagging on another daughter.
2120 Bag off/on complete.
2243 Bagging off 1 daughter, bagging on another daughter.
2303 Bag off/on complete
0015 Beginning outside rounds.
0032 Item #19 on the rounds is unsat, FSR in place, okay to proceed
0045 Outside rounds complete.
0046 Late entry - at 0030, operators out for lunch (JC)
0150 Operators resuming after lunch.
0300 Notified by RCT's that not only is PCM out of service by the step off pad ~~by high bay~~ JC 9-11-13, but 2 instruments are as well. 1 on the WCG above station 1 and 1 on the Berthold. Also the HFM at the high bay step off pad.
0407 Beginning inside rounds.
0425 Item #63 is OOS, okay to proceed per CSE documentation.
0428 Inside rounds complete.
0436 Denesting S851682, bagging off 1 daughter and bagging on S851682.
0552 RCT states while denesting, contamination was found on the 55, drum bagged up, RCT's taking smears, ~~operators bagging it on~~ JC 9-11-13
0530 RCT's found 500dpm, will be wiping floor. Operators will be throwing away the plastic on the floor into a drum.
0608 RCT's depositing 50-69-102
0610 Relieved by OCC Clarissa Velarde-McCleman

No further entries this page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination	[ ] RTR Replicate Scan [ ] RTR Independent Observation
Site ID:	LANL
Batch Number:	LA-RTR2-13-0111
Examination Date:	9/17/2013
Waste Container ID:	68318
Video/Audio Recorded Media Number:	LA-RTR2-13-0111 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 98.5 kg Tare Wt.: 33.4 kg Net Wt.: 65.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 68318

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	58.1
Soils (S):	
Total WMP Weight:	65.1

CCP Radiography Data Sheet

Waste Container ID: 68318

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	[signature]	9/17/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68318	Count Sequence Number:	23608
Operator:	D3PW2DK1\operator		
Assay Start:	9/19/2013 12:00:41 PM		
Description 1:	1LANDA1844		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 65.1 kg	Net:	65.1 kg
Container:	Volume: 208.0 l	Full:	55.0 %
Density:	0.570 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23608
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68318

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

Net Weight	65100.0 g		
Pu mass	3.15E+001	+-	5.88E+000 g
TRU Alpha Activity	4.46E+000	+-	1.21E+000 Ci
TRU Activity Concentration	6.85E+004	+-	1.86E+004 nCi/g
Pu-239 Equivalent Activity	4.53E+000	+-	1.21E+000 Ci
Pu-239 FGE	3.12E+001	+-	5.87E+000 g
Decay heat	1.44E-001	+-	4.00E-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	4.63E-007
U233	<LLD	<LLD	0.00E+000	5.31E-003
U234	3.15E-002	1.96E-004	4.89E-005	0.00E+000
U235	2.24E+000	4.85E-006	1.21E-006	2.65E-006
NP237	7.38E-002	5.20E-005	8.56E-006	2.52E-006
PU238	2.88E-003	4.93E-002	1.16E-002	5.66E-004
U238	<LLD	<LLD	0.00E+000	2.00E-005
PU239	2.96E+001	1.83E+000	3.63E-001	2.11E-002
PU240	1.89E+000	4.29E-001	1.04E-001	4.93E-003
AM241	6.26E-001	2.15E+000	1.15E+000	6.14E-002
PU241	3.64E-002	3.75E+000	9.13E-001	4.31E-002
PU242	6.31E-003	2.49E-005	6.07E-006	0.00E+000
AM243	6.85E-004	1.37E-004	2.29E-005	7.13E-006

Errors quoted at 1.000 sigma

Operator: Brt Tyrrth Date: 9-24-13

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

Automated Independent Technical Review

Count Sequence Number: 23608
Batch Number: 1LANDA1844
Counter ID: MCS HENC #1
Container ID: 68318
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 9/19/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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. U-234 ratioed from U-235.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

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

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68318**

BDR Number: **LA13FG2102**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	223.56	
74-82-8	Methane	142.14	U
67-56-1	Methanol	157.96	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130925C\
Data File : 68318.D
Acq On : 25 Sep 2013 12:23 pm (#1); 25-Sep-13, 12:22:44 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 25 12:31:52 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.565	96	4750277	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.868	117	3608578	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.614	GC1	1681m	223.56 ppmv	
4) Methanol	0.873	31	59957m	157.96 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-RTR2-13-0111
Examination Date:	9/17/2013
Waste Container ID:	68333
Video/Audio Recorded Media Number:	LA-RTR2-13-0111 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 115.5 kg Tare Wt.: 33.4 kg Net Wt.: 82.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68333

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	72.1
Soils (S):	
Total WMP Weight:	82.1

CCP Radiography Data Sheet

Waste Container ID: 68333

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

RTR Operator:

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

NDA 2000 Assay Report

Item Information

Item ID:	68333	Count Sequence Number:	23618
Operator:	D3PW2DK1\operator		
Assay Start:	9/20/2013 10:13:53 AM		
Description 1:	1LANDA1845		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 82.1 kg	Net:	82.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.790 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23618
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68333

Batch Number: 1LANDA1845
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/20/2013

Net Weight	82100.0 g		
Pu mass	1.26E+002	+-	3.80E+001 g
TRU Alpha Activity	1.70E+001	+-	5.91E+000 Ci
TRU Activity Concentration	2.08E+005	+-	7.19E+004 nCi/g
Pu-239 Equivalent Activity	1.73E+001	+-	5.91E+000 Ci
Pu-239 FGE	1.19E+002	+-	3.79E+001 g
Decay heat	5.48E-001	+-	1.94E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.36E-007
U233	<LLD	<LLD	0.00E+000	8.81E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.00E-006
NP237	1.55E-001	1.09E-004	2.18E-005	4.18E-006
PU238	1.16E-002	1.98E-001	6.80E-002	2.04E-003
U238	<LLD	<LLD	0.00E+000	3.00E-005
PU239	1.19E+002	7.35E+000	2.35E+000	7.58E-002
PU240	7.58E+000	1.72E+000	6.01E-001	1.77E-002
AM241	2.27E+000	7.77E+000	5.38E+000	1.20E-001
PU241	1.46E-001	1.50E+001	5.25E+000	1.55E-001
PU242	2.53E-002	9.99E-005	3.49E-005	0.00E+000
AM243	1.81E-003	3.61E-004	7.27E-005	1.19E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 9.24.13

ITR: Ami Barton Date: 9/24/13

Automated Independent Technical Review

Count Sequence Number: 23618 Batch Number: 1LANDA1845
Counter ID: MCS HENC #1
Container ID: 68333
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/20/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
FGE is greater than the upper limit of 200.00	Multiplication in drum. Neutron results rejected. Gamma results applied.
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
- The Pu-240 Eff Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok

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

Expert Review by: Sherri Chamberlin Date: 9-23-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68333**

BDR Number: **LA13FG12133**

Sampling Date: **12/20/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	355.65	
74-82-8	Methane	6.56	U
67-56-1	Methanol	12.01	
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.30	
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

21
~~22~~
KL 1-15-14

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131220c\
Data File : 68333.D
Acq On : 20 Dec 2013 2:17 pm (#1); 20 Dec 2013 2:16 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 20 14:26:22 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.057	96	7514379	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6171856	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.917	GC1	101449m	355.65	ppmv	
4) Methanol	0.827	31	4770m	12.01	ppmv	
12) Benzene	3.720	78	9233	0.30	ppmv #	85

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

41
~~43~~
EL 1-15-14

S846107

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0111
Examination Date:	9/17/2013
Waste Container ID:	68334
Video/Audio Recorded Media Number:	LA-RTR2-13-0111 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 140.0 kg Tare Wt.: 33.4 kg Net Wt.: 106.6 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: 68334

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Utility knife

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	102.0
Soils (S):	
Total WMP Weight:	106.6

CCP Radiography Data Sheet

Waste Container ID: 68334

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

RTR Operator:

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

NDA 2000 Assay Report

Item Information

Item ID:	68334	Count Sequence Number:	23617
Operator:	D3PW2DK1\operator		
Assay Start:	9/20/2013 9:31:39 AM		
Description 1:	1LANDA1845		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 107.0 kg	Net:	107.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
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:	23617	Batch Number:	1LANDA1845
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68334	Analysis Date:	9/20/2013

Net Weight	107000.0 g		
Pu mass	7.80E+001	+-	1.27E+001 g
TRU Alpha Activity	1.17E+001	+-	3.36E+000 Ci
TRU Activity Concentration	1.09E+005	+-	3.14E+004 nCi/g
Pu-239 Equivalent Activity	1.19E+001	+-	3.36E+000 Ci
Pu-239 FGE	7.53E+001	+-	1.19E+001 g
Decay heat	3.78E-001	+-	1.11E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.51E-001	1.07E-004	2.04E-005	4.36E-006
PU238	7.13E-003	1.22E-001	1.98E-002	3.34E-005
PU239	7.32E+001	4.54E+000	7.37E-001	1.24E-003
PU240	4.68E+000	1.06E+000	1.73E-001	2.91E-004
AM241	1.75E+000	5.99E+000	3.27E+000	1.00E-001
PU241	9.00E-002	9.27E+000	1.51E+000	2.54E-003
PU242	1.56E-002	6.17E-005	1.00E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.30E-007
U233	<LLD	<LLD	0.00E+000	9.24E-003
U234	3.85E-002	2.40E-004	7.16E-005	0.00E+000
U235	2.75E+000	5.93E-006	1.77E-006	3.92E-006
U238	<LLD	<LLD	0.00E+000	3.17E-005
AM243	2.00E-003	3.99E-004	7.74E-005	1.24E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 9.24.13

ITR: Ami Barton Date: 9/24/13

Automated Independent Technical Review

Count Sequence Number: 23617
Batch Number: 1LANDA1845
Counter ID: MCS HENC #1
Container ID: 68334
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 9/20/2013

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

Expert Review by: Sherri Chambers Date: 9-23-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68334**

BDR Number: **LA13FG2102**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	226.75	
74-82-8	Methane	142.14	U
67-56-1	Methanol	39.51	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130925C\
Data File : 68334.D
Acq On : 25 Sep 2013 1:08 pm (#1); 25-Sep-13, 13:07:30 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 25 13:15:53 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.548	96	4610067	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.858	117	3503697	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.620	GC1	1705	226.75	ppmv	100
4) Methanol	0.880	31	14554	39.51	ppmv	100

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

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S846132

S846132

Container P... 747057

File Options Reports Help

S846132

747057	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

S846132

- S846132
  - LA00000069195 - WLS
    - LASB50032
  - LA00000069193 - WLS
    - LASB50041
  - LA00000069188 - LANL
    - LASB50018
  - LA00000069168 - EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.01	%			

Working Copy
Date: 1-13-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S846132

6.2[4] Date Processed: 01-13-14

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

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

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

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

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

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

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

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

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

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

Performed By: Adam Segovia, [signature] 276702, 1-14-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S846132

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 429.6 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 512.6 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.: 5846132

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69193	69195	N/A	
10.1[4]	Daughter Drum Filter No.	JL-812	JL-802		
10.1[4]	Daughter Drum Bag Filter No.	L-10088	L-10078		
10.1[4]	Daughter Drum Purchase Order No.	501892	501892		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BoP			
	Model No.	LCPVC15-25PK			
	Serial No.	L-10050			
	Date of Manufacture	4-12			
10.2[5]	POC ID No	69188		N/A	
10.2[7][B]/10.2[6]	POC Item Description	Nitrate Salts Plastic			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	~~AS~~ 276702			
10.2[14]	POC Assembly Gross Weight (lb)	382.2			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1102.0			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	2 Gals	2 qts	N/A	
10.3[5][A]	Free Liquid Volume/Units	4 Gals	1 Gal		
10.3[7][A]	Opaque/Non-penetrable Item Description:	one Tungsten Glove	lead lining		
10.3[9][A]	PCB-contaminated Waste Description			N/A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See Comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	90%	60%	N/A	
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.: S846132

Comments: Nitrate Salts, Kitty litter, Plastic, Bag Off Stubs, Tape and Absorbed liquids.

11.1[1] Performed By: ADAM SEGOVIA, [signature] 1276702, 1-13-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, [signature] 1240092, 1/14/14 0938
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 1/5/14 AS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501893
Lot No.: 024443
Manufacture Date: 2013

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: D-13
Serial No.: HL-843
Manufacture Date: 8/11

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

5. [11] Performed By: Joe Romero / J. Romero / 1097021 / 1/5/14
Waste Handling Technician (print) Signature Z # Date

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

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

Comments:

8.1[1] Performed By: Joe Romero / J. Romero / 1097021 / 1/5/14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / CA / 1240091 / 1/14/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-13-14

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69168

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 058570
Cal. Expiration Date: 8-2-14
Range in ft-lb: 16-80
Tolerance: +/-3% cw +/-3% ccw

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

Performed By: Adam Segovia [signature] 276702 1-13-14
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 170.0 lb

Comments: N/C

8.1[1] Performed By: Adam Segovia [signature] 276702 1-13-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins [signature] 240092 1/14/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-11-14 cr

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69193

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5-2SPVC
Serial No.: L-10088
Manufacture Date: 5/13

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

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

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

Performed By: Edward Martinez [signature] 1239111 1-11-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 0190S
Serial No.: JL-812
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

5.[32] Drum tare weight (lbs): 76.0 lbs

5.[34][E] Drum ID No.: 69193

Comments: N/C

5.[35] Performed By: Edward Martinez / [signature] / 1239911 / 1-11-14
Operator (print) Signature Z # Date

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

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69193

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

M&TE No.: 038370
Cal. Expiration Date: 08-02-14
Range: 16-80 ft-lb
Tolerance (+/-): +/-3% cw + +/-6% ccw

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

Performed By: [illegible] / [signature] / 116641 / 01-13-14
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69193

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 332.2 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 Sabel (Operator (print)) / [signature] (Signature) 1116621 (Z #) 01-13-14 (Date)

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

UET Working Date: 1-11-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69195

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVL1.5-2SPVC
Serial No.: L-10078
Manufacture Date: 5/13

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

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

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

Performed By: RUSSELL SHUMAKER [signature] 212075
GERALD ESPINOZA [signature] 123779 1-11-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: JL-802
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69195

Comments: N/C

5.[35] Performed By: RESSEL SHUMMAKER / GERALD ESPINOZA — Signature — 212073 (GE) / 1237720 — 1-11-~~13~~/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins — Signature — 1240092 — 1/14/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69195

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

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

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

Performed By: ADAM SEGOVIA / [signature] A76704 / 1-13-14
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 67185

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 265.2 lbs

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

Comments: N/C

6.[32] Performed By: Adam Segovia (Operator (print)) / Signature / 276701 (Z #) 1-13-14 (Date)

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

Working Copy UET
Date: 1-12-14

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S8460132

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

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

6.3[18] Prepared parent 55-gal drum weight (lb): 429.6

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

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] / 267129 / 1-12-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 240891 / 1/14/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Jose Jerez / [signature] / 224521 / 1/14/14 / 1000
SOS/SOM or designee (print) Signature Z # Date Time

Salvage Drum Vented 6/8/13 1937 72

SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846132 Container Type: 85-GAL Gross Weight (lbs): 511

Inner Seal #: 019639 Filter Prefix: None Filter Serial #: None

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

TWSR Comments: LEACHED SOLIDS MST 12

Total PE-Ci Activity: 8.67E+00 Equivalent Combustible PE-Ci: 3.25E+00 AM-241 PE-Ci: 7.04E-01

Total Fissile Gram Equivalents: 97.2 Total Surface Dose Rate (mrem/hr): 12

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 5/21/2010 Comment: 55GAL not vented, liner inside 55GAL not vented

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

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

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

Performed By: R. W. Jones (Production Control (Print)) Signature 117434 Z Number 1.10.12 Date

WDP Engineering

SUSAN S. RAMSEY 100681 12/18/12

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts

Net Wt: 388 lb. Generator info shows waste consists of 12 items (likely plastic bags) of nitrate salts ranging in weight from 15 lb to 59 lb. Waste packaged into 55 gal drum. Nitrate salts may contain free liquids.

May require RWP for >1000 and <10,000 mrem/hr @ 30 cm.

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes Signature 112609 Z Number 5/2/12 Date

TRU Remediation Operations

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

Other Specific Safety Concerns: USE Proper PPE And kitty litter Ratio

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Do not push or press on waste with hands. Use hexamax gloves when processing.

Performed By: Gilbert Martinez (TRU Remediation Operations (Print)) Signature 149235 Z Number 12/6/13 Date

IHS Review: AS 206.8.62 12.19.12 NOTES:

D007 = Chromium

D008 = Lead

Noncertified TRU Waste Drum Item Information

DrumID: 019639

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	DS135NE1		19.320	NITRATE SALTS		15.95	52	6/14	G468	
2	LR136NE		12.050	NITRATE SALTS		4.3	52	6/14	G468	
3	OX128137NW		12.950	NITRATE SALTS		9.82	52	6/14	G468	
4	OX106137NE		26.480	NITRATE SALTS		20.8	52	6/14	G468	
5	LR136NW1		7.050	NITRATE SALTS		2.51	52	6/14	G468	
6	OX129138NE		18.180	NITRATE SALTS		10.51	52	6/14	G468	
7	LR141NW1		7.730	NITRATE SALTS		1.18	52	6/14	G468	
8	LR141NE1		8.750	NITRATE SALTS		9.92	52	6/14	G468	
9	LR141NE1		8.750	NITRATE SALTS		2.81	36	9/2	G468	
10	MX142NW1		7.050	NITRATE SALTS		21.91	52	6/14	G468	
11	MX142NW1		7.040	NITRATE SALTS		0.706	36	9/	G468	
12	MX142NE1		8.860	NITRATE SALTS		4.8	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 203.

Material Type	SNM (grams)	Items Net Wt (kg)
36	3.516	15.79
52	101.7	128.42
Totals	105.22	144.21

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 6/5/2013

Container No. (5.[1])	S846132					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	85gal/ 55gal					
Filtered Vent Type (5.[1])	O8DS			N/A 12/6/13		
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT (B2)	☐ 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])	50.4 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0.43 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: Doug Eisele / 265610
CCP (Print) Z#

Reviewed By: Steve Pombini / 240577
CCP (Print) Z#

Comments:
Sample was taken from 55 gal inside the 85gal.

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: Barbara Trujillo Barbara Trujillo / 167341 12/4/13
Waste Handling Operator (print) Signature Z# Date

Gas Determination Results Report

Date: 6/5/2013

Waste Container Number S846132

Batch Number DVS2130605

Filter Type Installed 08DS

Number of Filters Installed 1

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	25.02	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	10.13	1502.00	N	N/A
1,1-Dichloroethane	0	400.80	N	N/A
Cis 1,2-Dichloroethene	0	400.20	N	N/A
Methyl Ethyl Ketone	0	1503.00	N	N/A
Cyclohexane	0	497.30	N	N/A
Benzene	2.97	1492.00	N	N/A
1,2-Dichloroethane	0	400.80	N	N/A
N-Butyl Alcohol	0	200.20	N	N/A
Methyl Isobutyl Ketone	0	501.90	N	N/A
Toluene	5.28	1491.00	N	N/A
Chlorobenzene	0	186.60	N	N/A
Ethylbenzene	3.94	100.00	N	N/A
m,p-Xylene	3.06	100.09	N	N/A
o-Xylene	0	100.30	N	N/A
1,3,5-Trimethylbenzene	0	50.64	N	N/A
1[illegible]imethylbenzene	0	50.17	N	N/A

Flammable Tentative Identified Compounds (TIC)

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

Total Flammable VOCs	50.4	I.V.R. Intial and Date	RP 6-5-13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.429698	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-151

Doug Eisele
VS Operator Print Name

Signature

06-05-13
Date

1-13-14
0550 Assuming WCRR operations center. JCOleman
0615 Pre-job being conducted by SOS. Beginning outside rounds
0622 Beginning inside rounds.
0641 Item #63 is OOS, okay to proceed per CSE documentation. Outside rounds complete.
0648 Inside rounds complete as well as scale verification.
0649 Late entry at 0638, pre-job concluded. (JC)
0650 Per SOS, glove inspections will be performed as well before we enter into operations mode.
0730 Both rounds reviewed by SOS.
0731 Late entry at 0701, operators entered 50-69 to begin glove inspections. (JC)
0744 SOM instructed the operators inside 50-69 to increase the thermostat from 67° to 72° to assist in increasing the sizer temperature currently at 41°.
0800 Operators staging drums for the shipment to Area G.
0820 Beginning glove change on Station 7, left glove.
0827 Permission granted to lower the vehicle barriers.
0836 Glove change complete.
0842 Mode change complete. We are now in operations in WCRR yard and 50-69.
0843 Bagging on S846132.
0852 Bag on complete. PPE check is Sat.
0918 Vehicle access gates restored. Shipment out complete.
0949 Maintenance arrived to repair the small forklift. WO#00168539-1
1014 Initiating a drum movement from 50-69 to a transportainer.
1042 Bagging off 1 daughter, bagging on another daughter.
1045 Forklift repair complete. Drum movement complete.
1057 Bag off/on complete.
1220 Operators beginning to denest 3 drums.
1349 Denesting complete.
unexpected condition 1355 Operators notified ops. center that they are hearing a loud grinding noise from FE-003 on the mezzanine. SOS
1411 JC 1-13-14 entering 50-69 to take a listen.
1411 SOS notified SOM, both entering 50-69 to listen to FE-003.
Continued on next page. JCOleman

1-13-14 WCRR - SOM

0558 Reviewed Shift turnover check list and assumed the WCRR SOM position [signature]

0642 Completed attending the prejob brief conducted by the SOS (Clayton). The safety topic was pinch points and pause work authority. There is one scheduled transfer out to AREA-G, 10 drums total. The SOS discussed the current status of the glovebox requiring glove inspection, clean-up, and RCT noted there was a lead window (small) broken at station 2, and prior shift placed a lead plate into position. The window will require change out sometime. Shift orders in effect were reviewed and signed - ES/PM discussed yearly totals and remaining German Coal drums to process. SOM discussed SP-57 - heavy drums and precautions needed based upon drum weight not to exceed drum lift limit and utilize lead blanket stand/device. Also the small fork truck requires repair.

0707 Daily Area G phone call completed - statusing the ROD activities.

0732 Current inside temperature is noted at 64°F.

0744 Current setpoint was noted at 67°F. Requested operators to increase temperature to 72°F - setpoint. Per T. Gallegos, the Fire Riser is noted at 41°F.

0746 Inside operator report they need to change station 7 Left glove

0750 The SOS requests operators to change glove, and stay in respirator for bag on - only after mode change is complete.

0800 Outside operators initiate staging drums for a movement out

0836 Operators report glove box glove station 7 left hand is changed.

0842 Mode Change: 50/69 and ipod transition from Warm/warm to Operations/Operations

0844 Operations initiate bag on of parent 5846132.

0852 Bag on is noted completed.

0918 Transfer to AREA G - was completed

0945 Crafts arrive to initiate work on the forktruck. WO# 468539-02 reviewed and approved - work is conducted in the parking lot.

0954 Extended shift orders WCRR-SM-005 R0 - Provide Instructions to Prevent Bag Tears, and WCRR-SM-003 R2 - Instructions for Manual Drum Movements through 1-20-2014. Copies have been submitted to the procedure writer to incorporate.

1020 Outside operators initiate movement from 50/69 to the transportainer, 5 drums total

1038 Outside transfer is noted completed and the forktruck is repaired - hose replaced.

1057 Operators completed bag out of 1 daughter and bag on of another and continue to process

1213 Completed noon phone call with OM, PM, SOM and others updating WCRR status.

1218 Inside operations initiated de-nesting of 2-SP-35 and 1-SP-72.

1349 Denesting is noted completed

1355 Operators observe a high pitch vibration coming from FE-3 and notify OCO

(Continued on Next PAGE)

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

01/13/14

0600 Assuming SOS position. CJ
0615 Starting Pre-Job, discussed watching for all, known and potential pinch points. Also performing glove inspection prior to mode change.
0638 Pre-Job complete.
0730 Signed off on 4e rounds.
0800 Staging for the shipment out.
0820 Starting glove change station 7 left hand.
0836 Glove change complete.
0842 Mode change complete, WCRRF yard and 50-69 are now in Operations.
0843 Bagging on 5846132.
0852 Bag on complete.
0918 Shipment out complete.
0949 Maintenance arrived to repair the small forklift, WO# 00468539-02.
1014 Starting movement out of 50-69.
1045 ~~1027~~ CM 1-13-14 Movement out complete.
1057 Bag off/on complete.
1058 Late entry @ 1042 bagging off 1 daughter, bagging on a 2nd daughter.
1220 Starting to denest 3 drums.
1349 Denesting complete.
1355 Operators state that they are hearing a loud grinding sound coming from FE-003. Unexpected Condition.
1411 Notified SOM, going into 50-69 to listen from step-off pad.
1415 Notified CSE.
1416 SOM leaves voicemail with OM.
1426 OM notified.
1448 Bagging off 2nd daughter and 1 POC, placing port cover on.
1525 Maintenance onsite, SOM reviewing work package.
1534 Bag off/on complete.
1610 Maintenance entering 50-69 to scope FE-003 and determine if its the belts or other problem
1650 Per maintenance, ~~Continue to pro~~ and OM to continue to process, maintenance believes it to possibly be the motor. They will need to schedule a vibration analysis and Electricians. Motor appears to be making the noise.
1651-1709 Bagging on 5845017
1709 Inside and outside rounds reviewed and signed.
1705 Late Entry At 1650 an IOD was initiated for FE-003 (JJ)
1748 Bagging off one daughter final drum for the day. Placing port cover on Glove Box.

SIGNATURE Continued on Next Page DATE 20
READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet

Section 1: General Information	
☐ RTR Examination ☒ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	69188
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	☒ No ☐ Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 173.0 kg Tare Wt.: 145.1 kg Net Wt.: 27.9 kg
Rigid Liner and Liner Vent Description:	Liner: ☐ No ☒ Yes Lid: ☐ No ☒ Yes Type: ☐ 30-mil ☒ 90-mil ☐ 110-mil ☐ 125-mil Vented: ☐ No ☒ Yes ☐ N/A Punctured: ☐ No ☒ Yes Mechanical Vent: ☒ No ☐ Yes Fiberboard Liner: ☒ No ☐ Yes Lead Lined: ☒ No ☐ Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 69188

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):	25.9
Soils (S):	
Total WMP Weight:	27.9

CCP Radiography Data Sheet

Waste Container ID: 69188

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.
This Replicate Scan agrees with the Original Scan.

RTR Operator:

Thad Hasselstrom	[signature]	1/17/2014
Print Name	Signature	Date

5846132

NDA 2000 Assay Report

Item Information

Item ID:	69188	Count Sequence Number:	1232
Operator:	CLREMO67292\User		
Assay Start:	1/27/2014 11:06:28 AM		
Description 1:	4LANDA0041		
Description 2:	POC 173.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 27.9 kg	Net:	27.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.735 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

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

Engine Version: TMU Gamma 1.4

Count Sequence Number:	1232	Batch Number:	4LANDA0041
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 0	Software Version:	NDA 2000 V.4.0
Item ID:	69188	Analysis Date:	1/27/2014

Net Weight	27900.0 g		
Pu mass	1.67E+001	+-	6.33E+000 g
TRU Alpha Activity	3.94E+000	+-	1.05E+000 Ci
TRU Activity Concentration	1.41E+005	+-	3.75E+004 nCi/g
Pu-239 Equivalent Activity	4.00E+000	+-	1.05E+000 Ci
Pu-239 FGE	1.59E+001	+-	6.31E+000 g
Decay heat	1.29E-001	+-	3.45E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.92E-007
U233	<LLD	<LLD	0.00E+000	3.37E-003
U234	3.43E-003	2.13E-005	7.85E-006	0.00E+000
U235	2.45E-001	5.28E-007	1.94E-007	5.01E-007
NP237	5.07E-002	3.58E-005	1.15E-005	6.59E-007
PU238	1.65E-003	2.83E-002	1.21E-002	3.36E-004
U238	<LLD	<LLD	0.00E+000	1.14E-005
PU239	1.56E+001	9.70E-001	3.91E-001	1.15E-002
PU240	1.00E+000	2.27E-001	9.71E-002	2.70E-003
AM241	7.92E-001	2.72E+000	9.65E-001	1.04E-002
PU241	3.17E-002	3.26E+000	1.40E+000	3.88E-002
PU242	3.34E-003	1.32E-005	5.63E-006	0.00E+000
AM243	7.47E-004	1.49E-004	4.80E-005	2.65E-006

Errors quoted at 1.000 sigma

Operator: Brit Triplett Date: 1-31-14

ITR: Jim Barton Date: 2/3/14

Automated Independent Technical Review

Count Sequence Number: 1232
Batch Number: 4LANDA0041
Counter ID: MILCC
Container ID: 69188
Waste Matrix Code: S3000
Count Type:
Sequence Type:
Assay Date: 1/27/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 1/31/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69188**

BDR Number: **LA14FG12018**

Sampling Date: **2/4/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	734.55	
74-82-8	Methane	6.56	U
67-56-1	Methanol	73.41	
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	3.00	
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	2.86	
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140204c\
Data File : 69188.D
Acq On : 4 Feb 2014 2:05 pm (#1); 4 Feb 2014 2:04 pm (#2)
Operator : DE
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 04 14:16:10 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	9763109	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7438875	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.913	GC1	209531m	734.55	ppmv	
4) Methanol	0.824	31	37870m	73.41	ppmv	
7) Acetone	1.357	58	7792	3.00	ppmv	87
17) Toluene	5.577	92	86016	2.86	ppmv	94

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	69193
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 150.5 kg Tare Wt.: 33.4 kg Net Wt.: 117.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 69193

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	5.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	108.1
Soils (S):	
Total WMP Weight:	117.1

CCP Radiography Data Sheet

Waste Container ID: 69193

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

Comments: N/A

RTR Operator:

Michael Simmons		1/17/2014
Print Name	Signature	Date

5076052

NDA 2000 Assay Report

Item Information

Item ID:	69193	Count Sequence Number:	24148
Operator:	D3PW2DK1\operator		
Assay Start:	1/18/2014 10:52:25 AM		
Description 1:	1LANDA1893		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 117.0 kg	Net:	117.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.750 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

DS 1.23.14
~~16~~
15

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24148	Batch Number:	1LANDA1893
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69193	Analysis Date:	1/18/2014

Net Weight	117000.0 g		
Pu mass	5.09E+001	+-	1.79E+001 g
TRU Alpha Activity	8.12E+000	+-	1.43E+000 Ci
TRU Activity Concentration	6.94E+004	+-	1.22E+004 nCi/g
Pu-239 Equivalent Activity	8.23E+000	+-	1.43E+000 Ci
Pu-239 FGE	4.80E+001	+-	1.79E+001 g
Decay heat	2.62E-001	+-	4.55E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.83E-007
U233	<LLD	<LLD	0.00E+000	8.04E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.46E-006
NP237	1.13E-001	7.93E-005	1.53E-005	3.78E-006
PU238	4.64E-003	7.94E-002	3.14E-002	1.86E-003
U238	<LLD	<LLD	0.00E+000	2.45E-005
PU239	4.78E+001	2.96E+000	1.11E+000	6.95E-002
PU240	3.05E+000	6.93E-001	2.77E-001	1.63E-002
AM241	1.28E+000	4.39E+000	8.55E-001	1.69E-001
PU241	5.79E-002	5.96E+000	2.38E+000	1.40E-001
PU242	1.02E-002	4.03E-005	1.61E-005	0.00E+000
AM243	1.78E-003	3.55E-004	6.93E-005	1.12E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-22-14

ITR: _____ Date: 1-23-14

DS 1-23-14

17

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Automated Independent Technical Review

Count Sequence Number: 24148 Batch Number: 1LANDA1893
Counter ID: MCS HENC #1
Container ID: 69193
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/18/2014

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

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

DS 1.23.14
~~18~~ 17

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69193**

BDR Number: **LA14FG2010**

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

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\140129C\
Data File : 69193.D
Acq On : 29 Jan 2014 12:22 pm (#1); 29-Jan-14, 12:21:44 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 12:30:14 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.597	96	3353400	205.75	ppmv	0.08
15) Chlorobenzene-d5	5.894	117	2651553	177.50	ppmv	0.03

Target Compounds	Qvalue

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	69195
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 120.0 kg Tare Wt.: 33.4 kg Net Wt.: 86.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 69195

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	35.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	51.6
Soils (S):	
Total WMP Weight:	86.6

CCP Radiography Data Sheet

Waste Container ID: 69195

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

RTR Operator:

Michael Simmons		1/17/2014
Print Name	Signature	Date

5846132

NDA 2000 Assay Report

Item Information

Item ID:	69195	Count Sequence Number:	24203
Operator:	D3PW2DK1\operator		
Assay Start:	1/25/2014 1:06:48 PM		
Description 1:	1LANDA1898		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 86.6 kg	Net:	86.6 kg
Container:	Volume: 208.0 l	Full:	55.0 %
Density:	0.760 kg /l		

System Configuration

Counter:	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:	24203	Batch Number:	1LANDA1898
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:	69195	Analysis Date:	1/25/2014

Net Weight	86600.0 g		
Pu mass	5.60E+001	+- 2.11E+001	g
TRU Alpha Activity	1.17E+001	+- 5.40E+000	Ci
TRU Activity Concentration	1.35E+005	+- 6.23E+004	nCi/g
Pu-239 Equivalent Activity	1.18E+001	+- 5.40E+000	Ci
Pu-239 FGE	5.28E+001	+- 2.11E+001	g
Decay heat	3.80E-001	+- 1.79E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.05E-007
U233	<LLD	<LLD	0.00E+000	7.37E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.01E-006
NP237	1.23E-001	8.70E-005	1.69E-005	3.40E-006
PU238	5.11E-003	8.74E-002	3.67E-002	9.87E-004
U238	<LLD	<LLD	0.00E+000	2.55E-005
PU239	5.26E+001	3.26E+000	1.31E+000	3.68E-002
PU240	3.36E+000	7.63E-001	3.24E-001	8.62E-003
AM241	2.20E+000	7.56E+000	5.22E+000	1.27E-001
PU241	6.36E-002	6.55E+000	2.78E+000	7.40E-002
PU242	1.12E-002	4.43E-005	1.88E-005	0.00E+000
AM243	2.08E-003	4.16E-004	8.18E-005	9.96E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 1.29.14

ITR: [signature] Date: 1-29-14

Automated Independent Technical Review

Count Sequence Number: 24203 Batch Number: 1LANDA1898
Counter ID: MCS HENC #1
Container ID: 69195
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/25/2014

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

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

Expert Review by: Sheri Chamber Date: 1-29-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69195**

BDR Number: **LA14FG2010**

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

5846132

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	178.08	
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\140129C\
Data File : 69195.D
Acq On : 29 Jan 2014 12:44 pm (#1); 29-Jan-14, 12:43:55 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 12:53:38 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.555	96	3179409	205.75	ppmv	0.04
15) Chlorobenzene-d5	5.861	117	2520186	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.624	GC1	1339	178.08	ppmv	100

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

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S846168

S846168

Container 760701

File Options Reports Help

S846168

760701	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

S846168

- S846168
  - LA00000068330
  - LA00000068346
  - LA00000068326 – EMPTY
  - LA00000068345
  - LA00000068316

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5846168

6.2[4] Date Processed: 9-10-13

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

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

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

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

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

4.3[4][B] Platform Scale: Equipment No.: 0190065
Cal. Due Date: 10-14-14

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

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

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

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

Performed By: GERALD ESPINOZA / G. Esp 1237729 9-10-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	S84161168
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	428.6 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	120.0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	548.6 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.: S84L01108

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68330	69316		
10.1[4]	Daughter Drum Filter No.	KL-6052	KL-543	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6719	L-6624		A
10.1[4]	Daughter Drum Purchase Order No.	501321	501321		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP	BOP		
	Model No.	6cpvcl.528pvc	6cpvcl.528pvc		
	Serial No.	L-6887	L-6886		
	Date of Manufacture	1-13	1-13	N	
10.2[5]	POC ID No	68346	68345		
10.2[7][B]/10.2[6]	POC Item Description	Nitrate salts Kitty litter	Nitrate salts Kitty litter		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BC 204742	BC 204742	A	
10.2[14]	POC Assembly Gross Weight (lb)	389.8	344.8		
10.2[15]	POC Rad. Survey Results (mrem/hr)	800	1201		
10.3[3][A]	Approx. Containerized Liquid Vol./Units	1 GALLON	N		
10.3[5][A]	Free Liquid Volume/Units	5 GALLONS	A	N	
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	Lead		
10.3[9][A]	PCB-contaminated Waste Description	N	N A		
10.3[9][B]	PCB Item ID No.	A			A
10.3[10]	Remaining Waste Description	SEE COMMENTS	See comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	50%		
10.5[3]/10.6[2]	Description Waste Added During Processing	PLASTIC Kitty litter	plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S84U0168

Comments: LIQUID, LEAD SHIELDING, PLASTIC
Nitrate Salts, Kitty Litter

11.1[1] Performed By: Brandon Chavez / [signature] 1201742 / 9-10-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: G Mk / [signature] 1149235, 9/10/13 1733
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 9/10/13 HSC

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.:	501323
Lot No.:	0238025
Manufacture Date:	1-13

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

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

Overpack filtered vent information:

Manufacturer:	NUCFIL
Model No.:	019DS
Serial No.:	EK-1139
Manufacture Date:	5-10

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

5. [11] Performed By: Brandon Chavez / [signature] 124421 9-10-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/A

8.1[1] Performed By: Brandon Chavez / [signature] 124421 9-10-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: GMK / [signature] 149375 9.10.13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-10-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68326

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: Brandon Chavez / [signature] 1204740 9-10-13
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): 178.8 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 1204740 9-10-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk / [signature] M9235 9.10.13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 68316

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501321
Lot #: 0237220
Date of Manufacture: 13

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 #: LoC PIG-1.5-2 SPVC
Serial #: L-6624
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-543
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% or +/-6 in-lbs	Tolerance:	+/-3% or +/-6 in-lbs

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

☑ Yes ☐ No

Print Name: Frederick Archuleta Signature: [signature] Z#: 225826

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 76.0
File ID #: 019065

- ☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: Frederick Archuleta Operator Sign: [signature] Z#: 225826 Date: 8-19-13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204747 Date: 8-10-13

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

DRUM ID#: 68316

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) 240.0

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 9-10

Verifier Print/Sign: [illegible] Date: 9-10-13

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

Drum ID#: 68330

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501321
Lot #: 0237720
Date of Manufacture: 13

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC1.52SPVC
Serial #: L-6719
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-652
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):	40-206	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#: 204772

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 76.0
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Brandon Chavez Operator Sign: [signature] Z#: 204772 Date: 8-27-13

Verifier Print: GERALD ESPINOZA Verifier Sign: [signature] Z#: 237720 Date: 9.10.13

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

DRUM ID#: 608330

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: 9-18-13

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): 331.0

Scale ID#: 019D605

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 9-10-13

Verifier Print/Sign: [illegible] Date: 9-10-13

Working Copy
Date: 9-10-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S8461168

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

6.3[16] Platform scale serial number: 019005
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 428.6

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

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA [signature] 237724 9.10.13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk [signature] 149735 9.10.13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: G Mk [signature] 149735 9.10.13 1730
SOS/SOM or designee (print) Signature Z # Date Time

SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846168 Container Type: 55-GAL Gross Weight (lbs): 457
Inner Seal #: 019672 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHES SOLIDS MST 12
Total PE-Ci Activity: 1.40E+01 Equivalent Combustible PE-Ci: 5.26E+00 AM-241 PE-Ci: 1.14E+00
Total Fissile Gram Equivalents: 155.5 Total Surface Dose Rate (mrem/hr): 4
EPA Code(s): None
NCR RTR/NDA Comment: AK Review-Non-cemented Evap Salt
RTR Pre-Screen Date: 4/30/2007 Comment: Impenetrable Obj,
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VE 10/31/12 ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/[illegible] must be mixed with 1.0 volume of nitrate salts.
Performed By: R. W. Jones / R. W. Jones / 117434 / 1.18.4
Production Control (Print) SUSAN S. RAMSEY Signature Z Number 1006 81 Date 10/31/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Solid waste record indicates leached solids. 10 items of nitrate salts, heaviest item is 32 Kg (70 lbs). Net weight of 10 items is 150 Kg (330 lbs). May require RWP for >1,000 and <10,000 mrem/hr @ 30-cm. Container S846168 is identified for "high dose campaign", see attached e-mail dated 26 Jan 2011. Drum also contains leached solids with instructions on attached e-mail dated 5 Jan 2011.

Performed By: Michael D. Garcia / Michael D. Garcia / 1099143 / 12/2/11
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns:
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: VSE Correct Ratio of kitty litter
Performed By: Gilbert Mitz / [illegible] / 149775 / 2-15-13
TRU Remediation Operations (Print) Signature Z Number Date
[illegible] 972975 2/15/13
IHS Review [illegible] Small CSP, may contain Pb, Cr, Hg
11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 019672

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	MX142NW1A		9.890	NITRATE SALTS		30.99	52	6/14	G468
2	MX142NW1A		9.880	NITRATE SALTS		1.	36	9/	G468
3	OX130143NE		19.550	NITRATE SALTS		18.96	52	6/14	G468
4	OX130143NW		26.590	NITRATE SALTS		21.82	52	6/14	G468
5	O130143NE2		31.820	NITRATE SALTS		39.4	52	6/14	G468
6	OX131144NW		22.050	NITRATE SALTS		15.85	52	6/14	G468
7	DSL152NW1		9.090	NITRATE SALTS		2.91	52	6/14	G468
8	LR147NW1		6.360	NITRATE SALTS		3.49	52	6/14	G468
9	OX133151NE		11.590	NITRATE SALTS		16.54	52	6/14	G468
10	RR146VRNE1		2.610	NITRATE SALTS		14.8	52	6/14	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 207.2

Material Type	SNM (grams)	Items Net Wt (kg)
36	1.	9.88
52	164.76	139.55
Totals	165.76	149.43

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/27/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Erik Loechell	Erik Loechell	123483	11-31-11

Container No. (7.[1]):	01224	S846168	S023036
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55 gal
Current Filter Vent No. (7.[1]):	13	72	72
New Filter Vent No.: (7.[8][A]):	13	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	61224	S846168	S823036
Hydrogen Reading (ppm) (7.[10])	Ø ppm	920.75 ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	13	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	038371	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	5/6/11	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	± 3%	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☑ YES ☐ NO ☐ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	10 ft lbs.	N/A	N/A

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

Comments:
N/C

11.1[1] Performed By: Alicia Herrera, [signature] 198450 1/31/11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ Reviewed By: Kenny Romero, [signature] 111886 2.3.11
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110127c\
Data File : S846168.D
Acq On : 27 Jan 2011 11:20 am (#1); 27 Jan 2011 11:19 am (#2)
Operator : GR
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 27 12:37:51 2011
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.246	96	4267771	209.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	3504207	184.00 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.356	GC1	233150	920.75 ppm	100

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

Vocgas.m Thu Jan 27 12:38:06 2011

9-9-13
1812 Assuming WCRR operations center - KOleman
1825 Pre-job being conducted by SOS.
1850 Pre job concluded.
1906 Operators entering 50-69 to perform drumlift inspection.
2004 Operators state while performing the drumlift inspection the drumlift appears to be shifting and the drumlift cable is making a loud cracking noise.
2010 SOS and SOM entering 50-69 to check the drumlift.
2041 SOM has exited the facility. Notifying OM.
2046 SOM spoke with on-call engineer regarding drumlift.
2118 Initiating a drum movement from 50-69 to a transportainer.
2135 Drum movement out of 50-69 complete.
2150 Mode change complete. We are now in Warm Standby in 50-69 and WCRRF yard.
2210 Supervisor (Jon Hedlund) and mechanic arrived.
2230 Both briefing to the RWP. SOM released the work package for maintenance to be performed.
0015 SOM states drumlift operating normally. Operators performing EP-WCRR-WO-DOP0306.
0108 Mode change complete. We are now in operations in WCRRF yard and 50-69.
0240 Operators denesting 2 drums.
0330 Operators have completed denesting and have tried to bag on both drums but are encountering problems with the drumlift. It is tearing the bag all the way through to the drum. Operators exiting to discuss a path forward.
0357 Operators are not exiting at this time, they are bagging on drum #5846168. They will be using the 85 gallon caster to bag on.
0411 Bag on complete.
0416 Beginning outside rounds. Beginning inside rounds.
0433 Item #19 is unsat, FSR in place, okay to proceed.
0443 Item #63 is OOS, okay to proceed per CSE documentation.
0444 Inside rounds complete
0445 Outside rounds complete.

Continued on next page. KOleman

9-10-13 Continued from previous page. - Coleman

0515 Both rounds reviewed by SOS.

9-10-13 0605 Shift turnover briefing with CO, Clarissa Delarde - Coleman

No further entries this page.

9-10-13

0605 Assuming WCRRF operations center - CKelande
0606 Assuming WCRRF OPERATIONS IN TRAINING - HSMITH
0610 PRE JOB BRIEFING CONDUCTED BY SOS
0640 PRE JOB BRIEFING CONCLUDED
0721 OPERATORS ENTERING BUILDING TO BEGIN PROCESSING
0836 BAGGING OFF A DAUGHTER, BAGGING ON A POC AND CONTINUE ON SAME DRUM
0858 BAG OFF COMPLETE
0942 OPERATION CENTER NOTIFIED OF A CAM ALARM IN BUILDING 50-69, ENTER EP-WCRR-RM-ARP-0407 PROCEDURE, OPERATORS EXITED TO CHANGE ROOM., ALL OPERATORS ACCOUNTED FOR. SOS HAS BEEN NOTIFIED, PRODUCTION MANAGER NOTIFIED ALSO.
0944 SOM NOTIFIED ABOUT CAM ALARM IN BUILDING,
~~0945~~ 9/10/13 HS I-H NOTIFIED & IS PRESENT IN OPS CENTER
0947 OPS MANAGER NOTIFIED, CAM AG. NORTH OF GBE
~~0900~~ 9/10/13 HS 1000 NOTIFIED BY RCT CAM AG NORTH OF GBE AT 326.5 DAC 3678.3 CAM ALPHA, WHILE OPERATOR ~~RC~~ 9/10/13 HS WERE PREPING TO START BAG OFF, CAM ALARMED OPERATORS FOLLOWED RCT INSTRUCTIONS AND EXITED FACILITY INTO CHANGE ROOM. THEY WERE NOT IN RESPIRATORS. OPERATORS WILL BE FRISKED AND ~~NASAL~~ 9/10/13 HS NASALS WILL BE PERFORMED, AND OPERATORS WILL NOT BE ALLOWED INTO BUILDING UNTIL RESULTS FROM NASAL SWIPES ARE RETURNED FROM HPAL. RCT'S WILL BRIEF TO RWP FOR REENTRY AND RPO WILL BE GENERATED FOR CAM ALARM.
1010 OPS MANAGER WILL NOTIFY DOE AND FOD
1011 RCT CHECKING SMEARS FROM CHANGE AREA AND WILL BRIEF RWP ABOUT REENTRY
1024 RCT'S ENTERING BUILDING 50-69 INCIDENCE RESPONCE 2011-0014
1030 RCT'S ADVISED OPS SMEARS IN CHANGE ROOM, NDA
1212 ALL NASAL SMEARS ARE NDA PER RCT'S SUPERVISOR
1219 EXITING EP-WCRR-RM-ARP-0407, ROOM HAS BEEN APPROVED FOR REENTRY CONTINUED ON NEXT PAGE

HSMITH

9-10-13 HS ~~HSMITH~~

9-10-13 CONTINUED FROM PREVIOUS PAGE H SMITH
1219 OPERATORS WAITING FOR RCT'S TO REPLACE CAMS A6
ALL SURVEYS WERE NDA IN ROOM 102 BLDG 50-69
1815 PER DM OPERATORS OK TO RETURN TO TA50-69,
ONCE BAG OFF AND BAG ON OF NEXT DRUM
IS WE WILL GO TO WARM STAND BY MODE
FOR PCM WORK
1351 NOTIFIED BY OPERATOR ROOF IN TA50-69 STILL
LEAKING BY SCALES, WILL NOTIFY SOS AND SOM
1400 BAGGING OFF 2 PDCS BAGGING ON A DAUGHTER,
CONTINUING ON SAME DRUM
1432 BAG ON BAGOFF COMPLETE
1534 BAGGING OFF & BAGGING ON S846107
1545 STARTING OUTSIDE ROUNDS
1557 BAG ON BAG OFF COMPLETE
1601 ITEM 19 OUTSIDE ROUNDS UNSAT, FSR IN PLACE, OKAY
TO CONTINUE PER CSE ~~DOCUMENT~~ 9/10/13 HS DOCUMENTATION
1604 STARTING INSIDE ROUNDS
1610 OUTSIDE ROUNDS CONCLUDED
1624 INSIDE ROUNDS COMPLETED
1629 LATE ENTRY. 1618 ITEM #63 INSIDE ROUNDS OOS. OKAY
TO PROCEED, PER CSE DOCUMENTATION HSMITH
1702 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SOS
1722 BEGIN MOVEMENT FROM TA50-194/75 TO TA50-69
1748 MOVEMENT INTO TA50-69 IS COMPLETE
1749 BEGIN MOVEMENT INTO ~~TA-50-69~~ 9/10/13 HS TA50-194/75
INTO ~~TA 50-9~~ 9/10/13 HS TA50-69
1805 ~~1755~~ 9/10/13 HS MOVEMENT INTO TA50-69 COMPLETE
HH 9-10-13 SHIFT TURNOVER WITH OCO TERRI COLEMAN HSMITH

NO FURTHER ENTRIES ON THIS PAGE

9-9-13 WCRR SOS Log Book

1810 Performing turnover with off going SOS Gilbert Martinez assuming SOS position for the evening. Jim J.

1820 Starting Pre-Job brief. Safety Topic discussed ladder safety. Turnover from crew identified 2 85 gallon Parent drums needing to D-Nest. 6 Daughter drums needing to be moved out. Versalift inspection with brake was completed waiting on certification to be issued before it can be moved in.

1850 Concluded Pre-Job brief

1945 Unable to perform move out, Inventory control needing to update information from day crew so be can perform a move-out. Instructed operators to go ahead and start with D-Nesting while inventory is updating the WCATS system.

2004 Operator notifying me that the drumlift is shifting while performing its inspection and the cable is making a grinding noise.

2015 Entering 50-69 to try and identify what the problem is on the drum lift. My visual inspection identified the when the drum lift is coming down, it's jerking and once it reaches the bottom it shifts, then going on the way up it is also making a popping noise and then when it the horizontal position it shifts also. Explained my findings to the SOM

2040 SOM notifying CAAC OM of situation.

2118 Performing drum movement of 6 daughters generated during the day shift to the Transportainer

2135 Drum movement Complete

2150 Mode Change 50-69 and WCRR yard are in WARM STBY.

2210 Maintenance personnel on site

2230 Maintenance personnel being briefed on maintenance RWP

0105 ~~0005~~ Maintenance work on the drum-lift has been completed inspections have been performed and signed by the CSE.

0108 Mode Change Complete. WCRR yard and 50-69 are in Operations

0120 Operators starting to D-Nest when PSC called out identifying that he did not have enough qualified operators to perform D-Nesting operations. Had to identify the fourth operator

(continued on next p

0240 Operators starting to D-Vest two 85 gallon Parents.
0330 Operators have completed the D-Vesting operations however they are reporting that the parent drums are tearing when they are being placed into the cradle. They reported that they tried different Casters on both parent drums that were D-Vested and having the same problem. Reported it to the SOM, The SOM identified that they should ~~to~~ try the 85 gal caster so the 55 gallon parent actually sits on top of 85 gal caster which makes it sit higher and fit in the belly band. Operators tried this and works fine.
0357 Bagging on first Parent # 5846168
HA 0411 Bag on Complete.
0515 Signed off on rounds
0530 Operators reporting that Parent drum has a lot of liquid in it. pH reading was zero, neutralizer was added to it. Operator reporting the it is reacting causing it to foam. Instructed operator to leave one operator watching over it while turnover is being performed and we'll get someone to go and relieve them.
0600 Turning over SOS position to On-Coming SOS Gilbert Martinez
Securing SOS position for the day. [illegible]

No further entries on this page.

9/10/13 WCRR SOS LOG Book

0600 Assuming SOS Position ~~A~~ ~~Hd~~ m.p.

0615 Conducted Shift Brief Discussed Adjustments made on Lift, Shipments, and Crit safety Limits.

0640 Concluded shift brief

0721 Operators entering 50-69 For Processing.

0836 bagging off 1 Daughter Bagging on A POC

0858 bag off Complete

0942 Operator notified of A Cam Alarm In 50-69 Entering EP-WCRR-RM-ARP-0407, operator exiting to change room

0944 SOM notified of Alarm.

0947 Ops Manager notified Cam was #6 back side of GBE

1000 Notified by RCt Cam at 326.5 DAC ~~38~~ 3678.7 CPM Alpha. Also operators were not in Respirator will need to Perform nasals on all that were Inside 50-69 non of these Individuals will be Allowed back till Results return from HPal. RPO will be Generated.

1010 Ops Manager will notify DOE and Food.

1011 RCt will smear Change out Room and Brief to RWP for reentry

1024 RCts entering 50-69

1030 RCts Advised that Change Room NDA

1212 All Results From nasals NDA

1214 Exiting EP-WCRR-RM-ARP-0407 Room Has been Approved for reentry waiting on RCt's to change out Cam. Prior to operations

1315 Per CM ok to resume operations

1351 notified by operators roof leaking near scale Instructed to Put mop bucket to catch liquid.

1400 bagging off 2 POCs bagging on 1 daughter

1432 Bag off complete

1534 Bagging off / on 584607

1549 Started Rounds

1557 Bag on/off complete.

1707 Reviewed Inside and outside Rounds

Continued on next Page

9/10/13 Night Shift continued

0105 All PMT completed for WO #468623-01. MSS and CSE signatures completed and work order is closed out.

0108 Completed mode change: Work Yard/Bldg 50-69 from Warm/Warm to Operations/Operations.

0215 Notified by PIC that they did not have enough qualified people for critical lift (denesting) due to one person w/ cut and another needing biossay submission. Inventory control operator is qualified and will act as 4th person.

0240 Denesting ~~is complete.~~ MG 9/10/13 of 2 drums commencing.

0330 Denesting completed. Operators identified that when securing drum to drum lift that the belly bands were cutting the tape @ the bottom of upper hoop. This is due to drum not sitting up high enough. Operators obtained an 85 gal drum castor which raised drum up to sufficient height to prevent bag/tape tears.

0411 Bag on of drum #5846168 complete.

0604 Turned over SOM position to Day shift SOM. [illegible]

No further entries this page MG

9-10-13 Dayshift SOM

0611 Received the shift turnover checklist and assumed the SOM position [signature]

0618 Reviewed and approved the dayshift watchbill.

0619 Attended the pre-job brief conducted by the SOS in training (Clavijo) the SOS on duty is Gilbert. Roles and responsibilities were discussed. There is one transfer scheduled out and one scheduled in. The safety topic was Radon - played for the team. Criticality safety was also reviewed. A status of the facility was provided.

0711 Completed daily phone call to AREA 6 SOM providing scheduled POD.

0714 RP-1 supervisor indicated the PCM-2 is not working. The technicians were notified to support repair. The DAL will require evaluation.

0715 Operations entered feedoly and initiated processing the count down

0728 Turned the SOM watch over to Lou Jaffert [signature]

0728 ASSUMED SOM DUTIES. [signature]

0810 PCM 2 REPAIRED. HI VOLTAGE OFF - TURNED ON. NO ISSUES.

0939 PCM 2 IN 50-64-102 fails again.

0952 CAM ALARM REPORTED IN 50-69. CONTROL EXIT UNDERWAY

1005 CAM UPDATE: CAM A6, 326.5 DAL HRS, 3678 EM [illegible] 9-10-13 CPM ALPHA. PERSONNEL SURVEYS ARE NDA.

1020 DOE NOTIFIED VIA MESSAGE.

1040 PREPARING TO REENTER 50-69.

1154 INVESTIGATION SURVEYS COMPLETE. AWAITING NASAL RESULTS. WORKERS CAN NOT GO BACK TO WORK UNTIL NASALS ARE IN.

1213 NASALS ARE NDA.

1225 TA50-69-102 RELEASED

1300 A SHEET OF LEAD REMAINED WITHIN THE WCG. BAGGING OFF WILL INCLUDE BAGGING OFF 2 POCs, 1 DAUGHTER, BAG ON 1 DAUGHTER, REMEDIATE THE LEAD INTO THE DAUGHTER, THEN BAG OFF THE PARENT.* IT WAS REPORTED EARLIER THAT AT THE TIME OF THE CAM THAT PREPERATIONS WERE BEING MADE TO BAG OFF THE PARENT. *PLUS DAUGHTER. RP-2

CONTINUE ENTRY →

4-12-13 Dayshift (Cont)

IS WAITING IN THE WINGS (NOT ONSITE) TO REPAIR THE PCM BY SWAPPING A FOOT DETECTOR OUT.

1523 BAGGING OFF PARENT DISCUSSED AT 1300. WILL CONTINUE TO BAG ON NEXT DRUM, LEAVE LID ON, AND CALL PAUSE TO FIX PCM. HOWEVER, IF TECHS ARE NOT AVAILABLE AT THAT ~~B~~ JS 4-10-13 POINT CREW WILL CONTINUE PROCESSING DRUM. REPAIRS TO PCM WILL HAVE TO BE TOMORROW.

1557 TURN OVER SOM DUTIES TO GUADAGNOLI.

1557 Assumed the SOM duties John Guadagnoli

1600 Per RP-1 the PCM-2 technicians were not available to support changing out the PCM plate. As a result, operations will continue to process

late entry for 1458 - Operations completed bag off's and bag on of Parent drum SE46107, and initiate processing

1710 Extended shift order - WCRR-SH-13-003-R2 "Manual Drum Movements" to 5-17-13

1722 Outside operations initiated a movement out and transfer of 4 Parents in.

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

1815 Secured the day shift SOM position John Guadagnoli

No further entries this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0110
Examination Date:	9/16/2013
Waste Container ID:	68316
Video/Audio Recorded Media Number:	LA-RTR2-13-0110 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 109.0 kg Tare Wt.: 33.4 kg Net Wt.: 75.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: 68316

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Tape roll

R: Leaded rubber gloves

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	10.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	53.5
Soils (S):	
Total WMP Weight:	75.6

CCP Radiography Data Sheet

Waste Container ID: 68316

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

RTR Operator:

Benito Maestas	[signature]	9/16/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68316	Count Sequence Number:	23605
Operator:	D3PW2DK1\operator		
Assay Start:	9/19/2013 9:48:12 AM		
Description 1:	1LANDA1844		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 75.6 kg	Net:	75.6 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.560 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: 23605
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68316

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

Net Weight	75600.0 g		
Pu mass	7.12E+001	+-	1.12E+001 g
TRU Alpha Activity	8.99E+000	+-	2.13E+000 Ci
TRU Activity Concentration	1.19E+005	+-	2.81E+004 nCi/g
Pu-239 Equivalent Activity	9.15E+000	+-	2.13E+000 Ci
Pu-239 FGE	6.71E+001	+-	1.05E+001 g
Decay heat	2.88E-001	+-	7.02E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.11E-002	5.72E-005	9.30E-006	2.46E-006
PU238	6.51E-003	1.11E-001	1.75E-002	3.33E-005
PU239	6.68E+001	4.14E+000	6.51E-001	1.24E-003
PU240	4.27E+000	9.70E-001	1.52E-001	2.90E-004
AM241	1.10E+000	3.77E+000	2.02E+000	5.00E-002
PU241	8.22E-002	8.47E+000	1.33E+000	2.54E-003
PU242	1.43E-002	5.63E-005	8.85E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.26E-007
U233	<LLD	<LLD	0.00E+000	5.45E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.45E-006
U238	<LLD	<LLD	0.00E+000	1.83E-005
AM243	1.11E-003	2.23E-004	3.68E-005	7.29E-006

Errors quoted at 1.000 sigma

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

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

Automated Independent Technical Review

Count Sequence Number: 23605
Batch Number: 1LANDA1844
Counter ID: MCS HENC #1
Container ID: 68316
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 9/19/2013

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

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

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68316**

BDR Number: **LA13FG2103**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	129.67	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130926C\
Data File : 68316.D
Acq On : 26 Sep 2013 2:33 pm (#1); 26-Sep-13, 14:32:29 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 26 14:41:17 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.578	96	4532352	205.75 ppmv	0.06
15) Chlorobenzene-d5	5.878	117	3506873	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.613	GC1	975m	129.67 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0109
Examination Date:	9/13/2013
Waste Container ID:	68330
Video/Audio Recorded Media Number:	LA-RTR2-13-0109 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 150.0 kg Tare Wt.: 33.4 kg Net Wt.: 116.6 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: 68330

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, 90 mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	11.7
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	98.9
Soils (S):	
Total WMP Weight:	116.6

CCP Radiography Data Sheet

Waste Container ID: 68330

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

RTR Operator:

Michael Simmons		9/13/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68330	Count Sequence Number:	23599
Operator:	D3PW2DK1\operator		
Assay Start:	9/18/2013 12:55:58 PM		
Description 1:	1LANDA1843		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 117.0 kg	Net:	117.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.700 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23599
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68330

Batch Number: 1LANDA1843
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/18/2013

Net Weight	117000.0 g		
Pu mass	5.39E+001	+-	9.48E+000 g
TRU Alpha Activity	6.74E+000	+-	1.61E+000 Ci
TRU Activity Concentration	5.76E+004	+-	1.38E+004 nCi/g
Pu-239 Equivalent Activity	6.86E+000	+-	1.61E+000 Ci
Pu-239 FGE	5.22E+001	+-	8.90E+000 g
Decay heat	2.16E-001	+-	5.33E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.03E-001	7.27E-005	1.35E-005	3.15E-006
PU238	4.93E-003	8.43E-002	1.48E-002	3.41E-005
PU239	5.06E+001	3.14E+000	5.51E-001	1.27E-003
PU240	3.24E+000	7.34E-001	1.29E-001	2.97E-004
AM241	8.11E-001	2.78E+000	1.51E+000	7.56E-002
PU241	6.23E-002	6.42E+000	1.13E+000	2.59E-003
PU242	1.08E-002	4.26E-005	7.50E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.72E-007
U233	<LLD	<LLD	0.00E+000	6.76E-003
U234	2.89E-002	1.80E-004	5.27E-005	0.00E+000
U235	2.06E+000	4.45E-006	1.30E-006	2.99E-006
U238	<LLD	<LLD	0.00E+000	1.89E-005
AM243	1.41E-003	2.82E-004	5.30E-005	9.12E-006

Errors quoted at 1.000 sigma

Operator: Jon Barton Date: 9/19/13

ITR: Date: 9/20/13

Automated Independent Technical Review

Count Sequence Number: 23599
Batch Number: 1LANDA1843
Counter ID: MCS HENC #1
Container ID: 68330
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 9/18/2013

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

Expert Review by: Sheri Chamberlin Date: 9-19-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68330**

BDR Number: **LA13FG2102**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	241.65	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130925C\
Data File : 68330.D
Acq On : 25 Sep 2013 12:56 pm (#1); 25-Sep-13, 12:56:13 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 25 13:04:37 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.584	96	4786567	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.887	117	3670454	177.50 ppmv	0.03
Target Compounds					Qvalue
1) Hydrogen	1.621	GC1	1817	241.65 ppmv	100

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0109
Examination Date:	9/13/2013
Waste Container ID:	68345
Video/Audio Recorded Media Number:	LA-RTR2-13-0109 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 156.5 kg Tare Wt.: 145.1 kg Net Wt.: 11.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68345

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); Fiberboard Liner Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	10.4
Soils (S):	
Total WMP Weight:	11.4

CCP Radiography Data Sheet

Waste Container ID: 68345

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, liner is vented.

RTR Operator:

Michael Simmons		9/13/2013
Print Name	Signature	Date

S846168

NDA 2000 Assay Report

Item Information

Item ID:	68345	Count Sequence Number:	23600
Operator:	D3PW2DK1\operator		
Assay Start:	9/18/2013 1:40:24 PM		
Description 1:	1LANDA1843		
Description 2:	POC - GW = 156.5 kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 11.4 kg	Net:	11.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.652 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:	23600	Batch Number:	1LANDA1843
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:	68345	Analysis Date:	9/18/2013

Net Weight	11400.0 g			
Pu mass	1.99E+001	+-	8.49E+000	g
TRU Alpha Activity	2.53E+000	+-	9.13E-001	Ci
TRU Activity Concentration	2.22E+005	+-	8.01E+004	nCi/g
Pu-239 Equivalent Activity	2.57E+000	+-	9.13E-001	Ci
Pu-239 FGE	1.88E+001	+-	8.47E+000	g
Decay heat	8.12E-002	+-	2.97E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.79E-007
U233	<LLD	<LLD	0.00E+000	3.24E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.29E-007
NP237	1.92E-002	1.36E-005	2.45E-006	1.53E-006
PU238	1.82E-003	3.12E-002	1.47E-002	7.38E-004
U238	<LLD	<LLD	0.00E+000	9.16E-006
PU239	1.87E+001	1.16E+000	5.25E-001	2.75E-002
PU240	1.20E+000	2.71E-001	1.29E-001	6.43E-003
AM241	3.12E-001	1.07E+000	7.36E-001	6.64E-002
PU241	2.30E-002	2.37E+000	1.12E+000	5.62E-002
PU242	3.99E-003	1.58E-005	7.48E-006	0.00E+000
AM243	2.83E-004	5.66E-005	1.03E-005	4.30E-006

Errors quoted at 1.000 sigma

Operator: Ami Barton Date: 9/19/13

ITR: Date: 9/20/13

Automated Independent Technical Review

Count Sequence Number: 23600 Batch Number: 1LANDA1843
Counter ID: MCS HENC #1
Container ID: 68345
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/18/2013

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 Chandler Date: 9-19-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68345**

BDR Number: **LA13FG2113**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	17571.07	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131105C\
Data File : 68345.D
Acq On : 5 Nov 2013 2:27 pm (#1); 05-Nov-13, 14:26:24 (#2)
Operator : SA
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 14:35:19 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.581	96	4684745	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.877	117	3632172	177.50	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.578	GC1	132120m	17571.07	ppmv	

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

VOCGAS.M Wed Nov 06 12:34:28 2013

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0110
Examination Date:	9/16/2013
Waste Container ID:	68346
Video/Audio Recorded Media Number:	LA-RTR2-13-0110 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 177.0 kg Tare Wt.: 145.1 kg Net Wt.: 31.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 68346

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); Fiberboard Liner Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	28.9
Soils (S):	
Total WMP Weight:	31.9

CCP Radiography Data Sheet

Waste Container ID: 68346

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, liner is vented.

RTR Operator:

Print Name	Signature	Date
Benito Maestas	B. Maestas	9/16/2013

NDA 2000 Assay Report

Item Information

Item ID:	68346	Count Sequence Number:	23586
Operator:	D3PW2DK1\operator		
Assay Start:	9/17/2013 9:37:29 AM		
Description 1:	1LANDA1842		
Description 2:	POC - Gross Wt. = 177.0 Kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 31.9 kg	Net:	31.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.756 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:	23586	Batch Number:	1LANDA1842
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68346	Analysis Date:	9/17/2013

Net Weight	31900.0 g		
Pu mass	1.19E+002	+- 3.65E+001	g
TRU Alpha Activity	1.44E+001	+- 4.55E+000	Ci
TRU Activity Concentration	4.51E+005	+- 1.43E+005	nCi/g
Pu-239 Equivalent Activity	1.46E+001	+- 4.55E+000	Ci
Pu-239 FGE	1.13E+002	+- 3.64E+001	g
Decay heat	4.60E-001	+- 1.49E-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	8.07E-007
U233	<LLD	<LLD	0.00E+000	7.26E-003
U234	1.39E-002	8.62E-005	2.33E-005	0.00E+000
U235	9.88E-001	2.13E-006	5.76E-007	1.97E-006
NP237	8.01E-002	5.65E-005	1.10E-005	3.33E-006
PU238	1.09E-002	1.86E-001	6.51E-002	8.44E-004
U238	<LLD	<LLD	0.00E+000	1.85E-005
PU239	1.12E+002	6.92E+000	2.26E+000	3.14E-002
PU240	7.13E+000	1.62E+000	5.75E-001	7.35E-003
AM241	1.65E+000	5.65E+000	3.91E+000	1.46E-001
PU241	1.37E-001	1.41E+001	5.03E+000	6.42E-002
PU242	2.38E-002	9.40E-005	3.34E-005	0.00E+000
AM243	1.41E-003	2.82E-004	5.52E-005	9.80E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 9.19.13

ITR: _____ Date: 9/20/13

Automated Independent Technical Review

Count Sequence Number: 23586 Batch Number: 1LANDA1842
Counter ID: MCS HENC #1
Container ID: 68346
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/17/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	OK
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data. U-234 ratioed from u-235.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Bart B. Marah Date: 9/18/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68346**

BDR Number: **LA13FG2113**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	549.40	
74-82-8	Methane	142.14	U
67-56-1	Methanol	323.81	
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
598-58-3	Methyl Nitrate	313.26
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131105C\
Data File : 68346.D
Acq On : 5 Nov 2013 2:05 pm (#1); 05-Nov-13, 14:04:25 (#2)
Operator : SA
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 14:13:23 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.539	96	4269485	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3242829	177.50 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.617	GC1	4131m	549.40 ppmv	
4) Methanol	0.746	31	110468m	323.81 ppmv	

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

VOCGAS.M Wed Nov 06 12:33:30 2013

S846172

S846172

Containe 773361

File Options Reports Help

S846172

773361	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

S846172

S846172
- LA00000068418 -EMPTY
- LA00000068413
- LA00000068376

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
50.0	%			

Working Copy
Date: 9/23/13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S846172

6.2[4] Date Processed: 9-23-13

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

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

4.1[6][B] Parent Waste Container RCRA Designations: N/A

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

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

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

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

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

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

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

Performed By: [illegible] [signature] 128826 | 9-23-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: S846172	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	454.4 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	120 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	574.4 lb
6.2[7]	(S) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[17][D]	Drum lift hinge pin retaining clip replaced.	N/A / / Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S846172

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68413	68376		
10.1[4]	Daughter Drum Filter No.	LM-262	AN-680	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6777	L-6716	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		A		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	6 gallons			
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead	N		
10.3[9][A]	PCB-contaminated Waste Description	N	A		
10.3[9][B]	PCB Item ID No.				
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 (%)	95%	99%	N	
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic + Kitty litter	Plastic + Kitty litter	A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S846172

Comments: Nitrate Salts, Kitty Litter, Cut Fantastic Bottle, Plastic, Room Trash and Tape

11.1[1] Performed By: Edward Martinez [signature] 123991 9-23-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: G Mk / [signature] 149235 9/25/13 0840
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9-17-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.:	501563
Lot No.:	0238367
Manufacture Date:	2013

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

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

Overpack filtered vent information:

Manufacturer:	Nucfil
Model No.:	013
Serial No.:	JL-918
Manufacture Date:	10/11

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

5. [11] Performed By: Frederick Ashulch [signature] 1228826 9-17-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Frederick Ashulch [signature] 1228826 9-17-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G Mtz [signature] 1492751 9/25/13
Supervisor or designee (print) Signature Z # Date

Working Copy

ATTACHMENT 1
Page 1 of 2

Date: 9-10-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68376

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5-2SPVC
Serial No.: L-6716
Manufacture Date: 1-13

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

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

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

Performed By: Joe Edwards Schulte | [signature] | 1228826 | 9-10-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: ~~019DS~~ 019DS
Serial No.: AN-680
Manufacture Date: 1-13

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68376

Comments: N/C

5.[35] Performed By: Frederick Archuleta | [signature] | 1228899 | 9-10-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: G. Mtz | [signature] | 149235 | 9/25/13
Supervisor or designee (print) | Signature | Z # | Date

Working Copy
Date: 9-23-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68376

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

M&TE No.: 030370
Cal. Expiration Date: 08-02-14
Range in ft-lb: 10-80
Tolerance: +/-3% CW & +/-6% CCW

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

Performed By: James Sutal / [signature] / 111162 / 09-23-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68376

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 391.4 lbs

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

Comments: N/C

6.[32] Performed By: Edward Martinez (Operator (print)) [signature] (Signature) 123994 (Z#) 9-25-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 240090 (Z#) 9/25/13 (Date)

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-17-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68413

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2 SPVC
Serial No.: L-6777
Manufacture Date: 1/13

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

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

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

Performed By: MICHAEL MONTOYA (Operator (print)) [signature] (Signature) 191352 (Z #) 9/17/13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-262
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.: 68413

Comments: N/a

5.[35] Performed By: MICHAEL MONTOYA (Operator (print)) [signature] (Signature) 191352 (Z #) 9/17/13 (Date)

7.1[4] Reviewed By: G Mk (Supervisor or designee (print)) [signature] (Signature) 149235 (Z #) 9/25/13 (Date)

Working Copy
Date: 9-23-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68413

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-60
Tolerance: 4% ±3% incl ±4 to 8% incl

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

Performed By: Federico Bobbitt / [signature] / [illegible] / 9-23-13
Operator (print) Signature Z # Date

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:	N/A	N/A
Cal. Expiration Date:		
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.: 68413

6.[26] Scale File ID number: 0190625

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

6.[28] Drum gross weight: 332.8 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: [illegible] / [signature] 122880 9-23-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: G Mk / [signature] 149275 9/25/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9/23/13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S846172

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

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

6.3[18] Prepared parent 55-gal drum weight (lb): 454.4

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

Comments: N/A

8.1[1] Performed By: [illegible] / [signature] 132062 9-23-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk / [signature] 149235 9/25/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: G Mk / [signature] 149235 9/25/13 0835
SOS/SOM or designee (print) Signature Z # Date Time

1937/72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846172 Container Type: 85-GAL Gross Weight (lbs): 482
Inner Seal #: 019669 Filter Prefix: LAVC Filter Serial #: 00938
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 1.06E+01 Equivalent Combustible PE-Ci: 3.97E+00 AM-241 PE-Ci: 8.59E-01
Total Fissile Gram Equivalents: 116.8 Total Surface Dose Rate (mrem/hr): 3
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 2/9/2007 Comment: NA
Certified RTR Comment: None

Prohibited Items: ☒ Sealed > 4 Liters ☒ Liquid ☒ Pressurized Container ☒ Impenetrable Item ☑ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litty/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: R. W. Jones Z Number: 117434 Date: 1-10-12
SUSAN S. RAMSEY Signature: Susan S. Ramsey Z Number: 100481 Date: 10/31/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 422lb, Generator info shows waste consists 8 items (likely plastic bags) of nitrate salts ranging in weight from 25lb to 71lb. Waste packaged into 55 gal drum. Nitrate salts may contain free liquids.

May require RWP for >1000 and <10000 mrem/hr @ 30cm

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 6/27/12

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 when processing waste
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: Jose Jerez Z Number: 221452 Date: 11-29-12
LL Z# 249750 12/13/12

IHS Review. Johnny Amallwal CSP, may contain Pb, Cr, Hg 11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 019669

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	LR148NE1		20.900	NITRATE SALTS		8.79	52	6/14	G468	
2	LR149NW1		11.360	NITRATE SALTS		3.12	52	6/14	G468	
3	LR149NW2		12.270	NITRATE SALTS		11.45	52	6/14	G468	
4	0132150NE2		19.320	NITRATE SALTS		1.67	52	6/14	G468	
5	OX133151NE		23.410	NITRATE SALTS		33.42	52	6/14	G468	
6	OX133151NW		32.260	NITRATE SALTS		20.7	52	6/14	G468	
7	OX132150NE		20.450	NITRATE SALTS		18.37	52	6/14	G468	
8	LR147NE1		18.630	NITRATE SALTS		16.59	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 218.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	114.11	158.60
Totals	114.11	158.60

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 2/23/12

Container No. (5.[1])	S846172					
Filtered Vent Type (5.[1])	72					
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	Ø ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	2537.72 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	ppm	ppm	ppm	ppm	ppm

No Further Entries 2/28/12

5.[7] Certified CCP Technician:

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

Reviewed By: Gabe Romero (CCP (Print)) 236973 (Z#)

Comments:
Drum # S846172 is a 55 gallon drum sampled from inside an 85 gallon overpack.

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

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

6.1[2][B]/ 6.1[3] Performed By: Alicia Herrera (Waste Handling Operator (print)) (Signature) 198450 (Z#) 2/28/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120223c\
Data File : S846172.D
Acq On : 23 Feb 2012 2:30 pm (#1); 23-Feb-12, 14:30:08 (#2)
Operator : GR
Sample :
Misc : 55 GAL DRUM FROM INSIDE 85 GAL OVERPACK (72) (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 23 14:41:49 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Oct 18 13:58:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.621	96	5907353	209.00	ppmv	-0.01
15) Chlorobenzene-d5	5.934	117	4793752	185.50	ppmv	-0.01
Target Compounds						Qvalue
1) Hydrogen	1.623	GC1	19975	2537.72	ppmv	100

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

vocgas.m Thu Feb 23 14:42:03 2012

9-23-13 Dayshift

1330 Per discussion with P&T and OM, the transfer to WCRR from Area G will be on Wednesday 9-25-13.

1342 Turned the shift SOM over to Lou JALBERT John Guadagnoli

1348 ASSUMED SOM DUTIES.

1555 TURNED SOM OVER TO GUADAGNOLI.

1555 Assumed the SOM position John Guadagnoli

1558 Late entry for 1403 hrs. Two Parent drums were moved in, Operations de-nested 1 drum, and bagged off 5846195 and 1 daughter. Operations bagged on 5846172 -

1605 Late entry for 1507 hrs, Operations completed de-nesting and completed the bag on/bag off.

It was noted that DRUM 5846037 - was noted to have pinholes in the LID of the drum. Attempts were made to place tape over the pinholes, however the tape did not hold. The lid of the 85 was put back on. A pathforward - per discussion with the SOS and ES/PM would be to caulk the holes then de/nest. The CSE will need to be contacted if an attempt was made to caulk.

Also per SOS - he discussed with RCTs/RPs a path forward for Drums 5851426 - degraded ring and Drum 5846088, cracked ring. They indicate that they believe it can both be denested — The SOS will have experienced operators on night shift evaluate the drums for denesting. 9-23-13 9-23-13

The pinhole drum will be removed from the 50-69 facility until/caulking is procured and CSE is on board - (Drum 5846037 - on hold with Production Inventory)

1704 Inside Operations initiate bag off of 1 daughter and bag on of another and continue to process.

1715 CSE (B. Griffis) notified about Ring issues and use of caulking. He agreed to seal holes.

1741 Completed reviewing rounds - inside Room temperature noted at 68°F.

1745 Drum 5846172 currently generated 2 daughters 9-23-17 and operators continue to process.

1800 Conducted shift turnover review with night shift S

1805 Relieved by R. Axtell as SOM John Guadagnoli

No further Entries this page 9-23-13

9/23/13 Night Shift

1805 Reviewed Shift turnover checklist and assumed WCRR SOM position.

1806 Approved and posted Night Shift Operations watch bill.

1815 Attended prejob brief conducted by SOS. Discussed conditions of waste containers inside 50-69 to process - denesting of drums w/ bad rings - precautions and possible path forward including use of slings in a choker configuration similar to re-nesting POC's. IH safety topic was smoking cessation and programs offered @ LANL.

2115 Completed bag off of parent 5846172 and all daughters (2 total) bagged on drum # 5821203. ~~Denested 821203~~ MG 9/23/13 After denesting.

2344 Completed drum movement of 3 drums from 50-69 to transportainers.

2355 Operators reported fume hood is alarming. Directed operators to check FE-002 flowrate on Allen Bradley - flowrate reported to be 6200 cfm - normal reading.

9/24/13 0009 Requested RP-1 to conduct surveys in vicinity of fume hood. It was reported to OCO from operators that when checking the Allen Bradley that keying the radios caused interference.

0017 Operators breaking for lunch.

0035 RP-1 completed surveys of area around fume hood - all are NDA. Portable CAM unit was placed in front of fume hood as a precautionary measure. Researching past e-mails and log entries for previous fume hood alarms w/ actions taken.

0220 Fume hood alarm has not reset - notified OM

0235 Contacted CSE regarding fume hood alarm - He stated that as long as other ventillation system parameters are normal (verified) that ~~[illegible]~~ MG 9/24/13 since fume hood is inoperable and sealed off w/ tape + plastic that operations should not be affected. He recommended trying a reset of the alarm.

0241 Operator reported that reset of fume hood alarm failed. Operator has silenced the audible alarm.

0247 With concurrence of CSE per OM an IOD - Immediate Operability

Continued on next page →

9-23-13
0550 ASSUMMING WCRRF OPO POSITION HASMITH
0551 SCALE VERIFICATIONS BEING PERFORMED
0551 BEGINNING OUTSIDE ROUNDS
0615 BEGINNING PRE-JOB BRIEFING
0617 ITEM #19 OUTSIDE ROUNDS UNSAT PERMISSION TO PROCEED PER CSE
0625 OUTSIDE ROUNDS COMPLETED
0628 STARTING INSIDE ROUNDS
0635 PRE-JOB CONCLUDED
0640 BEING ~~RELIEF~~ 9/23/13 HS RELIEVED BY OCO CVELARDE, HASMITH
0641 ASSUMING WCRRF Operations center OCO position - CVelarde
0715 Item #63 is OOS, POD in place okay to proceed per CSE documentation
0718 WCC4 receptacle has been placed in the OCO position.
0732 Inside and outside rounds signed off by SOS.
0734 Forklift 943092 has error code 16, SOS and SOM have been notified. SOM will contact maintenance.
0745 mode change has been performed TASD-69 and WCRRF yard are now in operations.
0800 Starting movement into OSD-69
0821 movement into 50-69 is complete
0853 Starting to denest 3 drums will be bagging on 9846195
0939 Denesting is complete of 1 drum. Operators did not ~~bag~~ 9-24-13 CV denest 2 drums due to degraded lid and broken ring. Bag on of 9846195 is complete.
1000 Starting movement of drums to transport vehicle Permission granted to lower vehicle access gates.
1047 Bagging off 1 daughter, bagging on 1 daughter.
1103 Bag on, Bag off is complete.
1140 vehicle access gates have been restored, movement complete to transport vehicle.
1147 Starting movement into 50-69.
1203 movement into 50-69 is complete.
1304 Being relieved by OCO Howard Smith - CVelarde
1305 ~~1403~~ 9/23/13 ASSUMING OPERATIONS CENTER FROM CVELARDE - HSMITH
1403 STARTING DENESTING PROCESS, BAGGING OFF S846195 AND 1 DAUGHTER, BAGGING ON S846172

9/23/13 CONTINUED FROM PREVIOUS PAGE - K SMITH
1406 CONTINUING THE PROCESS
1507 DENESTING COMPLETE, BAG ON BAG OFF COMPLE
BAGGED ON S846172, DENESTED 1 DRUM, DID
DENEST S846037 DUE TO HOLES IN LID.
1519 STARTING INSIDE ROUNDS
1533 STARTING OUTSIDE ROUNDS
1543 ITEM #63 OOS INSIDE ROUNDS, OKAY TO PRO
PER CSE DOCUMENTATION. PDD IN PLACE
1548 ITEM #19 UNSAT OUTSIDE ROUNDS. OKAY TO PROCE
PER CSE DOCUMENTATION, FSR IN PLACE
1553 COMPLETED OUTSIDE ROUNDS
1555 INSIDE ROUNDS COMPLETE
1630 OUTSIDE ROUNDS REVIEWED BY SOS
1640 STARTING MOVEMENT INTO TA50-69 FROM TA50-1
1647 ADVISED BY SOS INSIDE ROUNDS REVIEWED AT 16
1650 MOVEMENT INTO TA50-69 COMPLETE
1655 ~~MOVEMENT~~ 9/23/13 HS STARTING MOVEMENT INTO TA50-194/75,
TA50-69
1700 MOVEMENT INTO TA50-194/75 COMPLETE
1703 BAGGING OFF BAGGING ON
1723 BAG ON BAG OFF COMPLETE, CONTINUING TO PR
9/23/13 1800 BEING RELIEVED BY OCO TERRI COLEMAN HSM
HS

NO FURTHER ENTRIES ON THIS PAGE

9-23-13

1800 Assuming WCRR operations center. JCollier

1820 Beginning pre-job.

1830 Pre-job concluded.

1914 Operators entering 50-69

2020 Operators denesting, bagging off 1 daughter and bagging on S821203.

2115 Denesting, bag off/on complete.

2334 Initiating a drum movement from 50-69 to a transportainer and transportainer to 50-69.

Unexpected condition 2355 Operators report that the fume hood is alarming. Contacted RCT's who stated to reset the fume hood alarm. Operators report that on the Allen Bradley, FE-002 is reading 6200 cfm. SOS and SOM notified.

2356 Late entry-at 2344, the drum movement out of 50-69 was complete. JC

9-24-13 0009 SOM states that the RCT's should take a few area smears to be safe to make sure nothing is coming out. Also operators state that the radios interfere with the Allen Bradley.

0035 RCT states all smears of the fume hood are NSA and he has also placed the portable CAM in front of the fume hood for precautionary measures.

0036 Late entry-At 0017, operators out for lunch JC

0224 OM notified by SOM.

0227 OM states to reset the alarm.

0235 SOM notified CSE.

0241 Operator states reset of fume hood failed.

0247 Per CSE, SOM will initiate an IOD for the fume hood.

0250 Operators notified to resume operations.

0316 Movement into 50-69 complete.

0352 Bagging off 1 daughter, bagging on another daughter

0358 Operators state the fume hood is alarming reading "emergency". SOM has been notified. Operators will complete the bag off and place everything in a safe configuration.

Continued on next page. JCollier

9/23/13 WCRR SOS Log Book

0600 Assuming SOS position for the day. [illegible]

0615 Starting Pre-Job brief. Safety Topic for the Day Shoulder Strains and watch for pedestrians. 1 Shipment out, moving in 3 Parents that will need D-Nesting.

0630 Concluded Pre-Job brief.

0732 Reviewed and signed off inside and outside rounds.

0734 Operators notifying of A-6 Code on one of the forklifts, not allowing forks or transmission to engage. notified the SOM and asked for priority since we only have one forklift for D-Nesting and shipment out. SOM instructed to D-Nest first.

0745 Mode change complete, WCRR yard and 50-69 are in operations, starting movement of 3 Parents from Transportainer to 50-69. Once completed, will be moving in forklift to start D-Nesting.

0856 Operators starting to D-Nest.

0939 D-Nesting complete. Only D-Nested one parent due to the other two had a crack ring and the second had a degraded ring. Bagged on Parent 5846195.

1000 Starting movement of waste containers to transport vehicles for shipment out

1047 Bagging off one daughter and continuing to process

1103 Bag on/off complete

1140 Shipment out complete 18 waste drums.

1147 Starting movement into 50-69

1203 Movement Complete

1230 Operators breaking for lunch

1330 Operators returning from lunch.

1403 D-Nesting 2 85 parents for processing. Bagging off first parent and 1 daughter, will be bagging on 5846172

1507 D-Nesting, Bag on Bag off complete. Only D-Nested one parent due to holes in the lid.

1645 Moving in another Parent for D-Nesting to replace the Parent that had holes until path forward is identified. Will also be moving out daughters of first Parent that was processed.

1650 Late entry. Reviewed and signed the rounds at 1639.

1705 Operators Bagging off one daughter and bagging on second daughter and will continue to process 2nd parent.

[illegible]

9/23/13

WURR SOS Log Book

Continued from previous page.
Have out of 3 daughters and 1 Parent that had holes and move in of additional Parent has been completed. Total of 3 85 gallon parents inside of SD-69 for D-Westing. Two of the parents were the ones from this morning that have remained inside so night shift crew can identify if they can D-Vest or not.

1723 Bag on / Bag off complete of second daughter, continuing to process

1810 Second Parent completed, ready to bag off, waiting for night shift crew to go in to D-West Parents and Bag off Parent and Bag on new Parent.

1815 Securing SOS position for the day. Turning over to on-coming SOS Clayton Mullins. [illegible]

HG

No further entries on this page.

9/23/13 WCRR SOS Log Book

1816 Assuming SOS position. CA

1820 Starting Pre-Job, discussed back and shoulder strains as well as quitting smoking aids.

1843 Pre-Job complete.

2020 Bagging off 1 daughter, denesting and bagging on S 821203.

2115 Denesting, bag off/on complete.

2334 Starting movement out of 50-69, as well as a move in.

2344 Move out of 50-69 complete.

2355 Operators notify that the fume hood is alarming, searching for past emails/notifications for a path forward. Unexpected Condition.

0009 At request of the SOM, RCT's will take smears to make sure nothing is coming out of the fume hood. Also being notified by ~~R~~ CM 9-23-13 operators that the radios interfere with the Allen Bradley.

0035 RCT's notified that all smears of the fume hood are NDA and they are also placing a portable CAM in front of the fume hood as a precautionary measure.

0224 SOM notifies OM ~~and CSE~~ CM 9-23-13

0227 OM states to ~~notif~~ CM 9-23-13 reset alarm.

0235 SOM notified CSE.

0241 Operators reporting that reset fume hood failed.

0247 Per CSE, SOM will initiate an IOD for the fume hood.

0316 Move into 50-69 complete.

0352 Bagging off 1 daughter, bagging on a 2nd daughter.

0358 Operators report that during bag off the fume hood was again alarming and the message error is reading "Emergency." Will continue with bag off to place waste in a safe configuration.

0407 Bag off/on complete. Operators instructed to reset the fume hood, normal readings.

Continued on Next Page

S846172

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0115
Examination Date:	9/26/2013
Waste Container ID:	68376
Video/Audio Recorded Media Number:	LA-RTR2-13-0115 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 177.5 kg Tare Wt.: 33.4 kg Net Wt.: 144.1 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: 68376

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	139.1
Soils (S):	
Total WMP Weight:	144.1

CCP Radiography Data Sheet

Waste Container ID: 68376

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

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

RTR Operator:

M.Simmons/ E.Rios		9/26/2013
Print Name	Signature	Date

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

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

Item ID:            68376              Count Sequence Number:  23685
Operator:           D3PW2DK1\operator
Assay Start:        10/3/2013   1:01:33 PM
Description 1:      1LANDA1851
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6, Not Precision
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       144.0   kg        Net:   144.0 kg
Container:          Volume:    208.0   l        Full:    90.0 %
Density:                         0.770 kg /l


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

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

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23685	Batch Number:	1LANDA1851
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68376	Analysis Date:	10/3/2013

Net Weight	144000.0 g		
Pu mass	4.28E+001	+-	8.82E+000 g
TRU Alpha Activity	1.40E+001	+-	5.96E+000 Ci
TRU Activity Concentration	9.72E+004	+-	4.14E+004 nCi/g
Pu-239 Equivalent Activity	1.41E+001	+-	5.96E+000 Ci
Pu-239 FGE	4.04E+001	+-	8.80E+000 g
Decay heat	4.59E-001	+-	1.98E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	5.09E-010	5.75E-007	1.33E-007	1.92E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.29E-006
U233	<LLD	<LLD	0.00E+000	1.12E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.05E-006
NP237	1.98E-001	1.40E-004	2.74E-005	5.14E-006
PU238	3.91E-003	6.69E-002	1.70E-002	1.31E-003
U238	<LLD	<LLD	0.00E+000	3.00E-005
PU239	4.01E+001	2.49E+000	5.46E-001	4.87E-002
PU240	2.57E+000	5.83E-001	1.52E-001	1.14E-002
AM241	3.17E+000	1.09E+001	5.94E+000	1.09E-001
PU241	4.93E-002	5.08E+000	1.32E+000	9.93E-002
PU242	8.56E-003	3.38E-005	8.82E-006	0.00E+000
AM243	3.44E-003	6.88E-004	1.36E-004	1.52E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/8/13

ITR: _____ Date: 10.9.13

Automated Independent Technical Review

Count Sequence Number: 23685 Batch Number: 1LANDA1851
Counter ID: MCS HENC #1
Container ID: 68376
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/3/2013

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

Expert Review by: Bart B. Marsh Date: 10/8/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68376**

BDR Number: **LA13FG2106**

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

5846172

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	478.64	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131024c\
Data File : 68376.D
Acq On : 24 Oct 2013 12:21 pm (#1); 24-Oct-13, 12:20:30 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 24 12:29:05 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.558	96	5697208	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.868	117	4291481	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.624	GC1	3599m	478.64 ppmv	

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

22

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0115
Examination Date:	9/26/2013
Waste Container ID:	68413
Video/Audio Recorded Media Number:	LA-RTR2-13-0115 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 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 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68413

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

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):	0.2
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	108.9
Soils (S):	
Total WMP Weight:	117.6

CCP Radiography Data Sheet

Waste Container ID: 68413

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

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

RTR Operator:

M. Simmons/ E. Rios	Eddie Rios	9/26/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68413	Count Sequence Number:	23675
Operator:	D3PW2DK1\operator		
Assay Start:	10/2/2013 1:53:14 PM		
Description 1:	1LANDA1850		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 118.0 kg	Net:	118.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.710 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

018
6/17/14

NDA 2000 Assay Report

Item Information

Item ID:	68413	Count Sequence Number:	23675
Operator:	D3PW2DK1\operator		
Assay Start:	10/2/2013 1:53:14 PM		
Description 1:	1LANDA1850		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 118.0 kg	Net:	118.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.710 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

SUPERSEDED CS 6/17/14

018A

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23675
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68413

Batch Number: 1LANDA1850
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/2/2013

Net Weight	118000.0 g		
Pu mass	1.02E+002	+-	1.92E+001 g
TRU Alpha Activity	1.43E+001	+-	1.72E+000 Ci
TRU Activity Concentration	1.21E+005	+-	1.46E+004 nCi/g
Pu-239 Equivalent Activity	1.45E+001	+-	1.72E+000 Ci
Pu-239 FGE	9.58E+001	+-	1.80E+001 g
Decay heat	4.59E-001	+-	5.57E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.82E-001	1.29E-004	2.40E-005	5.37E-006
PU238	9.29E-003	1.59E-001	3.00E-002	3.31E-005
PU239	9.53E+001	5.91E+000	1.12E+000	1.23E-003
PU240	6.09E+000	1.38E+000	2.61E-001	2.88E-004
AM241	1.98E+000	6.80E+000	1.29E+000	1.42E-003
PU241	1.17E-001	1.21E+001	2.28E+000	2.51E-003
PU242	2.03E-002	8.03E-005	1.52E-005	0.00E+000
CO60	3.87E-010	4.37E-007	9.51E-008	1.53E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.09E-006
U233	<LLD	<LLD	0.00E+000	1.12E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.34E-006
U238	<LLD	<LLD	0.00E+000	2.99E-005
AM243	2.71E-003	5.43E-004	1.03E-004	1.55E-005

Errors quoted at 1.000 sigma

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

ITR: [signature] Date: 6.9.14

019
CS 6/17/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23675
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68413

Batch Number: 1LANDA1850
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/2/2013

Net Weight	118000.0 g	
Pu mass	1.02E+002 +-	1.92E+001 g
TRU Alpha Activity	8.43E+000 +-	1.16E+000 Ci
TRU Activity Concentration	7.14E+004 +-	9.85E+003 nCi/g
Pu-239 Equivalent Activity	8.65E+000 +-	1.16E+000 Ci
Pu-239 FGE	9.57E+001 +-	1.80E+001 g
Decay heat	2.65E-001 +-	3.63E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.82E-001	1.29E-004	2.40E-005	5.37E-006
PU238	9.29E-003	1.59E-001	3.00E-002	3.31E-005
PU239	9.53E+001	5.91E+000	1.12E+000	1.23E-003
PU240	6.09E+000	1.38E+000	2.61E-001	2.88E-004
AM241	2.85E-001	9.78E-001	1.85E-001	2.04E-004
PU241	1.17E-001	1.21E+001	2.28E+000	2.51E-003
PU242	2.03E-002	8.03E-005	1.52E-005	0.00E+000
CO60	3.87E-010	4.37E-007	9.51E-008	1.53E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.09E-006
U233	<LLD	<LLD	0.00E+000	1.12E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.34E-006
U238	<LLD	<LLD	0.00E+000	2.99E-005
AM243	2.71E-003	5.43E-004	1.03E-004	1.55E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 10/3/13

ITR: D F R. C Date: 10-3-13

SUPERSEDED 04/17/14

04/17/14 019A

Automated Independent Technical Review

Count Sequence Number: 23675 Batch Number: 1LANDA1850
Counter ID: MCS HENC #1
Container ID: 68413
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

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

DJD
CS 6/17/14

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Am-241 direct reported from gamma results.

Expert Review by: Bart B. Marsh Date: 6/3/14

DOA
CS 6/17/14

Automated Independent Technical Review

Count Sequence Number: 23675 Batch Number: 1LANDA1850
Counter ID: MCS HENC #1
Container ID: 68413
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

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

Expert Review by: Sheri Chamberlin Date: 10-3-13

SUPERSEDED

CJ 4/17/14

020B

04/17/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68413**

BDR Number: **LA13FG12106**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	420.49	
74-82-8	Methane	9.63	U
67-56-1	Methanol	32.96	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131022c\
Data File : 68413.D
Acq On : 22 Oct 2013 3:59 pm (#1); 22 Oct 2013 3:58 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 22 16:10:40 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	7208386	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5354515	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.907	GC1	119946m	420.49	ppmv	
4) Methanol	0.828	31	12556	32.96	ppmv	100

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

S846195

S846195

Container 760848

File Options Reports Help

S846195

760848	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

S846195

S846195
- LA00000068338
- LA00000068448
- LA00000068368 - EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.01	%			

Working Copy
Date: 9-23-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S846195

6.2[4] Date Processed: 9-23-13

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

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

4.1[6][B] Parent Waste Container RCRA Designations: N/A

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

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

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

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

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

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

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

Performed By: [illegible] [signature] 1228826 9-23-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 5846195	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	458.8 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	120 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	578 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.	/ / 12/17 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.: 5846195

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68338	68448		
10.1[4]	Daughter Drum Filter No.	KL-4665	LM-263	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-8228	L-6707		
10.1[4]	Daughter Drum Purchase Order No.	501103	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	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	4 galons	N/A		
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	lead shielding		
10.3[9][A]	PCB-contaminated Waste Description	N/A			
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%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Stabout Bags kitty litter glove Box gloves	Stabout bags kitty litter Dayed Filters		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S846195

Comments: Plastic, Hexcrmrs Nitrate salts, glove box gloves, kitty litter, 4 gallons of PH 4 liquid neutralized lead

11.1[1] Performed By: [illegible] [illegible] 1220524 9 23 13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: G Mh [illegible] Mf 1492351 9/25/13 0836
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 6-28-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

	Filtered Vent	2-in. Bung
M&TE No.:	1002116	0383609
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	40-200	10-80

Overpack filtered vent information:

Manufacturer:	NUCFIL
Model No.:	018
Serial No.:	JL-1962
Manufacture Date:	10-11

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

5. [11] Performed By: Gerald Espinoza / [signature] / 1231720 / 6-28-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Gerald Espinoza / [signature] / 1231720 / 6-28-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G Mk / [signature] / 149235 / 9/25/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-23-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68368

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

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

Performed By: Federico Arbulato / [signature] 1228826 / 9-23-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 173.5 lb

Comments: N/C

8.1[1] Performed By: Federico Arbulato / [signature] 1228826 / 9-23-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mk / [signature] Mk 149275 / 9.25.13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 68338

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 #: 0239766
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: BOM
Model #: BC-VC 1.5 EJ-PC
Serial #: L 3228
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: MILFIL
Model #: 09105
Serial #: KL 465
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):	10-60
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: Dan Marquez Signature: [signature] Z#: 276707

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 76 lbs
File ID #: 019063

- [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: Dan Marquez Operator Sign: [signature] Z#: 276707 Date: 8-1-13

Verifier Print: Jackie Archibald Verifier Sign: [signature] Z#: 272826 Date: 9-23-13

Working Copy
Date: 9-23-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68338

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

M&TE No.: 035370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: 1/4 3% cw, 1/4 6% ccw

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

Performed By: Federico Arbolda / [signature] 122842 / 9-23-13
Operator (print) Signature Z # Date

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:	N/A	N/A
Cal. Expiration Date:		
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.: 68338

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 374.2 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: [illegible] / [signature] [illegible] 9-23-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert [illegible] / [signature] 149235 9/25/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-18-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68448

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc1.52Spec
Serial No.: L-6707
Manufacture Date: 1-13

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

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

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

Performed By: JOE QUINTANA (Operator (print)) [signature] (Signature) 239987 (Z #) 9/18/13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM 265
Manufacture Date: 12/12

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

5.[32] Drum tare weight (lbs): 76.0 lbs

5.[34][E] Drum ID No.: 68448

Comments: N/C

5.[35] Performed By: JOE QUINTANA (Operator (print)) Joe Q (Signature) 239987 (Z#) 9/18/13 (Date)

7.1[4] Reviewed By: G Mh (Supervisor or designee (print)) D (Signature) 149235 (Z#) 9/25/13 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68448

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

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

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

Performed By: Frederick Holiday / [signature] / 122880 / 9-23-13
Operator (print) Signature Z # Date

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:		
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.: 68448

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 361.6 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: [illegible] / [illegible] 122884 / 9-23-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: G Wk / [illegible] 149278 9/25/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-23-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5846195

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

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

6.3[18] Prepared parent 55-gal drum weight (lb): 458.8

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

Comments: N/C

8.1[1] Performed By: Frederick Robledo / [signature] 122856 / 9-23-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Martinez / [signature] 149235 9/25/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: G Mk / [signature] 149235 9/25/13 08:15
SOS/SOM or designee (print) Signature Z # Date Time

1937
72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846195 Container Type: 85-GAL Gross Weight (lbs): 477
Inner Seal #: 019670 Filter Prefix: LAVC Filter Serial #: 00939
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 1.12E+01 Equivalent Combustible PE-Ci: 4.21E+00 AM-241 PE-Ci: 9.12E-01
Total Fissile Gram Equivalents: 124.1 Total Surface Dose Rate (mrem/hr): 3
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 1/31/2007 Comment: Liner Not Punctured,
Certified RTR Comment: None

Prohibited Items: ☒ Sealed > 4 Liters ☒ Liquid ☒ Pressurized Container ☒ Impenetrable Item ☑ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of Nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: R. W. Jones Z Number: 117434 Date: 1.10.12
SUSAN S. RAMSEY Signature: Susan S. Ramsey Z Number: 100681 Date: 10/31/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 417lb. Generator info shows, waste consists of nine items (likely plastic bags) of nitrate salts, ranging in weight from 6lb to 57lb. Waste packaged into 55 gal drum. Nitrate salts may contain free liquids.

May require RWP for >1000 and <10000 mrem/hr @ 30 cm

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112604 Date: 5/2/12

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hand. Use Hexarmour gloves when processing waste.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: Jose Jerez Z Number: 221452 Date: 11-29-12
LL Z# 249750 12/12/12
IHS Review: [illegible] CSP, may contain Pb, Hg, Cr.
11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 019670

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	LR153NW1		13.640	NITRATE SALTS		6.65	52	6/14	G468	
2	LR154NE1		17.950	NITRATE SALTS		6.41	52	6/14	G468	
3	LR154NW1		18.640	NITRATE SALTS		6.13	52	6/14	G468	
4	OX134155NW		22.270	NITRATE SALTS		20.56	52	6/14	G468	
5	MX152NE1		25.910	NITRATE SALTS		48.47	52	6/14	G468	
6	OX134155NE		20.570	NITRATE SALTS		27.03	52	6/14	G468	
7	RR156VRNW1		2.843	NITRATE SALTS		0.84	52	6/14	G468	
8	OX13515BNE		24.090	NITRATE SALTS		11.41	52	6/14	G468	
9	LR157NE1		9.890	NITRATE SALTS		4.38	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 216.3

Material Type	SNM (grams)	Items Net Wt (kg)
52	131.88	155.80
Totals	131.88	155.80

72
HR
6.10.12

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 2/23/12

Container No. (5.[1])	S851715	S846195	64694			
Filtered Vent Type (5.[1])	72	72	72			
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	Ø ppm	Ø ppm	Ø ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	598.89 ppm	103.16 ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: N/C

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

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

6.1[2][B] Performed By: Alicia Herrera / 198468 2/23/12
5.[5] Waste Handling Operator (print) Signature Z# Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120222c\
Data File : S846195.D
Acq On : 22 Feb 2012 4:28 pm (#1); 22-Feb-12, 16:28:06 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL DRUM SAMPLED FROM 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 22 16:36:48 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Oct 18 13:58:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.638	96	6095634	209.00	ppmv	0.00
15) Chlorobenzene-d5	5.954	117	4864750	185.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.621	GC1	4714m	598.89	ppmv	

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

vocgas.m Wed Feb 22 16:36:59 2012

9-23-13
0550 ASSUMMING WCRRF OPO POSITION HASMITH
0551 SCALE VERIFICATIONS BEING PERFORMED
0555 BEGINNING OUTSIDE ROUNDS
0615 BEGINNING PRE-JOB BRIEFING
0617 ITEM #19 OUTSIDE ROUNDS UNSAT PERMISSION TO PROCEED PER CSE
0625 OUTSIDE ROUNDS COMPLETED
0628 STARTING INSIDE ROUNDS
0635 PRE-JOB CONCLUDED
0640 BEING ~~RELIEF~~ 9/23/13 HS RELIEVED BY OCO CVELARDE, HASMITH
0641 Assuming WCRRF Operations clerk OCO position - Cvelarde
0715 Item #13 in CCS, POD in place okay to proceed per CSE direction
0718 in CC4 receptacle has been placed in the OCC position.
0732 Inside and outside rounds cleared off by SES
0754 Forklift 943092 has error code 6, SOR and SOM have been notified. SOM will contact maintenance
0745 mode change has been performed TASC 69 and WCRRF yard are now in operation.
0800 Starting movement into 50-69
0821 movement into 50-69 is complete
0853 Starting to direct 3 drums will be bagging on 9846195
0939 Sensing is complete of 1 drum operations direct ~~bag~~ 9-26-13 direct 2 drums due to degraded lid and broken ring. Bag on of 9846195 is complete.
1000 starting movement of drums to transport vehicle permission granted to lower vehicle cargo gates.
1047 Bagging off 1 daughter, bagging on 1 daughter
1103 Bag on, bag off is complete
1140 vehicle access gates have been restored; movement complete to transport vehicle
1147 starting movement into 50-69
1203 movement into 50-69 is complete
1304 Being relieved by OCO Howard Smith - Cvelarde
1305 ~~1403~~ 9/23/13 ASSUMMING OPERATIONS CENTER FROM CVELARDE - HSMITH
1403 STARTING DENESTING PROCESS, BAGGING OFF S846195 AND 1 DAUGHTER, BAGGING ON S846172

9-23-13 Dayshift

0600 Reviewed the shift turnover check list and assumed the SOM position John Guadagnoli

0635 Completed attending the pre-job brief conducted by the SOS (Jose) The safety topic discussed was shoulder strains. There is one transfer scheduled out from WCRR to AREA G. Operations will complete rounds and initiate re-inventory and de-nesting of 3 drums. Critical lifts were discussed and ensure training is up to date. Drum movements were discussed and proper aisle spacing.

0708 Completed daily phone call to AREA G update with POD activities

0735 Outside operators notify the SOS that the fork truck is giving the same error code of last week. SOM prioritized: Denest first priority "transfer out is the second priority.

0745 Mode Change: 50/69 and Yard Transition from Cold/Warm to Operations/Operations

0846 P&T completed inspecting 18 drums for the transfer out, they will hold for about 45 min, to see if the fork truck becomes available after de-nesting (inside operations is completed)

0853 After moving 3 drums into 50/69 operators initiated de-nesting.

0939 The 1st bag on ccws completed - Parent Drum 5846195. Also operators informed the SOS and Operations center that Drum 5851426 has a ring that is degraded and cannot be denested. Also Drum 5846088 has a cracked ring and can not be denested.

1000 Operations initiate movement of drums from the transportainer to the transfer vehicle.

1005 Completed meeting with WMC coordinator and Energy Solutions PM. The new coordinator will verify labels on waste containers and review assay information. We requested all LLW/LLM to be placed into WCATS. She indicated she will try to get them into the system prior to the end of the week. She will need assay (Rad data) for the 12 ~~drums~~ containers to manifest to Area G. JJ 9-23-13

1140 The transfer truck was loaded, P&T will move after 1300 hrs - SOM notified OCO that the Spill Kit in WCRR yard was observed missing the plastic seal tag. Also one snow shovel had broken handle Notification was made to Energy Solutions IH

1220 Completed the daily call with OM, SOS, on PM.

1225 Late entry for 0745 - Procedure driven work is released -

(Continued on Next Page)

9-23-13 Dayshift

1330 Per discussion with P&T and OM, the transfer to WCRR from Area G will be on Wednesday 9-25-13.

1342 Turned the shift SOM over to Lou JALBERT [signature]

1348 Assumed SOM DUTIES. [signature]

1555 TURNED SOM OVER TO GUARDAGNOLI. [signature]

1555 Assumed the SOM position [signature]

1558 Late entry for 1403 hrs. Two Parent drums were moved in, Operations de-nested 1 drum, and bagged off 5846195 and 1 daughter. Operations bagged on 5846172 -

1605 Late entry for 1507 hrs, Operations completed de-nesting and completed the bag on/bag off.

It was noted that DRUM 5846037 - was noted to have pinholes in the LID of the drum. Attempts were made to place tape over the pinholes, however the tape did not hold. The lid of the 85 was put back on. A pathforward - per discussion with the SOS and ES/PM would be to caulk the holes then de/nest. The CSE will need to be contacted. if an attempt was made to caulk.

Also per SOS - he discussed with RCTs/RPs a path forward for Drums 5851426 - degraded ring and Drum 5846088, cracked ring. They indicate that they believe it can both be denested — The SOS will have experienced operators on nightshift evaluate the drums for denesting. [signature] 9-23-13 [signature] 9-23-13

The pinhole drum will be removed from the 50-69 facility until caulking is procured and CSE is on board - (Drum 5846037 - on hold with Production Inventory)

1704 Inside Operations initiate bag off of 1 daughter and bag on of another and continue to process.

1715 CSE (B. Griffis) notified about Ring issues and use of caulking. He agreed to seal holes.

1741 Completed reviewing rounds - inside Room temperature noted at 68°F.

1745 Drum 5846172 currently generated 2 daughters [signature] 9-23-13 and operators continue to process.

1800 Conducted shift turnover review with nightshift S

1805 Relieved by R. Axtell as SOM [signature]

No further Entries this page [signature] 9-23-13

8/23/13 WCRR 505 Log Book

0600 Assuming 505 position for the day. Jim J.

0615 Starting Pre-Job brief. Safety topic of the Day. Weather, strains and watch for pedestrians. 1 shipment out, moving in 3 Parents that will need D-Nesting

0630 Concluded Pre-Job brief.

0732 Reviewed and signed off inside and outside rounds

0734 Operators notifying of A to Cole on one of the forklifts, not allowing forks or transmission to engage. Notified the 504 and asked for priority since we only have one forklift for D-Nesting and shipment out. 504 instructed to D-Nest first.

0745 Mode change complete, WCRR pad and 504 are in operations, starting movement of 3 Parents from Transportainer to 504.
Once completed, will be moving in forklift to start D-Nesting

0816 Operators starting to D-Nest

0939 D-Nesting complete. Only D-Nested one Parent due to the other two had a crack ring and the second had a damaged ring. Bagged on Parent 584-0195

1000 Starting movement of waste containers to transport vehicles for shipment out

1047 Bagging off one daughter and continuing to process

1103 Bag on left complete

1140 Shipment out complete of waste drums.

1147 Starting movement into 504

1203 Movement complete

1230 Operators leaving for lunch

1330 Operators returning from lunch

1433 D-Nesting 2 85 parents or processing. Bagging off first parent and 1 daughter, will be bagging at 584-02

1500 D-Nesting Bag on Bag off complete. Only D-Nested one Parent due to holes in the liner.

1645 Moving in another Parent for D-Nesting to replace the Parent that had holes until path forward is identified. Will also be moving out drums of first Parent that was processed.

1650 Late entry. Reviewed and signed the rounds at 1630

1735 Operators Bagging off one daughter and bagging on second daughter and will continue to process 2nd Parent

9/23/13

WURR SOS Log Book

Continued from previous page.

Have out of 3 dumpsters and 1 Parent that had holes and move in of additional Parent has been completed. Total of 3 85 gallon parents inside of SO-69 for D-Nest. Two of the parents were the ones from this morning that have remained inside so night shift crew can decide if they can D-Nest or not.

1723 Bag on Bag off complete of second daughter, continuing to process

1810 Second Parent completed, ready to bag off, waiting for night shift crew to go in to D-Nest Parents and Bag off Parent and Bag on new Parent.

1815 Securing SOS position as the day Turning over to on-coming SOS Clayton Mullins. Jim Dy.

HC

Do Not enter on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0115
Examination Date:	9/26/2013
Waste Container ID:	68338
Video/Audio Recorded Media Number:	LA-RTR2-13-0115 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 169.5 kg Tare Wt.: 33.4 kg Net Wt.: 136.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 68338

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):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	10.0
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	105.1
Soils (S):	
Total WMP Weight:	136.1

CCP Radiography Data Sheet

Waste Container ID: 68338

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

RTR Operator:

M. Simmons/ E. Rios		9/26/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68338	Count Sequence Number:	23686
Operator:	D3PW2DK1\operator		
Assay Start:	10/3/2013 1:43:07 PM		
Description 1:	1LANDA1851		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 136.0 kg	Net:	136.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.730 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23686	Batch Number:	1LANDA1851
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68338	Analysis Date:	10/3/2013

Net Weight	136000.0 g		
Pu mass	5.00E+001	+- 1.09E+001	g
TRU Alpha Activity	8.70E+000	+- 2.82E+000	Ci
TRU Activity Concentration	6.40E+004	+- 2.07E+004	nCi/g
Pu-239 Equivalent Activity	8.81E+000	+- 2.82E+000	Ci
Pu-239 FGE	4.71E+001	+- 1.02E+001	g
Decay heat	2.82E-001	+- 9.33E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.09E-001	7.67E-005	1.46E-005	3.49E-006
PU238	4.57E-003	7.82E-002	1.70E-002	3.41E-005
PU239	4.69E+001	2.91E+000	6.33E-001	1.27E-003
PU240	3.00E+000	6.81E-001	1.48E-001	2.97E-004
AM241	1.47E+000	5.03E+000	2.74E+000	7.91E-002
PU241	5.76E-002	5.93E+000	1.29E+000	2.59E-003
PU242	1.00E-002	3.95E-005	8.60E-006	0.00E+000
CO60	2.12E-010	2.39E-007	5.42E-008	9.96E-008
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.33E-007
U233	<LLD	<LLD	0.00E+000	7.31E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.13E-006
U238	<LLD	<LLD	0.00E+000	1.83E-005
AM243	1.62E-003	3.23E-004	6.21E-005	1.01E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/8/13

ITR: _____ Date: 10.9.13

Automated Independent Technical Review

Count Sequence Number: 23686 Batch Number: 1LANDA1851
Counter ID: MCS HENC #1
Container ID: 68338
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/3/2013

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

Expert Review by: Bart B. Marah Date: 10/8/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68338**

BDR Number: **LA13FG2106**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1113.02	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131024c\
Data File : 68338.D
Acq On : 24 Oct 2013 12:43 pm (#1); 24-Oct-13, 12:43:12 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 24 12:57:14 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.548	96	5373861	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.855	117	4138646	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.555	GC1	8369	1113.02	ppmv	100

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

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5846195

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0115
Examination Date:	9/26/2013
Waste Container ID:	68448
Video/Audio Recorded Media Number:	LA-RTR2-13-0115 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 164.0 kg Tare Wt.: 33.4 kg Net Wt.: 130.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68448

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal containers

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	4.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	12.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	114.6
Soils (S):	
Total WMP Weight:	130.6

CCP Radiography Data Sheet

Waste Container ID: 68448

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

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

RTR Operator:

M. Simmons/ E. Rios		9/26/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68448	Count Sequence Number:	23683
Operator:	D3PW2DK1\operator		
Assay Start:	10/3/2013 11:06:15 AM		
Description 1:	1LANDA1851		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 131.0 kg	Net:	131.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.660 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23683
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68448

Batch Number: 1LANDA1851
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/3/2013

Net Weight	131000.0 g		
Pu mass	6.09E+001	+-	1.20E+001 g
TRU Alpha Activity	1.57E+001	+-	6.10E+000 Ci
TRU Activity Concentration	1.20E+005	+-	4.66E+004 nCi/g
Pu-239 Equivalent Activity	1.58E+001	+-	6.10E+000 Ci
Pu-239 FGE	5.74E+001	+-	1.19E+001 g
Decay heat	5.11E-001	+-	2.02E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.25E-006
U233	<LLD	<LLD	0.00E+000	1.15E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.17E-006
NP237	1.78E-001	1.25E-004	2.24E-005	5.37E-006
PU238	5.57E-003	9.52E-002	2.33E-002	1.58E-003
U238	<LLD	<LLD	0.00E+000	3.16E-005
PU239	5.71E+001	3.54E+000	7.41E-001	5.86E-002
PU240	3.65E+000	8.29E-001	2.09E-001	1.37E-002
AM241	3.26E+000	1.12E+001	6.05E+000	1.16E-001
PU241	7.02E-002	7.23E+000	1.82E+000	1.20E-001
PU242	1.22E-002	4.81E-005	1.22E-005	0.00E+000
AM243	2.32E-003	4.64E-004	8.41E-005	1.56E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/8/13

ITR: _____ Date: 10.9.13

Automated Independent Technical Review

Count Sequence Number: 23683 Batch Number: 1LANDA1851
Counter ID: MCS HENC #1
Container ID: 68448
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	OK
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Not data affecting, gamma results applied.
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	OK
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings.	
- The Cm/Cf Mass Variance is negative, Cm/Cf Mass Uncertainty set to zero so analysis could continue.	OK
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	OK
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	OK

Comments	Disposition
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test failed.	 Results taken from quantitative gamma data. Gamma results acceptable.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	 OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Bart B. Marah Date: 10/8/13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68448**

BDR Number: **LA13FG12107**

Sampling Date: **10/23/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1040.61	
74-82-8	Methane	9.63	U
67-56-1	Methanol	30.57	U
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.52	
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131023C\
Data File : 68448.D
Acq On : 23 Oct 2013 1:56 pm (#1); 23 Oct 2013 1:55 pm (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 23 14:04:36 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	7199943	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	5394157	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.913	GC1	296836	1040.61	ppmv	100
12) Benzene	3.710	78	15341	0.52	ppmv #	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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S846660

S846660

Container 754003

File Options Reports Help

S846660

754003	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

S846660

S846660
- LA00000068369 – EMPTY
- LA00000068415
- LA00000068447
- LA00000068399

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
33.99	%			

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 9/19/13 HS

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S844660

6.2[4] Date Processed: 9-19-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☑ Sealed Containers > 4L ☐ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☐ Moderate (≤ 10 rem/hr) ☑ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established: ☑ N/A
(> 300 PE-Ci Equivalent Combustible) NA
(SAC 5.10.1.7.2) (Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☐ YES ☑ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: [illegible] [illegible] 1228821 9-19-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 584660

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 415.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 120 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 535.8 lb

6.2[7] ($) Total Parent Drum Weight < 624 lb (SR 4.5.1): ☑ SAT ☐ UNSAT

6.2[17][D] Drum lift hinge pin retaining clip replaced. / 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.: S846660

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68417	68415		
10.1[4]	Daughter Drum Filter No.	LM-260	LM-259		
10.1[4]	Daughter Drum Bag Filter No.	L-6757	L-6759		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	6x8PVC1.52SDK			
	Serial No.	L-6709			
	Date of Manufacture	1-13			
10.2[5]	POC ID No	68399			
10.2[7][B]/10.2[6]	POC Item Description	Nitrate salts kitty litter		N	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BC 204742		A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)	1200.5			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A			
10.3[5][A]	Free Liquid Volume/Units	2 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead	Lead		
10.3[9][A]	PCB-contaminated Waste Description	N A	N A	A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments	see comments	A	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	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.: S846660

Comments: Nitrate Salts, Liquid, Kitty litter, Lead, Plastic

11.1[1] Performed By: Brandon Chavez / [signature] / 1047429 / 19.19.13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez / [signature] / 1149235 / 19.20.13 0723
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 6-28-13 JL

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:	40-200	10-80

Overpack filtered vent information:

Manufacturer:	NUCFIL
Model No.:	013
Serial No.:	JL-1973
Manufacture Date:	10-11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: Gerald Espinoza / [signature] / 1287724 / 6-28-13
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5. [18] 2-in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Gerald Espinoza / [signature] / 1287724 / 6-28-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / [signature] / 1149235 / 9/20/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-19-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68369

7.[23] Overpack drum closure ring torque wrench information:

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: ± 3% CCW ± 6% CCW

7.[24] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Brandon Chavez / [signature] 2047421 9-19-13
Waste Handling Technician (print) Signature Z # Date

7.[26] Overpack drum closure ring torque value: 60 ft-lb

7.[29] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[34][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 179.0 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 2047421 9-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] 1149235 9/20/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-17-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68915

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6 CPVC 1.5-2 SPVC
Serial No.: L-6759
Manufacture Date: 1/13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4% CW ±6% CCW	±3% CW ±6% CCW

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: DALE HAGEL MONTALVO | [signature] | 191352 | 9/17/13
Operator (print) | Signature | Z # | Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-259
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.: 68415

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 9/17/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 149235 / 9.20.13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date: 9-17-13w

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68415

6.[9] Drum closure ring torque wrench information:

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Brandon Chavez / [signature] / D0478R / 9-19-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	N/A	N/A
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: N/A _____ in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: _____ in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68415

6.[26] Scale File ID number: 07225

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 2752 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/C

6.[32] Performed By: Brandon Chavez / [signature] RW7V2 / 9-19-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 1149295 9.20.13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-18-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68447

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2 SPVC
Serial No.: L6757
Manufacture Date: 1/13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%ccw	±3%cw ±6%ccw

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: JOE QUINTANA [signature] 239987 9/18/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 DS
Serial No.: LM 260
Manufacture Date: 12/12

5.[26] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[29][B] 2 in. bung plug torque value: 30 ft-lb

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

5.[32] Drum tare weight (lbs): 76.0 lbs

5.[34][E] Drum ID No.: 68447

Comments: N/C

5.[35] Performed By: JOE QUINTANA (Operator (print)) Joe Q (Signature) 239987 (Z #) 9/18/13 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) (Signature) 114235 (Z #) 9.20.13 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68447

6.[9] Drum closure ring torque wrench information:

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: ±3% conv. ±6% conv.

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Brandon Chaez / Signature / Z# / 9-19-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	N/A	N/A
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: N/A / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: _____ in-lb ☐ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68447

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 344.2 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: Brandon Chavez [signature] 1287421 9-19-13
Operator (print) Signature Z# Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 1149235 9-20-13
Supervisor or designee (print) Signature Z# Date

1931
SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S846660 Container Type: 55-GAL Gross Weight (lbs): 433
Inner Seal #: 019659 Filter Prefix: None Filter Serial #: None
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 1.25E+01 Equivalent Combustible PE-Ci: 4.68E+00 AM-241 PE-Ci: 1.01E+00
Total Fissile Gram Equivalents: 137.8 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 4/30/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 15
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☒ Liquid ☒ Pressurized Container ☑ Impenetrable Item ☒ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / Susan Ramsey / 100681 / 12/20/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 373# Generator info shows 9 items of nitrate salts, weights range from 16-55#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids &/or debris may be present. RTR PS shows prohibited liquids + impenetrable object(s). No chemicals identified. Applicable waste codes are for chromium, lead + mercury. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 1/18/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☒ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not punch or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☒ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE Mix Reqd

Performed By: Gilbert Martin / [signature] / 1149235 / 6/19/13
TRU Remediation Operations (Print) Signature Z Number Date
Jose Jerez Jose Jerez 221452 6/22/13
HHS Review Jeffery Arnaldo CSP, may contain Pb Hg + Cr
1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 019659

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX135158NW		26.020	NITRATE SALTS		11.52	52	6/14	G468	
2	LR160SE1		16.140	NITRATE SALTS		75.39	52	6/14	G468	
3	LR157NE2		12.390	NITRATE SALTS		4.66	52	6/14	G468	
4	OX136162NE		9.660	NITRATE SALTS		5.18	52	6/14	G468	
5	O136162NE2		12.270	NITRATE SALTS		4.	52	6/14	G468	
6	OX136162NW		22.960	NITRATE SALTS		16.11	52	6/14	G468	
7	LR161NW		7.390	NITRATE SALTS		2.45	52	6/14	G468	
8	LR161NE		17.390	NITRATE SALTS		21.41	52	6/14	G468	
9	LR161NE2		11.920	NITRATE SALTS		5.58	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 196.4

Material Type	SNM (grams)	Items Net Wt (kg)
52	146.4	136.14
Totals	146.4	136.14

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: 4/18/13

Container No. (5.[1])	S846660					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	190S					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	3169.38 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Erik Loechell (CCP (Print)), 234183 (Z #)

Reviewed By: Nathan Wales (CCP (Print)), 2388166 (Z #)

Comments:

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), Susan J. Ramsey (Signature), 100681 (Z #), 5/20/13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130418c\
Data File : S846660.D
Acq On : 18 Apr 2013 1:20 pm (#1); 18 Apr 2013 1:19 pm (#2)
Operator : EL
Sample :
Misc : 55 GAL DRUM FROM FILTER-UN-19DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 18 13:29:22 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed Feb 20 11:23:15 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	8800861	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7136007	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.893	GC1	904009	3169.38	ppmv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

VOCGAS.M Thu Apr 18 13:29:34 2013 UNIT12

9-19-13
0600 Assuming WCRRF acc position - Orlando.
0607 Stack monitoring personnel arriving for monitoring.
0615 Pre job briefing being performed by SOS
0637 Pre job concluded
0810 Bagging off 1 daughter, bagging on 1 daughter.
0818 Permission granted to turn ~~[illegible]~~ 9-19-13 vehicle access gate for movement out to area G.
0837 Bag on, Bag off is complete.
0946 Bagging off 1 daughter and 1 PCC, Bagging on 9351752
0947 Vehicle access gates have been restored movement out of WCRRF is complete.
1040 mode change performed TMSD-69 and WCRRF yard now in cam standby.
1041 late entry bag on, bag off is complete at 1038 -Cl.
1045 maintenance entering SD-69 to perform work on PCM2
1058 work is complete on PCM2.
1100 mode change performed TMSD-69 and WCRRF yard now back in operations.
1324 Bagging off, bagging on ~~9841616~~ 9-19-13 ~~9841616~~ 9-19-13 S846616.
1352 Bag on, Bag off is complete.
1428 Starting movement into SD-69
1439 Movement into SD 69 is complete.
1441 Starting movement out of SD-69.
1456 Starting inside rounds
1520 Item #43 is OOS, POD in place okay to proceed per CSE documentation
1524 Inside rounds have been completed.
1525 Starting outside rounds.
1530 Bagging off 1 daughter, Bagging on 1 daughter containing to process.
1540 Item #19 is unsat, FSE in place okay to proceed.
1543 Bag on, Bag off complete.
1544 Outside rounds complete.
1650 Inside and outside rounds signed off by SOS.
1656 Bagging off 1 daughter, 1 PCC, Bagging on 9845104

9-19-13 Continued from previous page Cleland
1753 Bag on, Bag off complete.
Ha 1744 Clickebox receptacle has been turned on.
9-19-13 1805 9-19-13 Released by ~~Officer Coleman Cleland~~ CCC Tena
Coleman Cleland

No further entries this page

9-19-13 DAYSHIFT

0615 Reviewed the turnover checklist and assumed the day shift SOM position John Grandagnili

0634 Completed attending the pre-job brief conducted by the SOS (Gilbert) The Safety topic was - do not take short cuts - The SOS provided an update on status of the drum bagged on. RP-1 requested coordination to get the PCM-2 repaired. Coordination after the first drum may be effective. There is one transfer scheduled out. Rainwater was noted in the ARCTIC, operators are to be cautious for slip hazards in 50/69. Current shift orders in affect - Manual Drum Movements WCRR-SH-13-003-R2, Precautions to Prevent Bag Tears WCRR-SH-13-005 R0. A level B walk thru was conducted and compliments were recieved from the quality group. Next week DOE may visit.

0710 Completed the daily AREA G

0712 late entry for 0653 - Operators enter 50/69 facility and initiate processing

0837 Inside Operations complete bag off of 1 daughter drum.

0929 Completed performing a spot check with the transfer from the transportainer to the transfer vehicle. Drums being moved were called out to Production Inventory. Production Inventory takes note - per task order of the drums transfering out.

0946 Inside operations initiate bag offs

1020 PCM2 techs arrive and obtain brief (RWP) to support repair of PCM2 under IWD-RP-2-RIC-21 REV #2, they will enter to correct PCM2 after bag offs are completed

1038 Inside Operations report bag off and bag on of Parent S851752.

1040 Mode Change: 50/69 and Yard transition from Operations/Operations to WARM/WARM

1058 The PCM2 was repaired, Per techs dust is/could be shorting out the board.

1100 Mode Change: 50/69 and Yard transition from WARM/WARM to Operations/Operations

1215 Completed attending the daily MOON status meeting with the OM, PM, SOMs and the weekly project status meeting.

1226 Supported production Control, Susan Ramsey in obtaining proper procedure and attachment, to identify single layer of confinement to resolve an issue for six drums will not be sent back to WCRR.

1325 Inside Operations report initiating bag off of daughter drum and bag on of Parent drum S846660

1352 Inside Operations reported bag off of Parent S851752 of 1 daughter and bag on of the Parent S846660 was completed.

1427 The craft planner and carpenter arrived at WCRRF to scope the door leakage at the transportainer. Gasket material will require ordering

(Continued on next page)

9-19-13 DAYshift (Continued)

1450 Operations completed a movement into the facility one drum and initiated drum movements out.

1530 Inside Operations report bagging off 1 daughter and Bagging on 1 daughter and continue to process

1543 Bag on and Bag off complete of daughter and continue to process.

1656 Inside Operations report of initiating bag off of 1 daughter and 1 POC and bagging off Parent 584660 and bagging on 5845104.

1711 Late entry for 1600 - Completed walkthrough of the facility for housekeeping with LTP-DDD Project Manager, and Energy Solutions Production Manager A write up - will be forthcoming.

1731 Bag offs and Bag Ons are reported completed

1746 Conducted review of Rounds. Noted Items 19 and 63 unsat, FSR and POD are attached to the rounds noting corrective actions in place and to be conducted.

1805 Conducted shift turnover checklist with night shift SOM.

1815 Relieved of SOM position by R. Axtell - [signature]

No further entries this Page
[signature] 9-19-13

9/19/13 WCRR SOS LOG Book

0600 Assuming SOS Position [signature]

0615 Conducted shift brief Discussed status of facility. Current drum on Box And to not take shortcuts. Also disscussal the USE OF Hex armors.

0637 Concluded shift brief

0810 Bagging off 1 daughter bagging on Another

0815 shipment out started

0837 Bag on/off complete

0946 Bagging on 5851752 And bagging off

0947 shipment complete

1040 Mode Change Complete WCRRF In warm Lete entry bag on bag off complete @ 1018 DM

1045 Maintenace entering 50-69 to work on PCM

1058 Work on PCM Complete.

1100 mode change complete WCRRF In operations.

1324 Bagging on/off 5846660

1352 Bag on/off complete

1458 Starting move In to 50-69

1439 Move in Complete.

1441 Starting Move out of 50-69

1456 Started Rounds

1530 Bagging off 1 daughter bagging on Another

1543 Bag on/off Complete

1650 ~~Bag o~~ Reviewed Inside and outside Rounds

1656 Bag off daughter And Poc Bagging on 5845104

1733 Bag on/off complete.

1810 Relieved by Jose Jerez [signature]

no Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0114
Examination Date:	9/25/2013
Waste Container ID:	68399
Video/Audio Recorded Media Number:	LA-RTR2-13-0114 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 153.5 kg Tare Wt.: 145.1 kg Net Wt.: 8.4 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:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68399

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Eric Lyles		9/25/2013
Print Name	Signature	Date

CCP Radiography Data Sheet

Waste Container ID: 68399

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	5.4
Soils (S):	
Total WMP Weight:	8.4

NDA 2000 Assay Report

Item Information

Item ID:	68399	Count Sequence Number:	23670
Operator:	D3PW2DK1\operator		
Assay Start:	10/2/2013 10:09:54 AM		
Description 1:	1LANDA1850		
Description 2:	POC - GW = 153.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 8.4 kg	Net:	8.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.637 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:	23670	Batch Number:	1LANDA1850
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68399	Analysis Date:	10/2/2013

Net Weight	8400.0 g		
Pu mass	1.75E+001	+-	7.67E+000 g
TRU Alpha Activity	3.19E+000	+-	1.40E+000 Ci
TRU Activity Concentration	3.80E+005	+-	1.66E+005 nCi/g
Pu-239 Equivalent Activity	3.23E+000	+-	1.40E+000 Ci
Pu-239 FGE	1.65E+001	+-	7.65E+000 g
Decay heat	1.04E-001	+-	4.61E-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	4.79E-007
U233	<LLD	<LLD	0.00E+000	3.63E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.07E-006
NP237	2.84E-002	2.00E-005	3.54E-006	1.72E-006
PU238	1.60E-003	2.74E-002	1.32E-002	4.81E-004
U238	<LLD	<LLD	0.00E+000	9.42E-006
PU239	1.65E+001	1.02E+000	4.74E-001	1.79E-002
PU240	1.05E+000	2.39E-001	1.16E-001	4.19E-003
AM241	5.56E-001	1.91E+000	1.31E+000	7.65E-002
PU241	2.02E-002	2.08E+000	1.01E+000	3.65E-002
PU242	3.51E-003	1.39E-005	6.74E-006	0.00E+000
AM243	5.41E-004	1.08E-004	1.93E-005	5.02E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/3/13

ITR: _____ Date: 10-3-13

Automated Independent Technical Review

Count Sequence Number: 23670 Batch Number: 1LANDA1850
Counter ID: MCS HENC #1
Container ID: 68399
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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 Chamlin Date: 10-3-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68399**

BDR Number: **LA13FG2113**

Sampling Date: **11/5/2013**

S846660

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	179.27	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131105C\
Data File : 68399.D
Acq On : 5 Nov 2013 12:59 pm (#1); 05-Nov-13, 12:58:19 (#2)
Operator : SA
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 13:07:06 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.594	96	4920875	205.75	ppmv	0.08
15) Chlorobenzene-d5	5.891	117	3856388	177.50	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.607	GC1	1348m	179.27	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

VOCGAS.M Wed Nov 06 12:31:21 2013

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0114
Examination Date:	9/25/2013
Waste Container ID:	68415
Video/Audio Recorded Media Number:	LA-RTR2-13-0114 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 125.0 kg Tare Wt.: 33.4 kg Net Wt.: 91.6 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: 68415

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	Leather gloves
R:	
XPM:	Plastic bags
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	2.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	75.6
Soils (S):	
Total WMP Weight:	91.6

CCP Radiography Data Sheet

Waste Container ID: 68415

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	[signature]	9/25/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68415	Count Sequence Number:	16595
Operator:	DCLTD231\Operator		
Assay Start:	10/3/2013 11:46:26 AM		
Description 1:	2LANDA1230		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 91.6 kg	Net:	91.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.590 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16595	Batch Number:	2LANDA1230
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68415	Analysis Date:	10/3/2013

Net Weight	91600.0 g		
Pu mass	6.17E+001	+- 1.11E+001	g
TRU Alpha Activity	1.33E+001	+- 4.65E+000	Ci
TRU Activity Concentration	1.45E+005	+- 5.08E+004	nCi/g
Pu-239 Equivalent Activity	1.34E+001	+- 4.65E+000	Ci
Pu-239 FGE	5.83E+001	+- 1.11E+001	g
Decay heat	4.33E-001	+- 1.54E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.00E-007
U233	<LLD	<LLD	0.00E+000	8.08E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.55E-006
NP237	1.49E-001	1.05E-004	1.75E-005	1.95E-006
PU238	1.99E-002	3.40E-001	1.96E-001	3.02E-003
U238	<LLD	<LLD	0.00E+000	1.99E-005
PU239	5.80E+001	3.60E+000	6.89E-001	3.19E-002
PU240	3.54E+000	8.04E-001	1.80E-001	7.14E-003
AM241	2.49E+000	8.56E+000	4.59E+000	5.38E-002
PU241	8.96E-002	9.23E+000	1.81E+000	8.20E-002
PU242	7.75E-002	3.06E-004	1.05E-004	0.00E+000
AM243	2.73E-003	5.45E-004	9.14E-005	1.14E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10-8-13

ITR: _____ Date: 10-9-13

Automated Independent Technical Review

Count Sequence Number: 16595 Batch Number: 2LANDA1230
Counter ID: HENC #2
Container ID: 68415
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors. Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50	OK After EA review, results valid.

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 10/8/13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68415**

BDR Number: **LA13FG2106**

Sampling Date: **10/24/2013**

S 8466660

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	347.25	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131024c\
Data File : 68415.D
Acq On : 24 Oct 2013 1:00 pm (#1); 24-Oct-13, 13:00:08 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 24 13:08:37 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.548	96	5469457	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.864	117	4212235	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.622	GC1	2611m	347.25	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

5846660

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0114
Examination Date:	9/25/2013
Waste Container ID:	68447
Video/Audio Recorded Media Number:	LA-RTR2-13-0114 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 156.0 kg Tare Wt.: 33.4 kg Net Wt.: 122.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

CCP Radiography Data Sheet

Waste Container ID: 68447

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):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	107.6
Soils (S):	
Total WMP Weight:	122.6

CCP Radiography Data Sheet

Waste Container ID: 68447

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	[signature]	9/25/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68447	Count Sequence Number:	23674
Operator:	D3PW2DK1\operator		
Assay Start:	10/2/2013 1:09:55 PM		
Description 1:	1LANDA1850		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 123.0 kg	Net:	123.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.700 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23674	Batch Number:	1LANDA1850
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68447	Analysis Date:	10/2/2013

Net Weight	123000.0 g		
Pu mass	9.89E+001	+- 1.86E+001	g
TRU Alpha Activity	1.34E+001	+- 3.50E+000	Ci
TRU Activity Concentration	1.09E+005	+- 2.84E+004	nCi/g
Pu-239 Equivalent Activity	1.36E+001	+- 3.50E+000	Ci
Pu-239 FGE	9.32E+001	+- 1.75E+001	g
Decay heat	4.29E-001	+- 1.15E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.68E-002	6.83E-005	1.27E-005	4.05E-006
PU238	9.04E-003	1.55E-001	2.91E-002	3.28E-005
PU239	9.28E+001	5.75E+000	1.08E+000	1.22E-003
PU240	5.93E+000	1.35E+000	2.54E-001	2.86E-004
AM241	1.78E+000	6.10E+000	3.31E+000	9.32E-002
PU241	1.14E-001	1.17E+001	2.21E+000	2.49E-003
PU242	1.98E-002	7.82E-005	1.47E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.06E-007
U233	<LLD	<LLD	0.00E+000	8.93E-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	1.71E-005
AM243	2.73E-003	5.46E-004	1.02E-004	1.21E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/3/13

ITR: _____ Date: 10.3.13

Automated Independent Technical Review

Count Sequence Number: 23674 Batch Number: 1LANDA1850
Counter ID: MCS HENC #1
Container ID: 68447
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 10-3-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68447**

BDR Number: **LA13FG2105**

Sampling Date: **10/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	230.74	
74-82-8	Methane	142.14	U
67-56-1	Methanol	95.44	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131004c\
Data File : 68447.D
Acq On : 4 Oct 2013 1:56 pm (#1); 04-Oct-13, 13:55:44 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 04 14:04:30 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.588	96	4263757	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.887	117	3286668	177.50 ppmv	0.03
Target Compounds					Qvalue
1) Hydrogen	1.608	GC1	1735m	230.74 ppmv	
4) Methanol	0.883	31	32516m	95.44 ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed