ERID-257848

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: JUL 0 2 2014
Symbol: ENV-DO-14-0146
LAUR: 14-24694, 14-24665, 14-24671

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 Information Requested During New Mexico Environment Department/Los Alamos National Laboratory Daily Technical Phone Call- Cemented Waste Stream Characterization Information**

The purpose of this letter is to transmit information requested during the New Mexico Environment Department (NMED)/Los Alamos National Laboratory (LANL) daily technical phone calls that are currently being held as stipulated within the Administrative Order No. 5-19001 issued by the NMED. During the June 6, 2014 daily technical phone call, NMED personnel requested real-time-radiography (RTR) video and pre-screening information for the 20 containers of the post-1991 cemented transuranic waste stream that were identified to be on-site and requiring remediation. The enclosed information fulfills #8 of the *Requested Information / Pending Issues* table included as part of the written daily submission associated with each daily technical phone call.

Enclosure 1 (LA-UR-14-24694) provides a summary of the general information associated with the 20 containers. The summary includes each of the 20 container identification numbers, whether the storage and container records are available for each container, whether there is RTR video for each of the containers, and a brief explanation of the remediation required for each container. Enclosure 2 (LA-UR-14-24665) contains Waste Storage Record forms (and attached information) as well as container profiles from the Waste Compliance and Tracking System (WCATS) database associated with each of the 20 containers identified above. Enclosure 3 (LA-UR-14-24671) includes electronic copies of the 14 available RTR videos contained on 3 DVDs.

The RTR fast scan videos provided (Enclosure 3) were completed during the prescreen process specified in CCP-TP-066, *CCP Radiography Screening Procedure for Prohibited Items*. This process is used as a preliminary check to screen candidate containers to determine if they qualify for the extensive formal certification process. Videos are not specifically required as part of this screening process but were completed to provide information to assist the host site with their remediation process. This screening

procedure is not used to certify waste and therefore the videos do not need to meet the rigorous requirements that are used in the certification process.

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) Summary Table – On-site Post-1991 Cemented Transuranic Waste Containers Requiring Remediation
(2) LANL Waste Storage Information for Post-1991 Cemented Transuranic Waste Container from TA-55 (LA-CIN-01.001)
(3) High-Energy Real-Time Radiography Prescreen Videos

Cy: Ryan Flynn, NMED, Santa Fe, NM, (E-File)
Tom Blaine, NMED, Santa Fe, NM, (E-File)
Steve Pullen, NMED/HWB, Santa Fe, NM, (E-File)
Timothy Hall, NMED/HWB, Santa Fe, NM, (E-File)
Trais Kliphuis, NMED, Santa Fe, NM, (E-File)
Peter Maggiore, NA-LA, (E-File)
Lisa Cummings, NA-LA, (E-File)
Gene E. Turner, NA-LA, (E-File)
Eric L. Trujillo, NA-LA, (E-File)
Carl A. Beard, PADOPS, (E-File to aosburn@lanl.gov)
Michael T. Brandt, 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)
Anthony R. Grieggs, ENV-CP, (E-File)
Deborah K. Woitte, LC-ESH, (E-File)
Bill D. Zwick, MQ, (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)

Los Alamos NATIONAL LABORATORY

COPY

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(505) 667-5794/Fax (505) 667-5948

Date: JUL 02 2014
Symbol: ENV-DO-14-0146
LAUR: 14-24694, 14-24665, 14-24671

RECEIVED
JUL -3 2014
NMED
Hazardous Waste Bureau

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

Dear Mr. Kieling:

Subject: **Transmittal of Information Requested During New Mexico Environment Department/Los Alamos National Laboratory Daily Technical Phone Call- Cemented Waste Stream Characterization Information**

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Enclosure 1 (LA-UR-14-24694) provides a summary of the general information associated with the 20 containers. The summary includes each of the 20 container identification numbers, whether the storage and container records are available for each container, whether there is RTR video for each of the containers, and a brief explanation of the remediation required for each container. Enclosure 2 (LA-UR-14-24665) contains Waste Storage Record forms (and attached information) as well as container profiles from the Waste Compliance and Tracking System (WCATS) database associated with each of the 20 containers identified above. Enclosure 3 (LA-UR-14-24671) includes electronic copies of the 14 available RTR videos contained on 3 DVDs.

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ENCLOSURE 1

Summary Table –On-Site Post-1991 Cemented Transuranic Waste Containers Requiring Remediation

ENV-DO-14-0146

LAUR-14-24694

Date: JUL 0 2 2014

On-Site Post-1991 Cemented Transuranic Waste Containers Requiring Remediation

Container Identification	Waste Storage Record and WCATS Container Profile	Available RTR	Required Remediation
52118	X	X	Prohibited liquid found at 32 inches. Approximately 6 gallons.
53204	X		Impenetrable object found and 55 gallon container is not vented.
53306	X	X	Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53702	X	X	Sealed containers found that are greater than 4 liters, therefore, it is an impenetrable object. Sliptop Cans found.
53703	X		Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53712	X	X	Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53715	X	X	Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53719	X	X	Greater than 1% liquid found inside 55 gallon container and at 32 inches an impenetrable object is found.
53737	X	X	Within the 85 gallon container there is an internal lead lined 55 gallon container with 90 millimeter plastic liner that is not vented. The 55 gallon container is packed in absorbent and contains an S3000 monolith. Sealed container that is greater than 4 liters was also found.
53747	X	X	Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53749	X	X	Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53761	X	X	Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53764	X	X	Within the 85 gallon container with a baked on liner, is a vented lead-lined 55 gallon container, packaged in absorbent. There is greater than 1% liquid within the 85 gallon container- approximately 5 liters at the bottom of 55 gallon container.
53767	X	X	Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53772	X		Impenetrable object found.
53841	X		Within the 85 gallon container there is vented lead-lined 55 gallon container. There is greater than 1% liquid- approximately 2.5 liters at bottom of the 55 gallon container. Impenetrable object found.
53848	X	X	Sealed container found that is greater than 4 liters, therefore, it is an impenetrable object to be remediated.
53850	X	X	Within the 85 gallon container there is a lead-lined 55 gallon container with a homogeneous waste. One gallon paint cans are solids found (impenetrable object). NOTE: During 2007 RTR liquids and impenetrable objects were found. 2013 RTR did not find liquids in the container.
57347	X		Greater than 1% liquid found and an impenetrable object found.
61818	X		Greater than 1% liquid found and an impenetrable object found.

ENCLOSURE 2

LANL Waste Storage Information for Post-1991 Cemented Transuranic Waste Container from TA-55 (LA-CIN-01.001)

ENV-DO-14-0146

LAUR-14-24665

Date: JUL 0 2 2014

52118

CERTIFIED WASTE STORAGE RECORD

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000052118

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group: NIST-12	TID# ~~A055~~ B11098 ~~BHC98~~ Fixed Alpha NDA
Fac: 55	Ln J 139 3590
Building: PF-4	
Program Code: K530	

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT						C=Curie M=Gram
				Nuclide	Amount	±	Uncertainty	±		
01	☒ Steel Drum (55 gal)	Type	Thickness (in)	Pu-238	5.7E-4	E+1	3.8E-5	E+0		M
02	☐ Steel Overpack (Drum)			Am-241	1.0E-0	E+1	5.9E-0	E-1		M
03	☐ Steel Box (48 in. x 54 in. x 36.5 in.)	☐ None		Pu-239/240	5.7E-4	E+1	3.8E-0	E+0		M
04	☐ Steel Overpack (RRP Box)	☒ Lead	6.3E-2							
05	☐ Standard Waste Box	☐ Steel								
	☐ Other (Describe)	☐ Concrete								
		☐ Other								

		HAZARDOUS MATERIALS		
Process Batch Code	N/A	Name	EPA Code	Quantity(g)
Gross Wt. (lb.)	18.4	Lead	D008	3.9E+4
Organic Matl Wt. (lb.)	1.7E+1			
Organic Matl Vol. (%)	0			
Content Code	E06			
Date Closed (MM/DD/YY)	01/19/89			

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester H Smith 5/ Signature: [signature] Date: 01-26-89

II. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	4.5E+0	Survey Meter Model: Ro-3C	Property No: 3665
Neutron Dose Rate (mrem/h)	0.2E+0	Survey Meter Model: PNR-4	Property No: 4919
Total Dose Rate (mrem/h)	4.7E+0	The data in this section were collected as prescribed in approved procedures.	
Alpha Contamination (dpm/100cm²)	1.2E+1	Printed Name: Michael C. Lobl	Date: 3/8/89
Beta-Gamma Cont. (dpm/100cm²)	2.1E+1	Signature: [signature]	

III. HSE-7 AUTHORIZATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transmission to TA-54 per AR 10-5.	Printed Name	Date
	Signature	

IV. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	. E	Survey Meter Model	Property No.
Neutron Dose Rate (mrem/h)	. E	Survey Meter Model	Property No.
Total Dose Rate (mrem/h)	. E	The data in this section were collected as prescribed in approved procedures.	
Alpha Contamination (dpm/100cm²)	. E+	Printed Name	Date
Beta-Gamma Cont. (dpm/100cm²)	. E+	Signature	

V. STORAGE SITE INFORMATION

Received by	Date received	Pad No.	Level	☐ E ☐ C ☐ W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Row No.	Date Stacked	
		This waste package was stored at this location according to approved procedures.		
Printed Name	Date	Printed Name		Date
Signature		Signature		

VI. HSE-7 REVIEW

The data entered in Sections IV and V have been reviewed according to approved procedures.	Printed Name	Date
	Signature	

VII. CERTIFICATION STATEMENT

I certify that the above-described waste package has been prepared, packaged, and documented according to an approved TRU Waste Certification Plan and does, to the best of my knowledge, comply with the TRU Waste Acceptance Criteria as defined in the current approved issue of WIPP-DOE-069, "TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant."

Printed Name	Signature	Date

HS Form Number 10-5A (11/88)



HEALTH PHYSICS INFORMATION ON 55-GAL. CEMENT DRUMS AT CMR

GENERATOR SITE HEALTH PHYSICS INFORMATION

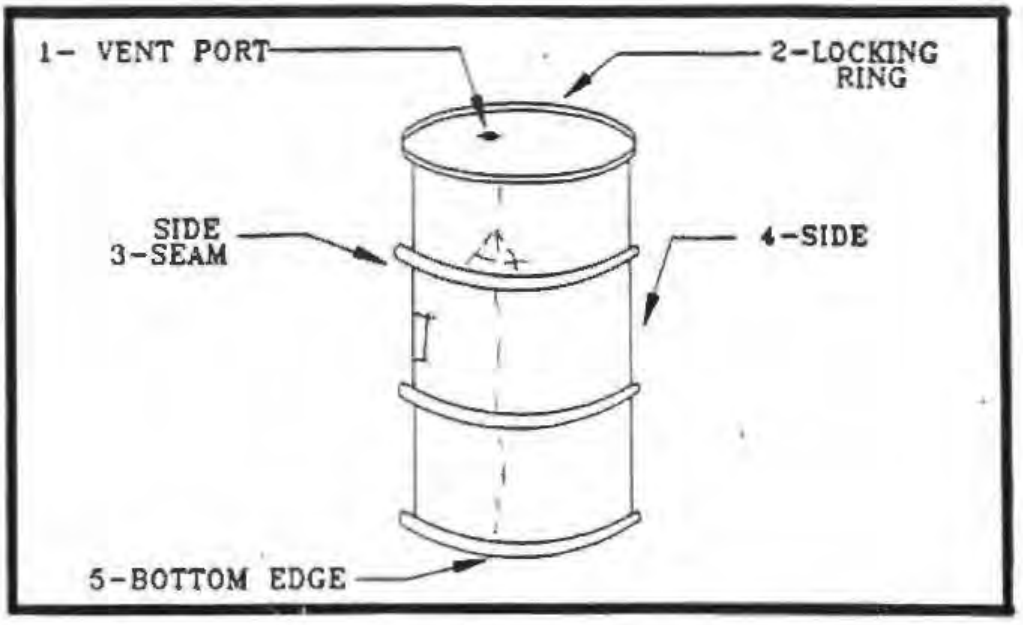
Gamma Dose Rate (*mrem/h*)	7.0E+0	Survey Meter Model R0-3C	Property Number 2628
Neutron Dose Rate (*mrem/h*)	1.5E+0	Survey Meter Model PNR-4	Property Number 4904
Total Dose Rate (*mrem/h*)	8.5E+0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (*dpm/100cm²*)	0.0E+0	Printed Name Gilbert Merriman	Date 5/14/93
Beta-Gamma Cont. (*dpm/100cm²*)	0.0E+0	Signature Gilbert C. Merriman	

55- GAL DRUM

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
MAY 0 5 1993

TA 3 BUILDING 79 SAMPLE DATE 4-29-93
RPT GIL MERRIMAN CONTAINER NO. LA000000 52118



△ Maximum Gamma Dose Rate 7.0 mR/hr.
□ Maximum Neutron Dose Rate 1.5 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM		
4	SIDE		
5	BOTTOM EDGE		

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2628
CDD: 5-25-93

NEUTRON INSTRUMENT
Model: PNR-4
P/N: 4904
CDD: 6-26-92

DISTRIBUTION:
1. RPT's TA-54 MS J592
2. RCT's TA-3 OUR MS G749
3. _____

ANALYZED BY: D. A. Barnes, M. Jansen
DATE: 4/30/93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

MAM
1-25-89

DISCARDABLE WASTE LOG SHEET

Effective Date 01/09/89

Page 1 of 1 Pages

L	A	0	0	0	0	0	0	5	2	1	1	8

WASTE PACKAGE SERIAL NUMBER

Lead Lined: Y
90 Mil Drum Liner: N
1/8 Inch Drum Liner: Y

[X] Proc. [ ] N-Comb [ ] Comb [ ] Pu-238

CONTAINER: [ ] open [X] In-Line

Waste Code: N/A

Carbon Filter Installed & Tightened: N/A

Locknut Tightened: N/A

Tamper Indicating Seal # ~~A00~~ ~~05530~~ B11098 B11098

Date Sealed 01-19-89

ITM NO	ITEM ID	PKG WT/VOL KG or L	MATRIX (MATERIAL)	MEAS. CODE	MT	SNM GRAMS	UNCRT +/- GRAMS	CERTIFIED PERSONNEL	REMARKS (Wt in Kg) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS / OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	FT40106B	34.8 L	EVBottoms	R04	52	42.19	~~3.39~~ 3.54				F ~~0.003~~ Cr 0.115 Pb ~~0.0147~~	8/33	01/13/89
1	FT20106A	9.9 L	EVBottoms	R04	52	14.95	0.34				Cd ~~0.001~~ Cr 0.033 Pb ~~0.005~~	8/33	01/13/89
2	FT40106B		EVBottoms	R04	44	10.10	0.55					2/III	01/13/89
3	FT2C106A		EVBottoms	R04	44	0.60	0.04					2/III	01/13/89
4													
5													
6													
7													
8													
9									4.24	8.07	Packaging		

TOTALS Pkg WT Kg	307.67	MST-12 signatures for Gross Weight	52	57.14	~~3.93~~ 3.75	TOTALS	4.24	8.07	Haz. Mat. - Kg Cd ~~0.004~~ Cr 0.148 Pb ~~0.037~~ 0.0215
x 2.2046 = Pkg Wt Lbs	678.30		44	10.10	0.59	organics lbs		17.79	MST-10 Assay Value
55 gal drum TARE Lbs	162.70	Accountability check:	52	57.14	3.34	QA Pkg Approval			Instrument ID. N/A
Scale GROSS WT Lbs	841.00								MST-10 Signature

This container's waste was packaged and the MST-12 data on the DWLS and the CWSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature William Schuessler

PACKAGING CONDITION INSPECTION

LA00000052118

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

I. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code	L	**Inspection Items**	**Initials**
Year Of Mfgr	88	Ring, Bolt, & Nut	DM
Box Serial No		Lid & Gasket	DM
Comments:		Chime	DM
		Dents	DM
		Gouges	DM
		Paint	DM
		RUST	DM

This container has been visually inspected and has been found to be free of damage that would make it unsuitable for TRU waste packaging.

Name	Signature	Date
DENNIS MARTINEZ	Dennis Martinez	9/10/89

II. DRIVER'S VISUAL INSPECTION

Inspection Items	Initials
Filter	
Labels	
Damage	
Closure Ring	
TID Seal No	
Name	

This waste package was visually inspected at time of pickup as required by approved procedures, and was found to be free of obvious damage or defects.

Comments

Signature	Date

III. TA-54 INSPECTION

Weight (lbs.)	
TID Seal No	
Comments:	
Name	Signature / Date

This waste package was visually inspected for handling damage before shipping, and, if the package is a drum, the closure ring bolt was tightened as required by approved procedures.

Signature

Date

HS Form Number 10-5C (11/88)

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6639
FAX (505) 665-8116

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA52118
LA52118

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML 0201AAO	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 5/19/93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TID# B19720 Hold Tag# 0678

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT						
				Nuclide	Amount +/-			Uncertainty +/-		C=Curie M=Gram
01	☐ Steel Drum (55 gal.)	☐ None								
02	☐ Standard Waste Box	Type	Thickness (in.)	AM241	1.07	E	+11	5.90	E -11	M
03	☒ Other (Cal TWCO)	LEAD	6.3E-12	PU512	5.71	E	+11	3.84	E +10	M
04	☐ RH Canister					E			E	

Waste Profile Request Number: 04636

Carbon Filter ID: 01 NFIT1238 02 OP LA14114 9

Process Batch Code: N/A

		NONRADIOACTIVE HAZARDOUS MATERIALS		
Gross Weight (lb.)	19.53E+2	Name	EPA Code	Quantity (g)
Organic Material Wt. (lb.)	1.78E+1	LEAD SHIELDING	D008	3.9E+4
Organic Material Volume (%)	10	CADMIUM	D006	~~6.17E-12~~ 3.43E+02
TRUCON Code	11.4A	CHROMIUM	D007	~~2.61E+10~~ 1.43E+2
Date Closed (MMDDYY): 5/19/93	~~011993~~	LEAD	D008	~~3.8E+1~~ 2.15E+1

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge

Printed Name: Kathleen M. Gruetzmacher	Signature: KM Gruetzmacher	Date: 5/20/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.6E+0	Survey Meter Model: RO-3C	Property Number: 2628
Neutron Dose Rate (mrem/h)	1.5E+0	Survey Meter Model: PNR-4	Property Number: 4904
Total Dose Rate (mrem/h)	3.1E+0	*The data in this section were collected according to approved procedures*	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: Gilbert Merriman	Date: 5/15/93
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: Gilbert C. Merriman	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5.	Printed Name: BRUCE LE BRUN	Date: 5/21/93
	Signature: Bruce Le Brun	

THIS PAGE FOR EM-7 USE ONLY

TRU 006
LA52118
LA52118

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	01	25	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	01	26	93	KARRI WILDER	Karri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
Andrew Caturano		6-1-93

6/14/93 CY
6/25/93 KW

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	2.0 E +0	Survey Meter Model ROSC	Property Number 2606
Neutron Dose Rate (mrem/h)	1.1 E +0	Survey Meter Model ESP-2 PNR-4	Property Number 6110
Total Dose Rate (mrem/h)	3.1 E +0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	1.2 E -0	Printed Name J. J. MILLER	Date 6-14-93
Beta-Gamma Cont. (dpm/100cm²)	4.8 E -0	Signature J. J. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials) RM	Date Received 6-9-93	ORIGINAL STORAGE DATA			
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 3	Layer 1	Row Number 3	
		Column Number 1	Date Stacked (MM.DD.YY) 06 16 93		
Printed Name Rick Martinez	Date 6-9-93	Printed Name Charlotte Fernandez		Date 7-9-93	
Signature Rick Martinez		Signature Charlotte Fernandez			

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name BRUCE LE BRUN	Date 7/13/93
	Signature Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	07	14	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	07	15	93	KARRI WILDER	Karri Wilder

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	07	21	93	Charlotte Fernandez	Charlotte Fernandez

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFI

LA52118

EM-8 USE ONLY
Reference Number C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process (KOP)*
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis (specify below)*
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste.)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). —>	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

	None	< 5.0 ppm	≥ 5.0 ppm	TCLP	Other
arsenic	☐	☒	☐	☐	☒ SW846 - 6010CA
barium	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☒ Other
cadmium	☐	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐	☒ Other
chromium	☐	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐	☒ Other
lead	☐	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐	☒ Other
mercury	☐	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐	☒ Other SW846 - 6020(ICP-MS)
nickel	☐	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐	☒ Other SW846 - 6010A
selenium	☒	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐	☒ Other
silver	☒	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐	☒ Other
thallium	☐	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐	☒ Other KeP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
benzene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☒ KeP
carbon tetrachloride	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐ Other
chlorobenzene	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☐ Other
chloroform	☐	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐	☐ Other
cresol	☐	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐	☐ Other
1,4-dichlorobenzene	☐	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐	☐ Other
1,2-dichloroethane	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐ Other
1,1-dichloroethylene	☐	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐	☐ Other
2,4-dinitrotoluene	☐	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐	☐ Other
hexachlorobenzene	☐	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐	☐ Other
hexachlorobutadiene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐ Other
hexachloroethane	☐	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐	☐ Other
methyl ethyl ketone	☐	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐	☐ Other
nitrobenzene	☐	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐	☐ Other
pentachlorophenol	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☐ Other
pyridine	☐	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐	☐ Other
tetrachloroethylene/perchloroethylene	☐	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐	☐ Other
trichloroethylene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐ Other
2,4,5-trichlorophenol	☐	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐	☐ Other
2,4,6-trichlorophenol	☐	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐	☐ Other
vinyl chloride	☐	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J Clayton	10/14/92		04636

CONTAINER PROFILE
52118
T-MTRU-TEMP

WS ID: 28588
C ID: 768031
ACTIVE

GENERAL INFORMATION

Container ID:	768031		
Labeled ID:	52118		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	19-May-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	19-May-1993
Compactible:		**Closed Date:**	19-May-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	959.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	110.00 lb
		Net Weight:	849.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000232: STAGE: NS: NS

CONTAINER PROFILE
52118
T-MTRU-TEMP

WS ID: 28588
C ID: 768031
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
-----	K567	---	---	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	38		0/0
Not Specified	NA	Carbon Composite	0	4149		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
52118
T-MTRU-TEMP

WS ID: 28588
C ID: 768031
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 73719, Status: Active							
B/G Survey			= 2.00	=	=	Not Applicable	
Neutron Survey			= 1.10	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.20	= 4.80

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 338917, Date: 05/19/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	1.07E+001	g	5.90E-001	N				NONE
52	5.71E+001	g	3.84E+000	N				NONE
Am-241	3.67E+001	Ci	2.03E+000	Y			Y	
Pu-238	9.79E-002	Ci	6.58E-003	Y			Y	
Pu-239	3.33E+000	Ci	2.24E-001	Y			Y	
Pu-240	7.78E-001	Ci	5.23E-002	Y			Y	
Pu-241	1.18E+001	Ci	7.94E-001	Y			Y	
Pu-242	4.50E-005	Ci	3.03E-006	Y			Y	
U-234	7.12E-006	Ci	4.78E-007	Y			Y	
U-235	1.24E-007	Ci	8.30E-009	Y			Y	

53204

LOS ALAMOS
NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53204
LA53204

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NMLO155AAG	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 7/29/93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT 2	Technical Area: TA55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLYLINED DRUM

TID # ~~B~~ B20089

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT								
				Nuclide	Amount +/-			Uncertainty +/-				C=Curie M=Gram
01	☐ Steel Drum (55 gal.)	☐ None										
02	☐ Standard Waste Box	Type	Thickness (in.)	PU-239	2.3E+0	E	+1	.		E		M
03	☒ Other (Cal TWCO)	LEAD	6.3E-2	AM-241	3.3E+0	E	+0	.		E		M
04	☐ RH Canister		. E		.	E		.		E		
					.	E		.		E		
					.	E		.		E		
					.	E		.		E		
					.	E		.		E		

Waste Profile Request Number	014631 6
Carbon Filter ID	01 AA 4 1 1 8 1 / 02 AA 3 9 6 6
Process Batch Code	N/A
Gross Weight (lb.)	16.4 E+2
Organic Material Wt. (lb.)	14.6 E+0
Organic Material Volume (%)	10
TRUCON Code	141A
Date Closed (MMDDYY)	07/29/93

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8 E+4 ~~3.8 E+4~~ 55 kg
CADMIUM	D006	~~2.2 E+0~~ ~~2.2 E+0~~ kg
CHROMIUM	D007	~~8.4 E+1~~ ~~1.2 E+1~~ kg
LEAD	D008	~~2.2~~ ~~1~~ kg

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data is correct and complete to the best of my knowledge.

Printed Name	Signature	Date
KATHLEEN M. GRUETZMACHER	KM Gruetzmacher	8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.2 E+0	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	4.0 E-1	Survey Meter Model: PNR-4	Property Number: 4909
Total Dose Rate (mrem/h)	1.6 E+0	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	<20 E+0	Printed Name: R J Cox	Date: 8/4/93
Beta-Gamma Cont. (dpm/100cm²)	1.8 E+1	Signature: R J Cox	

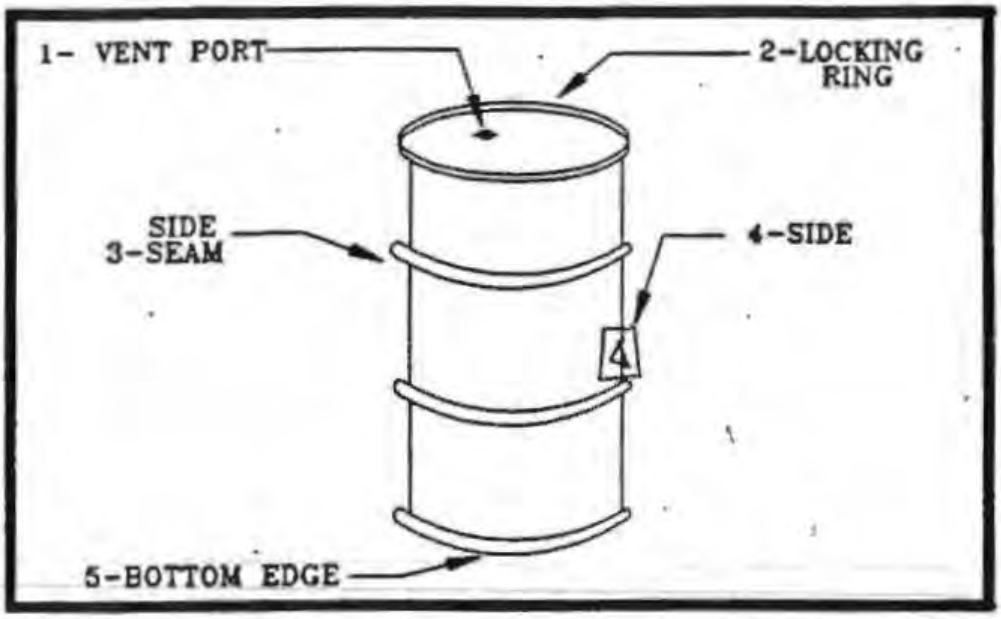
4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5.	Printed Name: J. Minton-Hughes	Date: 8-6-93
	Signature: Julia Minton-Hughes	

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 0 4 1993

TA 3 BUILDING 29 SAMPLE DATE 7-29-93
RPT R. COX CONTAINER NO. LA000000053204



△ Maximum Gamma Dose Rate 1.2 mR/hr.
□ Maximum Neutron Dose Rate .4 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	↓
5	BOTTOM EDGE	↓	18

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: ~~ESP-1~~ PNR-4
P/N: ~~8006~~ 4909
CDD: 9[illegible]-22-93

DISTRIBUTION:
1. RPT's TA-54 MS J592
2. RCT's TA-3 CMR MS G749
3. _____

ANALYZED BY: Ralph Vigil
DATE: 8-3-93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

ED WASTE STORAGE RECORD

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053204

WASTE PACKAGE SERIAL NUMBER
LA 88 01 00 57 05 82

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group HSE-12	TID # 404376
TA 53	Fixed Alpha - NDA
Building PF4	LWD 139 00 3650
Program Code	

CODE	CONTAINER	INTERNAL SHIELDING Type	Thickness (in.)
01	☑ Steel Drum (55 gal.)		
02	☐ Steel Overpack (Drums)		
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)		
04	☐ Steel Overpack (FRP Box)	☐ None	
	☐ Other (Describe)	☑ Lead	6.3E-2
		☐ Steel	• E
Drum Lot Code H	Year of Mfr 87	☐ Concrete	• E
Manufacturer's Box Serial Number N/A		☐ Other	• E
Process Batch Code N/A			

RADIONUCLIDE CONTENT Nuclide	Amount ±	C = Curie G = Gram
Pu152	2.326E ± 1	47
Am144	3.370E ± 0	47

Gross Wt. (lb.)	5.31E-2
Organic Matl Wt. (lb)	4.69E-0
Organic Matl Vol (%)	0
Content Code	006
Date Closed (MMDDYY)	021488

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.8E+4
		• E
		• E
		• E

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name Chester H Smith Sr | Signature Chester H Smith Sr | Date 02-08-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.5E+0	Survey Meter Model RO3C	Property No. ~~PNR-4~~ 002614
Neutron Dose Rate (mrem/h)	0.5E+0	Survey Meter Model PNR-4	Property No. 004913
Total Dose Rate (mrem/h)	1.0E+0		
Alpha Contamination (dpm/100cm²)	0.0E+0	The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.	
Beta-Gamma Cont. (dpm/100cm²)	3.6E+1		
Printed Name James B. Sánchez	Signature James B. Sánchez / Grant Paul Johnson	Date 2-16-88	

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name BRUCE T. REICH | Date 02/22/88
Signature Bruce T. Reich

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	7.0E-1	Survey Meter Model RO3C	Property No. 2610
Neutron Dose Rate (mrem/h)	3.0E-1	Survey Meter Model PNR4	Property No. 1905
Total Dose Rate (mrem/h)	1.0E+0		
Alpha Contamination (dpm/100cm²)	6.5E+1	The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.	
Beta-Gamma Cont. (dpm/100cm²)	3.6E+1		
Printed Name Glenn Corbin	Signature Glenn Corbin	Date 3/15/88	

V. STORAGE SITE INFORMATION MD-33

Received by KDS	Date received 3-1-88	Pad No. 5	Layer ~~4~~ ☐ E ☐ C ☐ W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No. ~~12~~ 15	Date Stacked 3-15-88
		This waste package was stored at this location according to approved procedures.	
Printed Name Eugene Salazar	Date 3-14-88	Printed Name ROSILA F. GARCIA	Date
Signature Eugene Salazar		Signature Rosila F. Garcia	

HS Form Number 10-5A (11/87)

4

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

LA880100505 82

WASTE PACKAGE SERIAL NUMBER

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed [CT] installer's INITIALS

Lead Lined [Y]

90 Mil Drum Liner [N]

1/8 Inch Drum Liner [N]

CONTAINER: open [ ] In-Line [X]

Tamper Indicating Seal # A04876

Waste Code: N/A

Date Sealed 02-04-88

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS VX	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	10X18WF1B	434 G467	26.25	EV Filtrate	R00	6.73	52	6.0	Smith					1/5	02/02/88
1	CAVASH13	TA-50	3.57	ASH High Fired	603	0.40	52	6.0	Smith					1/2	02/02/88
2	10S21WF1	434 G467	39.77	EV Filtrate	R00	15.96	52	6.0	Smith					1/6	02/04/88
3	10X20WF1A	434 G468	4.44	EV Filtrate	R00	0.17	52	6.0	Smith					1/4	02/04/88
4	10X18WF1B	434 G467	4.98	EV Filtrate	R00	0.67	44	99.9	Smith					3/II	02/02/88
5	10S21WF1	434 G467		EV Filtrate	R00	2.68	44	99.9	Smith					3/II	02/04/88
6	10X20WF1A	434 G468		EV Filtrate	R00	0.02	44	99.9	Smith					3/II	02/04/88
7														/	/ /
8														/	/ /
9										2.2	2.13	Packaging		/	/ /
TOTALS Pkg Wt. Kg			172.78	MST-12 signatures for Gross Weight		23.26	52	TOTALS		2.2	2.13	Haz. Mat. - Kg			
x 2.2046 = Pkg Wt Lbs			380.91			3.37	44	organics pounds			4.69	MST-10 Assay Value			
Scale GROSS WT. Pounds			531.33	for Accountability check				QA Data Pkg. Approval				Instrument ID/A			
55 gal. drum TARE Pounds			150.42					D. G. Le Baron 10/5/88				MST-10 Signature			

This container's waste was packaged and the MST-12 data on the DWLS and the CWSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Smith

#05-2-231/0239A

TRU 006

LA53204

LA53204

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE FO

EM-8 USE ONLY
Reference Number C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nC/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nC/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nC/g	☒ gamma	
☒ > 100 nC/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). →	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☒ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☒ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☒ Other SW846 - 6020 (mod)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☒ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☒ Other KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KoP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
[signature]	10/14/92		04636

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 | Manifest Document No. 53204 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
DAVIS V CHRISTENSEN
Los Alamos National Laboratory
TA54 AREA G MS Los Alamos NM 87545
4. Generator's Phone (505) 66-

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: LANL | 6. US EPA ID Number | C. State Transporter's ID | D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
RONALD G SALAZAR TA50 BLDG. 69
Los Alamos, NM 87545
10. US EPA ID Number | G. State Facility's ID | H. Facility's Phone 505 66-

	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	x RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918Solid, Elemental, ~~AM44~~, PU52, 1.807e+01CI, T.I.=0.2 RADIOACTIVE	1		649	P	
b.	YELLOW II, Am241, Pu238, Pu239, Pu240, Pu241, Pu242					
c.						
d.						

HMTF REVIEW
APPROVED ☑
DISCREPANCY ☐
7/11/96 7:30 GM

J. Additional Descriptions for Materials Listed Above
11a. D008, D007, D006

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
"EMERGENCY PHONE NO: (505) 667-6211"
11a. ERGNO: 165
Road Closure Required
Road Closure Required
TWSR#: 53204 HMTF#: 15455

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
DAVIS Christenson	Davis Christenson	07	11	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
VALDEZ ALVIN		07	12	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Ron Salazar	Ron Salazar	07	13	96

Style CF174 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

ORIGINAL-RETURN TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 Manifest Document No. 53204 2. Page 1 of 1 Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name
LANL

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
Rega Del Buey Rd. TA-54
Los Alamos, NM 87545

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone 505 667-6055

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a.	X	RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918Solid, Elemental, AM241, PU238, PU239, PU240, PU241, PU242, 1.8066+01Ci, T.I.=0.1 RADIOACTIVE YELLOW II,	1	DM	529	P	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
11a. D006

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
11a. ERDM: 165

TWR#: 53204

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Ronald G. Salazar	Ron Salazar	09	15	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Gilbert Salazar		09	15	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
RICK Martinez	Rick Martinez	09	15	96

Style CF17-8 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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TSDF COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved, OMB No. 2050-0039, Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NMOF90010515 | Manifest Document No. 53204 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name
LANL

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
Rose Gel Huey Rd., TA-54
Los Alamos, NM 87545

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone 505-667-4218

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X UN, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2915011d, Cleanout, AM241, P0230, P0239, P0240, P0241, P0242,		1	DM	525	P	
b. 1.506e+01Ci, T.I.=0.1 RADIOACTIVE YELLOW II,						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
111a DOOM

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
111a ERGNO:165 Row CUBIC FEET
INSRB: 53204 IMTE#:

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Monte B. Schazer		

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year
Glen Jaime		

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Rick Martinez	Rick Martinez	

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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GENERATOR COPY

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Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NMOOOOOIO515 | Manifest Document No. 53204 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: LANL | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
Mesa Del Rey Rd. TA-54
Los Alamos, NM 87545

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a. 9,00, RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918solid,Elevenlet, AM241, PU238, PU239, PU240, PU241, PU242,		1	DM	529	P	
b. 1 BOX=OICI, T.I.=0.1 RADIOACTIVE YELLOW II,						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
"EMERGENCY PHONE NO: (505) 667-6211"
ERG NO: 165
TWRR: 53204

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Ronald S. Salazar | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Glen Harper | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: RICK MARTINEZ | Signature | Month Day Year

Style CF174 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA - 50-69, WCRRF

LOCATION

ROOM : 102 ☐
103 ☐
104 ☐
50-193 ☐

BUILDING _____ ☐

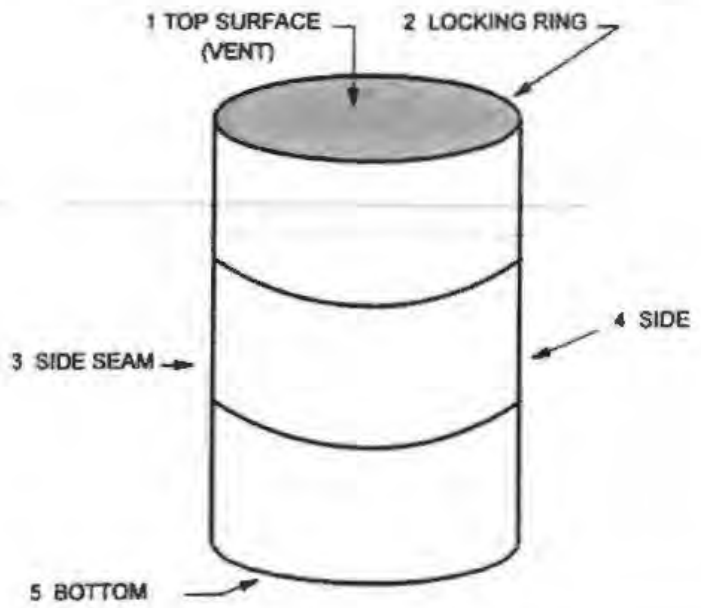
OTHER _____ ☐

CONTAINER NUMBER: 53204

DRUM SURVEY DATE: ___/___/___

SURVEYED BY: K. Ault
(Signature)

RCT: Salazar ☐
Ault ☒
Other: _____ ☐



GAMMA INSTRUMENT

MODEL: RO-2 ☐
RO-3C ☒
(OTHER) _____ ☐

P/N: 2645

CAL DUE DATE: 2/17/97

MAXIMUM GAMMA DOSE RATE

△ contact 0.6 mR/hr
1meter 0.1 mR/hr

NEUTRON INSTRUMENT

MODEL: ESP-2/NRD ☐
PNR-4 ☐
(OTHER) ESP-1 ☒

P/N: 8037

CAL DUE DATE: 1/29/97

MAXIMUM NEUTRON DOSE RATE

☐ contact 0.2 mRem/hr
1meter Ø mR/hr

SMEAR	LOCATION	ALPHA*	BETA*
1	TOP SURFACE		
2	LOCKING RING	2.2	0.7
3	SIDE SEAM		
4	SIDE	dpm	dpm
5	BOTTOM		

*dpm/100 cm sq

ALPHA / BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION:

1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales

_____

DATE: ___/___/___

CST-7/FSH-1 TA-50 (March 1995)

Stan Bodenstein, CS, 02:15 PM 9/9/96 -, Dewatered Drum Shipment to TA-

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Mon, 09 Sep 1996 14:15:16 -0600
To: aic@lanl.gov
From: bodenstein@lanl.gov (Stan Bodenstein, CST-7, 5-8462)
Subject: Dewatered Drum Shipment to TA-54
Cc: Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov, dvc@lanl.gov, aic@lanl.gov, rickmar@lanl.gov, jbaikey@lanl.gov, ronwieneke@lanl.gov, kgruetzmacher@lanl.gov, andym@lanl.gov, gveazey@lanl.gov, dpt@lanl.gov

I-Li,

We received the following drums from you as OVERPACKED 55 gallon drums. We dewatered each of the drums at the WCRRF.

Since each of the drums was in very good condition, we will be shipping the following list of drums back to you as 55 gallon drums, WITHOUT the overpacks. Also indicated is the change in weight due to the removal of water.

Please update the database as necessary.

Drum Number	Pounds Initial Weight	Final Weight
53836	532.0	523.8
53746	534.8	528.0
53783	556.0	548.4
53789	538.6	532.2
53204	531.8	529.4
53174	537.6	534.9
53851	554.8	552.1
53771	560.4	556.3
53715	547.2	543.1
54893	539.2	536.5
52054	833.6	813.2
52484	855.2	833.8
53847	527.0	519.4
53790	557.2	548.2
53734	821.0	815.6
53848	534.8	530.2
54002	804.8	798.6
53712	529.8	523.0
52187	862.6	844.2
53824	536.6	530.8
53772	561.6	545.8
53796	554.2	549.6
53722	554.0	545.8
53703	527.2	517.8
53714	531.8	529.4
53814	533.0	519.2
54894	537.4	535.6
53306	539.4	529.8
53842	540.4	528.0
53802	530.6	520.4

Los Alamos
NATIONAL LABORATORY

53204

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6639
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LANL pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste/ Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4636	LA000053204	53204	08/25/93

Check only one.

- [X] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/l, of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm.

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory (based on 261.23(a)(1))
[ ] D004	
[ ] D005	
[X] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[X] D007	
[X] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
[X] D008 — D65	Radioactive Lead Solids Subcategory
[ ] D009 5/24/17	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg [with inorganics])
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All applicable Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

NOTIFICATION FOR F001 – F005 SPENT SOLVENT WASTES

Check all that apply.

Spent solvent wastes with the following constituents only.

EPA Waste Code	Constituents in the waste	
☐ F001	☐ Acetone	☐ Isobutyl alcohol
☐ F002	☐ Benzene	☐ Methanol
☐ F003	☐ n-Butyl alcohol	☐ Methylene chloride
☐ F004	☐ Carbon disulfide (wastewater only)	☐ Methyl ethyl ketone
☐ F005	☐ Carbon tetrachloride	☐ Methyl isobutyl ketone
	☐ Chlorobenzene	☐ Nitrobenzene
	☐ o-cresol	☐ Pyridine
	☐ m-cresol	☐ Tetrachloroethylene
	☐ p-cresol	☐ Toluene
	☐ Cresol-mixed isomers (Cresylic acid)	☐ 1,1,1-Trichloroethane
	☐ Cyclohexanone (wastewater only)	☐ 1,1,2-Trichloroethane
	☐ o-Dichlorobenzene	☐ 1,1,2-Trichloro – 1,2,2-trifluoroethane
	☐ Ethyl acetate	☐ Trichloroethylene
	☐ Ethyl benzene	☐ Trichloromonofluoromethane
	☐ Ethyl ether	☐ Xylenes – mixed isomers (o-, m-, p-xylene)

Check all that apply.

EPA Waste Codes	Constituents in the waste
☐ F003	☐ Carbon disulfide
☐ F005	☐ Cyclohexanone
	☐ Methanol

Note: Treatment standards for these constituents apply to F001 – F005 wastes that contain only one, two, or all three of these constituents.

Check only one, if applicable.

EPA Waste Code	Constituents in the waste
☐ F005	☐ Containing 2-nitropropane as the only listed F001 – F005 solvent.
	☐ Containing 2-ethoxyethanol as the only listed F001 – F005 solvent.

NOTIFICATION FOR OTHER "F" WASTES

Check only one, if applicable.

- ☐ F006
- ☐ F007
- ☐ F008
- ☐ F009
- ☐ F027

CONTAINER PROFILE
53204
T-MTRU-TEMP

WS ID: 28588
C ID: 761864
ACTIVE

GENERAL INFORMATION

Container ID:	761864		
Labeled ID:	53204		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993

Discard Matrix:

TID(s):

Gen Contact:

Insert By: WCATS APPLICATION (000000)

Waste Desc: (LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	611.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	82.00 lb
		Net Weight:	469.00 lb

LOCATION

Pickup (Origin): LANL: 55-PF4: GEN-AREAS

Current: LANL: 54-G: 000153: C047: L01: R07

CONTAINER PROFILE
53204
T-MTRU-TEMP

WS ID: 28588
C ID: 761864
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
-----	K567	---	---	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	NOT AVAILABLE		0/0
Not Specified	NA	Carbon Composite	0	CK-120		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
53204
T-MTRU-TEMP

WS ID: 28588
C ID: 761864
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72343, Status: Active							
B/G Survey			= 0.80	=	=	Not Applicable	
Neutron Survey			= 0.00	=	=	Not Applicable	
Smear Results			Not Applicable			= 2.40	= 7.80

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336222, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	3.37E+000	g	0.00E+000	N				NONE
52	2.33E+001	g	0.00E+000	N				NONE
Am-241	1.16E+001	Ci	0.00E+000	Y			Y	
Pu-238	3.99E-002	Ci	0.00E+000	Y			Y	
Pu-239	1.35E+000	Ci	0.00E+000	Y			Y	
Pu-240	3.17E-001	Ci	0.00E+000	Y			Y	
Pu-241	4.81E+000	Ci	0.00E+000	Y			Y	
Pu-242	1.83E-005	Ci	0.00E+000	Y			Y	
U-234	2.90E-006	Ci	0.00E+000	Y			Y	
U-235	5.03E-008	Ci	0.00E+000	Y			Y	

53306

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53306
LA53306

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML 0169446	Inspected Items			
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents	
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint	
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 8-5-93		
	Signature: Steven Griego			

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TID# B20150

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT						
01	☐ Steel Drum (55 gal.)	☐ None		Nuclide	Amount +/-			Uncertainty +/-		C=Curie M=Gram
02	☐ Standard Waste Box	Type	Thickness (in.)	PU 242	3.19	E	+1	.	E	M
03	☒ Other (Cal TWCO)	LEAD	6.3E-2	AM 241	3.73	E	+0	.	E	M
04	☐ RH Canister		. E		.	E		.	E	

Waste Profile Request Number	04636
Carbon Filter ID	01 LA 34917 02 LA 18711
Process Batch Code	N/A
Gross Weight (lb.)	6.58E+2
Organic Material Wt. (lb.)	4.69E+0
Organic Material Volume (%)	10
TRUCON Code	114A
Date Closed (MMDDYY)	08/05/93

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+4
CADMIUM	D006	~~4.2E+2~~ kmg
CHROMIUM	D007	~~1.0E+3~~ kmg
LEAD	D008	~~2.6E+1~~ 1.5E+1 kmg

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Kathleen M. Gruetzmacher	KM Gruetzmacher	8/11/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	4.0E-1	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	0.0E+0	Survey Meter Model: PNR-4	Property Number: 4905
Total Dose Rate (mrem/h)	4.0E-1	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: RJ COX	Date: 8/9/93
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: RJ Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AP 10.5.	Printed Name: BRUCE LE BRUN	Date: 8/13/93
	Signature: Bruce L. Brun	

TRU 006
LA53306
LA53306

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	01 8	1 1 6	9 3	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09 8	01 9	3	HARRi Wilder	Harri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
Irene E. Lopez	Irene E. Lopez	8-30-93

.2493 9-23-93 CJ

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.0 E -1	Survey Meter Model	RO3C	Property Number	2620
Neutron Dose Rate (mrem/h)	2.0 E -1	Survey Meter Model	PNR4	Property Number	5229
Total Dose Rate (mrem/h)	3.0 E -1	*The data in this section were collected according to approved procedures.*			
Alpha Contamination (dpm/100cm²)	2.3 E +0	Printed Name	J.T. Miller	Date	9-13-93
Beta Gamma Cont. (dpm/100cm²)	5.0 E +0	Signature	J.T. Miller		

8. STORAGE SITE INFORMATION

Received By (Initials) Rm	Date Received 9-9-93	C4 DOME ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 1	Row Number 3
		Column Number 23	Date Stacked (MM,DD,YY) 01 14 93
Printed Name Rick Martinez	Date 9-9-93	Printed Name Charlotte Fernandez	Date 9/15/93
Signature Rick Martinez		Signature Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name BRUCE LE BRUN	Date 11/19/93
	Signature Bruce L Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	11 0	2 7	9 3	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	11 0	1 9	3	HARRi Wilder	Harri Wilder

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	12 0	1 6	9 3	Renee Sandoval	Renee Sandoval

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053306

WASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER: LA 88 01 00 05 05 95

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group: M5T-12	ID# A05068
TA: TA-55	
Building: PF-4	LWD-139 PN#3650
Program Code: K530	FIXED ALPHA - NDA

CODE	CONTAINER
01	☑ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (66 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

INTERNAL SHIELDING	Type	Thickness (in.)
	☐ None	
	☒ Lead	1.5E-2
	☐ Steel	.E
	☐ Concrete	.E
	☐ Other	.E

RADIONUCLIDE CONTENT	Nuclide	Amount ±		C = Curie G = Gram
	Pu-239	3.19E+1	E	Gm
	Am-241	3.73E+0	E	Gm
		.E		
		.E		
		.E		

Drum Lot Code: H | Year of Mfr.: 87
Manufacturer's Box Serial Number: N/A
Process Batch Code: N/A

Gross Wt. (lb)	5.40
Organic Matl Wt. (lb)	4.29
Organic Matl Vol (%)	0
Content Code	006
Date Closed (MMDDYY)	012588

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.8E+4
		.E
		.E
		.E
		.E

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester A Smith Jr | Signature: Chester A Smith Jr | Date: 02-29-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.5E+0	Survey Meter Model: RO-3C	Property No.: 2614
Neutron Dose Rate (mrem/h)	0.5E+0	Survey Meter Model: PNR-4	Property No.: 5238
Total Dose Rate (mrem/h)	1.0E+0		
Alpha Contamination (dpm/100cm²)	0.0E+0	*The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0		
Printed Name: JERILYN MOSSO	Signature: Jerilyn Mosso	Date: 3/15/88	

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name: BRUCE T. REICH | Date: 04/29/88
Signature: Bruce T. Reich

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	7.0E-1	Survey Meter Model: RO-3C	Property No.: 2620
Neutron Dose Rate (mrem/h)	0.0E-1	Survey Meter Model: PNR-4	Property No.: 4901
Total Dose Rate (mrem/h)	1.0E+0		
Alpha Contamination (dpm/100cm²)	0.0E+0	*The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0		
Printed Name: Glenn Corbin	Signature: Glenn Corbin MD 33 2K	Date: 7/27/88	

V. STORAGE SITE INFORMATION

Received by: SL	Date received: 7-26-88	Pad No.: 2	Layer: 3 ☒E ☐C ☐W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No.: 7	Date Stacked: 9-2-88
		This waste package was stored at this location according to approved procedures.	
Printed Name: Eugene Salazar	Date: 7/27/88	Printed Name: Rosila F. Garcia	Date: 9-2-88
Signature: Eugene Salazar		Signature: ROSILA F. GARCIA	

HS Form Number 10-5A (11/87)

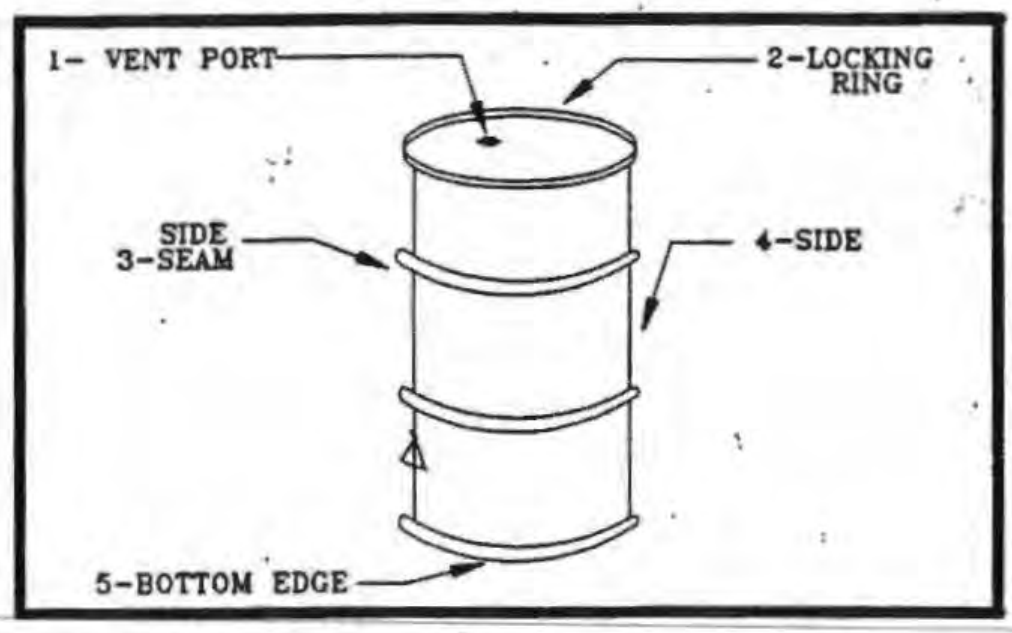
5

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 0 6 1993

TA 3 BUILDING 29 SAMPLE DATE 8-5-93

RPT R. Cox CONTAINER NO. LA000000053306



△ Maximum Gamma Dose Rate .4 mR/hr.

□ Maximum Neutron Dose Rate 0.0 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM		
4	SIDE		
5	BOTTOM EDGE	↓	↓

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: PNR-4
P/N: 4905
CDD: 9-3-93

DISTRIBUTION:

1. RPT's TA-54 MS J592
2. RCT's TA-3-29 MS G749
3. _____

ANALYZED BY: David A. Barnes Mike Jensen

DATE: 8/5/93

LOS ALAMOS
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

TRU 006
#LA53306#
LA53306

EM-8 USE ONLY
Reference Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490.

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization
- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nC/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nC/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nC/g	☒ gamma	
☒ > 100 nC/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). --->	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

	None	< 5.0 ppm	≥ 5.0 ppm	TCLP	Other
arsenic	☐	☒	☐	☐	☒ SW846-6010A
barium	☐	☒	☐	☐	☒
cadmium	☐	☐	☒	☐	☒
chromium	☐	☐	☒	☐	☒
lead	☐	☐	☒	☐	☒
mercury	☐	☒	☐	☐	☒ SW846-7470A(mod)
nickel	☐	☒	☐	☐	☒ SW846-6010A
selenium	☒	☐	☐	☐	☒
silver	☒	☐	☐	☐	☒
thallium	☐	☒	☐	☐	☒ KoP

	< 100.0 ppm	≥ 100.0 ppm
barium	☒	☐
chromium	☒	☐
nickel	☒	☐

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

	None	< 0.5 ppm	≥ 0.5 ppm	TCLP	Other
benzene	☐	☒	☐	☐	☒ KoP
carbon tetrachloride	☐	☒	☐	☐	☐
chlorobenzene	☐	☒	☐	☐	☐
chloroform	☐	☒	☐	☐	☐
cresol	☐	☒	☐	☐	☐
1,4-dichlorobenzene	☐	☒	☐	☐	☐
1,2-dichloroethane	☐	☒	☐	☐	☐
1,1-dichloroethylene	☐	☒	☐	☐	☐
2,4-dinitrotoluene	☐	☒	☐	☐	☐
hexachlorobenzene	☐	☒	☐	☐	☐
hexachlorobutadiene	☐	☒	☐	☐	☐
hexachloroethane	☐	☒	☐	☐	☐
methyl ethyl ketone	☐	☒	☐	☐	☐
nitrobenzene	☐	☒	☐	☐	☐
pentachlorophenol	☐	☒	☐	☐	☐
pyridine	☐	☒	☐	☐	☐
tetrachloroethylene/perchloroethylene	☐	☒	☐	☐	☐
trichloroethylene	☐	☒	☐	☐	☐
2,4,5-trichlorophenol	☐	☒	☐	☐	☐
2,4,6-trichlorophenol	☐	☒	☐	☐	☐
vinyl chloride	☐	☒	☐	☐	☐

	< 0.5 ppm	≥ 0.5 ppm
benzene	☒	☐
carbon tetrachloride	☒	☐

	< 100.0 ppm	≥ 100.0 ppm
chlorobenzene	☒	☐

	< 6.0 ppm	≥ 6.0 ppm
chloroform	☒	☐

	< 200.00 ppm	≥ 200.0 ppm
cresol	☒	☐

	< 7.5 ppm	≥ 7.5 ppm
1,4-dichlorobenzene	☒	☐

	< 0.5 ppm	≥ 0.5 ppm
1,2-dichloroethane	☒	☐

	< 0.7 ppm	≥ 0.7 ppm
1,1-dichloroethylene	☒	☐

	< 0.13 ppm	≥ 0.13 ppm
2,4-dinitrotoluene	☒	☐
hexachlorobenzene	☒	☐

	< 0.5 ppm	≥ 0.5 ppm
hexachlorobutadiene	☒	☐

	< 3.0 ppm	≥ 3.0 ppm
hexachloroethane	☒	☐

	< 200.0 ppm	≥ 200.0 ppm
methyl ethyl ketone	☒	☐

	< 2.0 ppm	≥ 2.0 ppm
nitrobenzene	☒	☐

	< 100.0 ppm	≥ 100.0 ppm
pentachlorophenol	☒	☐

	< 5.0 ppm	≥ 5.0 ppm
pyridine	☒	☐

	< 0.7 ppm	≥ 0.7 ppm
tetrachloroethylene/perchloroethylene	☒	☐

	< 0.5 ppm	≥ 0.5 ppm
trichloroethylene	☒	☐

	< 400.0 ppm	≥ 400.0 ppm
2,4,5-trichlorophenol	☒	☐

	< 2.0 ppm	≥ 2.0 ppm
2,4,6-trichlorophenol	☒	☐

	< 0.2 ppm	≥ 0.2 ppm
vinyl chloride	☒	☐

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
[signature]	10/14/92		04636

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

L	A	8	8	0	1	0	0	5	0	5	9	5

WASTE PACKAGE SERIAL NUMBER

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed [G] installer's INITIALS

Lead Lined [Y]

90 Mil Drum Liner [N]

1/8 Inch Drum Liner [N]

CONTAINER: open [ ] In-Line [X]

Tamper Indicating Seal # A05068

Waste Code: N/A

Date Sealed 02/25/88

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	2LR12EF1B	434 G-467	95.71	EU [illegible] FILTRATE	ROO	9.18	52	60	Smith				7/11	[illegible]	02/25/88
1	2DS9WF1A	434 G-468	80.59	EU [illegible] FILTRATE	ROO	22.72	52	60	Smith				7/11	[illegible]	02/25/88
2	2LR12EF1B	434 G-467		EU [illegible] FILTRATE	ROO	2.53	44	99.9	Smith				2	[illegible] III	02/25/88
3	2DS9WF1A	434 G-468		EU [illegible] FILTRATE	ROO	1.15	44	99.9	Smith				2	[illegible] III	02/25/88
4														/	/ /
5														/	/ /
6														/	/ /
7														/	/ /
8														/	/ /
9										7.2	2.13	Packaging		/	/ /

TOTALS Pkg Wt. Kg	176.30	MST-12 signatures for Gross Weight	31.90	52	TOTALS	9.2	9.13
x 2.2046 = Pkg Wt Lbs	388.7		3.53	44	organics pounds	4.69	2.13
55 gal. drum TARE Pounds	150.99	for Accountability			QA Data Pkg. Approval		
Scale GROSS WT. Pounds	539.64					89/4/25	

Haz. Mat. - Kg N/A 0.0

MST-10 Assay Value NA

Instrument ID.

MST-10 Signature RW Blankenship

This container's waste was packaged and the MST-12 data on the DWLS and the CWSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Fox

#05-2-231/C239A

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

Los Alamos National Laboratory
Mesa Del Suey Rd. TA-54

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a.	X	1	DM	530	P	
RQ,RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918Solid;Elemental, AM241, PU238, PU239, PU240, PU241, PU242, CM... 2.172e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW-II, 1						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

11a. 2908

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

EMERGENCY PHONE NO: (505) 667-6211
11a. ERGNO: 165

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Ronald C. Salazar	Ron Salazar			

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Avie Jones				

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Machacz	Rick Machacz	09	19	96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete

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TSDF COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

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3. Generator's Name and Mailing Address
Los Alamos National Laboratory
4. Generator's Phone ( )

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number
Los Alamos National Laboratory
Rees Del Rey Rd. TA-54
G. State Facility's ID
H. Facility's Phone

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211

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Printed/Typed Name	Signature	Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

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GENERATOR COPY

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GENERATOR

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Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

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5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number
Los Alamos National Laboratory
Mesa Del Buey Rd. SM-54

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
"EMERGENCY PHONE NO: (505) 667-6211"

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Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name | Signature | Month Day Year

Style CF17-8 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA - 50-69, WCRRF

LOCATION

ROOM : 102 ☒
103 ☐
104 ☐
50-193 ☐

BUILDING _____ ☐

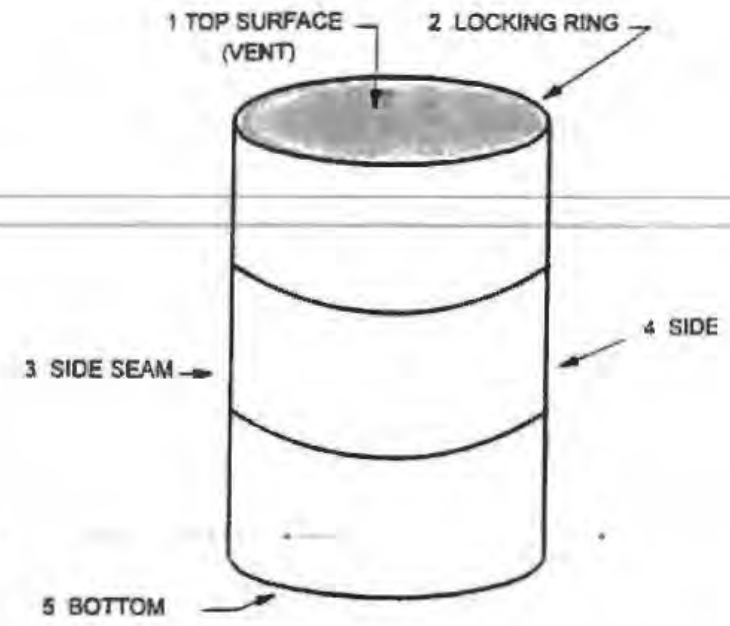
OTHER _____ ☐

CONTAINER NUMBER: 53306

DRUM SURVEY DATE: 9 16 96

SURVEYED BY: K Ault (Signature)

RCT: Salazar ☐
Ault ☒
Other: James Sanchez ☒



GAMMA INSTRUMENT

MODEL: RO-2 ☒
RO-3C ☐
(OTHER) _____ ☐

P/N: 3369

CAL DUE DATE: 10/3/96

MAXIMUM GAMMA DOSE RATE

△ contact 0.5 mR/hr
1 meter 0 mR/hr

NEUTRON INSTRUMENT

MODEL: ESP-2/NRD ☒
PNR-4 ☐
(OTHER) _____ ☐

P/N: 0031

CAL DUE DATE: 12/19/97

MAXIMUM NEUTRON DOSE RATE

☐ contact 0 mRem/hr
1 meter 0 mR/hr

SMEAR	LOCATION	ALPHA*	BETA*
1	TOP SURFACE	1.66	5.66
2	LOCKING RING	6.21	4.15
3	SIDE SEAM	2.31	7.20
4	SIDE	3.54	7.47
5	BOTTOM	0.897	0.00

*dpm/100 cm sq

ALPHA / BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION:
1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales

_____
DATE: ___/___/___

Stan Bodenstein, CS, 02:15 PM 9/9/96 -, Dewatered Drum Shipment to TA-

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Mon, 09 Sep 1996 14:15:16 -0600
To: aic@lanl.gov
From: bodenstein@lanl.gov (Stan Bodenstein, CST-7, 5-8462)
Subject: Dewatered Drum Shipment to TA-54
Cc: Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov, dvc@lanl.gov, aic@lanl.gov, rickmar@lanl.gov, jbalkey@lanl.gov, ronwieneke@lanl.gov, kgruetzmacher@lanl.gov, andym@lanl.gov, gveazey@lanl.gov, dpt@lanl.gov

I-Ll,

We received the following drums from you as OVERPACKED 55 gallon drums. We dewatered each of the drums at the WCRRF.

Since each of the drums was in very good condition, we will be shipping the following list of drums back to you as 55 gallon drums, WITHOUT the overpacks. Also indicated is the change in weight due to the removal of water.

Please update the database as necessary.

Drum Number	Pounds Initial Weight	Final Weight
53836	532.0	523.8
53746	534.8	528.0
53783	556.0	548.4
53789	538.6	532.2
53204	531.8	529.4
53174	537.6	534.9
53851	554.8	552.1
53771	560.4	556.3
53715	547.2	543.1
54893	539.2	536.5
52054	833.6	813.2
52484	855.2	833.8
53847	527.0	519.4
53790	557.2	548.2
53734	821.0	815.6
53848	534.8	530.2
54002	804.8	798.6
53712	529.8	523.0
52187	862.6	844.2
53824	536.6	530.8
53772	561.6	545.8
53796	554.2	549.6
53722	554.0	545.8
53703	527.2	517.8
53714	531.8	529.4
53814	533.0	519.2
54894	537.4	535.6
53306	539.4	529.8
53842	540.4	528.0
53802	530.6	520.4

Los Alamos
NATIONAL LABORATORY

53306

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6639
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LANL pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste/ Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4636	LA000053306	53306	9/09/93

Check only one.

- [X] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/L of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm.

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory (based on 261.23(a)(1))
[ ] D004	
[ ] D005	
[X] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[X] D007	
[X] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
[X] D009	Radioactive Lead Solids Subcategory
[ ] D009	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg [with inorganics])
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

D65 9/2/97

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All applicable Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

NOTIFICATION FOR F001 – F005 SPENT SOLVENT WASTES

Check all that apply.

Spent solvent wastes with the following constituents only.

EPA Waste Code	Constituents in the waste	
☐ F001	☐ Acetone	☐ Isobutyl alcohol
☐ F002	☐ Benzene	☐ Methanol
☐ F003	☐ n-Butyl alcohol	☐ Methylene chloride
☐ F004	☐ Carbon disulfide (wastewater only)	☐ Methyl ethyl ketone
☐ F005	☐ Carbon tetrachloride	☐ Methyl isobutyl ketone
	☐ Chlorobenzene	☐ Nitrobenzene
	☐ o-cresol	☐ Pyridine
	☐ m-cresol	☐ Tetrachloroethylene
	☐ p-cresol	☐ Toluene
	☐ Cresol-mixed isomers (Cresylic acid)	☐ 1,1,1-Trichloroethane
	☐ Cyclohexanone (wastewater only)	☐ 1,1,2-Trichloroethane
	☐ o-Dichlorobenzene	☐ 1,1,2-Trichloro – 1,2,2-trifluoroethane
	☐ Ethyl acetate	☐ Trichloroethylene
	☐ Ethyl benzene	☐ Trichloromonofluoromethane
	☐ Ethyl ether	☐ Xylenes – mixed isomers (o-, m-, p-xylene)

Check all that apply.

EPA Waste Codes	Constituents in the waste
☐ F003	☐ Carbon disulfide
☐ F005	☐ Cyclohexanone
	☐ Methanol

Note: Treatment standards for these constituents apply to F001 – F005 wastes that contain only one, two, or all three of these constituents.

Check only one, if applicable.

EPA Waste Code	Constituents in the waste
☐ F005	☐ Containing 2-nitropropane as the only listed F001 – F005 solvent.
	☐ Containing 2-ethoxyethanol as the only listed F001 – F005 solvent.

NOTIFICATION FOR OTHER "F" WASTES

Check only one, if applicable.

- ☐ F006
- ☐ F007
- ☐ F008
- ☐ F009
- ☐ F027

CONTAINER PROFILE
53306
T-MTRU-TEMP

WS ID: 28588
C ID: 761924
ACTIVE

GENERAL INFORMATION

Container ID:	761924		
Labeled ID:	53306		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	05-Aug-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	05-Aug-1993
Compactible:		**Closed Date:**	05-Aug-1993

Discard Matrix:

TID(s):

Gen Contact:

Insert By: WCATS APPLICATION (000000)

Waste Desc: (LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	612.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	82.00 lb
		Net Weight:	470.00 lb

LOCATION

Pickup (Origin): LANL: 55-PF4: GEN-AREAS

Current: LANL: 54-G: 000153: C007: L01: R01

CONTAINER PROFILE
53306
T-MTRU-TEMP

WS ID: 28588
C ID: 761924
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
——	K567	——	——	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	3497		0/0
Not Specified	NA	Carbon Composite	0	1871		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
53306
T-MTRU-TEMP

WS ID: 28588
C ID: 761924
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72424, Status: Active							
B/G Survey			= 0.10	=	=	Not Applicable	
Neutron Survey			= 0.20	=	=	Not Applicable	
Smear Results			Not Applicable			= 2.30	= 5.00

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336303, Date: 08/05/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	3.73E+000	g	0.00E+000	N				NONE
52	3.19E+001	g	0.00E+000	N				NONE
Am-241	1.28E+001	Ci	0.00E+000	Y			Y	
Pu-238	5.47E-002	Ci	0.00E+000	Y			Y	
Pu-239	1.86E+000	Ci	0.00E+000	Y			Y	
Pu-240	4.35E-001	Ci	0.00E+000	Y			Y	
Pu-241	6.60E+000	Ci	0.00E+000	Y			Y	
Pu-242	2.51E-005	Ci	0.00E+000	Y			Y	
U-234	3.97E-006	Ci	0.00E+000	Y			Y	
U-235	6.90E-008	Ci	0.00E+000	Y			Y	

53702

LOS ALAMOS
NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53702
LA53702

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML0002AAG	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Gallegos	Date: 8-11-93	
	Signature: Steven Gallegos		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group	Technical Area	Building	Program Code
	NMT-2	TA-55	PF4	K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

T.O.M. 8 20359

CODE	CONTAINER	INTERNAL SHIELDING	
		Type	Thickness (in.)
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box		
03	☒ Other (Cell TWCO)	LEAD	6.3E-2
04	☐ RH Canister		.E

Waste Profile Request Number: 04636

Carbon Filter ID: 01 LA 41133 02 (DP) LA 37613

Process Batch Code: N/A

Gross Weight (lb.): 16.71E-2

Organic Material Wt. (lb.): 4.69E+0

Organic Material Volume (%): 0

TRUCON Code: 1194

Date Closed (MM/DD/YY): 08/04/93 (03118/88)

RADIONUCLIDE CONTENT				C=Curie M=Gram
Nuclide	Amount +/-		Uncertainty +/-	
PU452	6.891E+1		.E	M
AM441	2.970E+0		.E	M
	.E		.E	
	.E		.E	
	.E		.E	
	.E		.E	
	.E		.E	

NONRADIOACTIVE HAZARDOUS MATERIALS		
Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+4
CADMIUM	D006	~~2.5E+0~~ kmg
CHROMIUM	D007	~~9.4E+1~~ kmg
LEAD	D008	~~1.4E+1~~ kmg

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data is correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: K M Gruetzmacher | Date: 9/1/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.4E+0	Survey Meter Model: ~~ESP-2~~ RO-3C	Property Number: ~~PNR-4~~ RSC 2646
Neutron Dose Rate (mrem/h)	7.0E-1	Survey Meter Model: PNR-4	Property Number: 5220
Total Dose Rate (mrem/h)	2.1E+0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: RJ Cox / ~~STEVE~~ PASCHORE	Date: 8/26/93
Beta Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: for R.J. Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5.	Printed Name: BRUCE LE BRUN	Date: 9/9/93
	Signature: Bruce Le Brun	

TRU 006
LA53702
LA53702

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	09	14	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	10	01	93	Kari Wilder	Kari Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
Gene E. Lopez 10-1-93 EJ 10-1-93 KLC	Gene E. Lopez	9/20/93

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	3.0 E-1	Survey Meter Model: RO3C	Property Number: 2620
Neutron Dose Rate (mrem/h)	5.0 E-1	Survey Meter Model: PNR4	Property Number: 5229
Total Dose Rate (mrem/h)	8.0 E-1	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.0 E-0	Printed Name: J.T. MILLER	Date: 9-27-93
Beta Gamma Cont. (dpm/100cm²)	3.2 E-0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials) RM	Date Received 9-24-93	ORIGINAL STORAGE DATA: DONE	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 1	Row Number 4
		Column Number 27	Date Stacked (MM DD YY) 09 28 93
Printed Name: Rick Martinez	Date: 9-24-93	Printed Name: RENEE SANDOVAL	Date: 10/6/93
Signature: Rick Martinez		Signature: Renee Sandoval	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 10/25/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	10	28	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	11	01	93	Kari Wilder	Kari Wilder

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	19	93	Renee Sandoval	Renee Sandoval

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053702

STE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER: LA 88 01 00 50 75 9

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group: INST-12	TED# H05075
TA: 55	
Building: PF-4	
Program Code: K530	FIXED HEAD - NDA LUD 139 - 3658

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT (C = Curie, G = Gram)		
				Nuclide	Amount	
01	☑ Steel Drum (55 gal)					
02	☐ Steel Overpack (Drums)					
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)	Type	Thickness (in.)	U-235	2.45 E-1	G
04	☐ Steel Overpack (FRP Box)	☐ None		Am-241	2.32 E-6	C
	☐ Other (Describe)	☑ Lead	6.3 E-2	Pu-239	6.39 E-1	G
		☐ Steel	. E	Pu-241	2.97 E-0	C
Drum Lot Code: H1	Year of Mfr.: 87	☐ Concrete	. E		. E	
Manufacturer's Box Serial Number: 4		☐ Other	. E		. E	
Process Batch Code: 2						

HAZARDOUS MATERIALS		
Name	EPA Code	Quantity (g)
Lead	D008	3.8 E+1

Gross Wt. (lb)	5.5 E+2
Organic Matl Wt. (lb)	4.6 E+1
Organic Matl Vol (%)	6
Content Code	016
Date Closed (MMDDYY)	031188

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester A Smith Jr | Signature: Chester A Smith Jr | Date: 03-15-88

II. GENERATOR--SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.5 E+0	Survey Meter Model: Ludlum 3C	Property No.: 2614
Neutron Dose Rate (mrem/h)	0.8 E+0	Survey Meter Model: PNR-4	Property No.: 5238
Total Dose Rate (mrem/h)	1.3 E+0		
Alpha Contamination (dpm/100cm²)	9.6 E+0	The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.	
Beta-Gamma Cont. (dpm/100cm²)	0.9 E+0		

Printed Name: James G. Schuster | Signature: James G. Schuster | Date: 4-11-88

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name: BRUCE T. REICH | Date: 04/29/88

Signature: Bruce T. Reich

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	5.0 E-1	Survey Meter Model: Ludlum 3C	Property No.: 2610
Neutron Dose Rate (mrem/h)	1.0 E-1	Survey Meter Model: PNR-4	Property No.: 4905
Total Dose Rate (mrem/h)	6.0 E-1		
Alpha Contamination (dpm/100cm²)	0.0 E+0	The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.	
Beta-Gamma Cont. (dpm/100cm²)	2.4 E+1		

Printed Name: Glenn Corbin | Signature: Glenn Corbin | Date: 5/3/88

V. STORAGE SITE INFORMATION

Received by	Date received: 5-13-88	Pad No.: MD-33	Layer: 2 ☐E ☐C ☑W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures. AK		Post No.: S-10	Date Stacked: 7-7-88
		This waste package was stored at this location according to approved procedures.	
Printed Name: KEITH CARTER	Date: 5/16/88	Printed Name: ROSILA F. GARCIA	Date: 7-7-88
Signature: Keith Carter		Signature: Rosila F. Garcia	

HS Form Number 10-5A (11/87)

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

L	A	8	8	0	1	0	0	5	0	7	5	9

WASTE PACKAGE SERIAL NUMBER

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed [X] installer's INITIALS

Lead Lined [Y]

90 Mil Drum Liner [Y]

1/8 Inch Drum Liner [Y]

CONTAINER: open [ ] In-Line [X]

Tamper Indicating Seal # H05075

Waste Code: N/A

Date Sealed 03-11-88

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIAL	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	30X36FIB	439 C468	57.11	Nitrate Solution Iron	R00	1.48	52	6.0	Smith					7/11	03/11/88
1	3LR3EF1	439 C468	109.3	Nitrate Solution Iron	R00	27.51	52	6.0	Smith					7/11	03/11/88
2	ASHALR-21	401 C466	2.21	ASH, High Level Incinerator	602	17.03	52	6.0	Smith					7/2	03/11/88
3	ASHALR-22	401 C466	2.37	ASH, High Level Incinerator	602	20.82	52	6.0	Smith					7/2	03/11/88
4	2LR26EF2A	439 C468	10.09	Nitrate Solution Iron	R00	6.18	52	6.0	Smith					7/11	03/11/88
5	GLSWC1130B	420 C439	0.34	Heating Mantles	201	1.14	52	6.0	Smith				0.34 Plastic	7/8	03/11/88
6	30X3WFIB	434 C468		Nitrate Solution Iron	R00	0.15	44	99.9	Smith					2/III	03/11/88
7	3LR3EF1	434 C468		Nitrate Solution Iron	R00	2.65	44	99.9	Smith					2/II	03/11/88
8	2LR26EF2A	434 C468		Nitrate Solution Iron	R00	2.99	44	99.9	Smith					2/III	03/11/88
9										2.2	2.13	Packaging		/	/ /

TOTALS Pkg Wt. Kg	181.70	MST-12 signatures for Gross Weight	68.91	52	TOTALS	2.2	2.13
x 2.2046 = Pkg Wt Lbs	400.58				organics pounds		4.69
55 gal. drum TARE Pounds	152.80	for Accountability check			QA Data Pkg. Approval		
Scale GROSS WT. Pounds	553.38						

Haz. Mat. - Kg N/A

MST-10 Assay Value NA

Instrument ID. _____

MST-10 Signature RW Blankenship

This container's waste was packaged and the MST-12 data on the DWLS and the CWSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Ford

TRU 006

LA53702

LA53702

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

EM-8 USE ONLY
Reference Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nC/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nC/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nC/g	☒ gamma	
☒ > 100 nC/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). --->	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☒ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☒ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☒ Other SW846 - 6020(mod)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☒ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☒ Other KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KoP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J. Clayton	10/14/92		04636

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NMO890010515 | Manifest Document No. 53702 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
DAVIS V CHRISTENSEN
Los Alamos National Laboratory
TA54 AREA G MS Los Alamos NM 87545

4. Generator's Phone (505) 66-

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: LANL | 6. US EPA ID Number | C. State Transporter's ID | D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
RONALD G SALAZAR TA50 WCRRF
Los Alamos, NM 87545

10. US EPA ID Number | G. State Facility's ID | H. Facility's Phone 505 66-

	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918 Solid, Elemental, ~~AM44, PU52,~~ 2.948e+01Ci, T.I.=0.7 RADIOACTIVE YELLOW II, Am241, Pu238, Pu239, Pu240, Pu241, Pu242	1		671	P	
b.						
c.						
d.						

HMTF REVIEW
APPROVED ☑
DISCREPANCY ☐
9/13/96
8:10
JB

J. Additional Descriptions for Materials Listed Above
11a. D008, D006, D007, D008,

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
11a. ERGNO: 165
Rad Clearance Required TWSR#: 53702 HMTF#:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
DAVIS CHRISTENSEN		09	16	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
MIKE MARQUEZ		09	18	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Style CF174 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER SOY INK

ORIGINAL-RETURN TO GENERATOR

Los Alamos
NATIONAL LABORATORY

55.12

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6839
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number
LANL

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number
Los Alamos National Laboratory
Mesa Del Buey Rd. TA-54
Los Alamos, NM 87545

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918Solid,Elemental, AM241, PU238, PU239, PU240, PU241, PU242,	X	1		671	P	
b. 2.947g;OICI, T.I.=0.1 RADIOACTIVE YELLOW II, 7,UN2915						
c.						
d. 11/18/96						

J. Additional Descriptions for Materials Listed Above
11a. D006

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
Roll Off required
"EMERGENCY PHONE NO: (505) 667-6211"
11a. ERGNO: 165
TMTR#: 53702 HMTR#: 16415

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Ronald D. Salazar	Ron Salazar	11	19	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Peter J. Miguez		11	19	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
RICK MARTINEZ		11	20	96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number
Los Alamos National Laboratory
Mesa Del Buey Rd. TA-54
Los Alamos, NM 87545

G. State Facility's ID

H. Facility's Phone

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918Solid, Elemental, AM241, PU239, PU239, PU240, PU241, PU242,	1		671		
b.	2.947e+01Ci, T.I.=0.1 RADIOACTIVE YELLOW II, 7, UN2916					
c.						
d.						

J. Additional Descriptions for Materials Listed Above
11a. D008

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
11a. ERGNO: 165

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Ronald J. Salazar	Ron Salazar			

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year
RICK MARTINEZ		11	20	96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 3-89) Previous editions are obsolete.

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GENERATOR COPY

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Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number
Los Alamos National Laboratory
Rosa Del Buey Rd. TA-54
Los Alamos, NM 87544

G. State Facility's ID

H. Facility's Phone

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, Solid, Elemental, AM241, PU238, PU239, PU240, PU241, PU242,	1		671		
b. 2.947E+01Ci, T.I.=0.1 RADIOACTIVE YELLOW II,					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
11a. DOE

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
11a. ERG NO: 165

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month Day Year
Ronald D. Salmon	Ron Salmon	

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Rick Martinez		

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA-50-69, WCRRF

LOCATION

ROOM: 102 ☐
103 ☐
104 ☐
50-193

BUILDING 69
OTHER

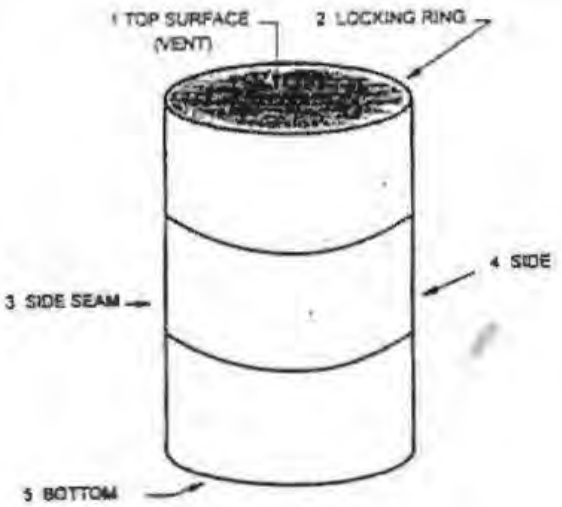
CONTAINER NUMBER : 53702

DRUM SURVEY DATE: 10/15/96

SURVEYED BY: James (Signature)

RCT: SALAZAR ☐
AULT ☐
SANCHEZ ☒

OTHER



GAMMA INSTRUMENT
MODEL: RO-2 ☐
RO-3C ☐
(OTHER) RO-20

P/N 6047

CAL DUE DATE 3/24/97
MAXIMUM GAMMA DOSE RATE
△ CONTACT 2.0 mR/hr
1-METER 0.1 mR/hr

NEUTRON INSTRUMENT
MODEL: ESP-2/NRD
PNR-4
(OTHER)
P/N: 8031
CAL DUE DATE 1/27/97
MAXIMUM NEUTRON DOSE RATE
☐
CONTACT 0.1 mRem/hr
1-METER 0 mRem/hr

SMEAR	LOCATION	ALPHA	BETA*
1	TOP SURFACE	5.03	330
2	LOCKING RING		
3	SIDE SEAM		
4	SIDE		
5	BOTTOM		

ALPHA/BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION

1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales

_____

DATE: / /

The following 31 drums were shipped to TA-54 on 11/20/96. All drums were originally received at WCRRF in overpacks and all drums in this shipment were returned to TA-54 without overpacks.

In some cases the drum weight increased a small fraction. This is due to very little, or zero, liquid being drained from the drum, and some consumables used to clean process components, the drum lid, bolting ring, and drum flange during the process were added to the drum prior to final closure.
Please adjust the data base as necessary.

Thank you!

Stan

Drum	Initial Weight Pounds	Final Weight Pounds	Comments
52016	792.2	777.2	
52169	840.6	832.4	
52605	828.6	819.6	
52608	803.2	794.4	
52609	829.4	832.8	
52615	763.8	763.2	
53702	553.4	542.8	
53705	543.4	538.2	
53709	509.4	510.0	
53730	824.6	825.2	
53732	863.6	859.0	
53739	841.0	840.6	
53787	533.8	527.0	
53807	531.8	526.0	
53809	531.8	528.8	
53810	540.4	526.2	
53811	558.8	549.6	
53812	529.6	525.6	
53820	501.8	454.2	
53821	518.2	514.2	
53827	524.4	520.0	
53828	547.4	544.8	
53829	544.2	538.0	
53830	545.8	537.8	
53833	548.2	547.8	
53835	574.4	563.0	
53840	532.8	528.8	
53843	530.2	525.2	
53844	548.6	540.4	
54040	783.4	779.4	
54890	530.8	530.4	

Stan Bodenstein, Facility Engineer, CST-7, MS E516
Waste Characterization, Reduction, and Repackaging Facility (WCRRF)
LANL, Los Alamos, NM 87545
Voice 505-665-8462, Fax 505-665-7567

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LANL pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste/ Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4636	LA0000053702	53702	9/24/93

Check only one.

- [x] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/L of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm.

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory (based on 261.23(a)(1))
[ ] D004	
[ ] D005	
[x] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[x] D007	
[x] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
[x] ~~D009~~ D65	Radioactive Lead Solids Subcategory
[ ] D009 9/24/93	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg [with inorganics])
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All applicable Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

CONTAINER PROFILE
53702
T-MTRU-TEMP

WS ID: 28588
C ID: 767561
ACTIVE

GENERAL INFORMATION

Container ID:	767561		
Labeled ID:	53702		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	11-Aug-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	11-Aug-1993
Compactible:		**Closed Date:**	11-Aug-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	625.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	82.00 lb
		Net Weight:	543.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000230: C028: L01: R03

CONTAINER PROFILE
53702
T-MTRU-TEMP

WS ID: 28588
C ID: 767561
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 57: SP AG Cement Cans No Issues

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
------	K567	----	----	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4133		0/0
Not Specified	NA	Carbon Composite	0	3763		0/0
Not Specified	NA	NA	0	NUCFIL HK-534		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

CONTAINER PROFILE
53702
T-MTRU-TEMP

WS ID: 28588
C ID: 767561
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 73142, Status: Active							
B/G Survey			= 0.30	=	=	Not Applicable	
Neutron Survey			= 0.50	=	=	Not Applicable	
Smear Results			Not Applicable			= 0.00	= 3.20

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Inactive, Assay Page: 337628, Date: 08/11/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	2.97E+000	g	0.00E+000	N				NONE
52	6.89E+001	g	0.00E+000	N				NONE
Am-241	1.02E+001	Ci	0.00E+000	Y			Y	
Pu-238	1.18E-001	Ci	0.00E+000	Y			Y	
Pu-239	4.01E+000	Ci	0.00E+000	Y			Y	
Pu-240	9.39E-001	Ci	0.00E+000	Y			Y	
Pu-241	1.43E+001	Ci	0.00E+000	Y			Y	
Pu-242	5.43E-005	Ci	0.00E+000	Y			Y	
U-234	8.58E-006	Ci	0.00E+000	Y			Y	
U-235	1.49E-007	Ci	0.00E+000	Y			Y	
Status: Active, Assay Page: 393503, Date: 07/23/2012, Derivation: Non-Destructive Assay (NDA)								
Am-241	8.44E+000	Ci	2.34E+000	N			Y	
Am-243	1.71E-003	Ci	4.39E-004	N			Y	
Np-237	1.68E-004	Ci	4.32E-005	N			Y	
Pu-238	9.10E-002	Ci	3.52E-002	N			Y	
Pu-239	3.36E+000	Ci	1.21E+000	N			Y	
Pu-240	7.86E-001	Ci	3.04E-001	N			Y	
Pu-241	7.24E+000	Ci	2.80E+000	N			Y	
Pu-242	4.53E-005	Ci	1.75E-005	N			Y	
U-235	0.00E+000	Ci	0.00E+000	N			Y	

53703

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53703
LA53703

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum List Code: NML0106AAG	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 8-5-93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

T.D # B 20163

CODE	CONTAINER	INTERNAL SHIELDING	
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box	Type	Thickness (in.)
03	☒ Other (Call TWCO)	LEAD	6.3E-2
04	☐ RH Canister		

Waste Profile Request Number: 04636

Carbon Filter ID: 01 LA 411119 02 OP 32997

Process Batch Code: N/A

Gross Weight (lb.): 6.513E+2

Organic Material Wt. (lb.): 4.69E+0

Organic Material Volume (%): 0

TRUCON Code: 111A

Date Closed (MM/DD/YY): 08/05/93

RADIONUCLIDE CONTENT				
Nuclide	Amount +/-		Uncertainty +/-	Ci/Curie Mi/Gram
PU-239	2.31E+1	E +1	E	M
AM-241	2.92E+0	E +0	E	M

NONRADIOACTIVE HAZARDOUS MATERIALS		
Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.9E+4
CADMIUM	D006	~~2.9E+0~~
CHROMIUM	D007	~~7.5E+1~~
LEAD	D008	~~1.1E+1~~

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The information is correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: K M Gruetzmacher | Date: 8/11/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	7.0E-1	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	0.0E+0	Survey Meter Model: PNR-4	Property Number: 4905
Total Dose Rate (mrem/h)	7.0E-1	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: RJ Ca	Date: 8/9/93
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: RJ Ca	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5.	Printed Name: BRUCE LE BRUN	Date: 8/12/93
	Signature: Bruce Le Brun	

TRU 006
LA53703
LA53703

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	01	16	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	21	93	KARRi Wilder	Karri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
Steve E. Lopez 9-23-93 C7	Steve E. Lopez	8-30-93

24.93 kw

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	5.0 E -1	Survey Meter Model: R03-C	Property Number: 2620
Neutron Dose Rate (mrem/h)	8.0 E -1	Survey Meter Model: PNR-4	Property Number: 5229
Total Dose Rate (mrem/h)	1.3 E +0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	1.1 E -0	Printed Name: J.T. MILLER	Date: 9-13-93
Beta Gamma Cont. (dpm/100cm²)	8.0 E -0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials): Rm	Date Received: 9-9-93	C7 Dome — ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		~~Pad Number~~: 153	Layer: 2 — Row Number: 6
		Column Number: 21	Date Stacked (MM.DD.YY): 01 14 93
Printed Name: Rick Martinez	Date: 9-9-93	Printed Name: Charlotte Fernandez	Date: 9/15/93
Signature: Rick Martinez		Signature: Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 11/19/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	10	27	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	11	01	93	KARRi Wilder	Karri Wilder

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	12	06	93	Renee Sandoval	Renee Sandoval

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053703

ASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER: LA88010050579V

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group: MST-12	TEP# H05864
TA: 55	
Building: PF-4	LUD-139 PN3650
Program Code: X530	FIXED ALPHA - NDA

CODE	CONTAINER
01	☒ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

INTERNAL SHIELDING	Type	Thickness (in.)
	☐ None	
	☒ Lead	6.3E-2
	☐ Steel	• E
	☐ Concrete	• E
	☐ Other	• E

RADIONUCLIDE CONTENT (C = Curie, G = Gram)	Nuclide	Amount	± 1	
	Pu-242	2.313E	+	Pu
	Am-241	2.920E	+ 0	Am

Drum Lot Code	H
Year of Mfr.	87
Manufacturer's Box Serial Number	N/A
Process Batch Code	N/A
Gross Wt. (lb)	5.35E+2
Organic Matl Wt. (lb)	4.69E+0
Organic Matl Vol (%)	0
Content Code	006
Date Closed (MMDDYY)	021988

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.9E+4

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Chester H Smith Jr	Chester H Smith Jr	02-22-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.5E+0	Survey Meter Model: RO-3C	Property No.: 2614
Neutron Dose Rate (mrem/h)	0.5E+0	Survey Meter Model: PNR-4	Property No.: 4913
Total Dose Rate (mrem/h)	1.0E+0		
Alpha Contamination (dpm/100cm²)	2.0E+1	The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.	2/26/88
Beta-Gamma Cont. (dpm/100cm²)	5.3E+1		
Printed Name: JERILYN MOSSO	Signature: Jerilyn Mosso		Date: 2/15/88 JM

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name	Signature	Date
BRUCE T. REICH	Bruce T. Reich	04/29/88

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	3.0E-1	Survey Meter Model: RO-3C	Property No.: 2610
Neutron Dose Rate (mrem/h)	9.0E-1	Survey Meter Model: PNR-4	Property No.: 4905
Total Dose Rate (mrem/h)	1.2E+0		
Alpha Contamination (dpm/100cm²)	0.0E+0	The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.	
Beta-Gamma Cont. (dpm/100cm²)	2.7E+1		
Printed Name: Glenn Corbin	Signature: Glenn Corbin		Date: 5/23/88

V. STORAGE SITE INFORMATION

LUD-33

Received by	Date received	Pad No.: 2	Layer: 2	☐ E ☐ C ☒ W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.	5-18-88	Post No.: 50	Date Stacked: 7-7-88	
		This waste package was stored at this location according to approved procedures.		
Printed Name: KEITH CARTER	Date: 5/16/88	Printed Name: ROSILA F. GARCIA	Date: 7-7-88	
Signature: Keith Carter		Signature: Rosila F. Garcia		

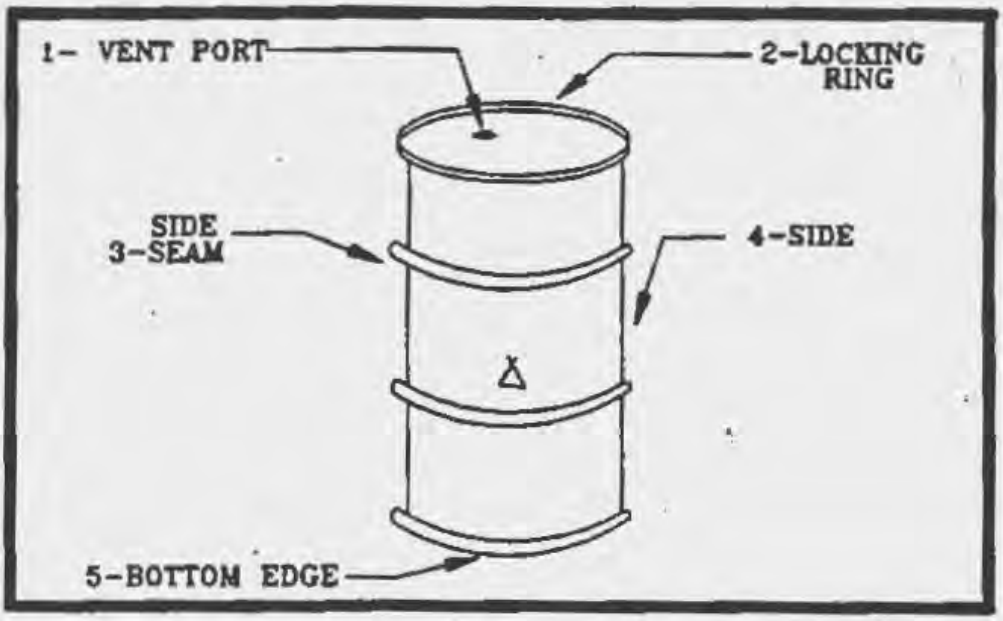
HS Form Number 10-5A (11/87)

04

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 0 6 1993

TA 3 BUILDING 29 SAMPLE DATE 8-5-93
RPT R. Cox CONTAINER NO. LA000000053703



△ Maximum Gamma Dose Rate .7 mR/hr.
□ Maximum Neutron Dose Rate 0.0 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM		
4	SIDE		
5	BOTTOM EDGE		

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: PNR-4
P/N: 4905
CDD: 9-3-93

DISTRIBUTION:
1. RPT's TA-54 MS J592
2. RCT's TA-3-29 MS G749
3. _____

ANALYZED BY: David A Barnes Mike Green
DATE: 8/6/93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

L	A	B	8	0	1	0	0	5	0	5	9	1

WASTE PACKAGE SERIAL NUMBER

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed [DM] installer's INITIALS

Lead Lined [Y]

90 Mil Drum Liner [N]

1/8 Inch Drum Liner [N]

CONTAINER: open [ ] In-Line [X]

Tamper Indicating Seal # H05064

Waste Code: U/A

Date Sealed 02-14-88

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	1DS21EF1B	437 G468	143.72	Nitrate	R00	21.86	52	6.0	Smith				7/4		02/17/88
1	20X8WF1A	437 G467	29.74	Nitrate	R00	1.45	52	5.0	Smith				7/4		02/19/88
2	1DS21EF1B	437 G468		Nitrate	R00	2.68	44	99.9	Smith				2	III	02/17/88
3	20X8WF1A	437 G467		Nitrate	R00	0.24	44	99.9	Smith				2	III	02/19/88
4				0 Nitrate soln Lean										/	/ /
5				1 Nitrate soln Lean										/	/ /
6				2 Nitrate soln Lean										/	/ /
7				3 Nitrate soln Lean										/	/ /
8														/	/ /
9										2.2	2.13	Packaging		/	/ /

TOTALS	Pkg Wt. Kg	173.46	MST-12 signatures for Gross Weight	23.31	52	TOTALS	2.2	2.13	Haz Mat.- Kg
x 2.2046 = Pkg Wt Lbs		382.41		2.92	44	organics pounds		4.69	MST-10 Assay Value NA
55 gal. drum TARE Pounds		152.80	for Accountability			QA Data Pkg. Approval			Instrument ID.
Scale GROSS WT. Pounds		535.2				88/4/26			MST-10 Signature RW Blankenship

This container's waste was packaged and the MST-12 data on the DWLS and the CWSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Fox

~~05-2-231/0239A~~

TRU 006

LOS ALAMOS
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

LA53703

EM-8 USE ONLY
Reference Number C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nC/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nC/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nC/g	☒ gamma	
☒ > 100 nC/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). —>	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☒ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☒ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☒ Other SW846 - 6020 (mod)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☒ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☒ Other KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KoP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J. Clayton	10/14/92		04636

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a.	X	1	DM	518	P	
b.						
c.						
d.						

a. RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, Solid, Elemental, AM241, PU238, PU239, PU240, PU241, PU242, 1.654E+01Ci, T.I.=0.0 RADIOACTIVE YELLOW II,

J. Additional Descriptions for Materials Listed Above

11a. D006

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

EMERGENCY PHONE NO: (505) 667-6211

11a. ERG NO: 165 Vent closure required

PASS: 93703 UNIT #:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Ronald E. Salazar		10	15	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Vasquez Alvin		10	15	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Martinez		10	18	96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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TSDF COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-98

UNIFORM HAZARDOUS WASTE MANIFEST

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D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	1	DM	515	P	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Style CF17-8 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60640 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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GENERATOR COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

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D. Transporter's Phone

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Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

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Printed/Typed Name	Signature	Month	Day	Year

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Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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SOY INK

FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA - 50-69, WCRRF

LOCATION

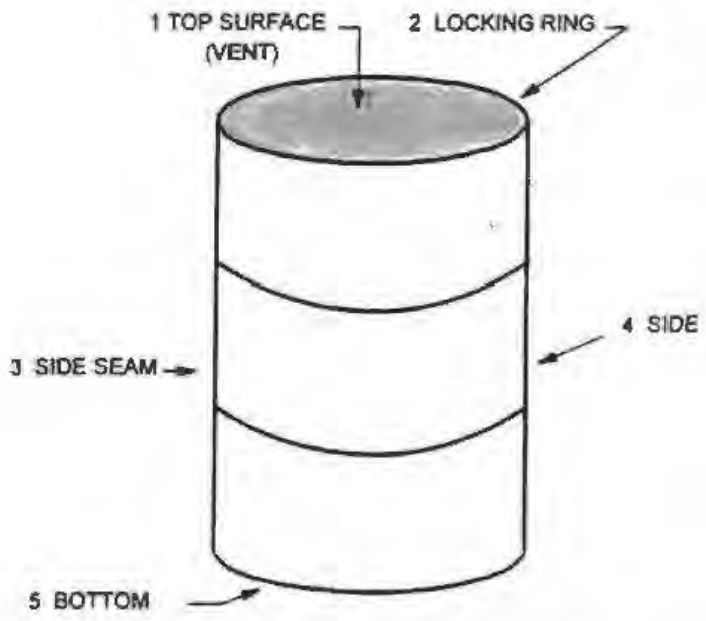
ROOM : 102 ☒
103 ☐
104 ☐
50-193 ☐
BUILDING _____ ☐
OTHER _____ ☐

CONTAINER NUMBER: 53703

DRUM SURVEY DATE: 9/6/96

SURVEYED BY: K. Caulk (Signature)

RCT: Salazar ☐
Ault ☒
Other: James Sanchez ☒



GAMMA INSTRUMENT
MODEL: RO-2 ☒
RO-3C ☐
(OTHER) _____ ☐
P/N: 3364
CAL DUE DATE: 10/31/96
MAXIMUM GAMMA DOSE RATE
△ contact 0.8 mR/hr
1 meter 0 mR/hr

NEUTRON INSTRUMENT
MODEL: ESP-2/NRD ☒
PNR-4 ☐
(OTHER) _____ ☐
P/N: 8031
CAL DUE DATE: 1/29/97
MAXIMUM NEUTRON DOSE RATE
☐ contact 0 mRem/hr
1 meter 0 mR/hr

SMEAR	LOCATION	ALPHA*	BETA*
1	TOP SURFACE	16.8	4.09
2	LOCKING RING	10.1	8.97
3	SIDE SEAM	1.000	2.06
4	SIDE	7.39	0.000
5	BOTTOM	0.897	9.25

*dpm/100 cm sq

ALPHA / BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION:
1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales
_____
DATE: ___/___/___

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Mon, 09 Sep 1996 14:15:16 -0600
To: aic@lanl.gov
From: bodenstein@lanl.gov (Stan Bodenstein, CST-7, 5-8462)
Subject: Dewatered Drum Shipment to TA-54
Cc: Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov, dvc@lanl.gov, aic@lanl.gov, rickmar@lanl.gov, jbalkey@lanl.gov, ronwieneke@lanl.gov, kgruetzmacher@lanl.gov, andym@lanl.gov, gveazey@lanl.gov, dpt@lanl.gov

I-Li,

We received the following drums from you as OVERPACKED 55 gallon drums. We dewatered each of the drums at the WCRRF.

Since each of the drums was in very good condition, we will be shipping the following list of drums back to you as 55 gallon drums, WITHOUT the overpacks. Also indicated is the change in weight due to the removal of water.

Please update the database as necessary.

Drum Number	Pounds Initial Weight	Final Weight
53836	532.0	523.8
53746	534.8	528.0
53783	556.0	548.4
53789	538.6	532.2
53204	531.8	529.4
53174	537.6	534.9
53851	554.8	552.1
53771	560.4	556.3
53715	547.2	543.1
54893	539.2	536.5
52054	833.6	813.2
52484	855.2	833.8
53847	527.0	519.4
53790	557.2	548.2
53734	821.0	815.6
53848	534.8	530.2
54002	804.8	798.6
53712	529.8	523.0
52187	862.6	844.2
53824	536.6	530.8
53772	561.6	545.8
53796	554.2	549.6
53722	554.0	545.8
53703	527.2	517.8
53714	531.8	529.4
53814	533.0	519.2
54894	537.4	535.6
53306	539.4	529.8
53842	540.4	528.0
53802	530.6	520.4

Los Alamos
NATIONAL LABORATORY

55163

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6838
FAX (505) 665-8110

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

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Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LAN pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste/ Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4636	LA0000053703	53703	9/09/93

Check only one.

- [x] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/L of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm.

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory (based on 261.23(a)(1))
[ ] D004	
[ ] D005	
[x] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[x] D007	
[x] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
[x] D008 D65 5/24/97	Radioactive Lead Solids Subcategory
[ ] D009	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg (with inorganics))
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All applicable Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

CONTAINER PROFILE
53703
T-MTRU-TEMP

WS ID: 28588
C ID: 761962
ACTIVE

GENERAL INFORMATION

Container ID:	761962		
Labeled ID:	53703		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	05-Aug-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	05-Aug-1993
Compactible:		**Closed Date:**	05-Aug-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	581.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	63.00 lb
		Net Weight:	458.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000229: C039: L02: R09

CONTAINER PROFILE
53703
T-MTRU-TEMP

WS ID: 28588
C ID: 761962
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
------	K567	----	----	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4119		0/0
Not Specified	NA	Carbon Composite	0	3297		0/0
Not Specified	NA	Carbon Composite	0	FS3141		0/0
Not Specified	NA	Carbon Composite	0	JF315		0/0

** Diffusivity is specified in moles per second per mole fraction*

CONTAINER PROFILE
53703
T-MTRU-TEMP

WS ID: 28588
C ID: 761962
ACTIVE

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72476, Status: Active							
B/G Survey			= 0.50	=	=	Not Applicable	
Neutron Survey			= 0.80	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.10	= 8.00

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336356, Date: 08/05/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	2.92E+000	g	0.00E+000	N				NONE
52	2.33E+001	g	0.00E+000	N				NONE
Am-241	1.00E+001	Ci	0.00E+000	Y			Y	
Pu-238	3.99E-002	Ci	0.00E+000	Y			Y	
Pu-239	1.36E+000	Ci	0.00E+000	Y			Y	
Pu-240	3.18E-001	Ci	0.00E+000	Y			Y	
Pu-241	4.82E+000	Ci	0.00E+000	Y			Y	
Pu-242	1.84E-005	Ci	0.00E+000	Y			Y	
U-234	2.90E-006	Ci	0.00E+000	Y			Y	
U-235	5.04E-008	Ci	0.00E+000	Y			Y	

53712

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53712
LA53712

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML-25-1996	Inspected Items		
Year of Manufacture: 93	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven G Rinago	Date: 7/29/93	
	Signature: Steven Grugo		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567			
Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM							
TID #B20098							

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT								
				Nuclide	Amount +/-			Uncertainty +/-				C=Curie M=Gram
01	☐ Steel Drum (55 gal.)	☐ None										
02	☐ Standard Waste Box	Type	Thickness (in.)	PU239	9.18E-6	E	+1	1.0	E			M
03	☒ Other (Cell TWCO)	LEAD	6.3E-2	AM241	1.28E-1	E	+1	1.0	E			M
04	☐ RH Canister					E			E			
Waste Profile Request Number: 04636						E			E			
Carbon Filter ID: 01 AA4144 02 ZA17414						E			E			
Process Batch Code: N/A						E			E			

		NONRADIOACTIVE HAZARDOUS MATERIALS		
Gross Weight (lb.)	16.917E+2	Name	EPA Code	Quantity (g)
Organic Material Wt. (lb.)	8.915E+0	LEAD SHIELDING	D008	3.8E+4
Organic Material Volume (%)	10	CADMIUM	D006	~~2.3E+0~~ 1.3E+2 kmg
TRUCON Code	114A	CHROMIUM	D007	~~8.7E+1~~ 1.6E+0 kmg
Date Closed (MMDDYY): 07/29/93	02 ~~11~~ 18	LEAD	D008	~~2.3E+1~~ 1.3E+1 kmg

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Kathleen M. Gruetzmacher	K M Gruetzmacher	8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	2.4E+0 R/hr	Survey Meter Model	RO-3C	Property Number	2646
Neutron Dose Rate (mrem/h)	6.0E-1	Survey Meter Model	PNR-4	Property Number	4909
Total Dose Rate (mrem/h)	2.9E+0 R/hr	The data in this section were collected according to approved procedures.			
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name	Robert J Cox	Date	8/4/93
Beta-Gamma Cont. (dpm/100cm²)	0.8E+0 dpm	Signature	Robert J Cox		

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5. DLB 8/12/93	Printed Name: R. G. Britton	Date: 8-6-93
	Signature: R. G. Britton	

TRU 006
#LA53712#
LA53712

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M D D Y Y	Printed Name	Signature
Date Entered in Database	08 13 93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09 01 93	HARRI WILDER	Harri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE E LOPEZ	Gene E. Lopez	8/23/93

9-1-93 CY
9.1.93 KW

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (*mrem/h*)	7.0 E -1	Survey Meter Model R03C	Property Number 2605
Neutron Dose Rate (*mrem/h*)	0.0 E +0	Survey Meter Model PNR4	Property Number 5229
Total Dose Rate (*mrem/h*)	7.0 E -1	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (*dpm/100cm²*)	1.2 E -0	Printed Name J.T. MILLER	Date 8-27-93
Beta Gamma Cont. (*dpm/100cm²*)	3.9 E -0	Signature J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (*Initials*) RM	Date Received 8.25.93	ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 2	Row Number 7
		Column Number 15	Date Stacked (MM,DD,YY) 08 30 93
Printed Name Rick Martinez	Date 8.25.93	Printed Name Charlotte Fernandez	Date 9/8/93
Signature Rick Martinez		Signature Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name BRUCE LE BRUN	Date 9/13/93
	Signature Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M D D Y Y	Printed Name	Signature
Date Entered in Database	09 13 93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09 13 93	HARRI WILDER	Harri Wilder

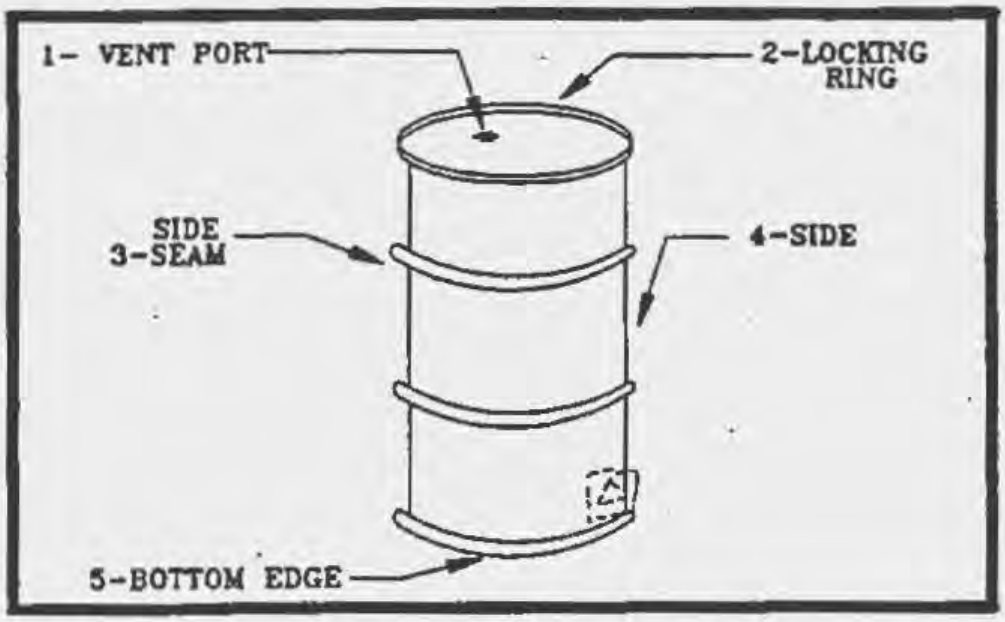
12. DUPLICATE COPY

	M M D D Y Y	Printed Name	Signature
Date Duplicate Filed	11 19 93	Perrie Sandoval	Perrie Sandoval

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 04 1993

TA 3 BUILDING 29 SAMPLE DATE 7-29-93
RPT R. COX CONTAINER NO. LA000000 53712 C



△ Maximum Gamma Dose Rate 2.1 mR/hr.
□ Maximum Neutron Dose Rate .6 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	↓
5	BOTTOM EDGE	↓	↓

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: ~~ESP-1~~ PNR-4
P/N: ~~8006~~ 4909
CDD: 9[illegible]-22-93

DISTRIBUTION:
1. RPT's TA-54 MS J592
2. RCT's TA-3 CMR MS G749
3. _____

ANALYZED BY: Mary Lindsey / David A Barnes
DATE: 8/3/93

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053712

TE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER
LA 8 8 0 1 0 0 5 0 5 3 8 7

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group H-ST-12	TID# HO1880
TA 55	
Building PF-4	Fixed Alpha - NDA
Program Code	LUD139-3533

CODE	CONTAINER	INTERNAL SHIELDING Type	Thickness (in.)	RADIONUCLIDE CONTENT Nuclide	Amount	±	C = Curie G = Gram
01	☑ Steel Drum (55 gal.)						
02	☐ Steel Overpack (Drums)						
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)	☐ None		Pu-152	4.18E0	+1	Pu
04	☐ Steel Overpack (FRP Box)			Am-241	1.29E1	+1	Pu
	☐ Other (Describe)	☑ Lead	4.5E-2		E		
		☐ Steel	.E		E		
Drum Lot Code B	Year of Mfr. 87	☐ Concrete	.E		E		
Manufacturer's Box Serial Number N/A		☐ Other	.E		E		
Process Batch Code N/A							

HAZARDOUS MATERIALS Name	EPA Code	Quantity (g)
Lead	D008	3.8E+4
		.E
		.E
		.E

Gross Wt. (lb.)	5.4E+2
Organic Matl Wt. (lb)	8.5E+0
Organic Matl Vol (%)	0
Content Code	006
Date Closed (MMDDYY)	021188

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester H. Smith Sr. Signature: [signature] Date: 02-11-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.0E+0	Survey Meter Model RO-3C	Property No. 002614
Neutron Dose Rate (mrem/h)	0.6E+0	Survey Meter Model PNR-4	Property No. 004913
Total Dose Rate (mrem/h)	1.6E+0		
Alpha Contamination (dpm/100cm²)	0.0E+0	The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.	
Beta-Gamma Cont. (dpm/100cm²)	2.7E+2		
Printed Name JERILYN MOSSO	Signature [signature]	Date 2/16/88	

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5

Printed Name: BRUCE T. REICH Date: 02/22/88
Signature: [signature]

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	3.9E+0	Survey Meter Model RO-3C	Property No. 7610
Neutron Dose Rate (mrem/h)	1.0E-1	Survey Meter Model PNR4	Property No. 4905
Total Dose Rate (mrem/h)	3.1E+0		
Alpha Contamination (dpm/100cm²)	1.3E+1	The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.	
Beta-Gamma Cont. (dpm/100cm²)	0.9E+0		
Printed Name Glenn Corbin	Signature [signature] MD-33	Date 3/15/88	

V. STORAGE SITE INFORMATION

Received by KDC	Date received 3-1-88	Pad No. 5	Layer 4 ☐E ☐O ☒W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No. 10	Date Stacked 3-15-88
		This waste package was stored at this location according to approved procedures.	
Printed Name Eugene Salazar	Date 3-14-88	Printed Name ROSILA E. GARCIA	Date 3-15-88
Signature [signature]		Signature [signature]	

HS Form Number 10-5A (11/87)

018

Effective Date 10/19/87

DISPOSABLE WASTE LOG SHEET

Page 1 of 1 Pages

L A 8 8 0 1 0 0 5 0 5 8 Y

WASTE PACKAGE SERIAL NUMBER

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed [DM] installer's INITIALS

Least Lined [4]

55 Gal Drum Liner [N]

1/8 Inch Drum Liner [N]

CONTAINER: open [ ] In-Line [X]

Tamper Indicating Seal # H04880

Waste Code: N/A

Date Sealed 02-11-88

ITM NO	ITEM ID	FROM WM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MERS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	1RR25EF1B	434 G467	120.70	EV Filtrate	R00	28.78	52	6.0	Smith					4/	02 09 '88
1	PLSMC586R	420 G440	1.93	Plastics Undefined	P02	3.89	52	6.8	Smith	1.90	1.93			1/17	02 09 '88
2	1LR28EF1A	434 G467	49.05	EV Filtrate	R00	9.19	52	6.0	Smith					4/	02 09 '88
3	1RR25EF1B	434 G467		EV Filtrate	R00	10.44	44	99.9	Smith					3/II	02 09 '88
4	1LR28EF1A	434 G417		EV Filtrate	R00	2.37	44	99.9	Smith					3/10	02 11 '88
5														/	/ /
6														/	/ /
7														/	/ /
8														/	/ /
9										2.2	2.13	Packaging		/	/ /
TOTALS Pkg Wt. Kg			171.68	MST-12 signatures for Gross Weight		41.86	52	TOTALS		4.1	4.06	Haz Mat. - Kg			
x 2.2046 = Pkg Wt Lbs			378.49			12.81	44	organics pounds		9.45	4.49	MST-10 Assay Value NA			
Scale (RMCS) Wt. Pounds			528.91	For Accountability				QA Data Pkg. Approval				Instrument ID.			
Signal Drum Wt. Pounds			150.42					D.D. Lewis 10/26/88				MST-10 Signature Donald W Blankenship			

This container's waste was packaged and the MST-12 data on the DWLS and the CWSP were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L Foltz

CS-2-231/0739A

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

TRU 006

LA53712

LA53712

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

EM-8 USE ONLY
Reference Number C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t_{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t_{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). →	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
arsenic	☐	☒ 5.0 ppm	☐ 5.0 ppm	☐	☒ SW846 - 6010A
barium	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☒
cadmium	☐	☐ 1.0 ppm	☒ 1.0 ppm	☐	☒
chromium	☐	☐ 5.0 ppm	☒ 5.0 ppm	☐	☒
lead	☐	☐ 5.0 ppm	☒ 5.0 ppm	☐	☒
mercury	☐	☒ 0.2 ppm	☐ 0.2 ppm	☐	☒ SW846 - 6020(Mod)
nickel	☐	☒ 134.0 ppm	☐ 134.0 ppm	☐	☒ SW846 - 6010A
selenium	☒	☐ 1.0 ppm	☐ 1.0 ppm	☐	☒
silver	☒	☐ 5.0 ppm	☐ 5.0 ppm	☐	☒
thallium	☐	☒ 130.0 ppm	☐ 130.0 ppm	☐	☒ KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
benzene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☒ KoP
carbon tetrachloride	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
chlorobenzene	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☐
chloroform	☐	☒ 6.0 ppm	☐ 6.0 ppm	☐	☐
cresol	☐	☒ 200.00 ppm	☐ 200.0 ppm	☐	☐
1,4-dichlorobenzene	☐	☒ 7.5 ppm	☐ 7.5 ppm	☐	☐
1,2-dichloroethane	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
1,1-dichloroethylene	☐	☒ 0.7 ppm	☐ 0.7 ppm	☐	☐
2,4-dinitrotoluene	☐	☒ 0.13 ppm	☐ 0.13 ppm	☐	☐
hexachlorobenzene	☐	☒ 0.13 ppm	☐ 0.13 ppm	☐	☐
hexachlorobutadiene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
hexachloroethane	☐	☒ 3.0 ppm	☐ 3.0 ppm	☐	☐
methyl ethyl ketone	☐	☒ 200.0 ppm	☐ 200.0 ppm	☐	☐
nitrobenzene	☐	☒ 2.0 ppm	☐ 2.0 ppm	☐	☐
pentachlorophenol	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☐
pyridine	☐	☒ 5.0 ppm	☐ 5.0 ppm	☐	☐
tetrachloroethylene/perchloroethylene	☐	☒ 0.7 ppm	☐ 0.7 ppm	☐	☐
trichloroethylene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
2,4,5-trichlorophenol	☐	☒ 400.0 ppm	☐ 400.0 ppm	☐	☐
2,4,6-trichlorophenol	☐	☒ 2.0 ppm	☐ 2.0 ppm	☐	☐
vinyl chloride	☐	☒ 0.2 ppm	☐ 0.2 ppm	☐	☐

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
[signature]	10/14/92		04636

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 | Manifest Document No. 53712 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
DAVIS V CHRISTENSEN
Los Alamos National Laboratory
TA54 AREA G MS Los Alamos NM 87545
4. Generator's Phone (505) 66-

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: LANL | 6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
RONALD G SALAZAR TA50 BLDG. 69
Los Alamos, NM 87545
10. US EPA ID Number
G. State Facility's ID
H. Facility's Phone 505 66-

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I Waste No
a. RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918,HIGHWAY ROUTE CONTROLLED QUANTITYSolid,Elemental, ~~AM44, PU52~~,	X	1		647	P	
b. 5.563e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III, Am241, Pu238, Pu239, Pu240, Pu241, Pu242						
c.						
d.						

HMTF REVIEW
APPROVED ☑
DISCREPANCY ☐
7/10/96
4:00
JB

J. Additional Descriptions for Materials Listed Above
11a. D008, D007, D006

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211 Radioactive
11a. ERGNO: 165 Highway Route Controlled quantity placards
Road Closure Request
TWSR#: 53712 HMTF#: 15464

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Davis Christenson	Davis Christenson	07	11	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
VALDEZ ALVIN		07	23	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Ron Salazar	Ron Salazar	07	23	96

Style CF176 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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ORIGINAL-RETURN TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	x	RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, HIGHWAY ROUTE CONTROLLED QUANTITY, Solid, Fissile, AM241, PU238, PU239, PU240, PU241, PU242, 5.563e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III,	1	DM	523	P	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

EMERGENCY PHONE NO: (505) 667-6211

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Ron D. G. Salazar	Ron Salazar		18	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
			18	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Martinez	Rick Martinez	09	18	96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800)621-5808

EPA Form 8700-22 (Rev 9-88) Previous editions are obsolete.

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TSDF COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039, Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X RQ RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, HIGHWAY ROUTE CONTROLLED QUANTITY, 4.1G Essential, PU238, PU239, PU240, PU241, PU242) 5.5636+010, T.I.=0.0 RADIOACTIVE YELLOW III		1	DM	523	P	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

EMERGENCY PHONE NO. (505) 667-6211

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete

PRINTED ON RECYCLED PAPER USING SOY INK

GENERATOR COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address	A. State Manifest Document Number
4. Generator's Phone ( )	B. State Generator's ID
5. Transporter 1 Company Name / 6. US EPA ID Number	C. State Transporter's ID / D. Transporter's Phone
7. Transporter 2 Company Name / 8. US EPA ID Number	E. State Transporter's ID / F. Transporter's Phone
9. Designated Facility Name and Site Address / 10. US EPA ID Number	G. State Facility's ID / H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ,A RADIOACTIVE MATERIAL, FISSILE, R.Q.S.,7,UN2918,HIGHWAY ROUTE CONTROLLED QUANTITY,Solid,Fissile, AM241, PU238, PU239, PU240, PU241, PU242, 5.562e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III,	1	DM	523	P	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

"EMERGENCY PHONE NO: (505) 667-6211"

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month Day Year
Rick Martinez	Rick Martinez	10 15 96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER (20% SOYBEAN INK)

FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA - 50-69, WCRRF

LOCATION

ROOM : 102 ☐
103 ☐
104 ☐
50-193 ☒

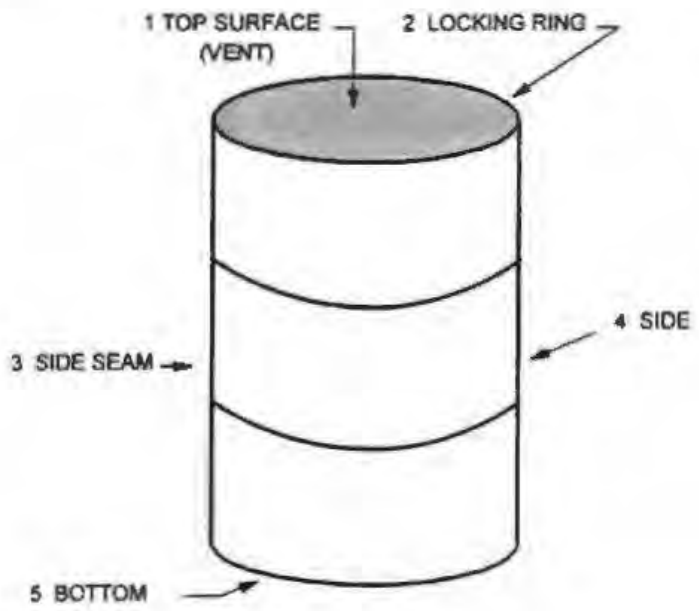
BUILDING _____ ☐
OTHER _____ ☐

CONTAINER NUMBER: 53212

DRUM SURVEY DATE: 8/22/96

SURVEYED BY: K. Ault
(Signature)

RCT: Salazar ☐
Ault ☒
Other: _____ ☐



GAMMA INSTRUMENT
MODEL: RO-2 ☐
RO-3C ☒
(OTHER) _____ ☐
P/N: 002661
CAL DUE DATE: 2/13/97
MAXIMUM GAMMA DOSE RATE
△ Contact 1.0 mR/hr
1 meter 0 mR/hr

NEUTRON INSTRUMENT
MODEL: ESP-2/NRD ☒
PNR-4 ☐
(OTHER) _____ ☐
P/N: 008031
CAL DUE DATE: 1/29/97
MAXIMUM NEUTRON DOSE RATE
☐ Contact 0.7 mRem/hr
1 meter 0 mR/hr

SMEAR	LOCATION	ALPHA*	BETA*
1	TOP SURFACE	0.000	0.353
2	LOCKING RING	4.95	2.27
3	SIDE SEAM	1.36	0.000
4	SIDE	2.71	0.000
5	BOTTOM	0.000	1.24

*dpm/100 cm sq

ALPHA / BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION:
1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales
_____
DATE: ___/___/___

Stan Bodenstein, CS, 02:15 PM 9/9/96 -, Dewatered Drum Shipment to TA-

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Mon, 09 Sep 1996 14:15:16 -0600
To: aic@lanl.gov
From: bodenstein@lanl.gov (Stan Bodenstein, CST-7, 5-8462)
Subject: Dewatered Drum Shipment to TA-54
Cc: Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov, dvc@lanl.gov, aic@lanl.gov, rickmar@lanl.gov, jbalkey@lanl.gov, ronwieneke@lanl.gov, kgruetzmacher@lanl.gov, andym@lanl.gov, gveazey@lanl.gov, dpt@lanl.gov

I-Li,

We received the following drums from you as OVERPACKED 55 gallon drums. We dewatered each of the drums at the WCRRF.

Since each of the drums was in very good condition, we will be shipping the following list of drums back to you as 55 gallon drums, WITHOUT the overpacks. Also indicated is the change in weight due to the removal of water.

Please update the database as necessary.

Drum Number	Pounds Initial Weight	Final Weight
53836	532.0	523.8
53746	534.8	528.0
53783	556.0	548.4
53789	538.6	532.2
53204	531.8	529.4
53174	537.6	534.9
53851	554.8	552.1
53771	560.4	556.3
53715	547.2	543.1
54893	539.2	536.5
52054	833.6	813.2
52484	855.2	833.8
53847	527.0	519.4
53790	557.2	548.2
53734	821.0	815.6
53848	534.8	530.2
54002	804.8	798.6
53712	529.8	523.0
52187	862.6	844.2
53824	536.6	530.8
53772	561.6	545.8
53796	554.2	549.6
53722	554.0	545.8
53703	527.2	517.8
53714	531.8	529.4
53814	533.0	519.2
54894	537.4	535.6
53306	539.4	529.8
53842	540.4	528.0
53802	530.6	520.4

Los Alamos
NATIONAL LABORATORY

53112

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6839
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

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Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LAN pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4636	LALCCC053712	53712	8/25/97

Check only one.

- [X] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/L of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm.

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory (based on 261.23(a)(1))
[ ] D004	
[ ] D005	
[X] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[X] D007	
[X] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
[X] D009 D65 6/2/97	Radioactive Lead Solids Subcategory
[ ] D009	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg [with inorganics])
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All associated Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

CONTAINER PROFILE
53712
T-MTRU-TEMP

WS ID: 28588
C ID: 762057
ACTIVE

GENERAL INFORMATION

Container ID:	762057		
Labeled ID:	53712		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	586.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	63.00 lb
		Net Weight:	463.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000153: C007: L01: R03

CONTAINER PROFILE
53712
T-MTRU-TEMP

WS ID: 28588
C ID: 762057
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
------	K567	----	----	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4144		0/0
Not Specified	NA	Carbon Composite	0	1744		0/0
Not Specified	NA	Carbon Composite	0	FS753		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

CONTAINER PROFILE
53712
T-MTRU-TEMP

WS ID: 28588
C ID: 762057
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72610, Status: Active							
B/G Survey			= 0.70	=	=	Not Applicable	
Neutron Survey			= 0.00	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.20	= 3.90

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336531, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	1.28E+001	g	0.00E+000	N				NONE
52	4.19E+001	g	0.00E+000	N				NONE
Am-241	4.40E+001	Ci	0.00E+000	Y			Y	
Pu-238	7.17E-002	Ci	0.00E+000	Y			Y	
Pu-239	2.44E+000	Ci	0.00E+000	Y			Y	
Pu-240	5.70E-001	Ci	0.00E+000	Y			Y	
Pu-241	8.66E+000	Ci	0.00E+000	Y			Y	
Pu-242	3.30E-005	Ci	0.00E+000	Y			Y	
U-234	5.21E-006	Ci	0.00E+000	Y			Y	
U-235	9.05E-008	Ci	0.00E+000	Y			Y	

53715

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53715
LA53715

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML0233AA6	Inspected Items		
Year of Manufacture: 93	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven G. Riego	Date: 7/29/93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group	Technical Area	Building	Program Code
	NMT-2	TA-55	PF4	K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TID # B20088

CODE	CONTAINER	INTERNAL SHIELDING	
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box	Type	Thickness (in.)
03	☒ Other (Call TWCO)	LEAD	6.3E-2
04	☐ RH Canister		.E1

RADIONUCLIDE CONTENT				C=Curie M=Gram
Nuclide	Amount +/-		Uncertainty +/-	
PU-239	2.75E3	E +1	.E	M
AU-196	2.85E1	E +1	.E	M
AM-241	1.61E0	E +0	.E	M
	.E	E	.E	
	.E	E	.E	
	.E	E	.E	

Waste Profile Request Number: 04795 ~~04636~~ DLO

Carbon Filter ID: 01 GA1411 04 DP GA1419716

Process Batch Code: N/A

Gross Weight (lb.)	6.69E+2
Organic Material Wt. (lb.)	9.69E+0
Organic Material Volume (ft³)	10
TRUCON Code	11.1A
Date Closed (MMDDYY)	07/29/93 ~~08/25/87~~

NONRADIOACTIVE HAZARDOUS MATERIALS		
Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+4
CADMIUM	D006	~~2.2E+0~~
CHROMIUM	D007	~~2.5E+1~~
LEAD	D008	~~1.3E+1~~

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: K M Gruetzmacher | Date: 8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.4E+0	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	6.0E-1	Survey Meter Model: PNR-4	Property Number: 4909
Total Dose Rate (mrem/h)	2.0E+0	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.9E+0	Printed Name: R J Cox	Date: 8/4/93
Beta Gamma Cont. (dpm/100cm²)	~~6.8~~ 8.6E+1	Signature: R J Cox	

4. EPA REVIEW/AUTHORIZATION

The data package for this waste has been reviewed [illegible]. The generator is authorized to arrange transportation to [illegible]

BRUCE LE BRUN 8/9/93

Printed Name: ~~R.G. Britton~~ | Date: ~~8-6-93~~ 8/9/93

Signature: ~~R.G. Britton~~

TRU 006
LA53715
LA53715

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	08	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	01	93	HARRI WILDER	Harri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE E. LOPEZ	Gene E. Lopez	8/23/93

9-1-93 CY
9-1-93 KW

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	4.0E-1	Survey Meter Model: R03C	Property Number: 2605
Neutron Dose Rate (mrem/h)	2.0E-1	Survey Meter Model: PNR4	Property Number: 5229
Total Dose Rate (mrem/h)	6.0E-1	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	9.1E-01	Printed Name: J.T. Miller	Date: 8-27-93
Beta Gamma Cont. (dpm/100cm²)	7.4E+10	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials)	Date Received: 8-25-93	ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number: 153	Layer: 2
		Row Number: 8	Column Number: 7
		Date Stacked (MM.DD.YY): 08/30/93	
Printed Name: Rick Martinez	Date: 8-25-93	Printed Name: Charlotte Fernandez	Date: 9/8/93
Signature: Rick Martinez		Signature: Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 9/13/93
	Signature: Bruce L. Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	09	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	13	93	HARRI WILDER	Harri Wilder

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	11	93	Prince Sandoval	Prince Sandoval

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

CERTIFIED WASTE STORAGE RECORD

LA000000053715

WASTE PACKAGE SERIAL NUMBER
LA B RHB 1 0 0 5 0 5 3 4

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group MST-12	0.5 mRem/hr Neutron
TA 54	0.5 MREM/hr @ 2"
Building PF-4	
Room 4C1	TRU CERTIFIABLE

TID# A04360

CODE	CONTAINER
01	☒ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

Drum Lot Code: D Year of Mfr: 86

Manufacturer's Box Serial Number: 4154

Process Batch Code: 4A1

Gross Wt. (lb.): 5.5 E+2

Organic Matl Wt. (lb): 9.9 E+0

Organic Matl Vol (%): 0

Content Code: 016

Date Closed (MMDDYY): 082587

INTERNAL SHIELDING		RADIONUCLIDE CONTENT (C - Curie, G - Gram)			
Type	Thickness (in.)	Nuclide	Amount ±		
☐ None		Pu 238	2.3 53 E	+1	Pu
☒ Lead	6.3 E-2	Pu 239	2.3 51 E	+1	Pu
☐ Steel		Am 241	4.6 E-0	+0	Pu
☐ Concrete					
☐ Other					

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.6 E+4

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Chester A. Smith Jr	Chester A. Smith Jr	09-01-87

II. GENERATOR-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	1.0 E+0
Survey Meter Model	139 / RO3C / PNR4
Survey Meter Serial No.	003612 / 002656 / 004911
Alpha Contamination (dpm/100cm²)	0.0 E+0
Beta-Gamma Cont. (dpm/100cm²)	0.0 E+0

The data in this section were collected as prescribed in approved procedures. The package is properly closed and is safe to handle and transport.

Printed Name: Floyde Smith Date: 9/4/87

Signature: Floyde Smith

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-2.

Printed Name: ARTHUR GUTHRIE Date: 87/12/7

Signature:

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	2.0 E+0
Survey Meter Model	PNR-4 / RO-6A
Survey Meter Serial No.	005230 / 003060
Alpha Contamination (dpm/100cm²)	7.1 E+1
Beta-Gamma Cont. (dpm/100cm²)	6.0 E+0

The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage. LK

Printed Name: Glenn Conkin Date: 1/15/88

Signature: Glenn Conkin

V. STORAGE SITE INFORMATION

MD-33

This package was visually inspected when received and was found to be properly labeled and in good condition. It was accepted according to approved procedures. 1-11-88

Pad No. 3 Layer 3

Post No. 10 Date Stacked 1-27-88

This waste package was stored at this location according to approved procedures.

Printed Name: EUGENE C. Salazar	Date: 1-12-88	Printed Name: ROSILA F. GARCIA	Date: 1-27-88
Signature: Eugene C. Salazar		Signature: Rosila F. Garcia	

Form Number HS 10-2 (02/86)

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

Effective Date 05/08/87

DISCARDABLE WASTE LOG SHEET

LA87010005534
WASTE PACKAGE SERIAL NUMBER

Page 1 of Page 1

☒ Proc. ☐ N-Comb ☐ Comb ☐ Pu-238

Lead Lined Y
90 Mil Drum Liner N
1/8 Inch Drum Liner N

CONTAINER: ☐ open ☒ In-Line

Waste Code: U/A

Tamper Indicating Seal # A04560

Date Sealed 08/25/87

ITM NO	ITEM ID	FROM RM or BOX	PKG WT Kg	MATRIX (MATERIAL)	MERS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL SIGNATURE	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS OTHER MATERIALS	AUTH. PG/LN	DATE mm/dd/yy
0	8DS18WFIB	434 G-417	118.88	EV Filtrate	R00	15 53	52	6	C Smith				1/A	08/25/87
1	8DS11EFIA	457 G-417	40.35	EV Filtrate	R00	1200	52	6	C Smith				1/A	08/25/87
2	F5WPS1	429 G-415	1.91	Non-Fissile Material	602	28.51	56	16.8	C Smith				2/14	08/25/87
3	8DS18WFIB	434 G-417	.	EV Filtrate	R00	1.39	44	99.9	C Smith				3/III	08/25/87
4	8DS11EFIA	457 G-417	.	EV Filtrate	R00	3.21	44	99.9	C Smith				3/III	08/25/87
5			.			.							/	/ /
6			.			.							/	/ /
7			.			.							/	/ /
8			.			.							/	/ /
9			.			.				2.2	2.13	Packaging	/	/ /
TOTALS	Kg		180.91			27.53	52	TOTALS		2.2	2.13			
	Pounds		398.83	MST-12 Signature for Gross Weight		28.51	56	Mst-12 Signature for Accountability check				MST-10 Assay Value NA		
						4.60	44					Instrument ID.		
	GROSS WT. Pounds		550									MST-10 Signature Ronald W Blankenship		
												QA Data Pkg Approval D.B. Le F		

The waste in this container was packaged and the MST-12 data on the DWLS and the CWSR were collected according to the procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s).

MST-12 Signature Charles L. Fox

* 05-2-231/0239A

TRU 006

LA53715

LA53715

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

EM-8 USE ONLY
Reference Number
04795

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT/NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement. Evaporator bottoms metals and methanol.

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☒ Nonradioactive ☐ Suspect ☑ Radioactive

Activity Measure	Radiation Type	Half life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	11/24/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). —>	Name (last, first, middle)	Mail Stop

Form 1345 (6/92) — Complete Reverse Side →

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846-6010A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☐ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☐ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☐ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other SW846-6020(mod)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☐ Other SW846-6010A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☐ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☐ Other KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KoP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

methanol

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations of metals based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
[signature]	11/24/92		04795

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 Manifest Document No. 53715

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
DAVIS V CHRISTENSEN
Los Alamos National Laboratory
TA54 AREA G MS Los Alamos NM 87545
4. Generator's Phone (505) 66-

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: LANL
6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
RONALD G SALAZAR TA50 BLDG. 69
Los Alamos, NM 87545
10. US EPA ID Number
G. State Facility's ID
H. Facility's Phone 505 66-

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918,HIGHWAY ROUTE CONTROLLED QUANTITYSolid,Elemental, ~~AM44~~, PU52, PU56, 6.086e+01Ci, T.I.=0.1 RADIOACTIVE YELLOW III, Am241, Pu238, Pu239, Pu240, Pu241, Pu242	1		669	P	
b.					
c.					
d.					

HMTF REVIEW
APPROVED ✓
DISCREPANCY
7/1/96
JB

J. Additional Descriptions for Materials Listed Above
11a. D008, D007, D006

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211 Radioactive
11a. ERGNO: 165 Highway Route Controlled quantity placards Required
Road closure Required
TWSR#: 53715 HMTF#: 15470

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: DAVIS Christensen — Signature: Davis Christensen — Month Day Year: 07/1/96

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: VALOR ALVIS — Signature: [signature] — Month Day Year: 07/23/96

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name — Signature — Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: Ron Salazar — Signature: Ron Salazar — Month Day Year: 07/23/96

GENERATOR / TRANSPORTER / FACILITY

Style CF17-4 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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ORIGINAL-RETURN TO GENERATOR

ease print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039, Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.
NMO8900105[illegible]	53715		

3. Generator's Name and Mailing Address	A. State Manifest Document Number
	B. State Generator's ID
4. Generator's Phone ( )	
5. Transporter 1 Company Name / 6. US EPA ID Number	C. State Transporter's ID / D. Transporter's Phone
7. Transporter 2 Company Name / 8. US EPA ID Number	E. State Transporter's ID / F. Transporter's Phone
9. Designated Facility Name and Site Address / 10. US EPA ID Number	G. State Facility's ID / H. Facility's Phone

	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918,HIGHWAY ROUTE CONTROLLED QUANTITY,Solid,Elemental, AM241, PU238,	X	1	DM	543	P	
b.	PU239, PU240, PU241, PU242, 6.0E+01CI, T.I.=0.1 RADIOACTIVE YELLOW III.						
c.							
d.							

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above
11A 0008	

15. Special Handling Instructions and Additional Information

*EMERGENCY PHONE NO: (505) 667-6211 [illegible]
11B. ERGNO: 165

TMSR#: 53715 HMTF#:

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Ronald G. Salazar	Ron Salazar	10	18	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Allen Salas	[signature]	10	18	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Martinez	Rick Martinez	10	18	96

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TSDF COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039; Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

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Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year

Style CF17-8 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

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GENERATOR COPY

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Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, HIGHWAY ROUTE CONTROLLED QUANTITY, Solid, Elemental, AM241, PU238,	1	DM	943	P	
b. PU239, PU240, PU241, PU242, 6.0E6440ICi, T.I.=0.1 RADIOACTIVE YELLOW III.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

"EMERGENCY PHONE NO: (505) 667-6211"
11a. ERG NO. 165

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Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: Rick Martinez | Signature | Month Day Year

Style CF17-8 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA - 50-69, WCRRF

LOCATION

ROOM : 102 ☐
103 ☐
104 ☐
50-193 ☐

BUILDING _____ ☐

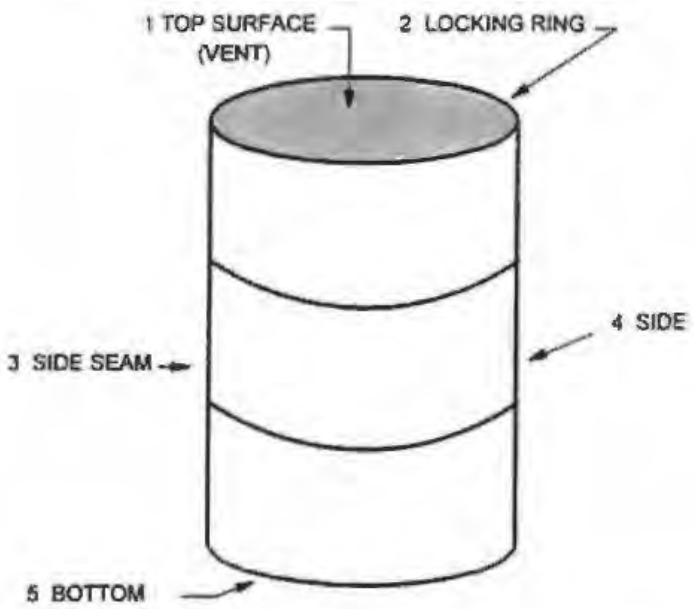
OTHER _____ ☐

CONTAINER NUMBER: 53715

DRUM SURVEY DATE: 8 / 14 / 96

SURVEYED BY: K. Ault (Signature)

RCT: Salazar ☐
Ault ☒
Other: _____ ☐



GAMMA INSTRUMENT

MODEL: RO-2 ☐
RO-3C ☒
(OTHER) _____ ☐

P/N: 2645

CAL DUE DATE: 2/7/97

MAXIMUM GAMMA DOSE RATE

△ contact 2.2 mR/hr
1 meter 0.1 mR/hr

NEUTRON INSTRUMENT

MODEL: ESP-2/NRD ☐
PNR-4 ☐
(OTHER) ESP-1 ☐

P/N: 8037

CAL DUE DATE: 1/29/97

MAXIMUM NEUTRON DOSE RATE

☐ contact 0.1 mRem/hr
1 meter 0 mR/hr.

SMEAR	LOCATION	ALPHA*	BETA*
1	TOP SURFACE		
2	LOCKING RING	11.5	3.32
3	SIDE SEAM	dpm	
4	SIDE		dpm
5	BOTTOM		

*dpm/100 cm sq

ALPHA / BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION:

1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales

_____

DATE: ___/___/___

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Mon, 09 Sep 1996 14:15:16 -0600
To: aic@lanl.gov
From: bodenstein@lanl.gov (Stan Bodenstein, CST-7, 5-8462)
Subject: Dewatered Drum Shipment to TA-54
Cc: Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov, dvc@lanl.gov, aic@lanl.gov, rickmar@lanl.gov, jbalkey@lanl.gov, ronwieneke@lanl.gov, kgruetzmacher@lanl.gov, andym@lanl.gov, gveazey@lanl.gov, dpt@lanl.gov

I-Li,

We received the following drums from you as OVERPACKED 55 gallon drums. We dewatered each of the drums at the WCRRF.

Since each of the drums was in very good condition, we will be shipping the following list of drums back to you as 55 gallon drums, WITHOUT the overpacks. Also indicated is the change in weight due to the removal of water.

Please update the database as necessary.

Drum Number	Pounds Initial Weight	Final Weight
53836	532.0	523.8
53746	534.8	528.0
53783	556.0	548.4
53789	538.6	532.2
53204	531.8	529.4
53174	537.6	534.9
53851	554.8	552.1
53771	560.4	556.3
53715	547.2	543.1
54893	539.2	536.5
52054	833.6	813.2
52484	855.2	833.8
53847	527.0	519.4
53790	557.2	548.2
53734	821.0	815.6
53848	534.8	530.2
54002	804.8	798.6
53712	529.8	523.0
52187	862.6	844.2
53824	536.6	530.8
53772	561.6	545.8
53796	554.2	549.6
53722	554.0	545.8
53703	527.2	517.8
53714	531.8	529.4
53814	533.0	519.2
54894	537.4	535.6
53306	539.4	529.8
53842	540.4	528.0
53802	530.6	520.4

Los Alamos
NATIONAL LABORATORY

55.15

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6639
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES.96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

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Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LAN pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4795	LA0000553715	553715	8/25/93

Check only one.

- [x] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/L of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory [based on 261.23(a)(1)]
[ ] D004	
[ ] D005	
[x] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[x] D007	
[x] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
[x] D008	Radioactive Lead Solids Subcategory
[ ] D009	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg [with inorganics])
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All applicable Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

CONTAINER PROFILE
53715
T-MTRU-TEMP

WS ID: 28860
C ID: 761863
ACTIVE

GENERAL INFORMATION

Container ID:	761863		
Labeled ID:	53715		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28860	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT. EVAPORATOR BOTTOMS METALS AND MET		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	625.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	82.00 lb
		Net Weight:	483.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000153: C005: L01: R06

CONTAINER PROFILE
53715
T-MTRU-TEMP

WS ID: 28860
C ID: 761863
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
------	K567	----	----	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4184		0/0
Not Specified	NA	Carbon Composite	0	4976		0/0
Not Specified	NA	Carbon Composite	0	CI-571		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
53715
T-MTRU-TEMP

WS ID: 28860
C ID: 761863
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72342, Status: Active							
B/G Survey			= 0.40	=	=	Not Applicable	
Neutron Survey			= 0.20	=	=	Not Applicable	
Smear Results			Not Applicable			= 0.91	= 7.40

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336221, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	4.61E+000	g	0.00E+000	N				NONE
52	2.75E+001	g	0.00E+000	N				NONE
56	2.85E+001	g	0.00E+000	N				NONE
Am-241	1.58E+001	Ci	0.00E+000	Y			Y	
Pu-238	3.45E-001	Ci	0.00E+000	Y			Y	
Pu-239	3.05E+000	Ci	0.00E+000	Y			Y	
Pu-240	1.44E+000	Ci	0.00E+000	Y			Y	
Pu-241	4.05E+001	Ci	0.00E+000	Y			Y	
Pu-242	4.21E-004	Ci	0.00E+000	Y			Y	
U-234	3.89E-005	Ci	0.00E+000	Y			Y	
U-235	1.15E-007	Ci	0.00E+000	Y			Y	

53719

LOS ALAMOS
NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53719
LA53719

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML0243AAG		Inspected Items		
Year of Manufacture: 1993		☑ Ring, Bolt, and Nut	☑ Chime	☑ Dents
Box Serial Number: N/A		☑ Lid and Gasket	☑ Gouges	☑ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.		Printed Name: Steven Gallegos		Date: 8-5-93
		Signature: Steven Gallegos		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TID# B20145

CODE	CONTAINER	INTERNAL SHIELDING	
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box	Type	Thickness (in.)
03	☒ Other (Call TWCO)	LEAD	6.3E-2
04	☐ RH Canister		

Waste Profile Request Number: 04636

Carbon Filter ID: 01LA411B 02 OF BH1962

Process Batch Code: N/A

Gross Weight (lb.): 16.516E+2

Organic Material Wt. (lb.): 4.619E+0

Organic Material Volume (%): 10

TRUCON Code: 111A

Date Closed (MM/DD/YY): 08/05/93

RADIONUCLIDE CONTENT				C=Curie M=Gram
Nuclide	Amount +/-		Uncertainty +/-	
PU-239	2.45E+1		1.1E-1	M
AM-241	2.52E+0		1.1E-1	M

NONRADIOACTIVE HAZARDOUS MATERIALS			
Name	EPA Code	Quantity (g)	
LEAD SHIELDING	D008	3.8E+4	
CADMIUM	D006	~~2.4E+0~~ 2.5E+2	kmg
CHROMIUM	D007	~~9.5E+1~~ 1.1E+4	kmg
LEAD	D008	~~2.5E+1~~ 1.4E+1	kmg

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. That information is correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: KM Gruetzmacher | Date: 8/11/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	5.0E-1	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	0.0E+0	Survey Meter Model: PNR-4	Property Number: 4905
Total Dose Rate (mrem/h)	5.0E-1	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: R J COX	Date: 8/9/93
Beta-Gamma Cont. (dpm/100cm²)	7.0E+0	Signature: RJ Cox	

4. EM-7 REVIEW/AUTHORIZATION

This data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5.	Printed Name: BRUCE LE BRUN	Date: 8/12/93
	Signature: Bruce Le Brun	

THIS PAGE FOR EM-7 USE ONLY

TRU 006
LA53719
LA53719

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	08	16	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	01	93	HARRI WILKER	Harri Wilker

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
Irene E Lopez	Irene E Lopez	8-30-93

9-23-93 C7

7-24-93 KM

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	4.0 E -1	Survey Meter Model: RO3C	Property Number: 2620
Neutron Dose Rate (mrem/h)	3.0 E -1	Survey Meter Model: PNR4	Property Number: 5229
Total Dose Rate (mrem/h)	7.0 E -1	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	1.1 E +0	Printed Name: J.T. MILLER	Date: 9-13-93
Beta-Gamma Cont. (dpm/100cm²)	5.3 E +0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials) RM	Date Received 9-9-93	C7 Dome	ORIGINAL STORAGE DATA
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 1	Row Number 8
		Column Number 17	Date Stacked (MM,DD,YY) 09/14/93
Printed Name: Rick Martinez	Date: 9-9-93	Printed Name: Charlotte Fernandez	Date: 9/15/93
Signature: Rick Martinez		Signature: Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 11/8/93
	Signature: Bruce R. Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	10	27	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	11	01	93	HARRI WILKER	Harri Wilker

12. DUPLICATE COPY

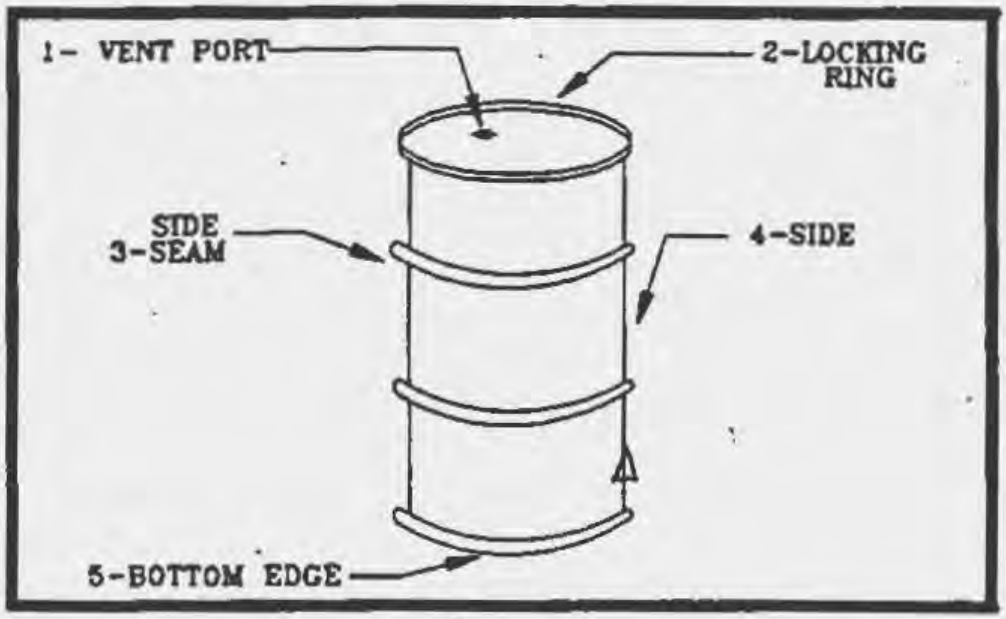
	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	06	93	Renee Sandoval	Renee Sandoval

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 06 1993

TA 3 BUILDING 29 SAMPLE DATE 8-5-93

RPT R. Cox CONTAINER NO. LA0000053719



△ Maximum Gamma Dose Rate .5 mR/hr.

□ Maximum Neutron Dose Rate 0.0 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	6
5	BOTTOM EDGE	↓	7

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: PNR-4
P/N: 4905
CDD: 9-3-93

DISTRIBUTION:

1. RPT's TA-54 MS J592
2. RCT's TA-3-29 MS G749
3. _____

ANALYZED BY: David A Barnes Mike Jensen

DATE: 8/6/93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCHARGABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

LA870100505069

WASTE PACKAGE SERIAL NUMBER

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed installer's INITIALS [@]

Lead Lined [Y]

90 Mil Drum Liner [N]

1/8 Inch Drum Liner [N]

CONTAINER: open [ ] In-Line [X]

Tamper Indicating Seal # AD48455 @

Waste Code: N/A

Date Sealed 12/03/87

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	IIDS19EF2	434 G-468	140.06	Filtrate	RCO	15.92	52	6	Smith					1/A	12/03/87
1	IIRR12EF1A	434 G-467	35.02	Filtrate	RCO	8.63	52	6	Smith					1/A	12/03/87
2	IIDS19EF2	434 G-468		Filtrate	RCO	1.25	44	99.9	Smith					31/III	12/03/87
3	IIRR12EF1A	434 G-467		Filtrate	RCO	1.27	44	99.9	Smith					31/III	12/03/87
4														/	/ /
5														/	/ /
6														/	/ /
7														/	/ /
8														/	/ /
9										2.2	2.13	Packaging		/	/ /

TOTALS Pkg Wt. Kg	175.08	MST-12 signatures for Gross Weight	24.55	52	TOTALS	2.2	2.13	Haz. Mat. Kg
x 2.2046 = Pkg Wt Lbs	385.98		2.52	44	organics pounds		4.69	MST-10 Assay Value NA
Scale GROSS WT. Pounds	537.92	for Accountability check.			QA Data Pkg. Approval			Instrument ID.
55 gal. drum TARE Pounds	151.94				D. B. La Brea			MST-10 Signature Ronald V Blankenship

This container's waste was packaged and the MST-12 data on the DWLS and the CHSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Fox

CS-2-231/0239A

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053719

WASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER: LA 88 01 00 50 69

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group: MST-12	TID A04855
TA: 55	
Building: PF-4	
Program Code:	

CODE	CONTAINER	INTERNAL SHIELDING Type	Thickness (in.)
01	☑ Steel Drum (55 gal.)		
02	☐ Steel Overpack (Drums)		
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)	☐ None	
04	☐ Steel Overpack (FRP Box)	☑ Lead	6.3E-2
	☐ Other (Describe)	☐ Steel	
		☐ Concrete	
		☐ Other	

Drum Lot Code: B1 Year of Mfr: 87
Manufacturer's Box Serial Number:

RADIONUCLIDE CONTENT (C = Curie, G = Gram)	Nuclide	Amount	±	
	PU52	2.455E	+1	M
	AM44	2.52E	+0	M

Process Batch Code	N/A
Gross Wt. (lb.)	5.38E+2
Organic Matl Wt. (lb)	4.69E-0
Organic Matl Vol (%)	0
Content Code	006
Date Closed (MMDDYY)	120387

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.8ET4

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
CARL P TRUSILLO	Carl P Trusillo	12/04/87

II. GENERATOR--SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	2.5E+0	Survey Meter Model: RO3C	Property No. 002610
Neutron Dose Rate (mrem/h)	5.0E-1	Survey Meter Model: PNR4	Property No. 005204
Total Dose Rate (mrem/h)	3.0E+0	LHD 139	003504
Alpha Contamination (dpm/100cm²)	1.3E+1	The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.	
Beta-Gamma Cont. (dpm/100cm²)	2.7E+1		

Printed Name	Signature	Date
LOU WILLIAMS	Lou Williams	12/8/87

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name	Date
ARTHUR GUTHRIE	88/1/7
Signature:	

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	2.0E+0	Survey Meter Model: 2036	Property No. 2615
Neutron Dose Rate (mrem/h)	5.0E-1	Survey Meter Model: PNR4	Property No. 5230
Total Dose Rate (mrem/h)	2.5E+0		
Alpha Contamination (dpm/100cm²)	1.7E+1	The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.	
Beta-Gamma Cont. (dpm/100cm²)	5.0E+2		

Printed Name	Signature	Date
Glenn Corbin	Glenn Corbin	1/26/88

V. STORAGE SITE INFORMATION

MD-33

Received by	Date received	Pad No. 5	Layer 3 ☐E ☐C ☑W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures. 1-27-88		Post No. 10-15	Date Stacked 1-27-88
		This waste package was stored at this location according to approved procedures.	
Printed Name: EUGENE Lujan	Date 1-20-88	Printed Name: ROSILA F. GARCIA	Date 1-27-88
Signature: Eugene Lujan		Signature: Rosila F. Garcia	

HS Form Number 10-5A (M/87)

PTR

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

CERTIFIED WASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER
LA 87 01 0050519

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group M-ST-12	0.5 MREM/HR Neutron TID# A04855
TA 55	
Building PF-4	
Room 401	

CODE	CONTAINER
01	☒ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

INTERNAL SHIELDING		RADIONUCLIDE CONTENT (C = Curie, G = Gram)			
Type	Thickness (in.)	Nuclide	Amount	±	
☐ None		Pu 252	2.455 E	+1	M
☐ Lead	6.3 E-2	Am 244	2.52 E	+0	M
☐ Steel	• E		• E		
☐ Concrete	• E		• E		
☐ Other	• E		• E		

Drum Lot Code	B
Year of Mfr.	87
Manufacturer's Box Serial Number	N/A
Process Batch Code	N/A
Gross Wt. (lb.)	5.38 E+2
Organic Matl Wt. (lb)	4.69 E+0
Organic Matl Vol (%)	0
Content Code	806
Date Closed (MMDDYY)	120387

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.8 E+4
		• E
		• E
		• E

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Carl P. Trujillo		12/04/87

II. GENERATOR-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	3.0 E+0
Survey Meter Model	Ludlum 139 / RO-3C / PNR-4
Survey Meter Serial No.	003504 / 002610 / 005204
Alpha Contamination (dpm/100cm²)	1.3 E+1
Beta-Gamma Cont. (dpm/100cm²)	2.7 E+1

The data in this section were collected as prescribed in approved procedures. The package is properly closed and is safe to handle and transport.

Printed Name	Date
LOU WILLIAMS	12/8/87
Signature: Lou Williams	

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-2.

Printed Name	Date
Signature	

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	• E
Survey Meter Model	
Survey Meter Serial No.	
Alpha Contamination (dpm/100cm²)	• E
Beta-Gamma Cont. (dpm/100cm²)	• E

The data in this section were collected at the TA-54 waste storage / disposal site as defined in approved procedures. The package is acceptable for handling and storage.

Printed Name	Date
Signature	

V. STORAGE SITE INFORMATION

This package was visually inspected when received and was found to be properly labeled and in good condition. It was accepted according to approved procedures.

Printed Name	Date
Signature	

Pad No.	Layer ☐ E ☐ C ☐ W
Post No.	Date Stacked

This waste package was stored at this location according to approved procedures.

Printed Name	Date
Signature	

Form Number HS 10-28 (12/86)

53719

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6639
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

TRU 006

LA53719

LA53719

EM-8 USE ONLY

Reference Number C4636

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). --->	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☒ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☒ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☒ Other SW846 - 6020 (mod)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☒ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☒ Other KnP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KnP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
[signature]	10/14/92		041636

CONTAINER PROFILE
53719
T-MTRU-TEMP

WS ID: 28588
C ID: 767997
ACTIVE

GENERAL INFORMATION

Container ID:	767997		
Labeled ID:	53719		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	05-Aug-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	05-Aug-1993
Compactible:		**Closed Date:**	05-Aug-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	656.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	110.00 lb
		Net Weight:	546.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000153: C063: L01: R02

CONTAINER PROFILE
53719
T-MTRU-TEMP

WS ID: 28588
C ID: 767997
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
——	K567	——	——	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4118		0/0
Not Specified	NA	Carbon Composite	0	1862		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

CONTAINER PROFILE
53719
T-MTRU-TEMP

WS ID: 28588
C ID: 767997
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 73677, Status: Active							
B/G Survey			= 0.40	=	=	Not Applicable	
Neutron Survey			= 0.30	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.10	= 5.30

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 338835, Date: 08/05/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	2.52E+000	g	0.00E+000	N				NONE
52	2.46E+001	g	0.00E+000	N				NONE
Am-241	8.65E+000	Ci	0.00E+000	Y			Y	
Pu-238	4.21E-002	Ci	0.00E+000	Y			Y	
Pu-239	1.43E+000	Ci	0.00E+000	Y			Y	
Pu-240	3.34E-001	Ci	0.00E+000	Y			Y	
Pu-241	5.08E+000	Ci	0.00E+000	Y			Y	
Pu-242	1.94E-005	Ci	0.00E+000	Y			Y	
U-234	3.06E-006	Ci	0.00E+000	Y			Y	
U-235	5.31E-008	Ci	0.00E+000	Y			Y	

53737

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53737
LA53737

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NMLC011AMG	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 8-5-93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TIO # B20151

CODE	CONTAINER	INTERNAL SHIELDING	
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box	Type	Thickness (in.)
03	☒ Other (Call TWCO)	LEAD	6.3E-2
04	☐ RH Canister		

Waste Profile Request Number: 04636

Carbon Filter ID: 01 L19191 02 L23198

Process Batch Code: N/A

Gross Weight (lb.): 6.910E+12

Organic Material Wt. (lb.): 1.82E+1 kg ~~8.25E+0~~

Organic Material Volume (%): 10

TRUCON Code: kg126A

Date Closed (MMDDYY): 08/05/93

RADIONUCLIDE CONTENT						
Nuclide	Amount +/-			Uncertainty +/-		CuCurie MuGram
PU-239	4.8E+7	E	+11	. E		M
AM-241	7.0E+7	E	+10	. E		M
	. E			. E		
	. E			. E		
	. E			. E		
	. E			. E		

NONRADIOACTIVE HAZARDOUS MATERIALS		
Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.9E+14
CADMIUM	D006	~~4.3E+0~~ ~~7.5E-12~~ kg
CHROMIUM	D007	~~1.1E+2~~ ~~3.0E+10~~ kg
LEAD	D008	~~9.4E+1~~ ~~4.4E~~ kg

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data is correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: KM Gruetzmacher | Date: 8/11/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	4.0E+0	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	0.0E+0	Survey Meter Model: PNR-4	Property Number: 4905
Total Dose Rate (mrem/h)	4.0E+0	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: RJ Cal	Date: 8/9/93
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: RJ Cal	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10.5.	Printed Name: BRUCE LE BRUN	Date: 8/12/93
	Signature: Bruce Le Brun	

TRU 006
LA53737
LA53737

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M D D Y Y	Printed Name	Signature
Date Entered in Database	0 8 / 1 7 / 9 3	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	0 8 / 2 1 / 9 3	KARRI WILDER	Karrie Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
Rene E. Lopez	Rene E Lopez	8/30/93

9-24-93 9-23-93 CY

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.0 E +0	Survey Meter Model: R03C	Property Number: 2620
Neutron Dose Rate (mrem/h)	5.0 E -1	Survey Meter Model: PNR 4	Property Number: 5229
Total Dose Rate (mrem/h)	1.5 E +0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	1.2 E -0	Printed Name: J.T. MILLER	Date: 9-13-93
Beta Gamma Cont. (dpm/100cm²)	9.2 E -0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials): Rm	Date Received: 9-9-93	CY DOME — ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number: 153	Layer: 1	Row Number: 4
		Column Number: 23	Date Stacked (MM,DD,YY): 0 9 / 1 4 / 9 3
Printed Name: Rick Martinez	Date: 9-9-93	Printed Name: Charlotte Fernandez	Date: 9/15/93
Signature: Rick Martinez		Signature: Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 11/10/93
	Signature: Bruce L Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M D D Y Y	Printed Name	Signature
Date Entered in Database	1 0 / 2 7 / 9 3	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	1 1 / 0 1 / 9 3	KARRI WILDER	Karrie Wilder

12. DUPLICATE COPY

	M M D D Y Y	Printed Name	Signature
Date Duplicate Filed	1 2 / 0 6 / 9 3	Renee Sandoval	Renee Sandoval

4/24/89

CERTIFIED WASTE STORAGE RECORD

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053737

WASTE PACKAGE SERIAL NUMBER
LA 8 8 C 1 0 0 5 1 1 2 8

AGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group HST-12	TID # A05582
TA 55	
Building PF-4	FRED Alpha - NDA.
Program Code K530	LWD 139-3547

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT			C = Curie G = Gram
				Nuclide	Amount		
01	☐ Steel Drum (55 gal.)				4.687	±	
02	☐ Steel Overpack (Drums)						
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)	Type	Thickness (In.)	Pu 239	4.687 E+1	± 10	M
04	☐ Steel Overpack (FRP Box)	☐ None		Am 241	6.0 E-2	± 10	M
	☐ Other (Describe)	☒ Lead	6.3 E-2		7.02 E+0	± 10	M
		☐ Steel	• E		• E		
Drum Lot Code B1	Year of Mfr. 87	☐ Concrete	• E		• E		
Manufacturer's Box Serial Number N/A		☐ Other	• E		• E		

		HAZARDOUS MATERIALS		
Process Batch Code	N/A	Name	EPA Code	Quantity (g)
Gross Wt. (lb)	7.72 E+2			
Organic Matl Wt (lb)	182.687	Lead	D008	3.9 E+4
Organic Matl Vol (%)	10.	cfg		
Content Code	0016			
Date Closed (MMDDYY)	081885			

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester A. Smith Jr | Signature: [signature] | Date: 08-18-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.5 E+0	Survey Meter Model: RO-3C	Property No. 2653
Neutron Dose Rate (mrem/h)	0.5 E+0	Survey Meter Model: PNR-4	Property No. 4910
Total Dose Rate (mrem/h)	1.0 E+0		
Alpha Contamination (dpm/100cm²)	0.0 E+0	*The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.*	
Beta-Gamma Cont. (dpm/100cm²)	1.7 E+1		

Printed Name: ARTURO R. SANCHEZ | Signature: Arturo R. Sanchez | Date: 12-22-88

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name: BRUCE LE BRUN | Signature: Bruce Le Brun | Date: 1/3/89

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	5.0 E+0	Survey Meter Model: RO2C	Property No. 002619
Neutron Dose Rate (mrem/h)	2.5 E-1	Survey Meter Model: PNR4	Property No. 005228
Total Dose Rate (mrem/h)	5.3 E+0		
Alpha Contamination (dpm/100cm²)	0.0 E+0	*The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0 E+0		

Printed Name: EDWARD SCHULTZ | Signature: Edward Schultz LK | Date: 1-24-89

V. STORAGE SITE INFORMATION

Received by: ANDREW J. CATANACH | Date received: 1/9/89 | Pad No. 8 | Layer 2 | ☐ E ☒ C ☐ W

This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.

Printed Name: ANDREW J. CATANACH | Date: 1/9/89 | Signature: [signature]

Post No. 25-30 | Date Stacked 2/1/89

This waste package was stored at this location according to approved procedures.

Printed Name: Lori Schneider | Date: 2/1/89 | Signature: Lori Schneider

MD-33

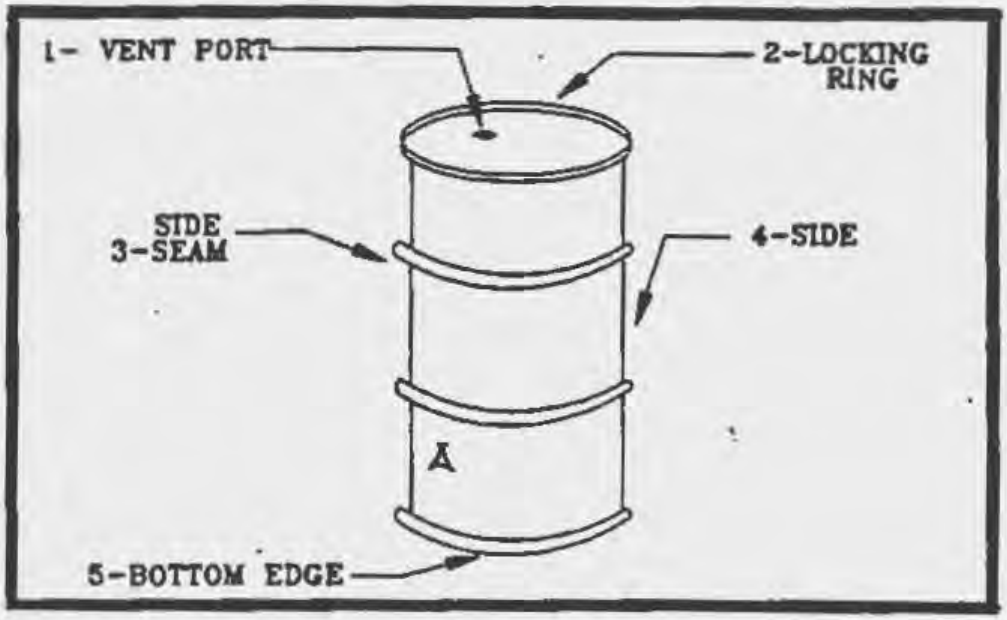
HS Form Number 10-5A (11/87)

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 0 6 1993

TA 3 BUILDING 29 SAMPLE DATE 8-5-93

RPT R. Cox CONTAINER NO. LA000000053737



△ Maximum Gamma Dose Rate 4.0 mR/hr.

□ Maximum Neutron Dose Rate 0.0 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	↓
5	BOTTOM EDGE	↓	↓

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: PNR-4
P/N: 4905
CDD: 9-3-93

DISTRIBUTION:
1. RPT's TA-54 MS J592
2. RCT's TA-3-29 MS G749
3. _____

ANALYZED BY: David A. Barnes Mike Jensen
DATE: 8/5/93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/88

Page 1 of 1 Pages

	R	0	A	0	1	0	0	5	1	1	2	8						

WRSI PACKAGE SERIAL NUMBER

Proc. [ ] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed [ ] installer's INITIAL

Lead Lined [Y]

90 Mil Drum Liner [N]

18 Inch Drum Liner [Y]

CONTAINER: [ ] open [X] In-Line

Waste Code: N/A

LA00000053737

Fibrating Seal # A05582

Date Sealed 08-18-88

ITEM NO	ITEM ID	FROM PM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	DRUM CONTENTS: ORGANICS US	WT.	HAZARDOUS MATERIALS	OTHER REMARKS	WITH. PC/LN	DATE mm/dd/yy
0	FT30726B	434/EV	~~69.51~~ 69.45	Nitrate Solution/Ion	R04	~~11.34~~ 4.11	52	6.0	Smith					1/11	08/12/88
1	FT20804A	434/EV	~~183.79~~ 207.95	Nitrate Solution/Ion	R04	36.62	52	6.0	Smith					1/11	08/12/88
2	CRUHSH08	TA-50	4.07	ASH High Fired	603	0.30	52	6.0	Smith					1/2	08/12/88
3	CRUASHC4	TA-50	3.78	ASH High Fired	603	0.61	52	6.0	Smith					1/2	08/12/88
4	FT30726B	434/EV		Nitrate Solution/Ion	R04	~~0.94~~ 0.00	44	99.9	Smith					2/III	08/12/88
5	FT20804A	434/EV		Nitrate Solution/Ion	R04	6.08	44	99.9	Smith					2/III	08/12/88
6														/	/ /
7														/	/ /
8														/	/ /
9										~~8.43~~ 8.25	~~8.43~~ 8.25	Packaging	4 containers	/	/ /

TOTALS Pkg Wt. Kg	276.15	MST-12 Signatures for Gross Weight	~~48.67~~ 44.70	52	TOTALS	~~8.43~~ 8.25	Haz. Mat. - Kg
x 2.2046 = Pkg Wt Lbs	608.80		~~6.65~~ 7.02	44	organics pounds	~~18.57~~ 18.19	T-10 Assay Value
55 gal. drum TARE Pounds	162.80	for Accountability			DA Data Pkg. Approval		Instrument ID.
Scale GROSS WT. Pounds	771.60				Dave 12/21/88		MST-10 Signature

This container's waste was packaged and the MST-12 data on the DWLS and the CWSP were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles T Fox

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NM0890010515 | Manifest Document No.: 53737 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory
DAVIS CHRISTENSEN TA54 MS:J595 LOS ALAMOS, NM87545
4. Generator's Phone (505) 665-8686

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: LANL | 6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
CST-7 TA-50 Bldg.69
Los Alamos, NM 87545
10. US EPA ID Number
G. State Facility's ID
H. Facility's Phone: 505-665-0652

	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918Solid,Elemental, ~~AM44~~, ~~PU52~~, 3.775e+01Ci, T.I.=0.0 RADIOACTIVE	X	1		890	P	
b.	YELLOW ~~II~~, III 241am, 238pu, 239pu, 240pu, 241pu, 242pu						
c.	Highway Route Controlled quantity						
d.							

HMTF REVIEW
APPROVED ☑
DISCREPANCY ☐
4/3/96
GM

J. Additional Descriptions for Materials Listed Above
11a. D008

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
11a. ERGNO: 65

TWSR#: 53737 HMTF#: 0

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name: Ron Salazar | Signature: Ron Salazar DLC | Month Day Year: 10/4/96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Ron Salazar | Signature: Ron Salazar | Month Day Year: 10/4/96

Style CF17-6 · LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800)621-5808

EPA Form 8700-22 (Rev. 3-89) Previous editions are obsolete.

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ORIGINAL-RETURN TO GENERATOR

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Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM6890010513 | Manifest Document No. 53737 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
Los Alamos National Laboratory
DAVIS CHRISTENSEN TA54 MS,J595 LOS ALAMOS, NM87545

A. State Manifest Document Number

B. State Generator's ID

4. Generator's Phone (505) 665-8686

5. Transporter 1 Company Name: LANL | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
CST-7 TA-50 Bldg.69
Los Alamos, NM 87545
| 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone 505-665-8652

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. X RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7,UN3326(d,Elemental, MH2, PU52, 2.775e+01Ci, T.I.=0.3 RADIOACTIVE YELLOW-II, 2		1		800	P	
b.						
c. Mixed Waste Contains Lead						
d.						

J. Additional Descriptions for Materials Listed Above
11a. DOE

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO. (505) 667-6211
11a. RPGNO: 65
TWBH#: 53737 UHTVH#: 0

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name | Signature | Month Day Year

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete

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GENERATOR COPY

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Form Approved, OMB No. 2050-0039, Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 Manifest Document No. 53737

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory
DAVIS CHRISTENSEN TA54 MS:J595 LOS ALAMOS, NM87545

4. Generator's Phone (505) 665-0686

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: LANL

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
CST-7 TA-50 Bldg.69
Los Alamos, NM 87545

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918Solid, Elemental, AM44, PU=3.775e+01Ci, T.I.=0.0 RADIOACTIVE	X	1		890	P	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO. (505) 667-6211
11a. ERGNO: 65
TWCR#: 53737 ENTR#: 0

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

GENERATOR

TRANSPORTER

FACILITY

Style CF17-8 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

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FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA - 54, AREA G

LOCATION

DOME : 48 ☐
49 ☐
153 ☐
283 ☒

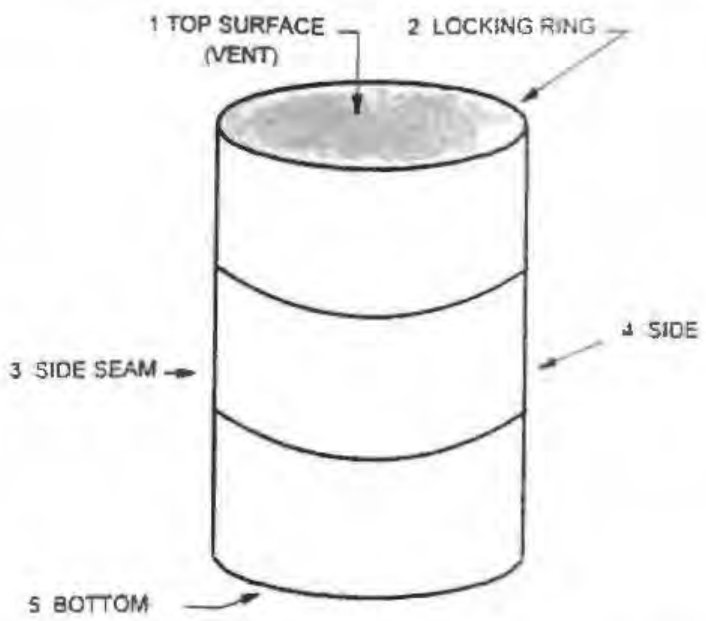
BUILDING _____ ☐
OTHER _____ ☐

CONTAINER NUMBER: 53737

DRUM SURVEY DATE: 3 / 21 / 96

SURVEYED BY: [signature]

RCT: Elliott ☐
Russell ☐
Schwiner ☒
Menzel ☒
Other: _____ ☐



GAMMA INSTRUMENT
MODEL: RO-2 ☒
RO-3C ☐
(OTHER) _____ ☐
P/N: 3408
CAL DUE DATE: 7/25/96
MAXIMUM GAMMA DOSE RATE
= 1.0 mR/hr

NEUTRON INSTRUMENT
MODEL: ESP-2/NRD ☒
PNR-4 ☐
(OTHER) _____ ☐
P/N: 1105
CAL DUE DATE: 7/16/96
MAXIMUM NEUTRON DOSE RATE
= 02 mRem/hr

SMEAR	LOCATION	ALPHA*	BETA*
1	TOP SURFACE	LMDA	10.2
2	LOCKING RING	/	LMDA
3	SIDE SEAM		/
4	SIDE	/	/
5	BOTTOM	LMDA	LMDA

*alpha 100 cpm 12

ALPHA / BETA INSTRUMENT
BERTHOLD LB770. P/N 844238

DISTRIBUTION:
1. RCT's TA-54 MS J592
2. _____
3. _____

APPROVED
BILL PURTYMUN
[signature]
DATE: 3/21/96

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Form Approved, OMB No. 2050-0039, Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 — Manifest Document No. 53737 — 2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory
DAVIS CHRISTENSEN TA54 MS:J595 LOS ALAMOS, NM87545
4. Generator's Phone (505) 665-8686

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name — 6. US EPA ID Number
LANL
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name — 8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address — 10. US EPA ID Number
Los Alamos National Laboratory
CST-7 TA-50 Bldg.69
Los Alamos, NM 87545
G. State Facility's ID
H. Facility's Phone 505-665-8652

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a. RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918Solid,Elemental, NM44, BU52, 3.775e+01Ci, T.I.=0.0 RADIOACTIVE	X	1		890	P	
b. YELLOW-II Zylon, PBO, PBO, Zylon, epoxy						
c. Hickory Knife Cadmium grating						
d.						

J. Additional Descriptions for Materials Listed Above
11a. D008

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
11a. ERGNO: 65
TWSR#: 53737 RMT#: 0

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
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Printed/Typed Name	Signature	Month	Day	Year
Ron Salazar	Ron Salazar	04	11	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
J. J. LUJAN	J. J. Lujan	04	12	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Martinez RM	Rick Martinez RM	04	13	96

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Form Approved. OMB No. 2050-0039. Expires 9-30-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
RONALD G SALAZAR
Los Alamos National Laboratory
TA50 BLDG 69 MS Los Alamos NM 87545

4. Generator's Phone (505) 66

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number | C. State Transporter's ID | D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number | G. State Facility's ID | H. Facility's Phone

Los Alamos National Laboratory
DAVIS V CHRISTENSEN TA54 AREA G
Los Alamos, NM 87545

505 66

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a.	X	RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, HIGHWAY ROUTE CONTROLLED QUANTITY solid, Fissential, AMT: FISSILE	1		890	F	
b.		3.775e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III, Am241, 10231, Pu239, Pu240, 10231, Pu242,					
c.							
d.							

J. Additional Descriptions for Materials Listed Above
114, 2000 J/g/W

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
11a. ERGNO: 166
TWSR#: 53737 HMTF#: 15283

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GENERATOR

Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev 9-86) Previous editions are obsolete

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Form Approved. OMB No. 2050-0039. Expires 9-30-99

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
NM0890010519	53737		

GENERATOR

3. Generator's Name and Mailing Address: ROMALO G SALAZAR
Los Alamos National Laboratory
TA50 BLDG. 69 RM Los Alamos NM 87545

4. Generator's Phone (505) 66-

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: LANL

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
DAVIS V. CHRISTENSEN TA54 AREA G
Los Alamos NM 87545

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, WASTE RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN3918,HIGHWAY ROUTE CONTROLLED QUANTITY,Solid,Elemental, [illegible]		1		890	P	
b. 3.775e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III, [illegible]						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
ERG NO: 165
TMSR#: 53737 MMTF#: 19263

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
[illegible]		07	21	16

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER USING SOYBEAN INK

FILE COPY OR STATE COPY

53737

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6939
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE I



EM-8 USE ONLY
Reference Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). →	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

	None	< 5.0 ppm	≥ 5.0 ppm	TCLP	Other
arsenic	☐	☒	☐	☐	☒ SW846 - 6010A
barium	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☒
cadmium	☐	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐	☒
chromium	☐	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐	☒
lead	☐	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐	☒
mercury	☐	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐	☒ SW846 - 6020(mod)
nickel	☐	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐	☒ SW846 - 6010A
selenium	☒	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐	☒
silver	☒	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐	☒
thallium	☐	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐	☒ KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

	None	< 0.5 ppm	≥ 0.5 ppm	TCLP	Other
benzene	☐	☒	☐	☐	☒ KoP
carbon tetrachloride	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
chlorobenzene	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☐
chloroform	☐	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐	☐
cresol	☐	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐	☐
1,4-dichlorobenzene	☐	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐	☐
1,2-dichloroethane	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
1,1-dichloroethylene	☐	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐	☐
2,4-dinitrotoluene	☐	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐	☐
hexachlorobenzene	☐	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐	☐
hexachlorobutadiene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
hexachloroethane	☐	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐	☐
methyl ethyl ketone	☐	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐	☐
nitrobenzene	☐	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐	☐
pentachlorophenol	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☐
pyridine	☐	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐	☐
tetrachloroethylene/perchloroethylene	☐	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐	☐
trichloroethylene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
2,4,5-trichlorophenol	☐	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐	☐
2,4,6-trichlorophenol	☐	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐	☐
vinyl chloride	☐	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐	☐

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J. Clayton	10/14/92		04636

CONTAINER PROFILE
53737
T-MTRU-TEMP

WS ID: 28588
C ID: 762110
ACTIVE

GENERAL INFORMATION

Container ID:	762110		
Labeled ID:	53737		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	05-Aug-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	05-Aug-1993
Compactible:		**Closed Date:**	05-Aug-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	890.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	63.00 lb
		Net Weight:	827.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000153: C085: L01: R07

CONTAINER PROFILE
53737
T-MTRU-TEMP

WS ID: 28588
C ID: 762110
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA126A: SOLIDIFIED ORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-41: CEMENTED ORGANICS

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M1

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
----	K567	---	---	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	79		0/0
Not Specified	NA	Carbon Composite	0	3958		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
53737
T-MTRU-TEMP

WS ID: 28588
C ID: 762110
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72676, Status: Active							
B/G Survey			= 1.00	=	=	Not Applicable	
Neutron Survey			= 0.50	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.20	= 9.20

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336597, Date: 08/05/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	7.02E+000	g	0.00E+000	N				NONE
52	4.89E+001	g	0.00E+000	N				NONE
Am-241	2.41E+001	Ci	0.00E+000	Y			Y	
Pu-238	8.37E-002	Ci	0.00E+000	Y			Y	
Pu-239	2.84E+000	Ci	0.00E+000	Y			Y	
Pu-240	6.66E-001	Ci	0.00E+000	Y			Y	
Pu-241	1.01E+001	Ci	0.00E+000	Y			Y	
Pu-242	3.85E-005	Ci	0.00E+000	Y			Y	
U-234	6.09E-006	Ci	0.00E+000	Y			Y	
U-235	1.06E-007	Ci	0.00E+000	Y			Y	

53747

LOS ALAMOS
NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53747
LA53747

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum List Code: NmL0146AAG	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Gallegos	Date: 7/29/93	
	Signature: Steven Gallegos		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TID #BZ0058

CODE	CONTAINER	INTERNAL SHIELDING	
		Type	Thickness (in.)
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box		
03	☒ Other (Call TWCO)	LEAD	6.3E-2
04	☐ RH Canister		

Waste Profile Request Number: 04636

Carbon Filter ID: 01 LA141172 02 LA140619

Process Batch Code: N/A

RADIONUCLIDE CONTENT					
Nuclide	Amount +/-		Uncertainty +/-		Ci/Curie MsGram
PU-239	5.0E-1	+1			M
AM-241	1.2E-0	+0			M

Gross Weight (lb.)	1.65E+2
Organic Material Wt. (lb.)	4.69E+0
Organic Material Volume (%)	10
TRUCON Code	LA-A-A
Date Closed (MMDDYY): 07/29/93	Time: 0908

NONRADIOACTIVE HAZARDOUS MATERIALS		
Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+4
CADMIUM	D006	~~2.1E+0~~ 3.2E+2
CHROMIUM	D007	~~8.3E+1~~ 1.3E+3
LEAD	D008	~~1.1E+1~~ 2.2E+1

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: KM Gruetzmacher | Date: 8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	6.0E-1	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	2.0E-1	Survey Meter Model: PNR-4	Property Number: 4909
Total Dose Rate (mrem/h)	8.0E-1	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: RJ Cox	Date: 8/4/93
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: RJ Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10.5. DG 8/12/93	Printed Name: R. G. Britton	Date: 8-6-93
	Signature: R. G. Britton	

THIS PAGE FOR EM-7 USE ONLY

TRU 006
LA53747
LA53747

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	01	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	01	93	KARRI WILKER	Karri Wilker

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE E. LOPEZ	Gene E. Lopez	8/23/93

9-1-93 CF
9-1-93 KW

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	4.0E-1	Survey Meter Model	RO2C	Property Number	2605
Neutron Dose Rate (mrem/h)	2.0E-1	Survey Meter Model	PNR4	Property Number	5229
Total Dose Rate (mrem/h)	6.0E-1	The data in this section were collected according to approved procedures.			
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name	J.T. MILLER	Date	8-27-93
Beta-Gamma Cont. (dpm/100cm²)	8.2E+0	Signature	J.T. Miller		

8. STORAGE SITE INFORMATION

Received By (Initials)	RM	Date Received	8-25-93	ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.				Pad Number 153	Layer 2	Row Number 1
				Column Number 17	Date Stacked (MM,DD,YY) 10/30/93
Printed Name	RICK MARTINEZ	Date	8-25-93	Printed Name	Charlotte Fernandez	Date	9/8/93
Signature	Rick Martinez			Signature	Charlotte Fernandez		

CY Dome

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name	BRUCE LE BRUN	Date 9/13/93
	Signature	Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	01	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	13	93	KARRI WILKER	Karri Wilker

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	11	93	Diane Sandoval	Diane Sandoval

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

CERTIFIED WASTE STORAGE RECORD

LA00000053747

WASTE PACKAGE SERIAL NUMBER: LA 87 01 05 05 41

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group MST-12	TID# A02367
TA 55	Neutrons mrem/hr 0.2
Building PF-4	
Room 401	Maximum dose rate 0.2 MR/hr 91 TRU CONTAMINATED

CODE	CONTAINER
01	☑ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (88 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

INTERNAL SHIELDING		RADIONUCLIDE CONTENT (C - Curie, G - Gram)		
Type	Thickness (in.)	Nuclide	Amount ±	
☐ None		PU 239	5.0E-1 ± 1	M
☑ Lead	6.3E-2	PU 244	1.26E-0 ± 0	M
☐ Steel	.E		.E	
☐ Concrete	.E		.E	
☐ Other	.E		.E	

Drum Lot Code: 101 Year of Mfr: 86
Manufacturer's Box Serial Number: NA
Process Batch Code: VARIA

Gross Wt. (lb.)	5.3E+2
Organic Matl Wt. (lb)	4.9E+0
Organic Matl Vol (%)	9
Content Code	006
Date Closed (MM/DD/YY)	091587

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Sealed Lead	D008	3.3E+4
		.E
		.E
		.E

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Chester A Smith Jr	Chester A Smith Jr	09/16/87

II. GENERATOR-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	1.2E+0
Survey Meter Model	Ludl 139, RO-3C, PNR-4
Survey Meter Serial No.	003504, 002660, 004917
Alpha Contamination (dpm/100cm²)	0.0E+0
Beta-Gamma Cont. (dpm/100cm²)	1.4E+1

The data in this section were collected as prescribed in approved procedures. The package is properly closed and is safe to handle and transport.

Printed Name	Date
LOU WILLIAMS	10-27-87
Signature: Lou Williams	

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-2.

Printed Name	Date
ARTHUR GUTHRIE	87/11/06
Signature	

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	1.2E+0
Survey Meter Model	PNR-4 / PIC-6A
Survey Meter Serial No.	005230 / 003060
Alpha Contamination (dpm/100cm²)	1.3E+1
Beta-Gamma Cont. (dpm/100cm²)	2.4E+1

The data in this section were collected at the TA-54 waste storage / disposal site as defined in approved procedures. The package is acceptable for handling and storage.

Printed Name	Date
J. VILLAREAL	12-4-87
Signature: J. Villareal	

V. STORAGE SITE INFORMATION MD-33

This package was visually inspected when received and was found to be properly labeled and in good condition. It was accepted according to approved procedures.

Pad No.	2	Layer	3
Post No.	10	Date Stacked	12/9/87

This waste package was stored at this location according to approved procedures.

Printed Name	Date	Printed Name	Date
O.K. BR		ROSILA F. GARCIA	12/9/87
Signature		Signature: Rosila F. Garcia	

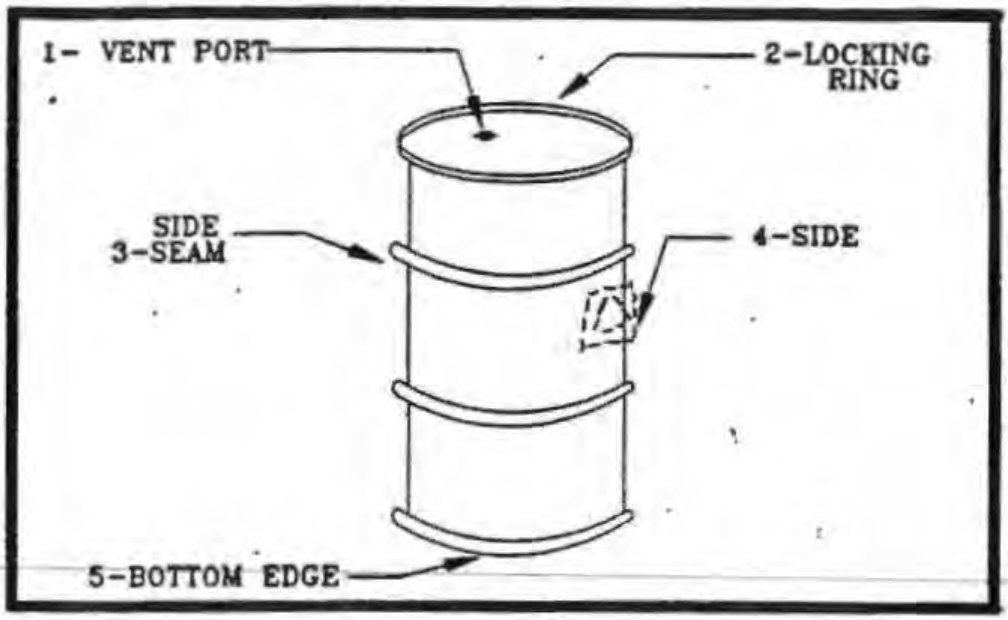
Form Number HS 10-28 (12/86)

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
MAILED
AUG 04 1993

TA 3 BUILDING 29 SAMPLE DATE 7-29-93

RPT R-COX CONTAINER NO. LA00000053747



△ Maximum Gamma Dose Rate .6 mR/hr.

□ Maximum Neutron Dose Rate -2 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	↓
5	BOTTOM EDGE	↓	↓

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: ~~ESP-1~~ PNR-4
P/N: ~~8006~~ 4909
CDD: 9~~0~~-22-93

DISTRIBUTION:

1. RPT's TA-54 MS J592
2. RCT's TA-3 CMR MS G749
3. _____

ANALYZED BY: Ralph Vigil

DATE: 8-3-93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

TRU WASTE CERTIFICATION PROGRAM
NON-CONFORMANCE REPORT

Log No. 00044

ORIGINATOR'S SECTION

Location: TA-50	Hold Tag No.: N/A

Waste Pkg. Serial No: LA870050 541 & 825

Description of Non-Conformance:

The receiving statement in section IV of the CWSR's are not signed-off.

Print Name: BRUCE T. REICH	Signature: Bruce T. Reich	Date: 02/10/88

DISPOSITION SECTION

Instructions for Disposition:

Notify Miguel that this has occurred.
No further action is required because the drums are already stacked and they will receive another visual inspection before they are shipped to the WIPP.

Print Name: BRUCE T. REICH	Signature: Bruce T. Reich	Date: 02/10/88

The above instructions have been completed as specified.

Printed Name: BRUCE T. REICH	Signature: Bruce T. Reich	Date: 02/10/88

7/86

Effective Date 05/08/87

DISCARDABLE WASTE LOG SHEET

LA87010BSC541
WASTE PACKAGE SERIAL NUMBER

Page 1 of Page 1

[X] Proc. [ ] N-Comb [ ] Comb [ ] Pu-238

Lead Lined [Y]
90 Mil Drum Liner [N]
1/8 Inch Drum Liner [N]

CONTAINER: [ ] open [X] In-Line

Waste Code: N/A

Tamper Indicating Seal # AC4367

Date Sealed 09/08/87

ITM NO	ITEM ID	FROM RM or BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL SIGNATURE	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS OTHER MATERIALS	AUTH. PG/LN	DATE mm/dd/yy
0	SLR24EF1B	434 G468	35.19	Filtrate	R00	5.76	52	6	Smith				4	09/08/87
1	SDS25EF1A	434 G467	139.20	Filtrate	R00	18.25	52	6	Smith				1/4	09/08/87
2	LRALR-30	401 G466	3.40	High Fired ASH	G02	16.59	52	6	Smith				1/2	09/08/87
3	LRALR-29	401 G466	2.98	High Fired ASH	G02	9.91	52	6	Smith				1/2	09/08/87
4	CHMAD-1	208 G223	0.19	Leached Solids	N03	0.00	52	6	Smith				1/13	09/08/87
5	SLR24EF1B	434 G468	.	Filtrate	R00	0.31	44	99.9	Smith				5/III	09/08/87
6	SDS25EF1A	434 G467	.	Filtrate	R00	0.95	44	99.9	Smith				5/III	09/08/87
7			.			.							/	/ /
8			.			.							/	/ /
9			.			.				2.2	2.13	Packaging	/	/ /
TOTALS	Kg	195.96		57.51	52	TOTALS				2.2	2.13			
	Pounds	387.9	MST-12 Signature for Gross Weight	1.26	44	Mst-12 Signature for Accountability check						MST-10 Assay Value NA Instrument ID.		
	GROSS WT. Pounds	538.8										MST-10 Signature Ronald W Hardesty		
												QA Data Pkg Approval A. B. Le Brun		

The waste in this container was packaged and the MST-12 data on the DWLS and the CWSR were collected according to the procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s).

MST-12 Signature Charles L. Fox

#05-2-231/0239A

53747

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6939
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

Stan Bodenstein, CS, 02:03 PM 12/10/96, Last Dewatering Drum Shipment

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Tue, 10 Dec 1996 14:03:28 -0700
To: aic@lanl.gov
From: "Stan Bodenstein, CST-7, 5-8462" <bodenstein@lanl.gov>
Subject: Last Dewatering Drum Shipment to TA-54
Cc: dvc@lanl.gov, Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov, jbalkey@lanl.gov, ronwieneke@lanl.gov, kgruetzmacher@lanl.gov, bodenstein@lanl.gov, pzr@lanl.gov, gavett@lanl.gov, sowers@lanl.gov, sgw@lanl.gov

I-Li,

The following is the last drum shipment involved with the drum dewatering project. This shipment is scheduled to happen next Tuesday, 12/17/96 at 9am. All drums are being returned WITHOUT overpacks except the 4 noted. One overpacked drum was not opened. As explained on the last shipment, some drums may weight slightly more that when received. This is due to the addition of some decon materials used during the individual drum draining operation. Please update the database to reflect the changes.

Drum	Weights Rcvd	Ship	General Comments
52030	N/A	N/A	Drum not opened, in overpack
52131	813.2	808.4	
52163	823.4	808.2	Lid rusted & Replaced
52166	821.6	809.2	Poor, overpacked
52167	867.2	867.6	
52171	832.0	830.6	
52177	863.2	841.0	Rusty, overpacked
52186	857.0	845.2	
52567	848.2	848.6	
52601	818.2	805.4	Rusted lid, replaced
52603	815.8	814.2	
53707	520.4	515.4	
53713	565.8	552.0	
53724	514.2	513.0	
53742	817.8	818.2	
53743	816.6	816.8	
53747	539.6	538.4	
53754	545.0	542.4	Rusted, overpacked
53756	556.2	548.0	
53765	558.6	554.6	
53766	557.6	553.6	
53779	804.4	804.4	
53792	551.6	538.4	
53793	568.0	563.0	
53800	500.8	500.8	
53819	553.0	538.0	
53823	534.6	534.4	
53825	528.4	522.6	
53831	548.4	544.0	
53839	534.6	531.2	
54000	826.0	826.4	
54018	778.8	776.6	

Printed for "I-Il Chen ,CST-14 , 5-6422" <aic@lanl.gov>

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number
Los Alamos National Laboratory
Hens Del Buey Rd. TA-54
Los Alamos, NM 87545

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2915Solid, Elemental, AM241, PU238, PU239, PU240, PU241, PU242, 1.666e+01Ci, RADIOACTIVE WHITE I,		1		657		
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
lbs. Doom

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
lbs. EBGNO: 169

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Ronald E. Salazar				

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year

Style CF174 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER USING SOY INK

FILE COPY OR STATE COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. [illegible] Manifest Document No. [illegible]

2. Page 1 of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name
LANL

6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
Mesa Del Buey Rd. TA-54
Los Alamos, NM 87545

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, Solid, Elemental, AM241, PU238, PU239, PU240, PU241, PU242, 1.346e+01Ci, RADIOACTIVE WHITE I,	X	1		657	E	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
12/10/96
LLW 0000

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
"EMERGENCY PHONE NO: (505) 667-6211"
Bldg. ERONO: 165
Final Close Inspect
12-16-96-16
TMSR#: 93787 WCTR#:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Ronald E Salazar	Ron Salazar	12	17	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Nivan Wilson		12	17	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Nick Martinez	Nick Martinez	12	17	96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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TSDF COPY

DRUM SURVEY SHEET
TA-50-69, WCRRF

LOCATION

ROOM: 102 ☒
103 ☐
104 ☐
50-193

BUILDING 69
OTHER

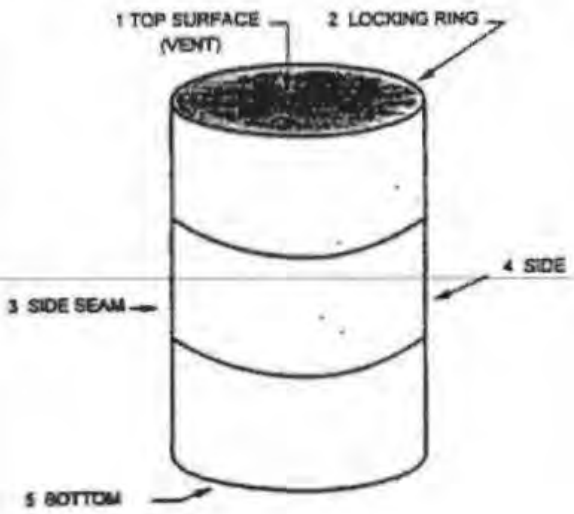
CONTAINER NUMBER : 53747

DRUM SURVEY DATE: 11/19/96

SURVEYED BY: James
(Signature)

RCT: SALAZAR ☐
AULT ☒
SANCHEZ ☒

OTHER



GAMMA INSTRUMENT
MODEL: RO-2 ☐
RO-3C ☐
(OTHER) RO-20

P/N 6047

CAL DUE DATE 3/24/97
MAXIMUM GAMMA DOSE RATE
△ CONTACT 0.1 mR/hr
1-METER 0 mR/hr

NEUTRON INSTRUMENT
MODEL: ESP-2/NRD
PNR-4

(OTHER)
P/N: 8031
CAL DUE DATE 1/29/97
MAXIMUM NEUTRON DOSE RATE
☐
CONTACT 0.4 mRem/hr
1-METER 0 mRem/hr

SMEAR	LOCATION	ALPHA	BETA*
1	TOP SURFACE	6.34	3.20
2	LOCKING RING	8.800	3.71
3	SIDE SEAM	7.39	0.000
4	SIDE	0.000	2.17
5	BOTTOM	0.897	2.72

ALPHA/BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION
1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales

_____

DATE: ___/___/___

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE F

LA53747
LA53747

EM-8 USE ONLY
Reference Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). --->	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846-6010A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☒ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☒ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☒ Other SW846-6020(Mod)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☒ Other SW846-6010A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☒ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☒ Other KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KoP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J Clayton	10/14/92		04636

waste compliance and tracking system

CONTAINER PROFILE
53747
T-MTRU-TEMP

WS ID: 28588
C ID: 761859
ACTIVE

GENERAL INFORMATION

Container ID:	761859		
Labeled ID:	53747		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	620.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	82.00 lb
		Net Weight:	478.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000153: C005: L01: R01

CONTAINER PROFILE
53747
T-MTRU-TEMP

WS ID: 28588
C ID: 761859
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
------	K567	---	----	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4172		0/0
Not Specified	NA	Carbon Composite	0	4069		0/0
Not Specified	NA	NA	0	HK-1523		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
53747
T-MTRU-TEMP

WS ID: 28588
C ID: 761859
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72338, Status: Active							
B/G Survey			= 0.40	=	=	Not Applicable	
Neutron Survey			= 0.20	=	=	Not Applicable	
Smear Results			Not Applicable			= 0.00	= 8.20

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336217, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	1.26E+000	g	0.00E+000	N				NONE
52	5.05E+001	g	0.00E+000	N				NONE
Am-241	4.33E+000	Ci	0.00E+000	Y			Y	
Pu-238	8.66E-002	Ci	0.00E+000	Y			Y	
Pu-239	2.94E+000	Ci	0.00E+000	Y			Y	
Pu-240	6.88E-001	Ci	0.00E+000	Y			Y	
Pu-241	1.04E+001	Ci	0.00E+000	Y			Y	
Pu-242	3.98E-005	Ci	0.00E+000	Y			Y	
U-234	6.29E-006	Ci	0.00E+000	Y			Y	
U-235	1.09E-007	Ci	0.00E+000	Y			Y	

53749

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53749
LA53749

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML 0086AAG	Inspected Items		
Year of Manufacture: 93	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 7/29/93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

T.O. #B20056

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT				
				Nuclide	Amount +/-	Uncertainty +/-		C=Curie M=Gram
01	☐ Steel Drum (55 gal.)	☐ None						
02	☐ Standard Waste Box	Type	Thickness (in.)	Pu-239	2.0E-9	± 1E-11		M
03	☒ Other (Call TWCO)	LEAD	6.3E-2	Am-241	7.1E-10	± 1E-12		M
04	☐ RH Canister		.E					

Waste Profile Request Number	04636
Carbon Filter ID	01 GM411718 02 GM319174
Process Batch Code	N/A
Gross Weight (lb.)	6.53E+2
Organic Material Wt. (lb.)	1.35E+1
Organic Material Volume (%)	10
TRUCON Code	111-4A
Date Closed (MM/DD/YY)	07/29/93

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+4
CADMIUM	D006	1.8E+10
CHROMIUM	D007	7.2E+11

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge.

LEAD D008 1.0E+1

Printed Name	Signature	Date
Kathleen M. Gruetzmacher	K M Gruetzmacher	8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.6E+0	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	2.0E-1	Survey Meter Model: PNR-4	Property Number: 4909
Total Dose Rate (mrem/h)	1.8E+0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination ($dpm/100cm^2$)	0.0E+0	Printed Name: R J Cox	Date: 8/4/93
Beta Gamma Cont. ($dpm/100cm^2$)	0.0E+0	Signature: RJ Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5. 8/12/93	Printed Name: R.G. Britton	Date: 8-6-93
	Signature: R.G. Britton	

TRU 006
#LA53749#
LA53749

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	08	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	01	93	KARRI L. WILDER	Karri L. Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE E. LOPEZ	Gene E. Lopez	8/23/93

9-1-93 CF
9.1.93 RW

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (*mrem/h*)	7.0 E -1	Survey Meter Model: RO3C	Property Number: 2605
Neutron Dose Rate (*mrem/h*)	2.0 E -1	Survey Meter Model: PNR4	Property Number: 5229
Total Dose Rate (*mrem/h*)	9.0 E -1	*The data in this section were collected according to approved procedures.*	
Alpha Contamination ($dpm/100cm^2$)	1.1 E +0	Printed Name: J.T. Miller	Date: 8-27-93
Beta-Gamma Cont. ($dpm/100cm^2$)	3.2 E +0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (*Initials*): RM	Date Received: 8-25-93	CF Done	ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number: 153	Layer: 1	Row Number: 8
		Column Number: 13	Date Stacked (MM.DD.YY): 08 30 93	
Printed Name: Rick Martinez	Date: 8-25-93	Printed Name: Charlotte Fernandez		Date: 9/8/93
Signature: Rick Martinez		Signature: Charlotte Fernandez		

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 9/13/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	09	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	13	93	KARRI L. WILDER	Karri L. Wilder

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	19	93	Diana Sandoval	Diana Sandoval

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053749

WASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER
LA 88 01 10 05 05 81

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group MST-12	TID # AO4874
TA 55	
Building PF-4	Encp Alpha - NOA
Program Code	LWO 139 - 3650

CODE	CONTAINER
01	☑ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (58 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

Drum Lot Code: B | Year of Mfr: 87
Manufacturer's Box Serial Number: N/A
Process Batch Code: N/A

INTERNAL SHIELDING	Type	Thickness (in.)
	☐ None	
	☑ Lead	6.3E-2
	☐ Steel	• E
	☐ Concrete	• E
	☐ Other	• E

RADIONUCLIDE CONTENT (C = Curie, G = Gram)	Nuclide	Amount	±	
	Pu-239	2.089E	+1	M
	Am-241	7.18CE	+0	M
		• E		
		• E		
		• E		
		• E		

Gross Wt. (lb)	5.35E+2
Organic Matl Wt. (lb)	1.35
Organic Matl Vol (%)	0
Content Code	006
Date Closed (MMDDYY)	020188

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD	D008	3.8E+4
		• E
		• E
		• E

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester H Smith Sr | Signature: Chester H Smith Sr | Date: 02-02-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.6E+0	Survey Meter Model: RO-3C	Property No.: 00 2614
Neutron Dose Rate (mrem/h)	0.6E+0	Survey Meter Model: PNR-4	Property No.: 00 4913
Total Dose Rate (mrem/h)	1.2E+0		
Alpha Contamination (dpm/100cm²)	6.3E+1	*The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0		

Printed Name: JERILYN S. MOSSO | Signature: Jerilyn Mosso / [illegible] | Date: 2/16/88

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name: BRUCE T. REICH | Signature: Bruce T. Reich | Date: 02/22/88

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	2.5E+0	Survey Meter Model: RO-3C	Property No.: 2610
Neutron Dose Rate (mrem/h)	0.0E+0	Survey Meter Model: NRD-4	Property No.: 4905
Total Dose Rate (mrem/h)	2.5E+0		
Alpha Contamination (dpm/100cm²)	0.0E+0	*The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.* LK	
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0		

Printed Name: Glenn Carbin | Signature: Glenn Carbin | Date: 3/15/88

V. STORAGE SITE INFORMATION MD-33

Received by: RDC	Date received: 3-1-88	Pad No.: 2	Layer: 4	☑ E ☐ C ☐ W	
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No.: 13	Date Stacked: 3/15/88		
		This waste package was stored at this location according to approved procedures.			
Printed Name: Eugene Salazar	Date: 3-14-88	Printed Name: ROSILA F. GARCIA	Date: 3-15-88		
Signature: Eugene Salazar		Signature: Rosila F. Garcia			

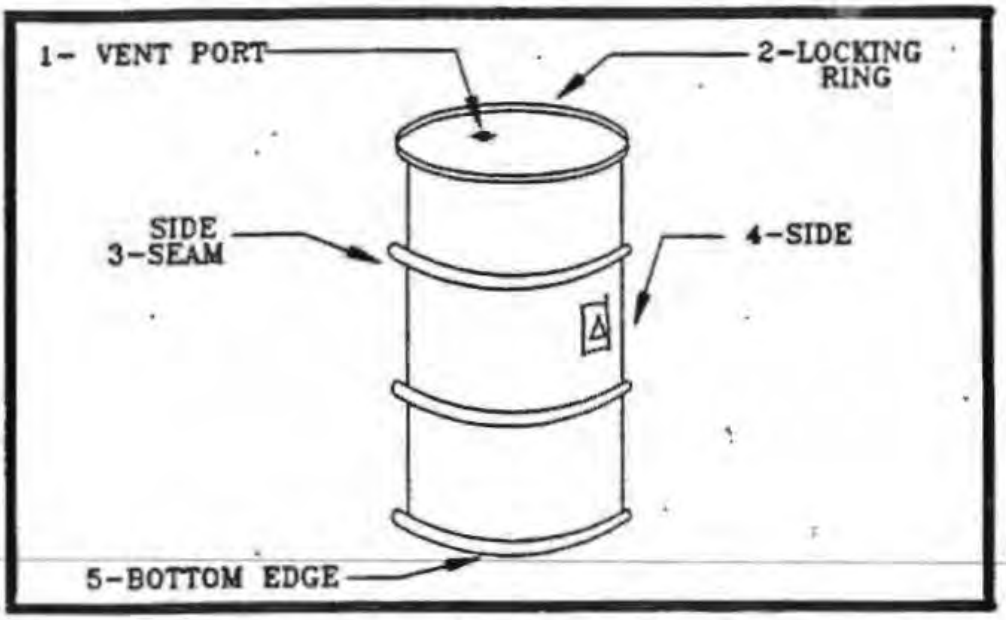
HS Form Number 10-5A (11/87)

MAILED
AUG 0 4 1993

TRU CONTAINER SMEAR SURVEY DATA SHEET

TA 3 BUILDING 29 SAMPLE DATE 7-29-93

RPT R-COX CONTAINER NO. LA000000053749



△ Maximum Gamma Dose Rate 1.6 mR/hr.

□ Maximum Neutron Dose Rate -2 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	↓
5	BOTTOM EDGE	↓	↓

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: ~~ESP-1~~ PNR-4
P/N: ~~6006~~ 4909
CDD: 9~~6~~-22-93

DISTRIBUTION:

1. RPT's TA-54 MS J592
2. RCT's TA-3 CMR MS G749
3. _____

ANALYZED BY: Gary Lundby / David A Barnes

DATE: 8/3/93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCHARGABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

LA880100505581

WASTE PACKAGE SERIAL NUMBER

[X] Proc. [ ] N-Comb [ ] Comb [ ] Pu-238

Vent Clip or Carbon Filter installed — installer's INITIALS: CT

Lead Lined: Y

90 Mil Drum Liner: N

1/8 Inch Drum Liner: W

CONTAINER: [ ] open [X] In-Line

Tamper Indicating Seal # AE48874

Waste Code: N/A

Date Sealed 02-02-88

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	10X4WFIB	434 C468	14.93	Ev. Filtrate	ROO	2.32	52	6.0	Smith					1/4	01/25/88
1	KITI 1	409 C414	9.96	Organic	ROO	0.12	52	6.0	Smith	0.95	2.0			1/15	01/25/88
2	KHTI 1	409 C414	9.96	Organic	ROO	0.12	52	6.0	Smith	0.45	2.0			1/15	01/25/88
3	EMERLITE4	vault	9.96	HEPA Solutions	ROO	1.00	52	6.0	Smith	~~0.95~~	~~2.0~~	~~HM~~		1/17	01/25/88
4	LR12EFIA	434 C468	29.87	Ev. Filtrate	ROO	2.30	52	6.0	Smith					1/4	01/25/88
5	IRR14WFIA	434 C468	99.57	Ev. Filtrate	ROO	15.03	52	6.0	Smith					1/4	02/02/88
6	10X4WFIB	434 C468		Ev. Filtrate	ROO	0.36	44	99.9	Smith					3/III	01/25/88
7	LR12EFIA	434 C468		Ev. Filtrate	ROO	1.09	44	99.9	Smith					3/III	01/25/88
8	IRR14WFIA	434 C468		Ev. Filtrate	ROO	5.73	44	99.9	Smith					3/III	02/02/88
9										2.2	2.13	Packaging		1	1 1

TOTALS Pkg Wt. Kg	174.25	MST-12 signatures for Gross Weight	20.89	52	TOTALS	4.1	6.13	Haz. Mat. Kg
x 2.2046 = Pkg Wt Lbs	384.15		2.18	44	organics pounds	13.51	13.52	MST-10 Assay Value NA
Scale GROSS WT. Pounds	535.43	for Accountability check			QA Data Pkg. Approval			Instrument ID.
55 gal. drum TARE Pounds	151.28				D. D. Le Beau 12/16/87			MST-10 Signature Ronald W Blankenship

This container's waste was packaged and the MST-12 data on the DWLS and the CHSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles J. Bork

DS-2-231/0239A

53749

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6839
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

LA53749
LA53749

EM-8 USE ONLY
Reference Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecyclable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). —>	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

	None	< 5.0 ppm	≥ 5.0 ppm	TCLP	Other
arsenic	☐	☒	☐	☐	☒ SW846 - 6010A
barium	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☒
cadmium	☐	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐	☒
chromium	☐	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐	☒
lead	☐	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐	☒
mercury	☐	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐	☒ SW846 - 6020(mod)
nickel	☐	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐	☒ SW846 - 6010A
selenium	☒	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐	☒
silver	☒	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐	☒
thallium	☐	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐	☒ KnP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
benzene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☒ KnP
carbon tetrachloride	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
chlorobenzene	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☐
chloroform	☐	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐	☐
cresol	☐	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐	☐
1,4-dichlorobenzene	☐	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐	☐
1,2-dichloroethane	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
1,1-dichloroethylene	☐	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐	☐
2,4-dinitrotoluene	☐	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐	☐
hexachlorobenzene	☐	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐	☐
hexachlorobutadiene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
hexachloroethane	☐	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐	☐
methyl ethyl ketone	☐	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐	☐
nitrobenzene	☐	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐	☐
pentachlorophenol	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☐
pyridine	☐	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐	☐
tetrachloroethylene/perchloroethylene	☐	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐	☐
trichloroethylene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
2,4,5-trichlorophenol	☐	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐	☐
2,4,6-trichlorophenol	☐	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐	☐
vinyl chloride	☐	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐	☐

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J Clayton	10/14/92		04636

Form 1348 (6/92)

CONTAINER PROFILE
53749
T-MTRU-TEMP

WS ID: 28588
C ID: 762019
ACTIVE

GENERAL INFORMATION

Container ID:	762019		
Labeled ID:	53749		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	653.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	110.00 lb
		Net Weight:	543.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000153: C097: L01: R02

CONTAINER PROFILE
53749
T-MTRU-TEMP

WS ID: 28588
C ID: 762019
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
-----	K567	---	---	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4178		0/0
Not Specified	NA	Carbon Composite	0	3974		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

CONTAINER PROFILE
53749
T-MTRU-TEMP

WS ID: 28588
C ID: 762019
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72549, Status: Active							
B/G Survey			= 0.70	=	=	Not Applicable	
Neutron Survey			= 0.20	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.10	= 3.20

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336469, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	7.18E+000	g	0.00E+000	N				NONE
52	2.09E+001	g	0.00E+000	N				NONE
Am-241	2.47E+001	Ci	0.00E+000	Y			Y	
Pu-238	3.58E-002	Ci	0.00E+000	Y			Y	
Pu-239	1.22E+000	Ci	0.00E+000	Y			Y	
Pu-240	2.85E-001	Ci	0.00E+000	Y			Y	
Pu-241	4.32E+000	Ci	0.00E+000	Y			Y	
Pu-242	1.65E-005	Ci	0.00E+000	Y			Y	
U-234	2.60E-006	Ci	0.00E+000	Y			Y	
U-235	4.52E-008	Ci	0.00E+000	Y			Y	

53761

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053761

TE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER LA 88 01 05 11 08

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group NMT-12	TED # A05060
TA 55	
Building PF-4	
Program Code H530	FIXED Alpha - NDA LWD 134 - 3533

CODE	CONTAINER
01	☑ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

Drum Lot Code B1 Year of Mfr 87

Manufacturer's Box Serial Number N/A

Process Batch Code N/A

INTERNAL SHIELDING	Type	Thickness (in.)
	☐ None	
	☑ Lead	0.3 E+2
	☐ Steel	0. E
	☐ Concrete	0. E
	☐ Other	0. E

RADIONUCLIDE CONTENT	Nuclide	Amount ±		C = Curie G = Grams
	Pu255	7.9 E+0		Ci
	Pu253	1.0 E+0		Ci
	Pu252	5.8 E+1		Ci
	Am241	5.0 E+0		Ci

Gross Wt. (lb)	54.7 E+2
Organic Matl Wt (lb)	12.7 E+1
Organic Matl Vol (%)	10
Content Code	006
Date Closed (MMDDYY)	051288

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.3 E+4

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name Chester A Smith Sr | Signature Chester A Smith Sr | Date 06-01-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.4 E+0	Survey Meter Model RO-3C	Property No. 2659
Neutron Dose Rate (mrem/h)	0.5 E+0	Survey Meter Model PNR-4	Property No. 4903
Total Dose Rate (mrem/h)	0.9 E+0		
Alpha Contamination (dpm/100cm²)	0.0 E+0	*The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0 E+0		

Printed Name JAMES B SANCHEZ | Signature James B Sanchez | Date 6-24-88

III. HSE-7 SOLID WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name BRUCE LE BRUN | Date 7/12/88

Signature Bruce Le Brun

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.0 E+0	Survey Meter Model RO-3C	Property No. 2620
Neutron Dose Rate (mrem/h)	0.0 E+0	Survey Meter Model PNR-4	Property No. 4901
Total Dose Rate (mrem/h)	0.0 E+0		
Alpha Contamination (dpm/100cm²)	0.0 E+0	*The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0 E+0		

Printed Name Glenn Conbin | Signature Glenn Conbin MD-33 | Date 8/4/88

V. STORAGE SITE INFORMATION

Received by	Date received 7-21-88	Pad No. 5	Layer 1 ☐ E ☐ O ☒ W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No. 10	Date Stacked 8-22-88
		This waste package was stored at this location according to approved procedures.	
Printed Name EUGENE SALAZAR	Date 8/4/88	Printed Name Rosila Garcia	Date 8-22-88
Signature Eugene Salazar		Signature ROSILA F. GARCIA	

HS Form Number 10-5A (11/87)

LOS ALAMOS
NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
#LA53761#
LA53761

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: RML 0103AA6	Inspected Items		
Year of Manufacture: 1 9 1 3	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 7/29/93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TWBID 20065

CODE	CONTAINER	INTERNAL SHIELDING Type	INTERNAL SHIELDING Thickness (in.)
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box		
03	☒ Other (Call TWCO)	LEAD	6.3E-2
04	☐ RH Canister		E

RADIONUCLIDE CONTENT										C=Curie M=Gram
Nuclide	Amount	+/-		Uncertainty	+/-					
PU-239	7.9210	E	+0	.		E				M
PU-238	2.0100	E	+0	.		E				M
PU-242	5.8185	E	+1	.		E				M
AM-241	5.0150	E	+0	.		E				M
		E		.		E				
		E		.		E				

Waste Profile Request Number: 04636

Carbon Filter ID: 01 LA411627 02 LA410610

Process Batch Code: N/A

Gross Weight (lb.)	6.615E+2
Organic Material Wt. (lb.)	1.217E+1
Organic Material Volume (%)	10
TRUCON Code	114A
Date Closed (MM/DD/YY)	07/29/93

NONRADIOACTIVE HAZARDOUS MATERIALS		
Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+4
CADMIUM	D006	4.36E+0
CHROMIUM	D007	1.0E+2
LEAD	D008	1.5E+1

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: KM Gruetzmacher | Date: 8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	3.0E-1	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	4.0E-1	Survey Meter Model: PNR-4	Property Number: 4909
Total Dose Rate (mrem/h)	7.0E-1	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	0.6E+0	Printed Name: R J Cox	Date: 8/4/93
Beta Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: RJ Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5 08/12/93	Printed Name: R. G. Britton	Date: 8-6-93
	Signature: R.G. Britton	

TRU 006
#LA53761#
LA53761

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	08	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	01	93	Karri Wilder	Karri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE E. LOPEZ	Gene E. Lopez	8/23/93

9-1-93 CF
9-1-93 RL

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (*mrem/h*)	5.0 E -1	Survey Meter Model: RO3C	Property Number: 2605
Neutron Dose Rate (*mrem/h*)	0.0 E +0	Survey Meter Model: PNR4	Property Number: 5229
Total Dose Rate (*mrem/h*)	5.0 E -1	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (*dpm/100cm²*)	3.4 E +0	Printed Name: J. T. Miller	Date: 8-27-93
Beta-Gamma Cont. (*dpm/100cm²*)	4.1 E +0	Signature: J. T. Miller	

8. STORAGE SITE INFORMATION

Received By (*Initials*) RM	Date Received 8-25-93	C4 Dome	ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 1	Row Number 1
		Column Number 19	Date Stacked (MM,DD,YY) 08 30 93	
Printed Name: Rick Martinez	Date: 8-25-93	Printed Name: Charlotte Fernandez		Date: 9/8/93
Signature: Rick Martinez		Signature: Charlotte Fernandez		

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 9/13/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	09	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	13	93	Karri Wilder	Karri Wilder

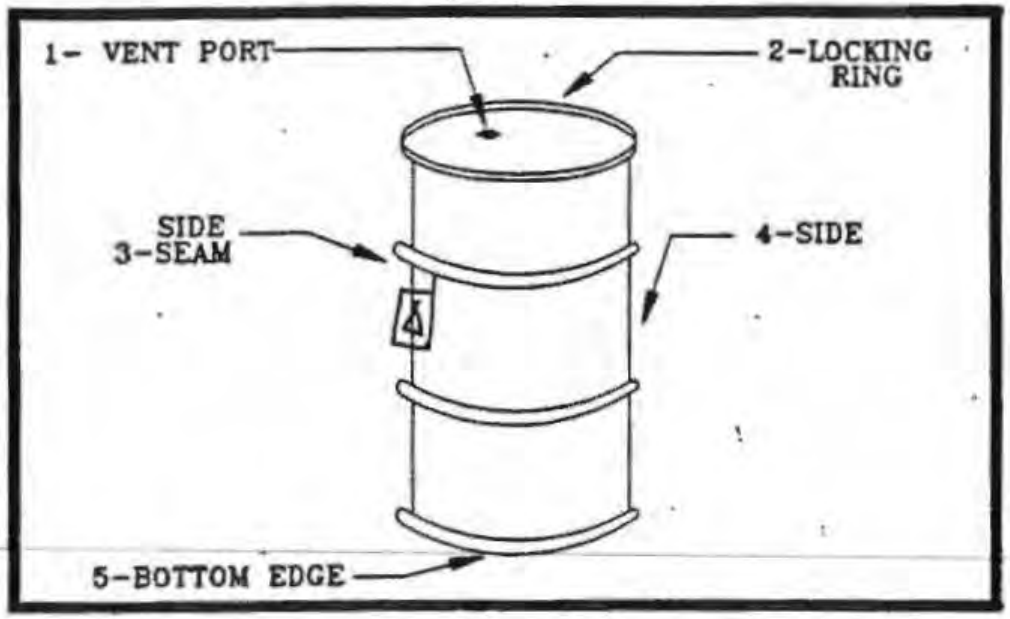
12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	19	93	Patricia Sandoval	Patricia Sandoval

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 0 4 1993

TA 3 BUILDING 29 SAMPLE DATE 7-29-93
RPT R-COX CONTAINER NO. LA00000053761



△ Maximum Gamma Dose Rate -3 mR/hr.
□ Maximum Neutron Dose Rate -4 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	↓
5	BOTTOM EDGE	↓	↓

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: ~~ESP-1~~ PNR-4
P/N: ~~0006~~ 4909
CDD: 9[illegible]-22-93

DISTRIBUTION:
1. RPT's TA-54 MS J592
2. RCT's TA-3 CMR MS G749
3. _____

ANALYZED BY: Ralph Vigil
DATE: 8-3-93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

Stan Bodenstein, CS, 07:06 PM 10/10/96, Second Dewatered Drum Shipment

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Thu, 10 Oct 1996 19:06:19 -0600
To: aic@lanl.gov
From: bodenstein@lanl.gov (Stan Bodenstein, CST-7, 5-8462)
Subject: Second Dewatered Drum Shipment to TA-54
Cc: Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov,
dvc@lanl.gov, rickmar@lanl.gov, jbalkey@lanl.gov, ronwieneke@lanl.gov,
kgruetzmacher@lanl.gov, dpt@lanl.gov, jhatchell@lanl.gov

I-Li,

We received the following drums from you as OVERPACKED 55 gallon drums. We dewatered each of the drums at the WCRRF.

Since each of the drums was in very good condition, except as noted below, we will be shipping the following list of drums back to you as 55 gallon drums, WITHOUT the overpacks on 10/11/96. Also indicated is the change in weight due to the removal of water.

Please update the database as necessary.

Drum Number	Pounds Initial Weight	Final Weight	Comments
53706	557.0	543.0	
53721	537.6	533.8	
53834	561.0	553.6	
53762	529.0	518.2	
53759	556.6	553.6	
53704	515.8	508.0	
53716	523.2	518.4	
53795	551.4	542.4	
53768	551.6	537.2	
53801	559.6	549.6	
53752	526.0	517.0	
53769	531.2	519.0	
53773	563.4	551.6	
53708	530.2	521.0	
53760	553.8	546.2	
53726	517.6	513.0	
52175	831.4	812.6	Drum in poor condition, returned in overpack.
53710	545.6	541.4	
53777	536.2	523.2	
53774	549.4	546.2	
53830	545.8	537.8	
54004	828.2	806.0	Drum in poor condition, returned in overpack.
53729	543.6	530.0	
53717	546.2	540.8	
53776	532.0	518.8	
53832	511.8	498.2	
53770	538.8	538.4	
53818	538.8	526.8	
53761	546.2	529.4	
53813	556.6	545.8	

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

WASTE PACKAGE SERIAL NUMBER: | A | B | A | 0 | 1 | 0 | 0 | 5 | 1 | 1 | 0 | 8 |

Prior. ☒ N-Comb. ☐ Comb. ☐ Pu-238 ☐

Vent Clip or Carbon Filter installed ☐ installer's INITIALS: BM

Lead Lined ☑

90 Mil Drum Liner ☑

1/8 Incl Drum Liner ☑

CONTAINER: open ☐ In-Line ☒

Tamper Indicating Seal # AB AR05060

Date Sealed 05-26-88

Waste Code: N/A

ITM NO	ITEM ID	FROM PM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
D	SLR6EFIB	434 G467	77.21	Nitrate Solution/Iron	R00	7.92	55	15.0	Smith					7/11	05/26/88
1	50X10WFI	434 G467	73.60	Nitrate Solution/Iron	R00	2.00	53	9.0	Smith					7/11	05/26/88
2	NE2IR	420 G440	1.79	Plastic imbedded	603	16.1 6.095	52	6.0	Smith	1.29	1.79			7/17	05/26/88
3	NL85R	420 G440	1.82	Plastic imbedded	602	14.56	52	6.0	Smith	1.14	1.82			7/17	05/26/88
4	5RR17EFIA	434 G467	14.61	Nitrate Solution/Iron	R00	7.91	52	6.0	Smith					7/11	05/26/88
5	NL16R	420 G440	0.99	Heating mantle	602	9.53	52	6.0	Smith			Levantte		7/8	05/26/88
6	MANL82A	420 G440	0.14 0.42	Sands Solids	602	3.19 3.57	52	6.0	Smith					7/13	05/26/88
7	SLR6EFIB	434 G467		Nitrate Solution/Iron	R00	3.99	44	99.9	Smith					2/II	05/26/88
8	50X10WFI	434 G467		Nitrate Solution/Iron	R00	0.11	44	99.9	Smith					2/II	05/26/88
9	5RR17EFIA	434 G467		Nitrate Solution/Iron	R00	0.95	44	99.9	Smith	2.2	2.13	Packaging		2/II	05/26/88
TOTALS Pkg Wt. Kg			180.16	MST-12 signatures for Gross Weight		7.92	55	TOTALS		4.63 2.2	3.94 2.13	Haz. Mat. - Kg			
× 2.2046 = Pkg Wt Lbs			397.18	Tested Smith		8.00 53.85	53	Organics pounds			4.126	MST-10 Assay Value			
55 gal. drum TARE Pounds			149.78	For Accountability check		5.02	44	QA Data Pkg. Approval				Instrument ID	N/A QAB		
Scale GROSS WT. Pounds			546.96	Tested Smith				W M Davis 7/8/88				MST-10 Signature			

This container's waste was packaged and the MST-12 data on the DWLS and the CWSP were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Fox

TRU 006

LA53761

LA53761

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE I

EM-8 USE ONLY
Reference Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). --->	Name (last, first, middle)	Mail Stop

Toxic Metals *(indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
arsenic	☐	☒ 5.0 ppm	☐ 5.0 ppm	☐	☒ SW846 - 6010A
barium	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☒
cadmium	☐	☐ 1.0 ppm	☒ 1.0 ppm	☐	☒
chromium	☐	☐ 5.0 ppm	☒ 5.0 ppm	☐	☒
lead	☐	☐ 5.0 ppm	☒ 5.0 ppm	☐	☒
mercury	☐	☒ 0.2 ppm	☐ 0.2 ppm	☐	☒ SW846 - 6020(mod)
nickel	☐	☒ 134.0 ppm	☐ 134.0 ppm	☐	☒ SW846 - 6010A
selenium	☒	☐ 1.0 ppm	☐ 1.0 ppm	☐	☒
silver	☒	☐ 5.0 ppm	☐ 5.0 ppm	☐	☒
thallium	☐	☒ 130.0 ppm	☐ 130.0 ppm	☐	☒ KnP

Organic Compounds *(indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
benzene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☒ KnP
carbon tetrachloride	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
chlorobenzene	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☐
chloroform	☐	☒ 6.0 ppm	☐ 6.0 ppm	☐	☐
cresol	☐	☒ 200.00 ppm	☐ 200.0 ppm	☐	☐
1,4-dichlorobenzene	☐	☒ 7.5 ppm	☐ 7.5 ppm	☐	☐
1,2-dichloroethane	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
1,1-dichloroethylene	☐	☒ 0.7 ppm	☐ 0.7 ppm	☐	☐
2,4-dinitrotoluene	☐	☒ 0.13 ppm	☐ 0.13 ppm	☐	☐
hexachlorobenzene	☐	☒ 0.13 ppm	☐ 0.13 ppm	☐	☐
hexachlorobutadiene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
hexachloroethane	☐	☒ 3.0 ppm	☐ 3.0 ppm	☐	☐
methyl ethyl ketone	☐	☒ 200.0 ppm	☐ 200.0 ppm	☐	☐
nitrobenzene	☐	☒ 2.0 ppm	☐ 2.0 ppm	☐	☐
pentachlorophenol	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☐
pyridine	☐	☒ 5.0 ppm	☐ 5.0 ppm	☐	☐
tetrachloroethylene/perchloroethylene	☐	☒ 0.7 ppm	☐ 0.7 ppm	☐	☐
trichloroethylene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
2,4,5-trichlorophenol	☐	☒ 400.0 ppm	☐ 400.0 ppm	☐	☐
2,4,6-trichlorophenol	☐	☒ 2.0 ppm	☐ 2.0 ppm	☐	☐
vinyl chloride	☐	☒ 0.2 ppm	☐ 0.2 ppm	☐	☐

Hazardous Constituents *(identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J. Clayman	10/14/92		04636

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-98

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number
Los Alamos National Laboratory
Mesa Del Buey Rd. TA-54

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, HIGHWAY ROUTE CONTROLLED QUANTITY, 0.114, Fissile, AM241, PU238, PU239, PU240, PU241, PU242, 4.389E+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III,	1		665	P	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above
10/9/96

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
"EMERGENCY PHONE NO: (505) 667-6211"
NM0-10-96-1

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Ronald E. Salazar				

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Arcadio Vargas		10	9	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Martinez		10	9	96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

TSDF COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

Los Alamos National Laboratory

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

Los Alamos National Laboratory
Mesa Del Buey Rd. TA-54

G. State Facility's ID

H. Facility's Phone

GENERATOR

	11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918,HIGHWAY ROUTE CONTROLLED QUANTITY,Essential, AM241, PU238, PU239, PU240, PU241, PU242, 4.389e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III.		1		665	P	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

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Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

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Printed/Typed Name | Signature | Month Day Year

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER USING SOY INK

FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA-50-69, WCRRF

LOCATION

ROOM: 102 ☐
103 ☐
104 ☐
50-193

BUILDING _____
OTHER _____

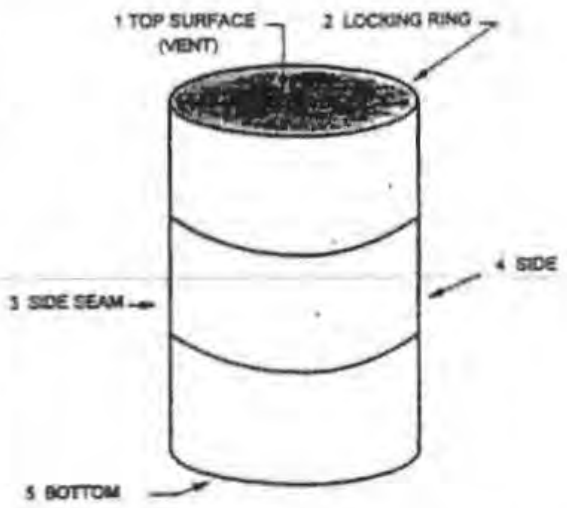
CONTAINER NUMBER : 53761

DRUM SURVEY DATE: 9/12/96

SURVEYED BY: James
(Signature)

RCT: SALAZAR ☐
AULT ☐
SANCHEZ ☒

OTHER _____



GAMMA INSTRUMENT
MODEL: RO-2 ☒
RO-3C ☐
(OTHER) _____

P/N 3304

CAL DUE DATE 10/3/96
MAXIMUM GAMMA DOSE RATE
△ CONTACT 0.2 mR/hr
1-METER 0 mR/hr

NEUTRON INSTRUMENT
MODEL: ESP-2/NRD
PNR-4
(OTHER) _____
P/N: 8031
CAL DUE DATE 1/29/97
MAXIMUM NEUTRON DOSE RATE
☐
CONTACT 0 mRem/hr
1-METER 0 mRem/hr

SMEAR	LOCATION	ALPHA	BETA*
1	TOP SURFACE	2.41	↑
2	LOCKING RING	↓	↑
3	SIDE SEAM	↓	↑
4	SIDE	↓	6.83
5	BOTTOM	↓	↓

ALPHA/BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION

1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales

_____

DATE: / /

53761

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6639
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LA pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste/ Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4636	LA000005376 1	53761	8/25/93

Check only one.

- [X] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/L of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm.

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory (based on 261.23(a)(1))
[ ] D004	
[ ] D005	
[X] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[X] D007	
[X] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
765 5/23/97 [X] ~~D009~~	Radioactive Lead Solids Subcategory
[ ] D009	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg [with inorganics])
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All applicable Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

NOTIFICATION FOR F001 – F005 SPENT SOLVENT WASTES

Check all that apply.

Spent solvent wastes with the following constituents only.

EPA Waste Code	Constituents in the waste	
☐ F001	☐ Acetone	☐ Isobutyl alcohol
☐ F002	☐ Benzene	☐ Methanol
☐ F003	☐ n-Butyl alcohol	☐ Methylene chloride
☐ F004	☐ Carbon disulfide (wastewater only)	☐ Methyl ethyl ketone
☐ F005	☐ Carbon tetrachloride	☐ Methyl isobutyl ketone
	☐ Chlorobenzene	☐ Nitrobenzene
	☐ o-cresol	☐ Pyridine
	☐ m-cresol	☐ Tetrachloroethylene
	☐ p-cresol	☐ Toluene
	☐ Cresol-mixed isomers (Cresylic acid)	☐ 1,1,1-Trichloroethane
	☐ Cyclohexanone (wastewater only)	☐ 1,1,2-Trichloroethane
	☐ o-Dichlorobenzene	☐ 1,1,2-Trichloro – 1,2,2-trifluoroethane
	☐ Ethyl acetate	☐ Trichloroethylene
	☐ Ethyl benzene	☐ Trichloromonofluoromethane
	☐ Ethyl ether	☐ Xylenes – mixed isomers (o-, m-, p-xylene)

Check all that apply.

EPA Waste Codes	Constituents in the waste
☐ F003	☐ Carbon disulfide
☐ F005	☐ Cyclohexanone
	☐ Methanol

Note: Treatment standards for these constituents apply to F001 – F005 wastes w... contain only one, two, or all three of these consituents.

Check only one, if applicable.

EPA Waste Code	Constituents in the waste
☐ F005	☐ Containing 2-nitropropane as the only listed F001 – F005 solvent.
	☐ Containing 2-ethoxyethanol as the only listed F001 – F005 solvent.

NOTIFICATION FOR OTHER "F" WASTES

Check only one, if applicable.

- ☐ F006
- ☐ F007
- ☐ F008
- ☐ F009
- ☐ F027

CONTAINER PROFILE
53761
T-MTRU-TEMP

WS ID: 28588
C ID: 762052
ACTIVE

GENERAL INFORMATION

Container ID:	762052		
Labeled ID:	53761		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	592.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	63.00 lb
		Net Weight:	469.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000232: STAGE

waste compliance and tracking system

CONTAINER PROFILE
53761
T-MTRU-TEMP

WS ID: 28588
C ID: 762052
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
—	K567	—	—	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4162		0/0
Not Specified	NA	Carbon Composite	0	4060		0/0
Not Specified	NA	Carbon Composite	0	IG2057		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
53761
T-MTRU-TEMP

WS ID: 28588
C ID: 762052
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72605, Status: Active							
B/G Survey			= 0.50	=	=	Not Applicable	
Neutron Survey			= 0.00	=	=	Not Applicable	
Smear Results			Not Applicable			= 3.40	= 4.10

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336526, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	5.05E+000	g	0.00E+000	N				NONE
52	5.88E+001	g	0.00E+000	N				NONE
53	2.00E+000	g	0.00E+000	N				NONE
55	7.92E+000	g	0.00E+000	N				NONE
Am-241	1.73E+001	Ci	0.00E+000	Y			Y	
Pu-238	1.93E-001	Ci	0.00E+000	Y			Y	
Pu-239	3.95E+000	Ci	0.00E+000	Y			Y	
Pu-240	1.10E+000	Ci	0.00E+000	Y			Y	
Pu-241	2.14E+001	Ci	0.00E+000	Y			Y	
Pu-242	1.47E-004	Ci	0.00E+000	Y			Y	
U-234	1.81E-005	Ci	0.00E+000	Y			Y	
U-235	1.47E-007	Ci	0.00E+000	Y			Y	

53764

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

CERTIFIED WASTE STORAGE RECORD

LA00000053764

WASTE PACKAGE SERIAL NUMBER
LA 8 7 0 1 0 0 5 0 5 4 2

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group NIST-12	TID # A04368
TA 55	Neutrons mrem/hr 0.5
Building PF-4	
Room 401	Neutron dose rate 0.5 mR/hr

CODE	CONTAINER
01	☑ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

Drum Lot Code D1 Year of Mfr. 86
Manufacturer's Box Serial Number diff
Process Batch Code NA

INTERNAL SHIELDING	
Type	Thickness (in.)
☐ None	
☑ Lead	0.3 E-2
☐ Steel	• E
☐ Concrete	• E
☐ Other	• E

RADIONUCLIDE CONTENT (C = Curie, G = Gram)		
Nuclide	Amount	±
PU 242	3.38 E+1	PC
AM 241	2.76 E+0	MC

Gross Wt. (lb.)	5.25 E+2
Organic Matl Wt. (lb)	4.69 E+1
Organic Matl Vol (%)	10
Content Code	006
Date Closed (MMDDYY)	091085

HAZARDOUS MATERIALS NO

Name	EPA Code	Quantity (g)
Lead	D008	3.3 E+2 G

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Chester A Smith Jr	Chester A Smith Jr	09/16/87

II. GENERATOR-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	2.0 E+0
Survey Meter Model	Ludl39, RO3C, PNR-4
Survey Meter Serial No.	003504, 002662, 004917
Alpha Contamination (dpm/100cm²)	4.0 E-1
Beta-Gamma Cont. (dpm/100cm²)	0.0 E-0

The data in this section were collected as prescribed in approved procedures. The package is properly closed and is safe to handle and transport.

Printed Name	Date
LOU WILLIAMS	10-27-87
Signature: Lou Williams	

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-2.

Printed Name	Date
MICHELLE BURNS	12/7/87
Signature: Michelle Burns	

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)		3.0 E+0
Survey Meter Model	PNR-4	PIC-6A
Survey Meter Serial No.	005230	003060
Alpha Contamination (dpm/100cm²)		3.0 E-1
Beta-Gamma Cont. (dpm/100cm²)		2.2 E-1

The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.

Printed Name	Date
J. VILLAREAL	12-22-87
Signature: J Villareal	

V. STORAGE SITE INFORMATION MD-33

This package was visually inspected when received and was found to be properly labeled and in good condition. It was accepted according to approved procedures.

Printed Name	Date
KEITH CARTER	12-18-87
Signature: Keith Carter	

Pad No. ~~2~~	Layer 1
Post No. ~~15~~ 20	Date Stacked 12/23/87

This waste package was stored at this location according to approved procedures.

Printed Name	Date
ROSILA F. GARCIA	12/23/87
Signature: Rosila F Garcia	

Form Number HS 10-28 (12/86)

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53764
LA53764

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: RVMLO162 AA6		Inspected Items		
Year of Manufacture: 93		☑ Ring, Bolt, and Nut	☑ Chime	☒ Dents
Box Serial Number: N/A		☒ Lid and Gasket	☑ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 8-11-93		
	Signature: Steven Griego			

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

T.D.# B20244

CODE	CONTAINER	INTERNAL SHIELDING	
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box	Type	Thickness (in.)
03	☒ Other (Call TWCO)	LEAD	6.3E-2
04	☐ RH Canister		

RADIONUCLIDE CONTENT											
Nuclide	Amount +/-			Uncertainty +/-			C=Curie M=Gram				
PU-239	3.3618	E	+1	.		E		M			
AM-241	2.7161	E	+0	.		E		M			
	.	E		.		E					
	.	E		.		E					
	.	E		.		E					
	.	E		.		E					
	.	E		.		E					

Waste Profile Request Number: 04636

Carbon Filter ID: 01 LA-541175 02 QR-A32V12

Process Batch Code: N/A

Gross Weight (lb.): 16.43E+2

Organic Material Wt. (lb.): 4.69E+0

Organic Material Volume (%): 10

TRUCON Code: 11.4A

Date Closed (MM/DD/YY): 05/11/93

NONRADIOACTIVE HAZARDOUS MATERIALS		
Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+4
CADMIUM	D006	~~2.5E+0~~
CHROMIUM	D007	~~2.6E+1~~
LEAD	D008	~~1.4E+1~~

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The information is correct and complete to the best of my knowledge. EM-7

Printed Name	Signature	Date
Kathleen M. Gruetzmacher	K M Gruetzmacher	9/1/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h): 6.0 ~~4.0E+0~~ 9-10-93	Survey Meter Model: ~~ESP-2~~ RO-3C	Property Number: ~~PNR-4~~ 2646	
Neutron Dose Rate (mrem/h): 6.0 ~~7.0E+0~~ 9-10-93	Survey Meter Model: PNR-4	Property Number: 5220	
Total Dose Rate (mrem/h): 1.2E+1	*The data in this section were collected according to approved procedures.*		
Alpha Contamination (dpm/100cm²): 2.6E+1	Printed Name: RJ Cox / STEVE BASEHORE	Date: 8/26/93	
Beta-Gamma Cont. (dpm/100cm²): 2.9E+1	Signature: Steve Basehore for R.J. Cox		

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5.	Printed Name: BRUCE LE BRUN	Date: 9/9/93
	Signature: Bruce Le Brun	

TRU 006
#LA53764#
LA53764

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	09	14	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	10	01	93	Karri Wilder	Karri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE E. LOPEZ	Gene E. Lopez	9/29/93

10-1-93 CF
10-1-93 KW

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (*mrem/h*)	6.0E-1	Survey Meter Model: RO3C	Property Number: 2620
Neutron Dose Rate (*mrem/h*)	4.0E-1	Survey Meter Model: PNR4	Property Number: 5229
Total Dose Rate (*mrem/h*)	1.0E+0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (*dpm/100cm²*)	1.1E+0	Printed Name: J.T. MILLER	Date: 9-27-93
Beta-Gamma Cont. (*dpm/100cm²*)	1.5E+0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (*Initials*) RM	Date Received 9-24-93	DS DOME	ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 2	Row Number 8
		Column Number 27	Date Stacked (MM,DD,YY) 09 28 93	
Printed Name: Rick Martinez	Date: 9-24-93	Printed Name: RENEE SANDOVAL		Date: 10-6-93
Signature: Rick Martinez		Signature: Renee Sandoval		

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 10/25/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	10	28	93	Charlotte Fernandez	Charlotte Fernandez
Data Entry Verified	11	01	93	Karri Wilder	Karri Wilder

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	19	93	Renee Sandoval	Renee Sandoval

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

Effective Date 05/08-87

DISCARDABLE WASTE LOG SHEET

LA870100S0542
WASTE PACKAGE SERIAL NUMBER

☒ Proc. ☐ N-Comb ☐ Comb ☐ Pu-238

Lead Lined ☐ Y
90 Mil Drum Liner ☐ N
1/8 Inch Drum Liner ☐ N

CONTAINER: ☐ open ☒ In-Line

Waste Code: N/A

Tamper Indicating Seal # A09368

Date Sealed 09/10/87

ITM NO	ITEM ID	FROM RM or BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL SIGNATURE	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS OTHER MATERIALS	AUTH. PG/LN	DATE mm/dd/yy
0	9LR24EF1C	434 G468	4.86	EV Filtrate	R00	✓ 0.89	52	6	Smith			☆	3/II	09/08/87
1	LRALR-296	401 G466	0.43	High Fired ASH	G02	✓ 1.40	52	6	Smith				1/2	09/08/87
2	90X22WF1C	434 G468	38.91	EV Filtrate	R00	✓ 7.53	52	6	Smith				1/II	09/10/87
3	90X1WF1	434 G467	107.00	EV Filtrate	R00	✓ 20.70	52	6	Smith				1/II	09/10/87
4	9LR2EF1A	434 G467	14.74	EV Filtrate	R00	✓ 2.36	52	6	Smith				1/II	09/10/87
5	9LR24EF1C	434 G468	-	EV Filtrate	R00	✓ 0.0444	44	99.9	Smith				3/III	09/08/87
6	90X27WF1C	434 G468	-	EV Filtrate	R00	✓ 0.2944	44	99.9	Smith				3/III	09/10/87
7	90X1WF1	434 G467	-	EV Filtrate	R00	✓ 0.7044	44	99.9	Smith				3/II	09/10/87
8	9LR2EF1A	434 G467	-	EV Filtrate	R00	✓ 1.9044	44	99.9	Smith				3/II	09/10/87
9	8DS25EF1B	434 G467	4.45	EV Filtrate	R00	✓ 0.85	52	6	Smith	22	2.13	Packaging	1/II	09/08/87

TOTALS	Kg	MST-12 Signature for Gross Weight	TOTALS	MST-10 Assay Value NA Instrument ID.
	170.22		.	
Pounds	375.3			MST-10 Signature Ronald W Blankenship
GROSS WT. Pounds	525.1		Mst-12 Signature for Accountability check	QA Data Pkg Approval

The waste in this container was packaged and the MST-12 data on the DWLS and the CWSR were collected according to the procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s).

MST-12 Signature Charles X Fox

CS-2-231/0239A

AK MLB 12/7/87

Effective Date 05/01/87

DISCARDABLE WASTE LOG SHEET

LA87010058542
WASTE PACKAGE SERIAL NUMBER

Page 2 of Page 2

☒ Proc. ☐ N-Comb ☐ Comb ☐ Pu-238

Lead Lined ☑
90 Mil Drum Liner ☑
1/8 Inch Drum Liner ☑

CONTAINER: ☐ open ☒ In-Line

Waste Code: N/A

Tamper Indicating Seal # A04368

Date Sealed 09/10/87

ITM NO	ITEM ID	FROM RM or BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL SIGNATURE	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS OTHER MATERIALS	AUTH. PG/LN	DATE mm/dd/yy
0	8DS25EF1B	437 B467	0.43	Filtrate	R00	✓ 0.0344	44	99.9					34	09/08/87
1			.			.							/	/ /
2			.			.							/	/ /
3			.			.							/	/ /
4			.			.							/	/ /
5			.			.							/	/ /
6			.			.							/	/ /
7			.			.							/	/ /
8			.			.							/	/ /
9			.			.				2.2	2.13	Packaging	/	/ /
TOTALS Kg			170.44			3389	52	TOTALS		2.2	2.13			
Pounds			375.3	MST-12 Signature for Gross Weight		2.76	44	MST-12 Signature for Accountability check				MST-10 Assay Value NA Instrument ID.		
GROSS WT. Pounds			545.1									MST-10 Signature		
												QA Data Pkg Approval		

The waste in this container was packaged and the MST-12 data on the DWLS and the CWSR were collected according to the procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s).

MST-12 Signature Charles L. Fox

OK MLB 12/7/87

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE FO

LA53764

LA53764

M-8 USE ONLY
erence Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). --->	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

	None	< 5.0 ppm	≥ 5.0 ppm	TCLP	Other
arsenic	☐	☒	☐	☐	☒ SW846-6010A
barium	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☒
cadmium	☐	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐	☒
chromium	☐	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐	☒
lead	☐	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐	☒
mercury	☐	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐	☒ SW846-6020(mod)
nickel	☐	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐	☒ SW846-6010A
selenium	☒	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐	☒
silver	☒	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐	☒
thallium	☐	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐	☒ KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
benzene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☒ KoP
carbon tetrachloride	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
chlorobenzene	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☐
chloroform	☐	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐	☐
cresol	☐	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐	☐
1,4-dichlorobenzene	☐	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐	☐
1,2-dichloroethane	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
1,1-dichloroethylene	☐	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐	☐
2,4-dinitrotoluene	☐	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐	☐
hexachlorobenzene	☐	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐	☐
hexachlorobutadiene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
hexachloroethane	☐	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐	☐
methyl ethyl ketone	☐	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐	☐
nitrobenzene	☐	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐	☐
pentachlorophenol	☐	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐	☐
pyridine	☐	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐	☐
tetrachloroethylene/perchloroethylene	☐	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐	☐
trichloroethylene	☐	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐	☐
2,4,5-trichlorophenol	☐	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐	☐
2,4,6-trichlorophenol	☐	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐	☐
vinyl chloride	☐	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐	☐

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J. Clayton	10/14/92		04636

53764

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6639
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

CONTAINER PROFILE
53764
T-MTRU-TEMP

WS ID: 28588
C ID: 761761
ACTIVE

GENERAL INFORMATION

Container ID:	761761		
Labeled ID:	53764		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	11-Aug-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	11-Aug-1993
Compactible:		**Closed Date:**	11-Aug-1993

Discard Matrix:

TID(s):

Gen Contact:

Insert By: WCATS APPLICATION (000000)

Waste Desc: (LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	643.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	110.00 lb
		Net Weight:	533.00 lb

LOCATION

Pickup (Origin): LANL: 55-PF4: GEN-AREAS

Current: LANL: 54-G: 000153: C087: L01: R07

CONTAINER PROFILE
53764
T-MTRU-TEMP

WS ID: 28588
C ID: 761761
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
----	K567	---	---	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4175		0/0
Not Specified	NA	Carbon Composite	0	3242		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

CONTAINER PROFILE
53764
T-MTRU-TEMP

WS ID: 28588
C ID: 761761
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72214, Status: Active							
B/G Survey			= 0.60	=	=	Not Applicable	
Neutron Survey			= 0.40	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.10	= 1.50

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 340576, Date: 08/11/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	2.76E+000	g	0.00E+000	N				NONE
52	3.37E+001	g	0.00E+000	N				NONE
Am-241	9.48E+000	Ci	0.00E+000	Y			Y	
Pu-238	5.77E-002	Ci	0.00E+000	Y			Y	
Pu-239	1.96E+000	Ci	0.00E+000	Y			Y	
Pu-240	4.59E-001	Ci	0.00E+000	Y			Y	
Pu-241	6.97E+000	Ci	0.00E+000	Y			Y	
Pu-242	2.65E-005	Ci	0.00E+000	Y			Y	
U-234	4.19E-006	Ci	0.00E+000	Y			Y	
U-235	7.28E-008	Ci	0.00E+000	Y			Y	

53767

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

CERTIFIED WASTE STORAGE RECORD

LA00000053767

WASTE PACKAGE SERIAL NUMBER: LA 87 01 00 05 05 21

I. GENERATOR-SITE PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group: MST-12	D-Switch/W Neutron TID # AD4349
TA: 55	
Building: PF-4	
Room: 401	Neutron dose rate 0.5 mR/hr TRU CERTIFIABLE

CODE	CONTAINER
01	☒ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (68 in. X 84 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

Drum Lot Code: ID1 Year of Mfr: 86

Manufacturer's Box Serial Number: N/A

INTERNAL SHIELDING	Type	Thickness (In.)
	☐ None	
	☒ Lead	6.3 E-2
	☐ Steel	• E
	☐ Concrete	• E
	☐ Other	• E

RADIONUCLIDE CONTENT (C = Curie, G = Gram)	Nuclide	Amount ±	
	PU52	4.876 E +1	M
	AM44	9.188 E +0	M
		• E	
		• E	
		• E	
		• E	

Process Batch Code: N/A

Gross Wt. (lb): 5.5 E +2

Organic Matl Wt. (lb): 4.69 E +0

Organic Matl Vol (%): 0

Content Code: 0106

Date Closed (MMDDYY): 072887

HAZARDOUS MATERIALS	Name	EPA Code	Quantity (g)
	LEAD	D008	3.8 E +4
			• E
			• E
			• E

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Carl P. Trujillo | Signature: [signature] | Date: 07/28/87

II. GENERATOR-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	1.5 E +0		
Survey Meter Model	139	ROSC	PAR4
Survey Meter Serial No.	003656	002656	004911
Alpha Contamination (dpm/100cm²)	0.0 E +0		
Beta-Gamma Cont. (dpm/100cm²)	0.0 E +0		

The data in this section were collected as prescribed in approved procedures. The package is properly closed and is safe to handle and transport.

Printed Name: F E Smith | Date: 8/4/87

Signature: [signature]

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-2.

Printed Name: ARTHUR GUTHRIE | Date: 87/9/11

Signature: [signature]

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	2.0 E +0	
Survey Meter Model	PIC-6A	PNR-4
Survey Meter Serial No.	003169	005209
Alpha Contamination (dpm/100cm²)	0.0 E +0	
Beta-Gamma Cont. (dpm/100cm²)	1.9 E +1	

The data in this section were collected at the TA-54 waste storage / disposal site as defined in approved procedures. The package is acceptable for handling and storage.

Printed Name: J. VILLAREAL | Date: 10-30-87

Signature: [signature] ZK

V. STORAGE SITE INFORMATION

This package was visually inspected when received and was found to be properly labeled and in good condition. It was accepted according to approved procedures.

Printed Name: [illegible] | Date: 11 23 87

Signature: [signature]

Pad No.	3	Layer	3 MD-33
Post No.	S-10	Date Stacked	12/9/87

This waste package was stored at this location according to approved procedures.

Printed Name: ROSILA F. GARCIA | Date: 12/9/87

Signature: [signature]

Form Number HS 10-28 (12/86)

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53767
LA53767

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML0029AAG	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 7/29/93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

T.O.# B 20061

CODE	CONTAINER	INTERNAL SHIELDING	
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box	Type	Thickness (in.)
03	☒ Other (Call TWCO)	LEAD	6.3E-12
04	☐ RH Canister		.E

Waste Profile Request Number: 04636

Carbon Filter ID: 01 LA411113 02 LA491916

Process Batch Code: N/A

Gross Weight (lb.): 16.619E+12

Organic Material Wt. (lb.): 4.619E+10

Organic Material Volume (%): 10

TRUCON Code: 11.4A

Date Closed (MM/DD/YY): 07/29/93 87128887

RADIONUCLIDE CONTENT

Nuclide	Amount +/-		Uncertainty +/-		C=Curie M=Gram
Pu-239	9.8716E	+11	.E		M
Am-241	9.1410E	+10	.E		M
	.E		.E		
	.E		.E		
	.E		.E		
	.E		.E		

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+14
CADMIUM	D006	~~2.5E+8~~ 1.4E+1
CHROMIUM	D007	~~9.7E+6~~ 2.8E+1
LEAD	D008	~~1.4E+1~~ 2.8E+1

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data is correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: K M Gruetzmacher | Date: 8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.1E+0	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	7.0E-1	Survey Meter Model: PNR-4	Property Number: 4909
Total Dose Rate (mrem/h)	1.8E+0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: RJ Cox	Date: 8/4/93
Beta Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: RJ Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5. DLD 8/12/93	Printed Name: K.G. Britton	Date: 8-6-93
	Signature: K.G. Britton	

TRU 006
LA53767
LA53767

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M D D Y Y	Printed Name	Signature
Date Entered in Database	08 13 93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09 01 93	Karri Wilder	Karri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE E. LOPEZ	Gene E. Lopez	8/23/93

9-1-93 CY
9-1-93 KD

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	7.0E-1	Survey Meter Model R03C	Property Number 2605
Neutron Dose Rate (mrem/h)	0.9E+0	Survey Meter Model PNR4	Property Number 5229
Total Dose Rate (mrem/h)	7.0E-1	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	2.4E+0	Printed Name J.T. Miller	Date 8-27-93
Beta-Gamma Cont. (dpm/100cm²)	7.8E+0	Signature J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials) DM	Date Received 8-25-93	CY Dome	ORIGINAL STORAGE DATA
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 1	Row Number 7
		Column Number 15	Date Stacked (MM,DD,YY) 08 30 93
Printed Name Rick Martinez	Date 8-25-93	Printed Name	Date 9/8/93
Signature Rick Martinez		Signature Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name BRUCE LE BRUN	Date 9/13/93
	Signature Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M D D Y Y	Printed Name	Signature
Date Entered In Database	09 13 93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09 13 93	Karri Wilder	Karri Wilder

12. DUPLICATE COPY

	M M D D Y Y	Printed Name	Signature
Date Duplicate Filed	11 19 93	Renee Sandoval	Renee Sandoval

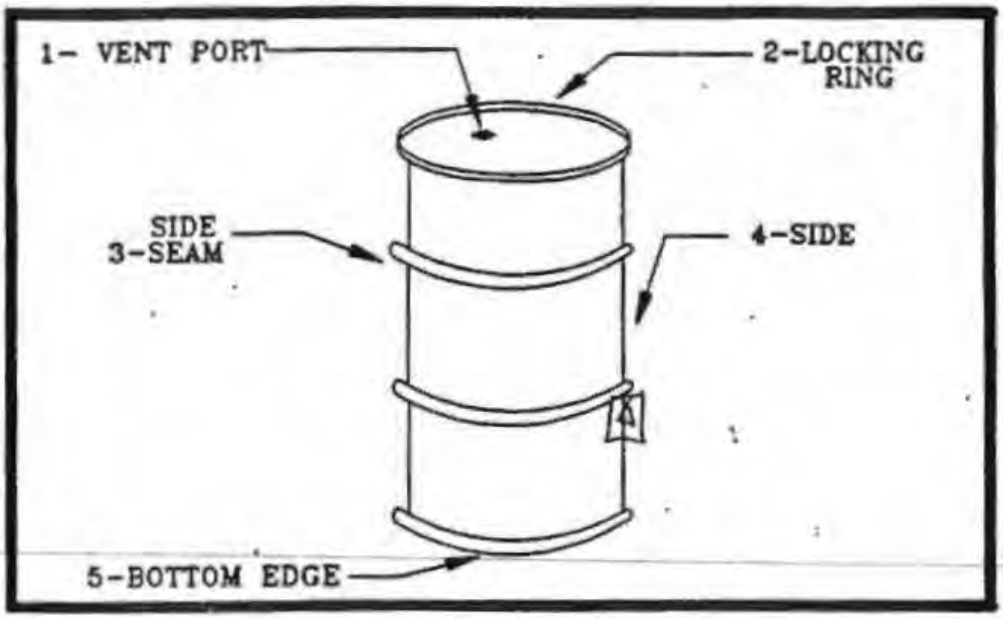
TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED

AUG 0 4 1993

TA 3 BUILDING 29 SAMPLE DATE 7-29-93

RPT R. COX CONTAINER NO. LA000000 53767



△ Maximum Gamma Dose Rate 1.1 mR/hr.

□ Maximum Neutron Dose Rate .7 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM		
4	SIDE		
5	BOTTOM EDGE		

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: ~~ESP-1~~ PNR-4
P/N: ~~8006~~ 4909
CDD: 9[illegible]-22-93

Gary Lundby

DISTRIBUTION:

1. RPT's TA-54 MS J592
2. RCT's TA-3 CMR MS G749
3. _____

ANALYZED BY: David A Barnes

DATE: 8/3/93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

TRU WASTE CERTIFICATION PROGRAM
NON-CONFORMANCE REPORT

Log No. 00024

ORIGINATOR'S SECTION

Location: TA 55	Hold Tag No.:

Waste Pkg. Serial No: LA8701 005052Ø; 521; 522; 514

Description of Non-Conformance: Incorrect EPA Hazardous Materials Code
Lead was recorded as ØØØ8 in the "EPA Code" on the CWSR
It should be D ØØ8

Print Name: ARTHUR GUTHRIE	Signature:	Date: 8/9/11

DISPOSITION SECTION

Instructions for Disposition:
1) Change CWSR to correct entry
2) Send copy of NCR to waste generator

Print Name: ARTHUR GUTHRIE	Signature: 8/9/11	Date: 8/9/11

The above instructions have been completed as specified.

Printed Name: ARTHUR GUTHRIE	Signature:	Date: 8/9/11

7/86

Effective Date 05/01/87

DISCARDABLE WASTE LOG SHEET

LA87Ø1ØØ5Ø521
WASTE PACKAGE SERIAL NUMBER

Page 1 of Page 1

☒ Proc. ☐ N-Comb ☐ Comb ☐ Pu-238

Lead Lined Y
90 Mil Drum Liner N
1/8 Inch Drum Liner N

CONTAINER: ☐ open ☒ In-Line

Waste Code: N/A

Tamper Indicating Seal # A04349

Date Sealed Ø7/28/87

ITM NO	ITEM ID	FROM RM or BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL SIGNATURE	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS OTHER MATERIALS	AUTH. PG/LN	DATE mm/dd/yy
0	70X16EF1B	434 G-468	51.9	EV FILTRATE	RØØ	12.45	52	6.Ø	C. Trujillo				1 ★	Ø7/23/87
1	70X16EF1C	434 G-468	36.3	EV FILTRATE	RØØ	8.72	52	6.Ø	C. Trujillo				1 ★	Ø7/28/87
2	7LR20EF1A	434 G-467	36.3	EV FILTRATE	RØØ	1Ø.72	52	6.Ø	C. Trujillo				1 ★	Ø7/28/87
3	7LR17EF1A	434 G-468	56.8	EV FILTRATE	RØØ	15.89	52	6.Ø	C. Trujillo				1 ★	Ø7/28/87
4	70X16EF1B	434 G-468	.	EV FILTRATE	RØØ	2.28	44	99.9	C. Trujillo				3/IV	Ø7/23/87
5	70X16EF1C	434 G-468	.	EV FILTRATE	RØØ	1.60	44	99.9	C. Trujillo				3/IV	Ø7/28/87
6	7LR20EF1A	434 G-467	.	EV FILTRATE	RØØ	2.39	44	99.9	C. Trujillo				3/IV	Ø7/28/87
7	7LR17EF1A	434 G-468	~~Ø.3~~	EV FILTRATE	RØØ	2.87	44	99.9	C. Trujillo				3/IV	Ø7/28/87
8	X5R16IFINE	209 D-202	Ø.3	CHLORIDE MELT	NØ3	1.Ø3	52	6.Ø	C. Trujillo				1/3	Ø7/28/87
9			.			.				2.2	2.13 4.69	PACKAGING	/	/ /
TOTALS Kg			181.6			48.76	52		TOTALS	2.2	2.13 4.69			
Pounds			400.4	MST-12 Signature for Gross Weight		9.18 44			Mst-12 Signature for Accountability check			MST-10 Assay Value NA Instrument ID.		
GROSS WT. Pounds			551									MST-10 Signature Ronald W Blackledge		
												QA Data Pkg Approval D.B. Le Te		

The waste in this container was packaged and the MST-12 data on the DWLS and the CWSR were collected according to the procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s).

MST-12 Signature Charles L Fox

★ OS-2-468/~~Ø2Ø1A~~ 231/0239A

TRU 006

LA53767

LA53767

EM-8 USE ONLY

Reference Number C4636

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE F

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). —>	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
arsenic	☐	☒ 5.0 ppm	☐ 5.0 ppm	☐	☒ SW846-6010A
barium	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☒
cadmium	☐	☐ 1.0 ppm	☒ 1.0 ppm	☐	☒
chromium	☐	☐ 5.0 ppm	☒ 5.0 ppm	☐	☒
lead	☐	☐ 5.0 ppm	☒ 5.0 ppm	☐	☒
mercury	☐	☒ 0.2 ppm	☐ 0.2 ppm	☐	☒ SW846-7020(mod)
nickel	☐	☒ 134.0 ppm	☐ 134.0 ppm	☐	☒ SW846-6010A
selenium	☒	☐ 1.0 ppm	☐ 1.0 ppm	☐	☒
silver	☒	☐ 5.0 ppm	☐ 5.0 ppm	☐	☒
thallium	☐	☒ 130.0 ppm	☐ 130.0 ppm	☐	☒ KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

	None	<	≥	TCLP	Other
benzene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☒ KoP
carbon tetrachloride	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
chlorobenzene	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☐
chloroform	☐	☒ 6.0 ppm	☐ 6.0 ppm	☐	☐
cresol	☐	☒ 200.00 ppm	☐ 200.0 ppm	☐	☐
1,4-dichlorobenzene	☐	☒ 7.5 ppm	☐ 7.5 ppm	☐	☐
1,2-dichloroethane	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
1,1-dichloroethylene	☐	☒ 0.7 ppm	☐ 0.7 ppm	☐	☐
2,4-dinitrotoluene	☐	☒ 0.13 ppm	☐ 0.13 ppm	☐	☐
hexachlorobenzene	☐	☒ 0.13 ppm	☐ 0.13 ppm	☐	☐
hexachlorobutadiene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
hexachloroethane	☐	☒ 3.0 ppm	☐ 3.0 ppm	☐	☐
methyl ethyl ketone	☐	☒ 200.0 ppm	☐ 200.0 ppm	☐	☐
nitrobenzene	☐	☒ 2.0 ppm	☐ 2.0 ppm	☐	☐
pentachlorophenol	☐	☒ 100.0 ppm	☐ 100.0 ppm	☐	☐
pyridine	☐	☒ 5.0 ppm	☐ 5.0 ppm	☐	☐
tetrachloroethylene/perchloroethylene	☐	☒ 0.7 ppm	☐ 0.7 ppm	☐	☐
trichloroethylene	☐	☒ 0.5 ppm	☐ 0.5 ppm	☐	☐
2,4,5-trichlorophenol	☐	☒ 400.0 ppm	☐ 400.0 ppm	☐	☐
2,4,6-trichlorophenol	☐	☒ 2.0 ppm	☐ 2.0 ppm	☐	☐
vinyl chloride	☐	☒ 0.2 ppm	☐ 0.2 ppm	☐	☐

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
[signature]	10/14/92		04636

53767

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6639
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

CONTAINER PROFILE
53767
T-MTRU-TEMP

WS ID: 28588
C ID: 762053
ACTIVE

GENERAL INFORMATION

Container ID:	762053		
Labeled ID:	53767		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993

Discard Matrix:

TID(s):

Gen Contact:

Insert By: WCATS APPLICATION (000000)

Waste Desc: (LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	669.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	110.00 lb
		Net Weight:	559.00 lb

LOCATION

Pickup (Origin): LANL: 55-PF4: GEN-AREAS

Current: LANL: 54-G: 000153: C097: L01: R01

CONTAINER PROFILE
53767
T-MTRU-TEMP

WS ID: 28588
C ID: 762053
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
——	K567	—	—	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	4113		0/0
Not Specified	NA	Carbon Composite	0	4996		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
53767
T-MTRU-TEMP

WS ID: 28588
C ID: 762053
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72606, Status: Active							
B/G Survey			= 0.70	=	=	Not Applicable	
Neutron Survey			= 0.00	=	=	Not Applicable	
Smear Results			Not Applicable			= 2.40	= 7.80

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 336527, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	9.14E+000	g	0.00E+000	N				NONE
52	4.88E+001	g	0.00E+000	N				NONE
Am-241	3.14E+001	Ci	0.00E+000	Y			Y	
Pu-238	8.36E-002	Ci	0.00E+000	Y			Y	
Pu-239	2.84E+000	Ci	0.00E+000	Y			Y	
Pu-240	6.64E-001	Ci	0.00E+000	Y			Y	
Pu-241	1.01E+001	Ci	0.00E+000	Y			Y	
Pu-242	3.84E-005	Ci	0.00E+000	Y			Y	
U-234	6.07E-006	Ci	0.00E+000	Y			Y	
U-235	1.05E-007	Ci	0.00E+000	Y			Y	

53772

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053772

D WASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER

LA 8 8 0 1 0 0 5 0 5 5 7

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group MST-12	TRU # HC9849
TA 55	
Building PF-4	
Program Code K590	TRU CERTIFIABLE

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT		C = Curie G = Gram
				Nuclide	Amount ±	
01	☑ Steel Drum (55 gal.)					
02	☐ Steel Overpack (Drums)					
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)	Type	Thickness (in.)	Pu-239	6.537E+1	G
04	☐ Steel Overpack (FRP Box)	☐ None		H-3	5.09E+0	C
	☐ Other (Describe)	☑ Lead	6.3E-2			
		☐ Steel				
Drum Lot Code H1	Year of Mfr. 87	☐ Concrete				
Manufacturer's Box Serial Number N/A		☐ Other				

		HAZARDOUS MATERIALS		
Process Batch Code	N/A	Name	EPA Code	Quantity (g)
Gross Wt. (lb.)	5.1E+2	Lead	D006	3.8E+4
Organic Matl Wt. (lb.)	4.69E+0			
Organic Matl Vol (%)	0			
Content Code	006			
Date Closed (MMDDYY)	111787			

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester H Smith Jr | Signature: Chester H Smith Jr | Date: 11-17-87

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.0E+0	Survey Meter Model: RO-3C	Property No. 002610
Neutron Dose Rate (mrem/h)	0.5E+0	Survey Meter Model: PNR-4	Property No. 004917
Total Dose Rate (mrem/h)	1.5E+0		
Alpha Contamination (dpm/100cm²)	9.9E+1	The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.	
Beta-Gamma Cont. (dpm/100cm²)	3.9E+1		
Printed Name: Lou Williams	Signature: Lou Williams	Date: 12/2/87	

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name: ARTHUR GUTHRIE | Date: 88/1/15

Signature:

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.0E+0	Survey Meter Model: RO3-C	Property No. 7615
Neutron Dose Rate (mrem/h)	5.0E-1	Survey Meter Model: PNR-4	Property No. 5230
Total Dose Rate (mrem/h)	1.5E+0		
Alpha Contamination (dpm/100cm²)	0.9E+0	The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.	
Beta-Gamma Cont. (dpm/100cm²)	1.7E+1		
Printed Name: Glenn Corbin	Signature: Glenn Corbin	Date: 2/2/88	

V. STORAGE SITE INFORMATION

Received by	Date received	Pad No. MD-33	Layer 1 ☐ E ☒ C ☐ W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No. ~~16~~ 26	Date Stacked 2-12-88
		This waste package was stored at this location according to approved procedures.	
Printed Name: Eugene Salazar	Date: 2-22-88	Printed Name: ROSILA F. GARCIA	Date: 2-12-88
Signature: Eugene Salazar		Signature: Rosila F. Garcia	

HS Form Number 10-5A (11/87)

PTR

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

CERTIFIED WASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER

LA 87 011 0105517

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group MST-12	TID# A04849
TA 55	As taken to the Vault.
Building PF-4	
Room 401	

CODE	CONTAINER
01	☑ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

INTERNAL SHIELDING		
Type	Thickness (in.)	
☐ None		
☑ Lead	6.3E-2	
☐ Steel	.E	
☐ Concrete	.E	
☐ Other	.E	

RADIONUCLIDE CONTENT		C = Curie G = Gram
Nuclide	Amount	
	7 Pu	
Pu-242	2.53E+1	G
Am-241	5.09E+1	G

Drum Lot Code	1A1
Year of Mfr	87
Manufacturer's Box Serial Number	N/A
Process Batch Code	N/A
Gross Wt. (lb)	5.61
Organic Matl Wt. (lb)	4.19E+0
Organic Matl Vol (%)	0
Content Code	CC
Date Closed (MMDDYY)	111787

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.5E+1

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Chester A Smith Jr	Chester A Smith Jr	11-17-87

II. GENERATOR-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)			1.5E+0
Survey Meter Model	139	RO3C	PNR4
Survey Meter Serial No.	003612	002610	002917
Alpha Contamination (dpm/100cm²)			9.9E+1
Beta-Gamma Cont. (dpm/100cm²)			3.9E+1

The data in this section were collected as prescribed in approved procedures. The package is properly closed and is safe to handle and transport.

Printed Name	Date
Lou Williams	12/2/87
Signature: Lou Williams	

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-2.

Printed Name	Date
Signature	

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Surface Dose Rate (mrem/h)	.E
Survey Meter Model	
Survey Meter Serial No.	
Alpha Contamination (dpm/100cm²)	.E
Beta-Gamma Cont. (dpm/100cm²)	.E

The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.

Printed Name	Date
Signature	

V. STORAGE SITE INFORMATION

This package was visually inspected when received and was found to be properly labeled and in good condition. It was accepted according to approved procedures.

Pad No.		Layer	☐ E ☐ C ☐ W
Post No.		Date Stacked	

This waste package was stored at this location according to approved procedures.

Printed Name	Date	Printed Name	Date
Signature		Signature	

Form Number HS 10-28 (12/86)

LOS ALAMOS
NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53772
LA53772

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML0073446	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 8-11-93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

T.O.# B20235

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT								
01	☐ Steel Drum (55 gal.)	☐ None		Nuclide	Amount +/-			Uncertainty +/-				Ci=Curie M=Gram
02	☐ Standard Waste Box	Type	Thickness (in.)	PU-239	2.53E+1	E	+10	1.1E				M
03	☒ Other (Cal-TWCO)	LEAD	6.3E-2	AM-241	5.09E	E	+10	1.1E				M
04	☐ RH Canister				E			E				
Waste Profile Request Number: 04636					E			E				
Carbon Filter ID: 01 LA3298 02 LA3716					E			E				
Process Batch Code: N/A					E			E				

Gross Weight (lb.)	167E+2
Organic Material Wt. (lb.)	9.69E+0
Organic Material Volume (%)	10
TRUCON Code	14A
Date Closed (MMDDYY): 08/11/93	081193

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8E+4
CADMIUM	D006	~~4.7E+2~~ 2.7E+0 kwg
CHROMIUM	D007	~~1.0E+3~~ 1.0E+0 kwg
LEAD	D008	~~2.7E+1~~ 1.5E+1 kwg

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data is correct and complete to the best of my knowledge. kwg

Printed Name: Kathleen M. Gruetzmacher | Signature: KM Gruetzmacher | Date: 9/1/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	~~0.2 3.0E-1 9-1-93~~ 0.2E-1	Survey Meter Model: ~~PNR-4~~ ESP-2 RO-2	Property Number: ~~PNR-4~~ 2646
Neutron Dose Rate (mrem/h)	~~0.5 6.0E-1 9-27-93~~ 0.5E-1	Survey Meter Model: PNR-4	Property Number: 5220
Total Dose Rate (mrem/h)	~~0.7 9.0E-1 9-27-93~~ 0.7E-1	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: RJ Cox / STEVE BASEHORE	Date: 8/26/93
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: Steve Basehore for R.J. Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5	Printed Name: BRUCE LE BRUN	Date: 9/9/93
	Signature: Bruce Le Brun	

TRU 006
LA53772
LA53772

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	09	14	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	10	01	93	KARRI WILDER	Karri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE E. LOPEZ 10-1-93 GEL 10-1-93 KW	Gene E. Lopez	9/29/93

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	3.0E-1	Survey Meter Model: RO3C	Property Number: 2620
Neutron Dose Rate (mrem/h)	0.0E+0	Survey Meter Model: PNR 4	Property Number: 5229
Total Dose Rate (mrem/h)	3.0E-1	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	1.1E+0	Printed Name: J.T. Miller	Date: 9-27-93
Beta-Gamma Cont. (dpm/100cm²)	4.0E+0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials)	Date Received: 9-24-93	DOE ORIGINAL STORAGE DATA	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number: 163	Layer: 2	Row Number: 8
		Column Number: 23	Date Stacked (MM,DD,YY): 09 28 93
Printed Name: Rick Martinez	Date: 9-24-93	Printed Name: RENEE SANDOVAL	Date: 10/6/93
Signature: Rick Martinez		Signature: Renee Sandoval	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 10/25/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	10	28	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	11	01	93	KARRI WILDER	KARRI WILDER

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	19	93	Renee Sandoval	Renee Sandoval

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

LA53772

LA53772

EM-8 USE ONLY
Reference Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nC/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nC/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nC/g	☒ gamma	
☒ > 100 nC/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). —>	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846 - 6010 A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☒ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☒ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☒ Other SW846 - 6020 (mod)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☒ Other SW846 - 6010 A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☒ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☒ Other KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KoP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
[signature]	10/14/92		04636

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

L	A	8	7	0	1	0	0	5	0	5	5	7

WASTE PACKAGE SERIAL NUMBER

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed [ ] installer's INITIALS

Lead Lined [Y]

90 Mil Drum Liner [N]

1/8 Inch Drum Liner [N]

CONTAINER: open [ ] In-Line [X]

Tamper Indicating Seal # A04849

Date Sealed 11-17-87

Waste Code: N/A

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	110X3WFIB	437 G468	69.00	Filtrate	RCO	10.80	52	6	Smith					4	11/10/87
1	10LR30EF2	434 G467	106.15	Filtrate	ROO	13.43	52	6	Smith					4	11/10/87
2	10LR30EFIA	437 G468	10.61	Filtrate	ROO	1.12	52	6	Smith					4	11/17/87
3	110X2WFIB	434 G468		Filtrate	ROO	0.27	44	99.9	Smith					3/III	11/10/87
4	10LR30EF2	437 G467		Filtrate	ROO	4.26	44	99.9	Smith					3/III	11/10/87
5	10LR30EFIA	434 G468		Filtrate	RIO	0.56	44	99.9	Smith					3/III	11/17/87
6														/	/ /
7														/	/ /
8														/	/ /
9										2.2	2.13	Packaging		/	/ /
TOTALS Pkg Wt. Kg			185.76	MST-12 signatures for Gross Weight		25.36	52		TOTALS	2.2	2.13	Haz. Mat. - Kg			
× 2.2046 = Pkg Wt Lbs			409.53			5.09	44		organics pounds		4.69	MST-10 Assay Value NA			
Scale GROSS WT. Pounds			561.25	for Accountability check:					QA Data Pkg. Approval			Instrument ID.			
55 gal. drum TARE Pounds			68.82									MST-10 Signature			

This container's waste was packaged and the MST-12 data on the DWLS and the CWSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Fox

* CS-2-231/0239A

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a.	X	RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, HIGHWAY ROUTE CONTROLLED QUANTITY, 2.455e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III,	1	DM	546	P
b.		PU239, PU240, PU241, PU242,				
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

EMERGENCY PHONE NO: (505) 667-6211

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
Ronald L. Salazar	Ron Salazar			

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Arlin Jones				

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Martinez	Rick Martinez			

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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TSDF COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

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C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X					
b.						
c.						
d.						

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Printed/Typed Name	Signature	Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

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GENERATOR COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

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C. State Transporter's ID

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E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, HIGHWAY ROUTE CONTROLLED QUANTITY, Elemental, AM241, PU238, PU239, PU240, PU241, PU242, 2.455e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III,	1	DM	546	P	
b.							
c.							
d.							

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

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"EMERGENCY PHONE NO: (505) 667-6211"

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Printed/Typed Name	Signature	Month Day Year

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Printed/Typed Name	Signature	Month Day Year

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Printed/Typed Name	Signature	Month Day Year

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Printed/Typed Name	Signature	Month Day Year

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EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA - 50-69, WCRRF

LOCATION

ROOM : 102 ☑
103 ☐
104 ☐
50-193 ☐

BUILDING _____ ☐

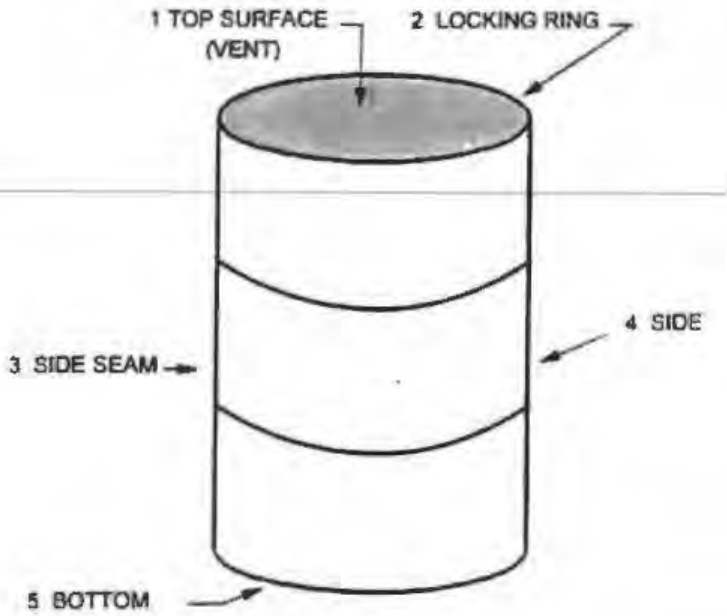
OTHER _____ ☐

CONTAINER NUMBER: 53772

DRUM SURVEY DATE: 9/6/96

SURVEYED BY: K. Ault (Signature)

RCT: Salazar ☐
Ault ☒
Other: Jaimes Sanchez ☒



GAMMA INSTRUMENT
MODEL: RO-2 ☑
RO-3C ☐
(OTHER) _____ ☐
P/N: 33647
CAL DUE DATE: 6/3/96
MAXIMUM GAMMA DOSE RATE
contact 0.5 mR/hr
1 meter 0 mR/hr

NEUTRON INSTRUMENT
MODEL: ESP-2/NRD ☒
PNR-4 ☐
(OTHER) _____ ☐
P/N: 80231
CAL DUE DATE: 1/29/97
MAXIMUM NEUTRON DOSE RATE
☐ contact 0 mRem/hr
1 meter 0 mR/hr

SMEAR	LOCATION	ALPHA*	BETA*
1	TOP SURFACE	10.3	4.60
2	LOCKING RING	1.66	7.36
3	SIDE SEAM	0.964	11.2
4	SIDE	0.84	318
5	BOTTOM	5.90	0629

*dpm/100 cm sq

ALPHA / BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION:
1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales
_____
DATE: ___/___/___

. Stan Bodenstein, CS, 02:15 PM 9/9/96 -, Dewatered Drum Shipment to TA-

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Mon, 09 Sep 1996 14:15:16 -0600
To: aic@lanl.gov
From: bodenstein@lanl.gov (Stan Bodenstein, CST-7, 5-8462)
Subject: Dewatered Drum Shipment to TA-54
Cc: Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov, dvc@lanl.gov, aic@lanl.gov, rickmar@lanl.gov, jbalkey@lanl.gov, ronwieneke@lanl.gov, kgruetzmacher@lanl.gov, andym@lanl.gov, gveazey@lanl.gov, dpt@lanl.gov

I-Li,

We received the following drums from you as OVERPACKED 55 gallon drums. We dewatered each of the drums at the WCRRF.

Since each of the drums was in very good condition, we will be shipping the following list of drums back to you as 55 gallon drums, WITHOUT the overpacks. Also indicated is the change in weight due to the removal of water.

Please update the database as necessary.

Drum Number	Pounds Initial Weight	Final Weight
53836	532.0	523.8
53746	534.8	528.0
53783	556.0	548.4
53789	538.6	532.2
53204	531.8	529.4
53174	537.6	534.9
53851	554.8	552.1
53771	560.4	556.3
53715	547.2	543.1
54893	539.2	536.5
52054	833.6	813.2
52484	855.2	833.8
53847	527.0	519.4
53790	557.2	548.2
53734	821.0	815.6
53848	534.8	530.2
54002	804.8	798.6
53712	529.8	523.0
52187	862.6	844.2
53824	536.6	530.8
53772	561.6	545.8
53796	554.2	549.6
53722	554.0	545.8
53703	527.2	517.8
53714	531.8	529.4
53814	533.0	519.2
54894	537.4	535.6
53306	539.4	529.8
53842	540.4	528.0
53802	530.6	520.4

53772

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6939
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LA pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4636	LA0000053772	53772	9/24/93

Check only one.

- [X] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/l. of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm.

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory (based on 261.23(a)(1))
[ ] D004	
[ ] D005	
[X] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[X] D007	
[X] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
765 7/21/97 [X] ~~D008~~	Radioactive Lead Solids Subcategory
[ ] D009	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg (with inorganics))
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All applicable Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

NOTIFICATION FOR F001 – F005 SPENT SOLVENT WASTES

Check all that apply.

Spent solvent wastes with the following constituents only.

EPA Waste Code	Constituents in the waste	
☐ F001	☐ Acetone	☐ Isobutyl alcohol
☐ F002	☐ Benzene	☐ Methanol
☐ F003	☐ n-Butyl alcohol	☐ Methylene chloride
☐ F004	☐ Carbon disulfide (wastewater only)	☐ Methyl ethyl ketone
☐ F005	☐ Carbon tetrachloride	☐ Methyl isobutyl ketone
	☐ Chlorobenzene	☐ Nitrobenzene
	☐ o-cresol	☐ Pyridine
	☐ m-cresol	☐ Tetrachloroethylene
	☐ p-cresol	☐ Toluene
	☐ Cresol-mixed isomers (Cresylic acid)	☐ 1,1,1-Trichloroethane
	☐ Cyclohexanone (wastewater only)	☐ 1,1,2-Trichloroethane
	☐ o-Dichlorobenzene	☐ 1,1,2-Trichloro – 1,2,2-trifluoroethane
	☐ Ethyl acetate	☐ Trichloroethylene
	☐ Ethyl benzene	☐ Trichloromonofluoromethane
	☐ Ethyl ether	☐ Xylenes – mixed isomers (o-, m-, p-xylene)

Check all that apply.

EPA Waste Codes	Constituents in the waste
☐ F003	☐ Carbon disulfide
☐ F005	☐ Cyclohexanone
	☐ Methanol

Note: Treatment standards for these constituents apply to F001 – F005 wastes which contain only one, two, or all three of these constituents.

Check only one, if applicable.

EPA Waste Code	Constituents in the waste
☐ F005	☐ Containing 2-nitropropane as the only listed F001 – F005 solvent.
	☐ Containing 2-ethoxyethanol as the only listed F001 – F005 solvent.

NOTIFICATION FOR OTHER "F" WASTES

Check only one, if applicable.

- ☐ F006
- ☐ F007
- ☐ F008
- ☐ F009
- ☐ F027

CONTAINER PROFILE
53772
T-MTRU-TEMP

WS ID: 28588
C ID: 767991
ACTIVE

GENERAL INFORMATION

Container ID:	767991		
Labeled ID:	53772		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	11-Aug-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	11-Aug-1993
Compactible:		**Closed Date:**	11-Aug-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	628.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	82.00 lb
		Net Weight:	486.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000153: C043: L01: R09

waste compliance and tracking system

CONTAINER PROFILE
53772
T-MTRU-TEMP

WS ID: 28588
C ID: 767991
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
-----	K567	---	----	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	3282		0/0
Not Specified	NA	Carbon Composite	0	DJ-616		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

CONTAINER PROFILE
53772
T-MTRU-TEMP

WS ID: 28588
C ID: 767991
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 73671, Status: Active							
B/G Survey			= 0.30	=	=	Not Applicable	
Neutron Survey			= 0.00	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.10	= 4.00

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 338829, Date: 08/11/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	5.09E+000	g	0.00E+000	N				NONE
52	2.54E+001	g	0.00E+000	N				NONE
Am-241	1.75E+001	Ci	0.00E+000	Y			Y	
Pu-238	4.35E-002	Ci	0.00E+000	Y			Y	
Pu-239	1.48E+000	Ci	0.00E+000	Y			Y	
Pu-240	3.46E-001	Ci	0.00E+000	Y			Y	
Pu-241	5.25E+000	Ci	0.00E+000	Y			Y	
Pu-242	2.00E-005	Ci	0.00E+000	Y			Y	
U-234	3.16E-006	Ci	0.00E+000	Y			Y	
U-235	5.49E-008	Ci	0.00E+000	Y			Y	

53841

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053841

ASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER

LA | 8 | 8 | 0 | 1 | 0 | 0 | 5 | 1 | 1 | 0 | 3

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group: HST-12	TED# HO5053 5
TA: 55	
Building: PF-4	Fixed Alpha NDA
Program Code: K530	LWD 139 003601

CODE	CONTAINER	INTERNAL SHIELDING		RADIONUCLIDE CONTENT (C = Curie, G = Gram)			
				Nuclide	Amount		
01	☑ Steel Drum (55 gal.)				2,362		
02	☐ Steel Overpack (Drums)	Type	Thickness (in.)	U-235	5.22	E	+1 14
03	☐ Steel Box (66 in. X 54 in. X 38.5 in.)	☐ None	0	H-3	9.05	E	+0 14
04	☐ Steel Overpack (FRP Box)	☑ Lead	6.3 E-2	Pu-239	5.67.0	E	+0 14
	☐ Other (Describe)	☐ Steel	. E	Am-241	3.8.00	E	+0 14
Drum Lot Code: H1	Year of Mfr: 87	☐ Concrete	. E		.	E	
Manufacturer's Box Serial Number: N/A		☐ Other	. E		.	E	
Process Batch Code: N/A							

		HAZARDOUS MATERIALS		
Gross Wt. (lb.)	55.4 E+2	Name	EPA Code	Quantity (g)
Organic Matl Wt. (lb)	46.9 E+0	Lead	D008	3.5 E+4
Organic Matl Vol (%)	0			. E
Content Code	10.06			. E
Date Closed (MMDDYY)	051789			. E

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester H Smith Sr | Signature: Chester H Smith | Date: 05-19-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.4 E+0	Survey Meter Model: Ro-3c	Property No: 002659
Neutron Dose Rate (mrem/h)	0.0 E+0	Survey Meter Model: PNR-4	Property No: 005238
Total Dose Rate (mrem/h)	0.4 E+0		
Alpha Contamination (dpm/100cm²)	1.8 E+0	*The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.*	
Beta-Gamma Cont. (dpm/100cm²)	1.5 E+1		

Printed Name: Robert E. Valdez | Signature: Robert E. Valdez | Date: 5-25-88

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name: BRUCE LE BRUN | Signature: Bruce Le Brun | Date: 7/13/88

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	4.0 E-1	Survey Meter Model: Ro-3c	Property No: 2620
Neutron Dose Rate (mrem/h)	5.0 E-1	Survey Meter Model: PNR-4	Property No: 4901
Total Dose Rate (mrem/h)	9.0 E-1		
Alpha Contamination (dpm/100cm²)	0.0 E+0	*The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0 E+0		

Printed Name: Glenn Corbin | Signature: Glenn Corbin ZK | Date: 7/28/88

V. STORAGE SITE INFORMATION WD-33

Received by: [illegible]	Date received: 7-26-88	Pad No: 5	Layer: 1 ☐ E ☐ C ☑ W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No: 20	Date Stacked: 9-2-88
		This waste package was stored at this location according to approved procedures.	
Printed Name: Eugene Selover	Date: 7-27-88	Printed Name: Rosila Garcia	Date: 9-2-88
Signature: Eugene Selover		Signature: ROSILA F. GARCIA	

HS Form Number 10-5A (11/87)

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53841
LA53841

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML-185-AMG	Inspected Items		
Year of Manufacture: 93	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging	Printed Name: Steven Griego	Date: 7/29/93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TID # BZ0090

CODE	CONTAINER	INTERNAL SHIELDING	
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box	Type	Thickness (in.)
03	☒ Other (Call TWCC)	LEAD	6.3E-2
04	☐ RH Canister		.E

RADIONUCLIDE CONTENT						
Nuclide	Amount +/-			Uncertainty +/-		Ci=Curie Mi=Gram
Pu-152	2.36 2	E	+11	.	E	M
Pu-153	8.67 0	E	+10	.	E	M
Am-241	3.81 0	E	+10	.	E	M
	.	E		.	E	
	.	E		.	E	
	.	E		.	E	

Waste Profile Request Number	0 4 6 3 6
Carbon Filter ID	01 LA 41 8 10 02 LA 41 7 7
Process Batch Code	N/A

Gross Weight (lb.)	16.7 2 E +2
Organic Material Wt. (lb.)	4.6 9 E +0
Organic Material Volume (%)	10
TRUCON Code	kng 1 1 A A
Date Closed (MMDDYY)	07/29/93 ~~05 17 88~~

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	3.8 E +4
CADMIUM	D006	~~2.3 E+0~~ kng
CHROMIUM	D007	~~8.7 E+1~~ kng
LEAD	D008	~~2.3 E+1~~ kng

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The information is correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: KM Gruetzmacher | Date: 8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	5.0 E -1	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	0.0 E +0	Survey Meter Model: PNR-4	Property Number: 4909
Total Dose Rate (mrem/h)	5.0 E -1	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.0 E +0	Printed Name: RJ Cox	Date: 8/4/93
Beta-Gamma Cont. (dpm/100cm²)	0.0 E +0	Signature: RJ Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5	Printed Name: J. Minton Hughes	Date: 8-6-93
	Signature: J. Minton Hughes	

TRU 006
LA53841
LA53841

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	08	16	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	08	21	93	KARRI WILDER	Karri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
Gene E. Lopez	Gene E. Lopez	8/23/93

8-31-93 9-1-93 CJ

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	4.0E-1	Survey Meter Model: RO3C	Property Number: 2605
Neutron Dose Rate (mrem/h)	3.0E-1	Survey Meter Model: PNR4	Property Number: 5229
Total Dose Rate (mrem/h)	7.0E-1	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	3.4E+0	Printed Name: J.T. Miller	Date: 8-27-93
Beta-Gamma Cont. (dpm/100cm²)	2.1E+0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (Initials) RM	Date Received 8-25-93	CJ Dome	ORIGINAL STORAGE DATA
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 2	Row Number 2
		Column Number 13	Date Stacked (MM,DD,YY) 08 31 93
Printed Name: Rick Martinez	Date: 8-25-93	Printed Name: Charlotte Fernandez	Date: 9/8/93
Signature: Rick Martinez		Signature: Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 9/13/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	09	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	13	93	KARRI WILDER	Karri Wilder

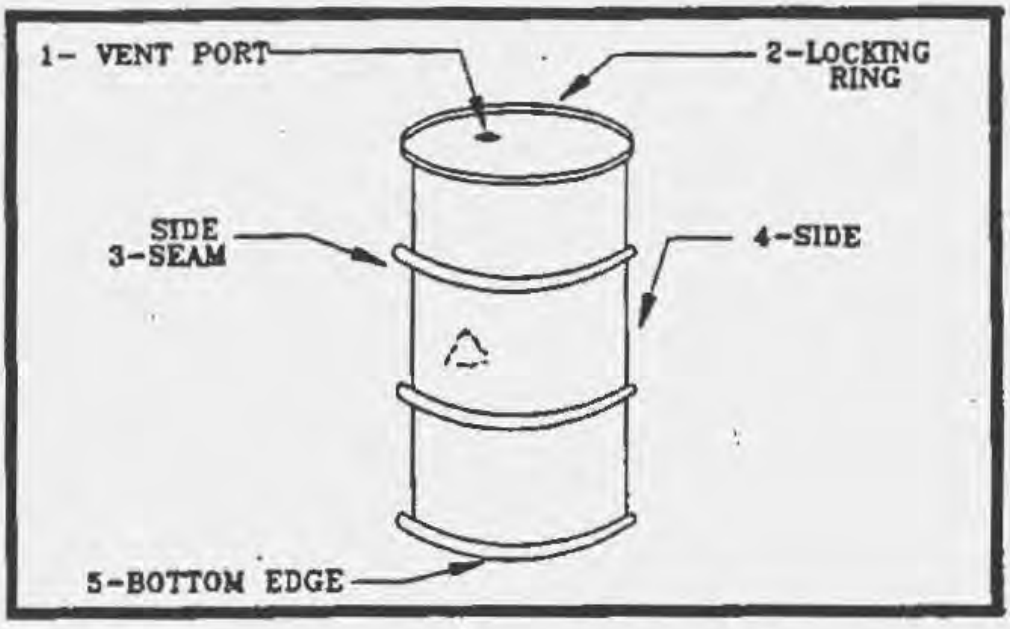
12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	10	14	93	Renee Sandoval	Renee Sandoval

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 0 4 1993

TA 3 BUILDING 29 SAMPLE DATE 7-29-93
RPT R-COX CONTAINER NO. LA000000053841



△ Maximum Gamma Dose Rate -5 mR/hr.
□ Maximum Neutron Dose Rate 0.0 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM		
4	SIDE		
5	BOTTOM EDGE		

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: ~~ESP-1~~ PNR-4
P/N: ~~8006~~ 4909
CDD: 9[illegible]-22-93

DISTRIBUTION:
1. RPT's TA-54 MS J592
2. RCT's TA-3 CMR MS G749
3. _____

ANALYZED BY: Ralph Vigil
DATE: 8-3-93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

WASTE PACKAGE SERIAL NUMBER: RAB A01N05110 3

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Lead Lined [Y]
90 Mil Drum Liner [N]
118 Incl Drum Liner [N]

Vent Clip or Carbon Filter installed [Y] Installer's INITIAL: S

CONTAINER: open [ ] In-line [X]

Tamper Indicating Seal # H05053 DOE

Date Sealed 05-17-88

Waste Code: N/A

ITM NO	ITEM ID	FROM PM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	SRR4WFIB	434 E468	119.42	Nitrate Solution Lean	RCC	23.62	52	4.9	Smith					2/11	05/17/88
1	50X6WFIA	434 E468	62.31	Nitrate Solution Lean	RCC	8.67	53 44	6.0	Smith					2/11	05/17/88
2	SRR4WFIB	434 E468		Nitrate Solution Lean	RCC	3.22 3.22 3.80	44	99.9	Smith					2/11	05/17/88
3	50X6WFIA	434 E468		Nitrate Solution Lean	RCC	0.58	49	99.9	Smith					2/11	05/17/88
4														/	/ /
5														/	/ /
6														/	/ /
7														/	/ /
8														/	/ /
9										8.2	2.13	Packaging		/	/ /
TOTALS Pkg Wt. Kg			181.93	MST-12 Signatures for Gross Weight		32.49 32.27 4.05 4.11 13.62 52 3.67 53 3.80 44			TOTALS	8.2	2.13	Haz. Mat. Kg			
x 2.2046 = Pkg Wt Lbs			400.64						organics pounds		4.69	MST-10 Assay Value			
55 gal. drum TARE Pounds			153.33	For Accountability Only					QA Data Pkg. Approval			Instrument ID.	N/A		
Scale GROSS WT. Pounds			553.97						W M Davis 7/8/88			MST-10 Signature		DLB.	

This container's waste was packaged and the MST-12 data on the BILS and the CWSP were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles X. Smith

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

LA53841

EM-8 USE ONLY
Reference Number
C4636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste regs	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecyclable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional) -->	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☒ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☒ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☒ Other SW846 - 6020(mod)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☒ Other SW846 - 6010A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☒ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☒ Other KoP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KoP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
J. Layman	10/14/92		04636

Please print or type (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 Manifest Document No. 53840

2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

~~DAVIS V CHRISTENSEN~~

3. Generator's Name and Mailing Address
Los Alamos National Laboratory
TA54 AREA G MS Los Alamos NM 87545
4. Generator's Phone (505 66-

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name: LANL — 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
RONALD G SALAZAR TA50 WCRRF
Los Alamos, NM 87545
10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone 505 66-

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)		12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I Waste No.
a.	X	RQ, ~~RADIOACTIVE MATERIAL, FISSILE,~~ Waste N.O.S.,7,UN2918Solid,Elemental, AM241, PU238, PU239, PU240, PU241, PU242, ~~3.349e+01Ci, T.I.=0.5 RADIOACTIVE YELLOW~~ II,	1		650	P	
b.							
c.							
d.							

HMTF REVIEW
APPROVED ☑
DISCREPANCY ☐
10/9/96 GM

J. Additional Descriptions for Materials Listed Above
11a. D008

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211*
11a. ERGNO: 165
Road Closure Required

TWSR#: 53840 HMTF#: 16164

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
DAVIS Christenson	Davis Christenson	10	11	96

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
FRED P. MOYA	Fred P Moya	10	11	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Ronald G. Salazar	Ron Salazar	10	14	96

Style CF174 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

PRINTED ON RECYCLED PAPER

ORIGINAL-RETURN TO GENERATOR

53841

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6638
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

CONTAINER PROFILE
53841
T-MTRU-TEMP

WS ID: 28588
C ID: 768087
ACTIVE

GENERAL INFORMATION

Container ID:	768087		
Labeled ID:	53841		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993
Discard Matrix:			
TID(s):			
Gen Contact:			
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	(LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.		

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	672.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	110.00 lb
		Net Weight:	562.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: GEN-AREAS
Current:	LANL: 54-G: 000232: C014: L01: R08

waste compliance and tracking system

CONTAINER PROFILE
53841
T-MTRU-TEMP

WS ID: 28588
C ID: 768087
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
——	K567	—	----	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	477		0/0
Not Specified	NA	Carbon Composite	0	4180		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
53841
T-MTRU-TEMP

WS ID: 28588
C ID: 768087
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 73783, Status: Active							
B/G Survey			= 0.40	=	=	Not Applicable	
Neutron Survey			= 0.30	=	=	Not Applicable	
Smear Results			Not Applicable			= 3.40	= 2.10

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 337081, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	3.80E+000	g	0.00E+000	N				NONE
52	2.36E+001	g	0.00E+000	N				NONE
53	8.67E+000	g	0.00E+000	N				NONE
Am-241	1.30E+001	Ci	0.00E+000	Y			Y	
Pu-238	8.50E-002	Ci	0.00E+000	Y			Y	
Pu-239	1.87E+000	Ci	0.00E+000	Y			Y	
Pu-240	4.88E-001	Ci	0.00E+000	Y			Y	
Pu-241	8.17E+000	Ci	0.00E+000	Y			Y	
Pu-242	4.29E-005	Ci	0.00E+000	Y			Y	
U-234	6.72E-006	Ci	0.00E+000	Y			Y	
U-235	6.79E-008	Ci	0.00E+000	Y			Y	

53848

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053848

WASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER

LA | S | S | 0 | 1 | 0 | 0 | 5 | 0 | 1 | 1 | 1 | 0

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group MST-12	TID# A0-442
TA 55	
Building PF-4	FIXED Alpha - NDA
Program Code H530	LUD 134 3533

CODE	CONTAINER
01	☒ Steel Drum (55 gal.)
02	☐ Steel Overpack (Drums)
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)
04	☐ Steel Overpack (FRP Box)
	☐ Other (Describe)

INTERNAL SHIELDING	Type	Thickness (in.)
	☐ None	
	☒ Lead	6.3 E-2
	☐ Steel	. E
	☐ Concrete	. E
	☐ Other	. E

RADIONUCLIDE CONTENT (C = Curie, M = Gram)	Nuclide	Amount	±	
	Pu-238	4.185 E	+1	M
	Am-241	4.430 E	+0	M

Drum Lot Code: E1 | Year of Mfr: 87

Manufacturer's Box Serial Number: N/A

Process Batch Code: N/A

Gross Wt. (lb.)	5.3 E +2
Organic Matl Wt. (lb.)	4.6 E +0
Organic Matl Vol (%)	0
Content Code	006
Date Closed (MMDDYY)	062788

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.8 E +1
		. E
		. E
		. E

The data in this section were collected, and the waste described herein was packaged and labelled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name	Signature	Date
Chester H Smith Jr	Chester H Smith Jr	06-03-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.5 E+0	Survey Meter Model RO-3C	Property No. 2659
Neutron Dose Rate (mrem/h)	0.5 E+0	Survey Meter Model PNR-4	Property No. 4903
Total Dose Rate (mrem/h)	1.0 E+0		
Alpha Contamination (dpm/100cm²)	9.6 E+0	*The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.*	
Beta-Gamma Cont. (dpm/100cm²)	1.7 E+1		
Printed Name James B. Sánchez	Signature		Date 6-28-88

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name BRUCE LE BRUN — Date 7/12/88

Signature Bruce Le Brun

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.3 E+0	Survey Meter Model RO-3C	Property No. 7620
Neutron Dose Rate (mrem/h)	5.0 E-1	Survey Meter Model PNR-4	Property No. 4901
Total Dose Rate (mrem/h)	1.5 E+0		
Alpha Contamination (dpm/100cm²)	0.0 E+0	*The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0 E+0		
Printed Name Glenn Corbin	Signature		Date 7/25/88

V. STORAGE SITE INFORMATION MD-33

Received by	Date received 7.26-88	Pad No. 3	Layer 1 ☐ E ☐ C ☐ W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No. 18	Date Stacked 9-2-88
		This waste package was stored at this location according to approved procedures.	
Printed Name Eugene Salazar	Date 7-27-88	Printed Name Rosila Garcia	Date 9-2-88
Signature Eugene Salazar		Signature ROSILA F. GARCIA	

HS Form Number 10-5A (11/87)

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53848
LA53848

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: Nom L 0245 AA 6	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 8-5-93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55-GAL. CEMENT DRUM OVERPACKED IN 85-GAL. ENPAC POLY-LINED DRUM

TIO # B 20201

CODE	CONTAINER	INTERNAL SHIELDING	
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box	Type	Thickness (in.)
03	☒ Other (Cell TWCO)	LEAD	6.3E-12
04	☐ RH Canister		.E

Waste Profile Request Number: 04636

Carbon Filter ID: 01 LA 41214 02 CP 243310

Process Batch Code: N/A

Gross Weight (lb.): 1605 21 E+12

Organic Material Wt. (lb.): 4.619 E+10

Organic Material Volume (%): 10

TRUCON Code: 111 4A

Date Closed (MM/DD/YY): 08/05/93 (orig 05/27/88)

RADIONUCLIDE CONTENT

Nuclide	Amount +/-		Uncertainty +/-		C=Curie M=Gram
PU 239	4.1815	E +11	.	E	M
AM 241	4.4310	E +10	.	E	M
	.	E	.	E	
	.	E	.	E	
	.	E	.	E	
	.	E	.	E	

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD SHIELDING	D008	38 E+11
CADMIUM	D006	~~2.3 E+8~~
CHROMIUM	D007	~~9.0 E+1~~
LEAD	D008	~~1.3 E+1~~

Kmg Kmg Kmg

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge.

Printed Name: Kathleen M. Gruetzmacher | Signature: K M Gruetzmacher | Date: 8/11/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.9 E+0	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	0.0 E+0	Survey Meter Model: PNR-4	Property Number: 4905
Total Dose Rate (mrem/h)	1.9 E+0	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.0 E+0	Printed Name: RJ Cox	Date: 8/9/93
Beta-Gamma Cont. (dpm/100cm²)	0.0 E+0	Signature: RJ Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA 54 by AR 10-5.	Printed Name: BRUCE LE BRUN	Date: 8/12/93
	Signature: Bruce Le Brun	

TRU 006
LA53848
LA53848

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	08	17	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	28	93	KARRI WILDER	Karri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
Gene E Lopez	Gene E Lopez	8-30-93

9-23-93 CF 9-24-93

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	9.0E-1	Survey Meter Model: RO3C	Property Number: 2620
Neutron Dose Rate (mrem/h)	7.0E-1	Survey Meter Model: PNR4	Property Number: 5229
Total Dose Rate (mrem/h)	1.6E+0	*The data in this section were collected according to approved procedures.*	
Alpha Contamination ($dpm/100cm^2$)	0.0E+0	Printed Name: J.T. MILLER	Date: 9-13-93
Beta Gamma Cont. ($dpm/100cm^2$)	5.6E+0	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (*Initials*) RM	Date Received 9-9-93	CF Dome	ORIGINAL STORAGE DATA
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number 153	Layer 2	Row Number 7
		Column Number 17	Date Stacked (MM,DD,YY) 09 14 93
Printed Name: Rick Martinez	Date: 9-9-93	Printed Name: Charlotte Fernandez	Date: 9/15/93
Signature: Rick Martinez		Signature: Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 11/19/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered In Database	10	27	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	11	01	93	KARRI Wilder	Karri Wilder

12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	12	14	93	Renee Sandoval	Renee Sandoval

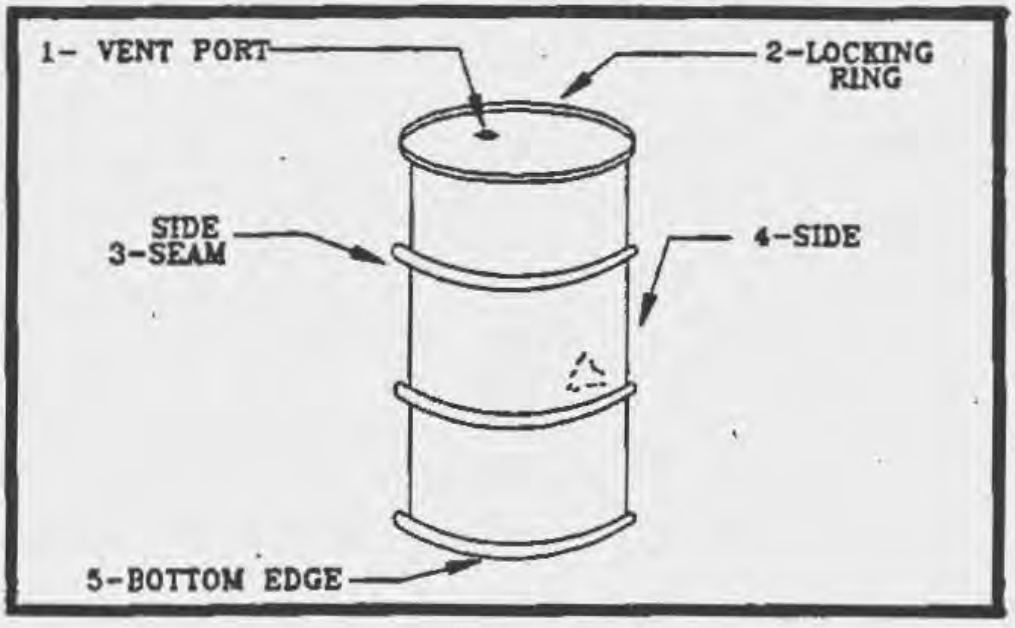
TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED

AUG 0 6 1993

TA 3 BUILDING 29 SAMPLE DATE 8-5-93

RPT R. Cox CONTAINER NO. LA000000053848



△ Maximum Gamma Dose Rate 1.9 mR/hr.

□ Maximum Neutron Dose Rate 0.0 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	↓
5	BOTTOM EDGE	↓	↓

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: PNR-4
P/N: 4905
CDD: 9-3-93

DISTRIBUTION:

1. RPT's TA-54 MS J592
2. RCT's TA-3-29 MS G749
3. _____

ANALYZED BY: David Barnes Mike Jensen

DATE: 8/6/93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

WASTE PACKAGE SERIAL NUMBER: L A B 8 0 1 0 0 5 1 1 1 0

Proc. [✓] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed [DM] (installer's INITIAL)

Lead Lined [Y]

90 Mil Drum Liner [N]

1/8 Inch Drum Liner [N]

CONTAINER: open [ ] In-Line [✓]

Waste Code: N/A

Tamper Indicating Seal # A04442

Date Sealed 05-27-88

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS Y/N	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	SRR17EFIB	434 C467	95.86	Nitrate Solution	R00	28.16	52	6.0	Smith					2/11	05/27/88
1	Mannl 87B	HEC C440	0.28	Packed Solids	602	2.38	52	6.0	Smith					2/13	05/27/88
2	5EX16WFIA	434 C468	60.96	Nitrate Solution	R00	11.31	52	6.0	Smith					2/11	05/27/88
3	SRR17EFIB	434 C467		Nitrate Solution	R00	3.63	44	99%	Smith					2/11	05/27/88
4	5EX16WFIA	434 C468		Nitrate Solution	R00	0.80	44	99%	Smith					2/11	05/27/88
5														/	/ /
6														/	/ /
7														/	/ /
8														/	/ /
9										2.1	2.13	Pudopey		/	/ /
TOTALS	Pkg Wt. Kg		177.10	MST-12 Signatures for Gross Weight		41.55	52	TOTALS		2.1	2.13	Haz. Mat. - Kg			
	x 2.2046 = Pkg Wt Lbs		390.43			4.43	44	organics pounds			4.69	MST-10 Assay Value			
55 gal. drum TARE Pounds			143.43	for Accountability Check				QA Data Pkg. Approval				Instrument ID.	N/A		
Scale GROSS WT. Pounds			533.86					W Davis 7/8/88				MST-10 Signature			

This container's waste was packaged and the MST-12 data on the DWLS and the CWSP were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Smith

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

LA53848

EM-8 USE ONLY
Reference Number 04636

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490.

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT / NMT-2	7-1193	E501	55	PF-114	206

Method of Characterization

- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☒ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis
- ☒ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☐ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecycleable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU liquid and particulate wastes immobilized in gypsum-based cement

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nC/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nC/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nC/g	☒ gamma	
☒ > 100 nC/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
Schueler, William T.	106374	William Schueler	10/14/92

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). —>	Name (last, first, middle)	Mail Stop

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐	None	☒	<	5.0 ppm	☐	≥	5.0 ppm	☐	TCLP	☒	Other	SW846 - 6010CA		
barium	☐	None	☒	<	100.0 ppm	☐	≥	100.0 ppm	☐	TCLP	☒	Other			
cadmium	☐	None	☐	<	1.0 ppm	☒	≥	1.0 ppm	☐	TCLP	☒	Other			
chromium	☐	None	☐	<	5.0 ppm	☒	≥	5.0 ppm	☐	TCLP	☒	Other			
lead	☐	None	☐	<	5.0 ppm	☒	≥	5.0 ppm	☐	TCLP	☒	Other			
mercury	☐	None	☒	<	0.2 ppm	☐	≥	0.2 ppm	☐	TCLP	☒	Other	SW846 - 6020(mod)		
nickel	☐	None	☒	<	134.0 ppm	☐	≥	134.0 ppm	☐	TCLP	☒	Other	SW846 - 6010A		
selenium	☒	None	☐	<	1.0 ppm	☐	≥	1.0 ppm	☐	TCLP	☒	Other			
silver	☒	None	☐	<	5.0 ppm	☐	≥	5.0 ppm	☐	TCLP	☒	Other			
thallium	☐	None	☒	<	130.0 ppm	☐	≥	130.0 ppm	☐	TCLP	☒	Other	KoP		

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐	None	☒	<	0.5 ppm	☐	≥	0.5 ppm	☐	TCLP	☒	Other	KoP		
carbon tetrachloride	☐	None	☒	<	0.5 ppm	☐	≥	0.5 ppm	☐	TCLP	☐	Other			
chlorobenzene	☐	None	☒	<	100.0 ppm	☐	≥	100.0 ppm	☐	TCLP	☐	Other			
chloroform	☐	None	☒	<	6.0 ppm	☐	≥	6.0 ppm	☐	TCLP	☐	Other			
cresol	☐	None	☒	<	200.00 ppm	☐	≥	200.0 ppm	☐	TCLP	☐	Other			
1,4-dichlorobenzene	☐	None	☒	<	7.5 ppm	☐	≥	7.5 ppm	☐	TCLP	☐	Other			
1,2-dichloroethane	☐	None	☒	<	0.5 ppm	☐	≥	0.5 ppm	☐	TCLP	☐	Other			
1,1-dichloroethylene	☐	None	☒	<	0.7 ppm	☐	≥	0.7 ppm	☐	TCLP	☐	Other			
2,4-dinitrotoluene	☐	None	☒	<	0.13 ppm	☐	≥	0.13 ppm	☐	TCLP	☐	Other			
hexachlorobenzene	☐	None	☒	<	0.13 ppm	☐	≥	0.13 ppm	☐	TCLP	☐	Other			
hexachlorobutadiene	☐	None	☒	<	0.5 ppm	☐	≥	0.5 ppm	☐	TCLP	☐	Other			
hexachloroethane	☐	None	☒	<	3.0 ppm	☐	≥	3.0 ppm	☐	TCLP	☐	Other			
methyl ethyl ketone	☐	None	☒	<	200.0 ppm	☐	≥	200.0 ppm	☐	TCLP	☐	Other			
nitrobenzene	☐	None	☒	<	2.0 ppm	☐	≥	2.0 ppm	☐	TCLP	☐	Other			
pentachlorophenol	☐	None	☒	<	100.0 ppm	☐	≥	100.0 ppm	☐	TCLP	☐	Other			
pyridine	☐	None	☒	<	5.0 ppm	☐	≥	5.0 ppm	☐	TCLP	☐	Other			
tetrachloroethylene/perchloroethylene	☐	None	☒	<	0.7 ppm	☐	≥	0.7 ppm	☐	TCLP	☐	Other			
trichloroethylene	☐	None	☒	<	0.5 ppm	☐	≥	0.5 ppm	☐	TCLP	☐	Other			
2,4,5-trichlorophenol	☐	None	☒	<	400.0 ppm	☐	≥	400.0 ppm	☐	TCLP	☐	Other			
2,4,6-trichlorophenol	☐	None	☒	<	2.0 ppm	☐	≥	2.0 ppm	☐	TCLP	☐	Other			
vinyl chloride	☐	None	☒	<	0.2 ppm	☐	≥	0.2 ppm	☐	TCLP	☐	Other			

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

Contains Pu^{239} and Am^{241}. Concentrations above based on total metal concentrations taking into account TCLP and encapsulation by cementation.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☑ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☑ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
D006	D007	D008					

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
A Clayman	10/14/92		04636

Form 1346 (R/92)

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NM0890010515 | Manifest Document No. 53848 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
DAVIS V CHRISTENSEN
Los Alamos National Laboratory
TA54 AREA G MS Los Alamos NM 87545
4. Generator's Phone (505) 66-

A. State Manifest Document Number
B. State Generator's ID

5. Transporter 1 Company Name: LANL
6. US EPA ID Number
C. State Transporter's ID
D. Transporter's Phone

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Los Alamos National Laboratory
RONALD G SALAZAR TA50 BLDG. 69
Los Alamos, NM 87545
10. US EPA ID Number
G. State Facility's ID
H. Facility's Phone 505 66-

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X	RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S.,7,UN2918,HIGHWAY ROUTE CONTROLLED QUANTITYSolid,Elemental, ~~AM44, PU52,~~	1		652	P	
b.		2.690e+01Ci, T.I.=0.1 RADIOACTIVE YELLOW III, Am241, Pu238, Pu239, Pu240, Pu241, Pu242					
c.							
d.							

HMTF REVIEW
APPROVED ☑
DISCREPANCY ☐
7/10/96
JB

J. Additional Descriptions for Materials Listed Above
11a. D008, D006, D007

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY PHONE NO: (505) 667-6211
11a. ERGNO: 165
Highway Route Controlled Radioactive quantity placards required
Road Closure Required
TWSR#: 53848 HMTF#: 15466

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
DAVIS Christenson	Davis Christenson	07	1	1996

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Mike Mayers	Mike Mayers	07	23	1996

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Ron Salazar	Ron Salazar	07	23	1996

GENERATOR | TRANSPORTER | FACILITY

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60648 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

SOY INK

ORIGINAL-RETURN TO GENERATOR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.	X		DM	530	P	
RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7, UN2918, HIGHWAY ROUTE CONTROLLED QUANTITY, 2.69e+01Ci, Fissional, AM241, PU238, PU239, PU240, PU241, PU242, 2.690e+01Ci, T.I.=0.0 RADIOACTIVE YELLOW III,							
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

"EMERGENCY PHONE NO: (505) 667-6211"
11a. ERGNO: 165

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Month	Day	Year
Ronald E. Salazar				

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Martinez				

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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TSDF COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address 4. Generator's Phone ( )	A. State Manifest Document Number B. State Generator's ID
5. Transporter 1 Company Name / 6. US EPA ID Number	C. State Transporter's ID D. Transporter's Phone
7. Transporter 2 Company Name / 8. US EPA ID Number	E. State Transporter's ID F. Transporter's Phone
9. Designated Facility Name and Site Address / 10. US EPA ID Number	G. State Facility's ID H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, RADIOACTIVE MATERIAL, FISSILE, N.O.S., 7,UN2918,HIGHWAY ROUTE CONTROLLED QUANTITY,Fissile,TI 1.=0.0 PU238, PU239, PU240, PU241, PU242, 2.690e+0101, T.I.=0.0 RADIOACTIVE YELLOW III,		1	DM	930	P	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above
11a. D009	

15. Special Handling Instructions and Additional Information

"EMERGENCY PHONE NO. (505) 667-6211"
11a. RQ(Hg) 65

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Printed/Typed Name	Signature	Month	Day	Year
Mark B. Schaar				

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Calvin Dacus		11	17	96

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Rick Martinez		11	17	96

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60646 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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SOY INK

GENERATOR COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039. Expires 9-30-96

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of | Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 Company Name | 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.						
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name | Signature | Month Day Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

Style CF17-6 LABELMASTER, AN AMERICAN LABELMARK CO., CHICAGO, IL 60645 (800)621-5808

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

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FILE COPY OR STATE COPY

DRUM SURVEY SHEET
TA - 50-69, WCRRF

LOCATION

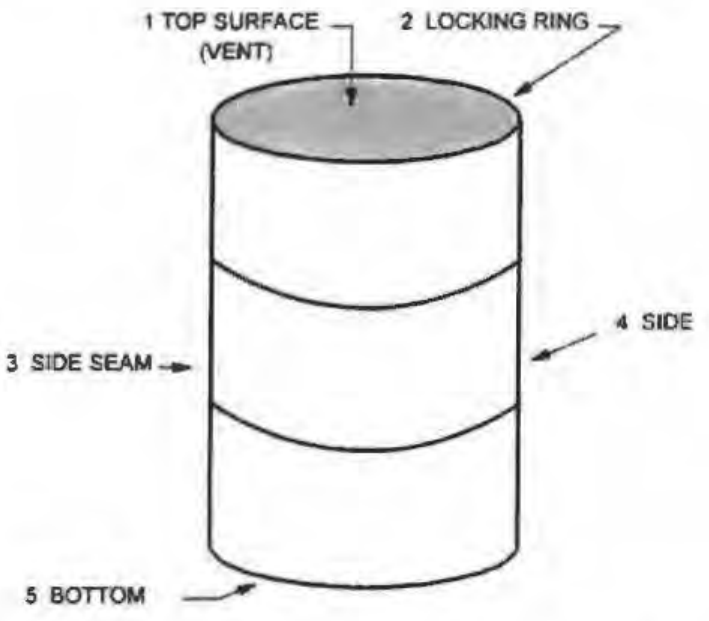
ROOM: 102 ☐
103 ☐
104 ☐
50-193 ☒
BUILDING _____ ☐
OTHER _____ ☐

CONTAINER NUMBER: 53818

DRUM SURVEY DATE: 8/22/96

SURVEYED BY: K. Gonzales
(Signature)

RCT: Salazar ☐
Ault ☒
Other: _____ ☐



GAMMA INSTRUMENT
MODEL: RO-2 ☐
RO-3C ☒
(OTHER) _____ ☐
P/N: 2661
CAL DUE DATE: __/__/__
MAXIMUM GAMMA DOSE RATE
Δcontact 2.1 mR/hr
1 meter 0 mR/hr

NEUTRON INSTRUMENT
MODEL: ESP-2/NRD ☐
PNR-4 ☐
(OTHER) _____ ☐
P/N: 8031
CAL DUE DATE: __/__/__
MAXIMUM NEUTRON DOSE RATE
☐ contact 0.1 mRem/hr
1 meter 0 mR/hr

SMEAR	LOCATION	ALPHA*	BETA*
1	TOP SURFACE	1.76	2.53
2	LOCKING RING	2.55	0.000
3	SIDE SEAM	0.000	1.11
4	SIDE	5.09	0.000
5	BOTTOM	0.018	0.362

*dpm/100 cm sq

ALPHA / BETA INSTRUMENT
BERTHOLD LB770, P/N 844236

DISTRIBUTION:
1. RCT's TA-50 MS E516
2. _____
3. _____

APPROVED
Bobby Gonzales

_____
DATE: __/__/__

Return-Path: <bodenstein@lanl.gov>
X-Sender: sab@wm0.lanl.gov
Date: Mon, 09 Sep 1996 14:15:16 -0600
To: aic@lanl.gov
From: bodenstein@lanl.gov (Stan Bodenstein, CST-7, 5-8462)
Subject: Dewatered Drum Shipment to TA-54
Cc: Triay@lanl.gov, jrh@lanl.gov, shelmick@lanl.gov, grand@lanl.gov,
dvc@lanl.gov, aic@lanl.gov, rickmar@lanl.gov, jbalkey@lanl.gov,
ronwieneke@lanl.gov, kgruetzmacher@lanl.gov, andym@lanl.gov,
gveazey@lanl.gov, dpt@lanl.gov

I-Li,

We received the following drums from you as OVERPACKED 55 gallon drums. We dewatered each of the drums at the WCRRF.

Since each of the drums was in very good condition, we will be shipping the following list of drums back to you as 55 gallon drums, WITHOUT the overpacks. Also indicated is the change in weight due to the removal of water.

Please update the database as necessary.

Drum Number	Pounds Initial Weight	Final Weight
53836	532.0	523.8
53746	534.8	528.0
53783	556.0	548.4
53789	538.6	532.2
53204	531.8	529.4
53174	537.6	534.9
53851	554.8	552.1
53771	560.4	556.3
53715	547.2	543.1
54893	539.2	536.5
52054	833.6	813.2
52484	855.2	833.8
53847	527.0	519.4
53790	557.2	548.2
53734	821.0	815.6
53848	534.8	530.2
54002	804.8	798.6
53712	529.8	523.0
52187	862.6	844.2
53824	536.6	530.8
53772	561.6	545.8
53796	554.2	549.6
53722	554.0	545.8
53703	527.2	517.8
53714	531.8	529.4
53814	533.0	519.2
54894	537.4	535.6
53306	539.4	529.8
53842	540.4	528.0
53802	530.6	520.4

53848

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
Bld. J591
Los Alamos, New Mexico 87545
(505) 667-6839
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

A copy of this form must be attached to each Waste Profile Form and to each Uniform Hazardous Waste Manifest required to transport waste within LA pursuant to 40 CFR 268.7(a)(1).

Waste Profile Form No.	Chemical Waste/ Waste Disposal Record No.	Uniform Hazardous Waste Manifest No.	Date of Waste Pickup
4636	LA0000053848	53848	9/09/93

Check only one.

- [x] Non-wastewater
- [ ] Wastewater (as defined in 40 CFR 268.2(f))

NOTIFICATION OF CALIFORNIA LIST APPLICABILITY

Check all that apply.

- [ ] Liquid hazardous waste containing PCBs at a concentration of ≥50 ppm.
- [ ] A D001 – D017 liquid waste containing ≥134 mg/l, of nickel and/or ≥130 mg/L of thallium.
- [ ] A D001 – D011 waste containing Halogenated Organic Compounds (HOCs) listed in 40 CFR 268, Appendix III, at ≥1000 ppm.

NOTIFICATION OF "D" CHARACTERISTIC EPA WASTE CODES

Check all that apply.

EPA Waste Code	Waste Description and/or Subcategory (as needed)
[ ] D001*	Ignitable characteristic wastes (except for the Section 261.21(a)(1) High TOC Subcategory) that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D001	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than 10% total organic carbon.
[ ] D002*	Corrosive Characteristic Wastes that are managed in non-CWA/non-CWA-equivalent/non-Class I SDWA systems.
[ ] D003	Reactive Sulfides Subcategory
[ ] D003	Reactive Cyanides Subcategory
[ ] D003	Water Reactive Subcategory
[ ] D003	Other Reactives Subcategory (based on 261.23(a)(1))
[ ] D004	
[ ] D005	
[x] D006	Wastes that exhibit the TC for cadmium
[ ] D006	Cadmium Containing Batteries Subcategory
[x] D007	
[x] D008	Wastes that exhibit TC for lead
[ ] D008	Lead Acid Batteries Subcategory
D65 5/23/97 [x] ~~D009~~	Radioactive Lead Solids Subcategory
[ ] D009	High Mercury-Organic Subcategory (≥260 mg/kg Hg with organics and not incinerator residues)
[ ] D009	High Mercury-Inorganic Subcategory (≥260 mg/kg Hg [with inorganics])
[ ] D009	Low Mercury Subcategory (<260 mg/kg Hg)
[ ] D009	All D009 wastewaters
[ ] D009	Elemental mercury contaminated with radioactive materials.
[ ] D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory
[ ] D010	
[ ] D011	

[ ] D012*	[ ] D020*	[ ] D028*	[ ] D036*
[ ] D013*	[ ] D021*	[ ] D029*	[ ] D037*
[ ] D014*	[ ] D022*	[ ] D030*	[ ] D038*
[ ] D015*	[ ] D023*	[ ] D031*	[ ] D039*
[ ] D016*	[ ] D024*	[ ] D032*	[ ] D040*
[ ] D017*	[ ] D025*	[ ] D033*	[ ] D041*
[ ] D018*	[ ] D026*	[ ] D034*	[ ] D042*
[ ] D019*	[ ] D027*	[ ] D035*	[ ] D043*

*All applicable Underlying Hazardous Constituents in these characteristic wastes must be checked in Table UTS.

Los Alamos
National Laboratory

LAND DISPOSAL RESTRICTIONS NOTIFICATION FORM

NOTIFICATION FOR F001 – F005 SPENT SOLVENT WASTES

Check all that apply.

Spent solvent wastes with the following constituents only.

EPA Waste Code	Constituents in the waste	
☐ F001	☐ Acetone	☐ Isobutyl alcohol
☐ F002	☐ Benzene	☐ Methanol
☐ F003	☐ n-Butyl alcohol	☐ Methylene chloride
☐ F004	☐ Carbon disulfide (wastewater only)	☐ Methyl ethyl ketone
☐ F005	☐ Carbon tetrachloride	☐ Methyl isobutyl ketone
	☐ Chlorobenzene	☐ Nitrobenzene
	☐ o-cresol	☐ Pyridine
	☐ m-cresol	☐ Tetrachloroethylene
	☐ p-cresol	☐ Toluene
	☐ Cresol-mixed isomers (Cresylic acid)	☐ 1,1,1-Trichloroethane
	☐ Cyclohexanone (wastewater only)	☐ 1,1,2-Trichloroethane
	☐ o-Dichlorobenzene	☐ 1,1,2-Trichloro – 1,2,2-trifluoroethane
	☐ Ethyl acetate	☐ Trichloroethylene
	☐ Ethyl benzene	☐ Trichloromonofluoromethane
	☐ Ethyl ether	☐ Xylenes – mixed isomers (o-, m-, p-xylene)

Check all that apply.

EPA Waste Codes	Constituents in the waste
☐ F003	☐ Carbon disulfide
☐ F005	☐ Cyclohexanone
	☐ Methanol

Note: Treatment standards for these constituents apply to F001 – F005 wastes wh... contain only one, two, or all three of these constituents.

Check only one, if applicable.

EPA Waste Code	Constituents in the waste
☐ F005	☐ Containing 2-nitropropane as the only listed F001 – F005 solvent.
	☐ Containing 2-ethoxyethanol as the only listed F001 – F005 solvent.

NOTIFICATION FOR OTHER "F" WASTES

Check only one, if applicable.

- ☐ F006
- ☐ F007
- ☐ F008
- ☐ F009
- ☐ F027

CONTAINER PROFILE
53848
T-MTRU-TEMP

WS ID: 28588
C ID: 761588
ACTIVE

GENERAL INFORMATION

Container ID:	761588		
Labeled ID:	53848		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	28588	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	05-Aug-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	05-Aug-1993
Compactible:		**Closed Date:**	05-Aug-1993

Discard Matrix:

TID(s):

Gen Contact:

Insert By: WCATS APPLICATION (000000)

Waste Desc: (LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT.

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	530.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	63.00 lb
		Net Weight:	467.00 lb

LOCATION

Pickup (Origin): LANL: 55-PF4: GEN-AREAS

Current: LANL: 54-G: 000153: C035: L01: R02

waste compliance and tracking system

CONTAINER PROFILE
53848
T-MTRU-TEMP

WS ID: 28588
C ID: 761588
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED HOMOGENEOUS SOLIDS

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
-----	K567	---	---	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	NOT AVAILABLE		0/0
Not Specified	NA	Carbon Composite	0	DJ162		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

CONTAINER PROFILE
53848
T-MTRU-TEMP

WS ID: 28588
C ID: 761588
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 71964, Status: Active							
B/G Survey			= 0.90	=	=	Not Applicable	
Neutron Survey			= 0.70	=	=	Not Applicable	
Smear Results			Not Applicable			= 0.00	= 5.60

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 340257, Date: 08/05/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	4.43E+000	g	0.00E+000	N				NONE
52	4.18E+001	g	0.00E+000	N				NONE
Am-241	1.52E+001	Ci	0.00E+000	Y			Y	
Pu-238	7.17E-002	Ci	0.00E+000	Y			Y	
Pu-239	2.44E+000	Ci	0.00E+000	Y			Y	
Pu-240	5.70E-001	Ci	0.00E+000	Y			Y	
Pu-241	8.66E+000	Ci	0.00E+000	Y			Y	
Pu-242	3.30E-005	Ci	0.00E+000	Y			Y	
U-234	5.21E-006	Ci	0.00E+000	Y			Y	
U-235	9.05E-008	Ci	0.00E+000	Y			Y	

53850

Los Alamos
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

LA00000053850

WASTE STORAGE RECORD

WASTE PACKAGE SERIAL NUMBER: LA88 0105058

I. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	ADDITIONAL INFORMATION
Group: INST-12	TID# H25071
TA: 53	
Building: PF-4	
Program Code: K530	

CODE	CONTAINER	INTERNAL SHIELDING Type	Thickness (in.)	RADIONUCLIDE CONTENT Nuclide	Amount ±	C = Curie G = Gram
01	☑ Steel Drum (55 gal.)					
02	☐ Steel Overpack (Drums)					
03	☐ Steel Box (68 in. X 54 in. X 38.5 in.)	☐ None		Pu-239	5.70E+0	G
04	☐ Steel Overpack (FRP Box)			Am-241	1.20E+0	G
	☐ Other (Describe)	☑ Lead	6.3E-2			
		☐ Steel				
Drum Lot Code: H1	Year of Mfr: 87	☐ Concrete				
Manufacturer's Box Serial Number: N/A		☐ Other				
Process Batch Code: N/A						

Gross Wt. (lb)	5.33E+2
Organic Mat'l Wt. (lb)	1.77E+1
Organic Mat'l Vol (%)	10
Content Code	0016
Date Closed (MMDDYY)	103091888

HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
Lead	D008	3.5E+2 G
Tetrachloroethylene	U210	2.4E+3

The data in this section were collected, and the waste described herein was packaged and labeled according to the procedures defined in the Los Alamos TRU Waste Certification Plan and its appropriate attachment(s). The data are correct and complete to the best of my knowledge.

Printed Name: Chester H Smith Sr. | Signature: [signature] | Date: 05-07-88

II. GENERATOR—SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	0.5E+0	Survey Meter Model: RO-3C	Property No.: 2014
Neutron Dose Rate (mrem/h)	0.8E+0	Survey Meter Model: PNR-4	Property No.: 5278
Total Dose Rate (mrem/h)	1.3E+0		
Alpha Contamination (dpm/100cm²)	1.3E+1	*The data in this section were collected as prescribed in approved procedures. The package is safe to handle and transport.*	
Beta-Gamma Cont. (dpm/100cm²)	1.9E+1		

Printed Name: Floyde Smith | Signature: [signature] | Date: 4/26/88

III. HSE-7 SOLID-WASTE RECORDS OFFICE INFORMATION

The data package for this waste has been reviewed by HSE-7. The generator is authorized to arrange transportation to TA-54 per AR 10-5.

Printed Name: BRUCE T. REICH | Date: 05/11/88
Signature: [signature]

IV. STORAGE-SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	7.0E-1	Survey Meter Model: RO-3C	Property No.: 2620
Neutron Dose Rate (mrem/h)	5.0E-1	Survey Meter Model: PNR-4	Property No.: 4901
Total Dose Rate (mrem/h)	1.2E+0		
Alpha Contamination (dpm/100cm²)	0.0E+0	*The data in this section were collected at the TA-54 waste storage/disposal site as defined in approved procedures. The package is acceptable for handling and storage.*	
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0		

Printed Name: Glenn Corbin | Signature: [signature] ZK | Date: 7/28/88

V. STORAGE SITE INFORMATION MD-33

Received by: [signature]	Date received: 7-26-88	Pad No.: 2	Layer: 1	☑ E ☐ e ☐ W
This package was visually inspected and found to be properly labeled and in good condition. It was accepted according to approved procedures.		Post No.: 15	Date Stacked: 9-2-88	
		This waste package was stored at this location according to approved procedures.		
Printed Name: Eugene Salazar	Date: 7/28/88	Printed Name: [signature]	Date: 9-2-88	
Signature: Eugene Salazar		Signature: ROSILA F. GARCIA		

HS Form Number 10-5A (11/87)

LOS ALAMOS NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

TRU 006
LA53850
LA53850

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Drum Lot Code: NML0159AAG	Inspected Items		
Year of Manufacture: 1993	☒ Ring, Bolt, and Nut	☒ Chime	☒ Dents
Box Serial Number: N/A	☒ Lid and Gasket	☒ Gouges	☒ Paint
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.	Printed Name: Steven Griego	Date: 3/29/93	
	Signature: Steven Griego		

2. GENERATOR'S PACKAGE INFORMATION

ORIGIN OF WASTE	Group: NMT-2	Technical Area: TA-55	Building: PF4	Program Code: K567

Additional Information: 55 GAL CEMENT DRUM OVERPACKED IN 85-GAL ENPAC POLY-LINED DRUM T.O.# B20074

CODE	CONTAINER	INTERNAL SHIELDING	
		Type	Thickness (in.)
01	☐ Steel Drum (55 gal.)	☐ None	
02	☐ Standard Waste Box		
03	☒ Other (Call TWCO)	LEAD	6.3E-12
04	☐ RH Canister		.E

Waste Profile Request Number: 01674

Carbon Filter ID: 01 LA 3 4 1 5 | 02 LA 4 0 6 18

Process Batch Code: N/A

RADIONUCLIDE CONTENT							C=Curie M=Gram
Nuclide	Amount +/-			Uncertainty +/-			
PU-239	5.6E+0	E	+0	.E			M
AM-241	1.2E+0	E	+0	.E			M
	.E			.E			
	.E			.E			
	.E			.E			
	.E			.E			

Gross Weight (lb.)	16.5E-2
Organic Material Wt. (lb.)	1.4E-1
Organic Material Volume (%)	10
TRUCON Code	111-41A
Date Closed (MM/DD/YY)	07/29/93

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
LEAD SHIELDING	D010 1E	3.5E+4
CADMIUM	D010 16	1.8E+0
CHROMIUM	D010 17	6.5E+1

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures. The data are correct and complete to the best of my knowledge.

LEAD * D008 1.0E+1

Printed Name: KATHLEEN M. GRUETZMACHER Signature: K M Gruetzmacher Date: 8/5/93

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	8.0E-1	Survey Meter Model: RO-3C	Property Number: 2646
Neutron Dose Rate (mrem/h)	1.0E+0	Survey Meter Model: PNR-4	Property Number: 4909
Total Dose Rate (mrem/h)	1.8E+0	The data in this section were collected according to approved procedures.	
Alpha Contamination (dpm/100cm²)	0.0E+0	Printed Name: R J Cox	Date: 8/4/93
Beta-Gamma Cont. (dpm/100cm²)	0.0E+0	Signature: R J Cox	

4. EM-7 REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by EM-7. The generator is authorized to arrange transportation to TA-54 by AR 10-5 DOE 8/12/93	Printed Name: R.G. Britton	Date: 8-6-93
	Signature: R.G. Britton	

* TETRACHLOROETHYLENE 2.4E+3

TRU 006
LA53850
LA53850

THIS PAGE FOR EM-7 USE ONLY

5. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	08	16	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	01	93	HARRi · WiLSER	Harri Wilder

6. PRELOAD VISUAL INSPECTION

This waste package was visually inspected at the time of pickup according to approved procedures and was found to be free of obvious damage or defects.

Comments

Printed Name	Signature	Date
GENE' E. LOPEZ	Gene E. Lopez	8/23/93

9-1-93 CY
9-1-93 RW

7. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	14.0 E-11	Survey Meter Model: RO3C	Property Number: 2605
Neutron Dose Rate (mrem/h)	13.0 E-11	Survey Meter Model: PNR 4	Property Number: 5229
Total Dose Rate (mrem/h)	17.0 E-11	*The data in this section were collected according to approved procedures.*	
Alpha Contamination (dpm/100cm²)	12.2 E+10	Printed Name: J.T. MILLER	Date: 8-27-93
Beta-Gamma Cont. (dpm/100cm²)	16.3 E+10	Signature: J.T. Miller	

8. STORAGE SITE INFORMATION

Received By (*Initials*)	Date Received	ORIGINAL STORAGE DATA	
CM	8-25-93	CY Dome	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Pad Number: 153	Layer: 1	Row Number: 4
		Column Number: 19	Date Stacked (MM,DD,YY): 08/30/93
Printed Name: Rick Martinez	Date: 8-25-93	Printed Name: Charlotte Fernandez	Date: 9/8/93
Signature: Rick Martinez		Signature: Charlotte Fernandez	

9. EM-7 REVIEW

The data entered in Sections 6, 7, and 8 have been reviewed according to approved procedures.	Printed Name: BRUCE LE BRUN	Date: 9/13/93
	Signature: Bruce Le Brun	

10. TRU WASTE CERTIFICATION OFFICE INFORMATION

COMMENTS	NONCONFORMANCE REPORT NUMBER(S)	HOLD-TAG NUMBER(S)
1		
Printed Name	Signature	Date

11. DATA MANAGEMENT INFORMATION

	M M	D D	Y Y	Printed Name	Signature
Date Entered in Database	09	13	93	Charlotte Fernandez	Charlotte Fernandez
Date Entry Verified	09	13	93	HARRi WiLSER	Harri Wilder

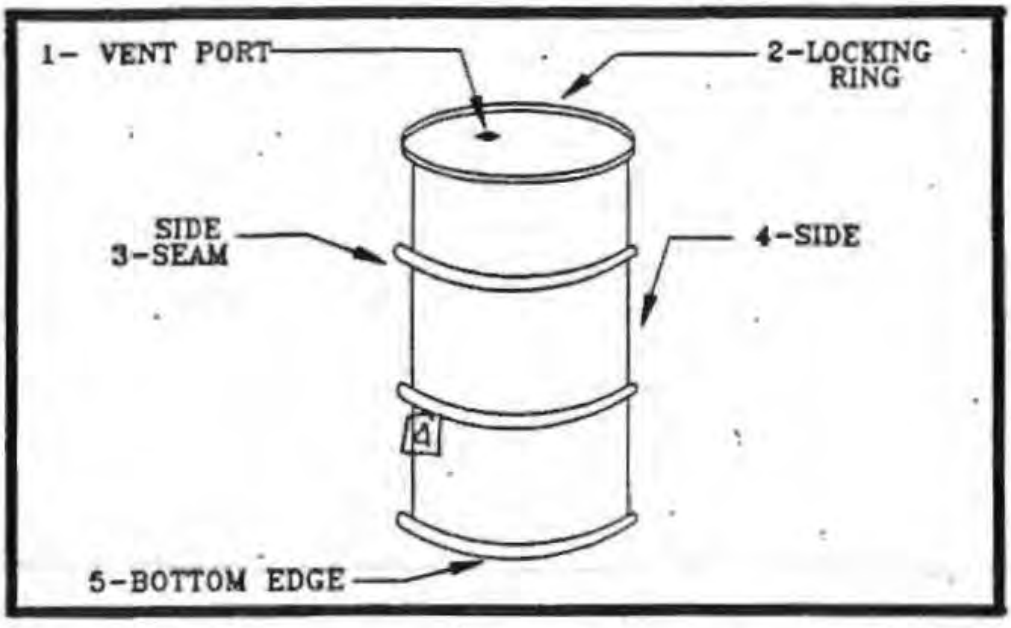
12. DUPLICATE COPY

	M M	D D	Y Y	Printed Name	Signature
Date Duplicate Filed	11	21	93	Renee Sandoval	Renee Sandoval

TRU CONTAINER SMEAR SURVEY DATA SHEET

MAILED
AUG 0 4 1993

TA 3 BUILDING 29 SAMPLE DATE 7-29-93
RPT R-COX CONTAINER NO. LA000000053850



△ Maximum Gamma Dose Rate .8 mR/hr.
□ Maximum Neutron Dose Rate 1.0 mRem/hr.

SMEAR NO.	LOCATION	*ALPHA	*BETA-GAMMA
1	VENT PORT	NDA	NDA
2	LOCKING RING	↓	↓
3	SIDE SEAM	↓	↓
4	SIDE	↓	↓
5	BOTTOM EDGE	↓	↓

*dpm/100cm. sq.

GAMMA INSTRUMENT
Model: RO-3C
P/N: 2646
CDD: 9-16-93

NEUTRON INSTRUMENT
Model: ~~ESP-1~~ PNR-4
P/N: ~~0006~~ 4909
CDD: 9[redacted]-22-93

DISTRIBUTION:
1. RPT's TA-54 MS J592
2. RCT's TA-3 CMR MS G749
3. _____

ANALYZED BY: Ralph Vigil
DATE: 8-3-93

2/3/93
K. M. Gruetzmacher

The amounts of the hazardous materials, cadmium, chromium, and lead were calculated based on a "worst-case concentration" of these materials in a cement package. These concentrations are based on RCRA-toxic metal analyses of EV waste, shown in these waste packages as "EV Bottoms," "EV Filtrate," or "Lean Nitric Solution." Refer to NMT-2-PROC-92-116, memo to Bruce Reich, EM-7 from Gerry Veazey, NMT-2 dated 10/21/92.

Metal	Worst-Case Concentration (g/l)
Cd	0.085
Cr	3.300
Pb	0.480

DISCARDABLE WASTE LOG SHEET

Effective Date 10/19/87

Page 1 of 1 Pages

1	A	B	8	0	1	0	0	5	0	5	9	8

WASTE PACKAGE SERIAL NUMBER

Proc. [X] N-Comb [ ] Comb [ ] Pu-238 [ ]

Vent Clip or Carbon Filter installed installer's INITIALS [CF]

< Lead Lined [Y]

90 Mil Drum Liner [N]

1/8 Inch Drum Liner [N]

CONTAINER: open [ ] In-Line [X]

Tamper Indicating Seal # A05071

Waste Code: N/A

Date Sealed 03-04-88

ITM NO	ITEM ID	FROM RM/BOX	PKG WT Kg	MATRIX (MATERIAL)	MEAS. CODE	SNM GRAMS	MT	%	CERTIFIED PERSONNEL	REMARKS (Wt. in Kg.) ORGANICS V%	ORGANICS WT.	HAZARDOUS MATERIALS	OTHER REMARKS	AUTH. PG/LN	DATE mm/dd/yy
0	2DSMEFIB	434 C-469	109.40 ~~109.40~~	Nitrate Solution Iron	RDD	3.65	52	6.0	Smith					1/11	03/02/88
1	KITI2	48 B-14	9.95	organic	RDD	0.53	52	6.0	Smith	0.95	2.0			1/15	03/04/88
2	CLOOX ~~IDIS~~	203 C-441	9.95	Nitrate Solution Iron	RDD	0.00	52	~~5.9~~ ~~6.0~~	Smith					1/11	03/04/88
3	IIISO3137	420 C-436	9.95	organic	RDD	1.04	52	6.0	Smith	0.95	3.2 ~~2.4~~	Tetrachloroethylene 2.4 kg		1/15	03/04/88
4	2LR2LEFIA	434 C-468	34.81	Nitrate Solution Iron	RDD	0.65	52	6.0	Smith					1/11	03/04/88
5	2DS17EFIB	434 C-467		Nitrate Solution Iron	RDD	1.11	44	99.9	Smith					2A/III	03/02/88
6	2LR26EFIA	434 C-468		Nitrate Solution Iron	RDD	0.09	44	99.9	Smith					2A/III	03/04/88
7														/	/ /
8														/	/ /
9										2.2	2.13	Packaging		/	/ /
TOTALS	Pkg Wt. Kg		174.06	MST-12 signatures for Gross Weight		5.67	52	TOTALS		4.10	~~7.33~~ 7.13	Haz. Mat.- Kg 2.4			
	x 2.2046 = Pkg Wt Lbs		383.73			1.20	44	organics pounds			~~14.71~~ 13.51				
55 gal. drum TARE Pounds			149.34	for Accountability check.				QA Data Pkg. Approval				MST-10 Assay Value N/A			
Scale GROSS WT. Pounds			533.07									Instrument ID.			
												MST-10 Signature			

This container's waste was packaged and the MST-12 data on the DWLS and the CWSR were collected according to procedures defined in the Los Alamos Certification Plan and the appropriate attachment(s). MST-12 Signature Charles L. Fox

53850

Los Alamos
NATIONAL LABORATORY

Environmental Management
Environmental Stewardship Program
EM, J591
Los Alamos, New Mexico 87545
(505) 667-6808
FAX (505) 665-8118

Date: October 2, 1996
Refer to: EM/ES:96-253

Ms. Cynthia Longenbaugh
Waste Management Division
U.S. Department of Energy
Albuquerque Operations Office
P.O. Box 5400
Albuquerque, NM 87185-5400

Dear Ms. Longenbaugh:

SUBJECT: TRU WASTE GENERATION BASELINE CHANGE

In a recent data validation review of FY 1993, 1994, and 1995 Laboratory waste volumes, it was determined that the routine TRU/MTRU reported in 1993 was incorrect. Only 53 m^3 of the 284 m^3 of TRU/MTRU reported as routine waste was correctly characterized as routine waste from that year. The remainder was either non-routine, or prior year waste that happened to be sent from TA-55 to TA-54 in 1993.

ACTIVITY	VOLUME (M3)
a. Routine wastes generated at TA-55 during 1993	53
b. Overpack of drums (~233 ea.) generated before 93	68
c. Legacy gloveboxes from previous years	156
d. One-meter diameter steel vessels (12 ea.) cleaned out during previous years	07
	284

This 1993 waste volume correction is significant as the Department of Energy Pollution Prevention goals and the University of California contract performance measures both determine routine waste minimization performance by comparing present year waste volumes with 1993 volumes (see enclosed graph). We request that the 1993 baseline numbers for routine TRU waste generation at Los Alamos National Laboratory be corrected.

Sincerely,

Thomas P. Starke

Thomas P. Starke
Environmental Stewardship Program Manager
Los Alamos National Laboratory

Enclosure: a/s

TS:lma

An Equal Opportunity Employer/Operated by the University of California

TRU 006

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

WASTE PROFILE

LA53850

EM-8 USE ONLY
Reference Number 6714

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPF, MS K490

Division/Group	Telephone	Mail Stop	Technical Area	Building	Room
NMT/NMT2	5-4356	E501	55	PF-2	120

Method of Characterization
- ☐ *Knowledge of Process* (KOP)
- ☐ MSDS attached (optional)
- - OR -
- ☐ *Chemical/Physical Analysis* (specify below)
- ☐ Request for analysis ☐ Analysis attached

Waste Category *(Choose one or more of the categories below that most accurately describe your waste)*

☐ Flammable	☐ Pesticide	☐ Photographic	☐ Spent coolant	☐ Plastics
☐ Combustible	☐ Beryllium	☐ Sanitary	☐ Aerosol cans	☐ Filter media
☐ High explosive	☐ Asbestos	☐ Radiochemistry	☐ Motor oil	☐ Vacuum filter media
☐ DOT oxidizer	☒ Solvent	☐ Paint waste	☐ Pump oil	☒ Cement paste
☐ Pyrophoric	☐ Waste rags	☐ Laboratory trash	☐ Capacitor oil	☐ Nonsalvageable
☐ Cyanide	☐ Glass	☐ Metallurgic	☐ UST remediation	☐ Nonrecyclable
☒ Heavy metal	☐ Plating solution	☐ Scrap metal	☐ Contaminated soils	☐ Building debris
☐ Corrosive	☐ Etchant	☐ Medical/Biological	☐ Environmental/SWMU	☐ Firing site debris

General Description *(provide a general description of the waste and/or waste-generating process below)*

TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM-BASED CEMENT AND TETRACHLOROETHYLENE

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
☒ Solid	☐ < 100°	☐ 2.0 or less	☐ Unstable	☐ < 50 ppm
☐ Semisolid/sludge	☐ 100° to 139°	☐ 2.1 to 12.4	☐ Water reactive	☐ 50 to 500 ppm
☐ Absorbed liquid	☐ 140° to 200°	☐ 12.5 or greater	☐ Cyanides	☐ > 500 ppm
☐ Liquid	☐ > 200°	☒ Not aqueous	☐ Sulfides	☒ None
☐ Gas cylinder or vessel	☒ Not ignitable		☐ Shock sensitive	
☐ Multilayered			☐ Class A or B explosive	
☐ Suspended solids			☒ Nonreactive	
☐ Powder or ash				

Waste Origination

A. Is this waste generated in a radiation controlled area? ☒ Yes ☐ No

B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) ☒ Yes ☐ No

C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.

Radioactivity

☐ Nonradioactive ☐ Suspect ☒ Radioactive

Activity Measure	Radiation Type	Half-life
☐ ≤ 2.0 nCi/g	☒ alpha	☐ $t^{1/2}$ < 20 yr
☐ > 2.0 nCi/g	☒ beta	☒ $t^{1/2}$ ≥ 20 yr
☐ > 10.0 nCi/g	☒ gamma	
☒ > 100 nCi/g	☐ tritium	

WASTE GENERATOR CERTIFICATION: *Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.*

Waste Generator's Name (last, first, middle)	Z Number	Signature	Date
GRUETMACHER, KATHLEEN M.	099731	K M Gruetzmacher	7/27/93

If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). →	Name (last, first, middle)	Mail Stop

Form 1346 (6/92) *Complete Reverse Side* Page 1

RECEIVED AUG 2 0 1993

Toxic Metals *(Indicate if each of the following heavy metals exists in your waste at the posted concentrations)*

arsenic	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☒ Other SW846-6010A
barium	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☒ Other
cadmium	☐ None	☐ < 1.0 ppm	☒ ≥ 1.0 ppm	☐ TCLP	☒ Other
chromium	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
lead	☐ None	☐ < 5.0 ppm	☒ ≥ 5.0 ppm	☐ TCLP	☒ Other
mercury	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☒ Other SW846-6020 (MOD)
nickel	☐ None	☒ < 134.0 ppm	☐ ≥ 134.0 ppm	☐ TCLP	☒ Other SW846-6010A
selenium	☒ None	☐ < 1.0 ppm	☐ ≥ 1.0 ppm	☐ TCLP	☐ Other
silver	☒ None	☐ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
thallium	☐ None	☒ < 130.0 ppm	☐ ≥ 130.0 ppm	☐ TCLP	☒ Other KOP

Organic Compounds *(Indicate if each of the following organic compounds exists in your waste at the posted concentrations)*

benzene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☒ Other KOP
carbon tetrachloride	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
chlorobenzene	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
chloroform	☐ None	☒ < 6.0 ppm	☐ ≥ 6.0 ppm	☐ TCLP	☐ Other
cresol	☐ None	☒ < 200.00 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
1,4-dichlorobenzene	☐ None	☒ < 7.5 ppm	☐ ≥ 7.5 ppm	☐ TCLP	☐ Other
1,2-dichloroethane	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
1,1-dichloroethylene	☐ None	☒ < 0.7 ppm	☐ ≥ 0.7 ppm	☐ TCLP	☐ Other
2,4-dinitrotoluene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobenzene	☐ None	☒ < 0.13 ppm	☐ ≥ 0.13 ppm	☐ TCLP	☐ Other
hexachlorobutadiene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
hexachloroethane	☐ None	☒ < 3.0 ppm	☐ ≥ 3.0 ppm	☐ TCLP	☐ Other
methyl ethyl ketone	☐ None	☒ < 200.0 ppm	☐ ≥ 200.0 ppm	☐ TCLP	☐ Other
nitrobenzene	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
pentachlorophenol	☐ None	☒ < 100.0 ppm	☐ ≥ 100.0 ppm	☐ TCLP	☐ Other
pyridine	☐ None	☒ < 5.0 ppm	☐ ≥ 5.0 ppm	☐ TCLP	☐ Other
tetrachloroethylene/perchloroethylene	☐ None	☒ < 0.7 ppm	☒ ≥ 0.7 ppm	☐ TCLP	☐ Other
trichloroethylene	☐ None	☒ < 0.5 ppm	☐ ≥ 0.5 ppm	☐ TCLP	☐ Other
2,4,5-trichlorophenol	☐ None	☒ < 400.0 ppm	☐ ≥ 400.0 ppm	☐ TCLP	☐ Other
2,4,6-trichlorophenol	☐ None	☒ < 2.0 ppm	☐ ≥ 2.0 ppm	☐ TCLP	☐ Other
vinyl chloride	☐ None	☒ < 0.2 ppm	☐ ≥ 0.2 ppm	☐ TCLP	☐ Other

Hazardous Constituents *(Identify hazardous constituents for F- and K-listed wastes and substances causing waste to exhibit a characteristic)*

Additional Comments *(Provide comments regarding the chemical or radiological nature of the waste)*

CONTAINS Pu^{239} AND Am^{241}. CONCENTRATIONS ABOVE BASED ON TOTAL METAL CONCENTRATIONS TAKING INTO ACCOUNT TCLP AND ENCAPSULATION BY CEMENTATION.

Do not write in this box - EM-8 use only

Waste Classification

- ☐ Non-RCRA waste
- ☐ RCRA-regulated solid waste
- ☒ RCRA-regulated hazardous waste
- ☐ Radioactive only
- ☐ PCB
- ☐ non-PCB TSCA waste
- ☐ asbestos
- ☐ municipal refuse
- ☐ nonhazardous chemical waste
- ☐ administratively controlled waste
- ☐ sanitary/industrial sludges
- ☐ hazardous waste
- ☐ mixed low-level waste
- ☒ mixed transuranic waste
- ☐ low-level waste
- ☐ transuranic waste

RCRA Code 1	RCRA Code 2	RCRA Code 3	RCRA Code 4	RCRA Code 5	RCRA Code 6	RCRA Code 7	RCRA Code 8
F002	D006	D007	D008				

EM-8 Reviewer's Signature	Date	Cost Center/Program Code for Analysis	Reference Number
Michelle McCarl	7/30/93		16714

Form 1346 (6/92)

CONTAINER PROFILE
53850
T-MTRU-TEMP

WS ID: 34589
C ID: 761711
ACTIVE

GENERAL INFORMATION

Container ID:	761711		
Labeled ID:	53850		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	34589	**Container Subtype:**	85-gallon steel drum
Work Path:	T-MTRU-TEMP	**Origin Date:**	29-Jul-1993 12:00 am
Quantity (Univ):		**Accum Start Date:**	29-Jul-1993
Compactible:		**Closed Date:**	29-Jul-1993

Discard Matrix:

TID(s):

Gen Contact:

Insert By: WCATS APPLICATION (000000)

Waste Desc: (LEGACY WCCP) TRU LIQUID AND PARTICULATE WASTES IMMOBILIZED IN GYPSUM - BASED CEMENT AND TETRACHLOROETHYLENE

WEIGHTS AND VOLUMES

Container Volume:	0.32 CM	**Gross Weight:**	651.00 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	110.00 lb
		Net Weight:	541.00 lb

LOCATION

Pickup (Origin): LANL: 55-PF4: GEN-AREAS

Current: LANL: 54-G: RTR-HE

waste compliance and tracking system

CONTAINER PROFILE
53850
T-MTRU-TEMP

WS ID: 34589
C ID: 761711
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: **Year of Manuf:** 1993

Lot No.: **Serial No:**

Solution Package: 36: SP CIN01 Container Issues (Cans)

TRUCON Code: LA114A: SOLIDIFIED INORGANIC

Shipping Category:

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-36: WASTE STREAM DEFINITION NOT AVAILABLE

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): YES **Retrievable:** **BIR WS Code:** LA-M4

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
------	K567	----	----	100.00			*SELECTION LIST*

EPA CODES

System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D006A	D006	Cadmium
D007A	D007	Chromium
D008A	D008	Lead
D039	D039	Tetrachloroethylene

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	Carbon Composite	0	3495		0/0
Not Specified	NA	Carbon Composite	0	4068		0/0

** Diffusivity is specified in moles per second per mole fraction*

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
0.00 kg	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

CONTAINER PROFILE
53850
T-MTRU-TEMP

WS ID: 34589
C ID: 761711
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 72145, Status: Active							
B/G Survey			= 0.40	=	=	Not Applicable	
Neutron Survey			= 0.30	=	=	Not Applicable	
Smear Results			Not Applicable			= 2.20	= 6.30

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 340504, Date: 07/29/1993, Derivation: Generator Entered Results (e.g., Offsite Assay)								
44	1.20E+000	g	0.00E+000	N				NONE
52	5.67E+000	g	0.00E+000	N				NONE
Am-241	4.12E+000	Ci	0.00E+000	Y			Y	
Pu-238	9.72E-003	Ci	0.00E+000	Y			Y	
Pu-239	3.30E-001	Ci	0.00E+000	Y			Y	
Pu-240	7.72E-002	Ci	0.00E+000	Y			Y	
Pu-241	1.17E+000	Ci	0.00E+000	Y			Y	
Pu-242	4.47E-006	Ci	0.00E+000	Y			Y	
U-234	7.06E-007	Ci	0.00E+000	Y			Y	
U-235	1.23E-008	Ci	0.00E+000	Y			Y	

57347

Los Alamos
NATIONAL LABORATORY

TRU WASTE STORAGE RECORD

LA00000057347

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Purchase Order #	PR2777381	Inspected Items		
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging.		[X] Ring, Bolt, and Nut	[X] Chime	[X] Dents
		[X] Lid and Gasket	[X] Gouges	[X] Paint
Name: LEHMAN CHARLES JR		Znumber: 071894		Date: MAR 31 2000

2. GENERATOR'S PACKAGE INFORMATION

Group	Technical Area	Building	Program Code
NMT-7	55	PF-4	8J0700 KG19 3000 3000

Additional Information: TID

CONTAINER	LINER	INTERNAL SHIELDING
[X] Steel Drum (*55 gal.*)	[ ] None	[ ] None
[ ] Steel Drum (*85 gal.* Overpack)	[ ] 90 mil liner	Type: LEAD; Thickness (*in.*): 6.3E-2
[ ] Standard Waste Box	[X] 125 mil liner	
[ ] RH Canister		
[ ] Other (*Call TWCO*)		
[ ] Standard Waste Box Overpack		

Carbon Filter ID: 01 FS1940; 02

RADIONUCLIDE CONTENT

Nuclide	Amount	Uncertainty	C = Curie, M = Gram
PU-238	1.461E-3	5.062E-5	M
PU-239	1.370E+1	4.748E-1	M
PU-240	8.767E-1	3.037E-2	M
PU-241	2.922E-2	1.012E-3	M
PU-242	2.922E-3	1.012E-4	M
AM-241	4.025E+0	1.783E-1	M

Waste Profile Request Number	31409
Process Batch Code	NA
Gross Weight (*lb.*)	7.69E+2
Net Weight (*lb.*)	6.07E+2
Shipping Category	1000400133
LANL Waste Stream ID	TA-55-14
TRUCON Code	114B
Date Closed (*MMDDYY*)	NOV 27 2000

[X] DP [ ] NON DP If Non-DP waste, attach DOE approval documentation

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (*g*)
None		

Accumulation Start Date (*MMDDYY*)

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures.

Name: SMITH CHESTER A JR | Znumber: 087715 | Date: SEP 6 2001

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

		Survey Date	Survey Meter Model	Property Number	Calibration Void Date
Gamma Dose Rate (*mrem/h*) (contact)	2.0E-1	MAR 28 2001	RO2	003370	JUL 31 2001
Neutron Dose Rate (*mrem/h*) (contact)	3.0E-1	MAR 28 2001	SNRD	012159	OCT 11 2001
Total Dose Rate (*mrem/h*) (contact)	5.0E-1				
Total Dose Rate (*mrem/h*) (1 meter)	3.0E-1				
Alpha Contamination ($dpm/100cm^2$)	0.0E+0				
Beta-Gamma Cont. ($dpm/100cm^2$)	0.0E+0				

The data in this section were collected according to approved procedures.

Name: MONTAGUE CHARLENE L | Znumber: 110850 | Date: SEP 6 2001

Corrected Data Invalidate this Form

4. TRU WASTE MANAGEMENT REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by TRU Waste Management. The generator is authorized to arrange transportation to TA-54.	Name: ARMIJO JODY A	
	Znumber: 108696	Date: SEP 11 2001

5. PRELOAD VISUAL INSPECTION

This waste package was visually inspected prior to transport according to approved procedures. It meets WAC packaging and labeling requirements and is free from obvious damage and defects.	Printed Name: Gail M. Welsh	Date *(Inspection Valid for 30 Days)*: 9-17-01
	Signature: Gail M. Welsh	

6. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (*mrem/h*): 0.0E+0	Survey Meter Model: RO-20	Property Number: 9848	Calibration Void Date: 10-11-01
Neutron Dose Rate (*mrem/h*): 0.0E+0	Survey Meter Model: E600/SNRD	Property Number: 12048/13136	Calibration Void Date: 11-14-01/4-2-02
Total Dose Rate (*mrem/h*): 0.0E+0	*The data in this section were collected according to approved procedures.*		
Alpha Contamination ($dpm/100cm^2$): 0.0E+0	Printed Name: Terry L Bishop		Date: 10/2/01
Beta-Gamma Cont. ($dpm/100cm^2$): 0.0E+0	Signature: Terry L Bishop		

7. STORAGE SITE INFORMATION

Received By (*Initials*): BV	Date Received: 9-21-01	**ORIGINAL STORAGE DATA**	
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Building Number: 283	Layer: 02 / Row Number: 10
		Column Number: 72	Date Stacked (*MM,DD,YY*): 09 25 01
Printed Name: Gabriel Valdez	Date: 9-21-01	Printed Name: Gabriel Valdez	Date: 10-10-01
Signature: Gabriel Valdez		Signature: Gabriel Valdez	

8. WASTE ACCEPTANCE OFFICE

Initials/Date	WE Description

NCR Number	Initials/Date	NCR Description

9. DATA MANAGEMENT INFORMATION

	M M D D Y Y	Printed Name	Signature
Date Entered In Database	10 16 01	Michelle Campos	Michelle Campos
Date Entry Verified	10 22 01	Charlotte Fernandez	Charlotte Fernandez

10. DUPLICATE COPY

	M M D D Y Y	Printed Name	Signature
Date Duplicate Filed	11 15 01	Billy Martinez	Billy Martinez



LOS ALAMOS NATIONAL LABORATORY
WASTE PROFILE SYSTEM
WPF #: 31409

27-Aug-2001 11:01 AM (Version: 3) p.1

Generator :	NAKAOKA, RONALD K	MS :	E501	PH :	55971	Z#:	108508
WMC :	MCCORMICK, EGAN	MS :	E501	PH :	78158	Z#:	093573
Contact :							
RCRA Rev :	CORIZ, MICHELLE	MS :	J595	PH :	54000	Z#:	120950
Status :	ACTIVE	Activation Date :	27-Aug-1999		Expiration Date:		27-Aug-2002
Group :	NMT7	TA :	55	Bldg :	000004	Room:	401

You are required to keep a copy of the WPF(s) in your files for at least three years. This WPF(s) is valid for one year or as long as the composition of the waste you have characterized remains the same and the generator remains the same. Should your waste or generator change, please submit a new WPF to FWO-SWO Customer Service, and attach a copy of the WPF which is being replaced.

Waste Accumu : **TSDF Site ID# 479**
Method of Char : **Acceptable Knowledge Documentation** **Number: See Below**

Waste Type : **Process Waste/Spent Chemical/Other**
Waste Classes: RCA Waste - **RCA Waste**
RAD Waste - **Radioactive-TRU**
Classif/Sensi - **N**

Waste Category: **Treated Hazardous waste residue**

Waste Sources : **Materials Processing/Production**

Waste Matrix : **Solid**

Matrix Type : **Homogeneous**

Waste/Proc Desc : TRUWM-TA55-DP01, INSPECTION AND PACKAGING OF CERTIFIABLE COMBUSTIBLE AND NON-COMBUSTIBLE TRU WASTE. WASTE ORIGINATION AND DISPOSITION FORMS (WODF) PROVIDED BY THE WASTE ORIGINATOR. TRUCON CODE LA 114, SOLIDIFIED INORGANIC PROCESS SOLIDS. ALL MATERIAL TYPES (MT). WASTE FORM: THE WASTE CONSISTS OF SOLIDIFIED INORGANIC PROCESS SOLIDS (PROCESS RESIDUE FROM EVAPORATOR BOTTOMS AND OTHER DISCARDABLE SOLUTIONS, PROCESS LEACHED SOLIDS, ASH FILTER CAKES, SALTS, METAL OXIDES, FINES, ETC.) IMMOBILIZED IN PORTLAND CEMENT TO FORM A NONCORROSIVE SOLID MONOLITH. THE WASTE FORM MAY CONTAIN TRACE (<1% WEIGHT) ORGANICS. PAPER, PLASTICS, AND NON-HAZARDOUS METALS MAY ALSO BE PRESENT. NO KNOWN HAZARDOUS CONSTITUENTS OR CHARACTERISTICS. DRUM CONSTITUENTS VARY FROM LOT TO LOT.

Ignitability : **Not ignitable**

Corrosivity : **Non-aqueous**

Reactivity : **Non-reactive**

Boiling Point : **Not applicable**

Toxicity Characteristic Metals :

Contaminant	Method	Limit	Min	Max	Unit
ARSENIC	**TCLP**	**Y**			**PPM**
BARIUM	**TCLP**	**Y**			**PPM**
CADMIUM	**TCLP**	**Y**			**PPM**
CHROMIUM	**TCLP**	**Y**			**PPM**
LEAD	**TCLP**	**Y**			**PPM**
MERCURY	**TCLP**	**Y**			**PPM**

SELENIUM	**TCLP**	**Y**			**PPM**
SILVER	**TCLP**	**Y**			**PPM**

Toxicity Characteristic Organic Compounds:

Contaminant	Method	Limit	Min	Max	Unit
BENZENE	**TCLP**	**Y**			**PPM**
CARBON TETRACHLORIDE	**TCLP**	**Y**			**PPM**
CHLOROBENZENE	**TCLP**	**Y**			**PPM**
CHLOROFORM	**TCLP**	**Y**			**PPM**
O-CRESOL	**TCLP**	**Y**			**PPM**
M-CRESOL	**TCLP**	**Y**			**PPM**
P-CRESOL	**TCLP**	**Y**			**PPM**
CRESOL - MIXED	**TCLP**	**Y**			**PPM**
1,4-DICHLOROBENZENE	**TCLP**	**Y**			**PPM**
1,2-DICHLOROETHANE	**TCLP**	**Y**			**PPM**
1,1-DICHLOROETHYLENE	**TCLP**	**Y**			**PPM**
2,4-DINITROTOLUENE	**TCLP**	**Y**			**PPM**
HEXACHLOROBENZENE	**TCLP**	**Y**			**PPM**
HEXACHLOROBUTADIENE	**TCLP**	**Y**			**PPM**
HEXACHLOROETHANE	**TCLP**	**Y**			**PPM**
METHYL ETHYL KETONE	**TCLP**	**Y**			**PPM**
NITROBENZENE	**TCLP**	**Y**			**PPM**
PENTACHLOROPHENOL	**TCLP**	**Y**			**PPM**
PYRIDINE	**TCLP**	**Y**			**PPM**
TETRACHLOROETHYLENE	**TCLP**	**Y**			**PPM**
TRICHLOROETHYLENE	**TCLP**	**Y**			**PPM**
2,4,5-TRICHLOROPHENOL	**TCLP**	**Y**			**PPM**
2,4,6-TRICHLOROPHENOL	**TCLP**	**Y**			**PPM**
VINYL CHLORIDE	**TCLP**	**Y**			**PPM**

Additional Chemical Constituents and Contaminants :

CAS NO	Constituent	MIN	MAX	UOM
7429-90-5	**ALUMINUM**	**0**	**30**	**%**
	AMMONIA	**0**	**1**	**%**
	ASH	**0**	**10**	**%**
7440-70-2	**CALCIUM**	**0**	**30**	**%**
	CHLORIDE	**0**	**30**	**%**
	FLUORIDE	**0**	**30**	**%**
7782-42-5	**GRAPHITE**	**0**	**10**	**%**
65997-15-1	**PORTLAND CEMENT**	**50**	**60**	**%**
	LEACHED RESIDUES	**0**	**10**	**%**
7439-95-4	**MAGNESIUM**	**0**	**30**	**%**
	NITRATES	**0**	**30**	**%**
7439-89-6	**IRON**	**0**	**30**	**%**
7440-02-0	**NICKEL**	**0**	**1**	**%**
	OXALATES	**0**	**30**	**%**
7440-90-7	**POTASSIUM**	**0**	**30**	**%**
	SILICA SOLIDS	**0**	**10**	**%**
7440-23-5	**SODIUM**	**0**	**30**	**%**
	SULFATES	**0**	**30**	**%**

Additional Information: REFER TO "WASTE PACKAGING DESCRIPTION TABLE" FOR TRUCON CODE LA 114. THIS WPF REPLACES WPF 25338 (NEW GENERATOR)

WASTE CHARACTERIZATION INFORMATION

Radioactivity Category :	**RADIOACTIVE-TRU**
RCRA Category :	**NON-HAZARDOUS WASTE**
Secondary Info :	N/A
Waste Classification :	**TRANSURANIC WASTE**
Waste Acceptances :	
EPA Hazardous Waste Code :	N/A

Los Alamos
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DISCARDABLE WASTE LOG SHEET

LA00000057347

Item ID	Matrix	Volume (l)	Net Wt (kg)	NaOH	H2O	MT	SNM(g)	Uncert(g)	Pg//Ln	Memo
FT1-111400B	Evaporator Bottoms	16.20		8.10	13.00	44	3.565	0.178	2/0	
						52	9.776	0.489	8/33	
FT3-111500A	Evaporator Bottoms	49.40		10.37	39.50	44	0.460	0.011	2/0	
						52	4.836	0.131	8/33	

Run Date	NOV 15 2000
Drum Tare (lbs)	161.40
Cement Wt	290.60
Final Wt (lbs)	768.80

Total EV	65.60
Total NaOH	0.00
Total H2O	52.50
Drum pH	10.51
Probe Calibration Date	NOV 15 2000
NOTE: Treated Feed Non-Corrosive	

MT	Total SNM	Total Uncert
44	4.025000	0.189000
52	14.612000	0.620000

MT	Total SNM	Total Uncert

Printed SEP 14 01 14:15:55 by BUSTAMANTE J M

TRU Waste Origination & Disposition Information

Itemid	Matrix					Date
EVATL032900A4	Evaporator Bottoms					MAR 29 2000
Quantity	**Gross Wt (kg)**	**Tare Wt**	**Net Wt (kg)**	**Volume (l)**		**Process Status**
			0.00	17.80		EV
Generator			**Znumber**	**Room**		**Phone**
MONTOYA DENNIS P			166942	401		7-2572
Waste Process		**Assay**	**Combined into**		**Drumid**	
Cement Fixation		Other Assay	FT3-111500			

Beryllium NO	**Explosives** NO	**PCB's** NO
Compressed Gases NO	**Free Liquids** YES	**Particulates** NO
Corrosive YES	**Hazardous** NO	**Pyrophorics** NO

Comments
TK4

Assay Information

Isotope	MT	SNM (g)	Uncert (g)	Mcode	Limit	SNM (g)/unit	Date	By
AM-241	44	0.009345	0.000038	R04	0.00	0.001		Analytical Chemistry Report
PU-239	52	0.130652	0.001764	R04	3.37	0.007		Analytical Chemistry Report

Justification Memos

Memo ID
NONE

Hazardous Materials

EPA Code	Material	Wt (g)
NONE		

History

Date	Name	Event	Comments
NOV 15 2000	LEHMAN CHARLES JR	CERTIFIED	
NOV 15 2000	LEHMAN CHARLES JR	COMBINED	FT3-111500

TRU Waste Origination & Disposition Information

Itemid	Matrix					Date
EVATL032900A5	Evaporator Bottoms					MAR 29 2000
Quantity / **Gross Wt (kg)**	**Tare Wt**	**Net Wt (kg)**	**Volume (l)**			**Process Status**
		0.00	17.30			EV
Generator			**Znumber**	**Room**		**Phone**
MONTOYA DENNIS P			166942	401		7-2572
Waste Process	**Assay**		**Combined into**		**Drumid**	
Cement Fixation	Other Assay		FT3-111500			

Beryllium NO	**Explosives** NO	**PCB's** NO
Compressed Gases NO	**Free Liquids** YES	**Particulates** NO
Corrosive YES	**Hazardous** NO	**Pyrophorics** NO

Comments
TK-1

Assay Information

Isotope	MT	SNM (g)	Uncert (g)	Mcode	Limit	SNM (g)/unit	Date	By
AM-241	44	0.142725	0.001227	R04	0.00	0.008		Analytical Chemistry Report
PU-239	52	2.889100	0.112386	R04	3.37	0.167		Analytical Chemistry Report

Justification Memos

Memo ID
NONE

Hazardous Materials

EPA Code	Material	Wt (g)
NONE		

History

Date	Name	Event	Comments
NOV 15 2000	LEHMAN CHARLES JR	CERTIFIED	
NOV 15 2000	LEHMAN CHARLES JR	COMBINED	FT3-111500

TRU Waste Origination & Disposition Information

Itemid	Matrix					Date
FT1-111400	Evaporator Bottoms					NOV 14 2000
Quantity / **Gross Wt (kg)**	**Tare Wt**	**Net Wt (kg)**	**Volume (l)**			**Process Status**
			47.40			EV
Generator			**Znumber**	**Room**		**Phone**
LEHMAN CHARLES JR			071894	401		7-2572
Waste Process	**Assay**		**Combined into**		**Drumid**	
Cement Fixation	Other Assay				See Below	

Beryllium NO	**Explosives** NO	**PCB's** NO
Compressed Gases NO	**Free Liquids** YES	**Particulates** NO
Corrosive YES	**Hazardous** NO	**Pyrophorics** NO

Comments
tk-5 and tk8

Assay Information

Isotope	MT	SNM (g)	Uncert (g)	Mcode	Limit	SNM (g)/unit	Date	By
AM-241	44	10.494555	0.524728	M00	0.00	0.221		Analytical Chemistry Report
PU-239	52	28.781400	1.439070	M00	3.37	0.607		Analytical Chemistry Report

Justification Memos

Memo ID
NONE

Hazardous Materials

EPA Code	Material	Wt (g)
NONE		

SNM Batch Information

Drum ID	Item ID		MT	SNM	Uncert	Volume	
LA00000057341	FT1-111400	A	44	6.930	0.347	31.30	
LA00000057341	FT1-111400	A	52	19.005	0.950	31.30	
LA00000057347	FT1-111400	B	44	3.565	0.178	16.20	Empty
LA00000057347	FT1-111400	B	52	9.776	0.489	16.20	Empty

History

Date	Name	Event	Comments
NOV 14 2000	LEHMAN CHARLES JR	COMBINED	EVDS032000A1
NOV 14 2000	LEHMAN CHARLES JR	COMBINED	EVATL032900A1
NOV 14 2000	LEHMAN CHARLES JR	SPLIT	LA00000057341
NOV 14 2000	LEHMAN CHARLES JR	SPLIT	LA00000057341
NOV 14 2000	LEHMAN CHARLES JR	SPLIT	LA00000057341
NOV 14 2000	LEHMAN CHARLES JR	SPLIT	LA00000057347
NOV 14 2000	LEHMAN CHARLES JR	SPLIT	LA00000057347

TRU Waste Origination & Disposition Information

Itemid	Matrix						Date
FT3-111500	Evaporator Bottoms						NOV 15 2000
Quantity / Gross Wt (kg)	Tare Wt	Net Wt (kg)	Volume (l)				Process Status
			49.40				EV
Generator				Znumber	Room		Phone
LEHMAN CHARLES JR				071894	401		7-2572
Waste Process		Assay		Combined into		Drumid	
Cement Fixation		Other Assay				See Below	

Beryllium NO	Explosives NO	PCB's NO
Compressed Gases NO	Free Liquids YES	Particulates NO
Corrosive YES	Hazardous NO	Pyrophorics NO

Comments
TK-1

Assay Information

Isotope	MT	SNM (g)	Uncert (g)	Mcode	Limit	SNM (g)/unit	Date	By
AM-241	44	0.459520	0.010980	M00	0.00	0.009		Analytical Chemistry Report
PU-239	52	4.835852	0.130677	M00	3.37	0.098		Analytical Chemistry Report

Justification Memos

Memo ID
NONE

Hazardous Materials

EPA Code	Material	Wt (g)
NONE		

SNM Batch Information

Drum ID	Item ID		MT	SNM	Uncert	Volume	
LA00000057347	FT3-111500	A	44	0.460	0.011	49.40	Empty
LA00000057347	FT3-111500	A	52	4.836	0.131	49.40	Empty

History

Date	Name	Event	Comments
NOV 15 2000	LEHMAN CHARLES JR	COMBINED	EVATL032900A4
NOV 15 2000	LEHMAN CHARLES JR	COMBINED	EVATL050100A1
NOV 15 2000	LEHMAN CHARLES JR	COMBINED	EVATL032900A5
NOV 15 2000	LEHMAN CHARLES JR	SPLIT	LA00000057347
NOV 15 2000	LEHMAN CHARLES JR	SPLIT	LA00000057347
NOV 15 2000	LEHMAN CHARLES JR	SPLIT	LA00000057347
NOV 15 2000	LEHMAN CHARLES JR	SPLIT	LA00000057347

TRU Waste Origination & Disposition Information

Itemid	Matrix					Date
EVDS032000A1	Evaporator Bottoms					MAR 20 2000
Quantity / **Gross Wt (kg)**	**Tare Wt**	**Net Wt (kg)**	**Volume (l)**			**Process Status**
		0.00	25.70			EV
Generator			**Znumber**	**Room**		**Phone**
MONTOYA DENNIS P			166942	401		7-2572
Waste Process	**Assay**		**Combined into**		**Drumid**	
Cement Fixation	Other Assay		FT1-111400			

Beryllium NO	**Explosives** NO	**PCB's** NO
Compressed Gases NO	**Free Liquids** YES	**Particulates** NO
Corrosive YES	**Hazardous** NO	**Pyrophorics** NO

Comments
tk-5

Assay Information

Isotope	MT	SNM (g)	Uncert (g)	Mcode	Limit	SNM (g)/unit	Date	By
AM-241	44	10.382800	0.519140	R04	0.00	0.404		Analytical Chemistry Report
PU-239	52	25.700000	1.285000	R04	3.37	1.000		Analytical Chemistry Report

Justification Memos

Memo ID
NONE

Hazardous Materials

EPA Code	Material	Wt (g)
NONE		

History

Date	Name	Event	Comments
NOV 14 2000	LEHMAN CHARLES JR	CERTIFIED	
NOV 14 2000	LEHMAN CHARLES JR	COMBINED	FT1-111400

TRU Waste Origination & Disposition Information

Itemid	Matrix					Date
EVATL032900A1	Evaporator Bottoms					MAR 29 2000
Quantity / Gross Wt (kg)	Tare Wt	Net Wt (kg)	Volume (l)			Process Status
		0.00	21.70			EV
Generator			Znumber	Room		Phone
MONTOYA DENNIS P			166942	401		7-2572
Waste Process	Assay		Combined into		Drumid	
Cement Fixation	Other Assay		FT1-111400			

Beryllium NO	Explosives NO	PCB's NO
Compressed Gases NO	Free Liquids YES	Particulates NO
Corrosive YES	Hazardous NO	Pyrophorics NO

Comments
TK8

Assay Information

Isotope	MT	SNM (g)	Uncert (g)	Mcode	Limit	SNM (g)/unit	Date	By
AM-241	44	0.111755	0.005588	R04	0.00	0.005		Analytical Chemistry Report
PU-239	52	3.081400	0.154070	R04	3.37	0.142		Analytical Chemistry Report

Justification Memos

Memo ID
NONE

Hazardous Materials

EPA Code	Material	Wt (g)
NONE		

History

Date	Name	Event	Comments
APR 6 2000	SMITH CHESTER A JR	CERTIFIED	
NOV 14 2000	LEHMAN CHARLES JR	CERTIFIED	
NOV 14 2000	LEHMAN CHARLES JR	CERTIFIED	correct vol
NOV 14 2000	LEHMAN CHARLES JR	COMBINED	FT1-111400

TRU Waste Origination & Disposition Information

Itemid	Matrix					Date
EVATL050100A1	Evaporator Bottoms					MAY 1 2000
Quantity	**Gross Wt (kg)**	**Tare Wt**	**Net Wt (kg)**	**Volume (l)**		**Process Status**
			0.00	14.30		EV
Generator			**Znumber**	**Room**		**Phone**
VALDEZ AQUILINO D			085599	401		7-2572
Waste Process		**Assay**	**Combined into**		**Drumid**	
Cement Fixation		Other Assay	FT3-111500			

Beryllium NO	**Explosives** NO	**PCB's** NO
Compressed Gases NO	**Free Liquids** YES	**Particulates** NO
Corrosive YES	**Hazardous** NO	**Pyrophorics** NO

Comments
tk7

Assay Information

Isotope	MT	SNM (g)	Uncert (g)	Mcode	Limit	SNM (g)/unit	Date	By
AM-241	44	0.307450	0.009715	R04	0.00	0.021		Analytical Chemistry Report
PU-239	52	1.816100	0.016527	R04	3.37	0.127		Analytical Chemistry Report

Justification Memos

Memo ID
NONE

Hazardous Materials

EPA Code	Material	Wt (g)
NONE		

History

Date	Name	Event	Comments
NOV 15 2000	LEHMAN CHARLES JR	CERTIFIED	
NOV 15 2000	LEHMAN CHARLES JR	COMBINED	FT3-111500

*** IN CASE OF EMERGENCY CALL 505-667-6211 ***

SHIP FROM	SHIP TO
TWSR #: 57347 Requestor: CHESTER A JR SMITH Z #: 087715 Phone: 72857 TA: 55 Bldg: PF4	EM-SWO Phone: 505-665-6158 Solid Radioactive Waste Management Los Alamos National Laboratory Location TA-54___ Area-L___ Area-G___ TA-50___ Bldg-1___ Bldg-37___ Transporter: LANL

Line Item	HM	DOT Shipping Description	Containers No./Type	Total Quantity	Unit / Vol
1	x	RQ, RADIOACTIVE MATERIAL, N.O.S.,7,UN2982	1	DM	769 P

57347: Solid,Elemental, AM241, PU238, PU239, PU240, PU241, PU242, 6.543e-01TBq(1.768e+01Ci),T.I.=0.3 RADIOACTIVE YELLOW II, Fissile EXCEPTED

HMTF # 302078

ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE
ERG#: 163
Road Closure Required

SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

THIS IS TO CERTIFY THAT THE ABOVE-NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, LABELED, AND PLACARDED; ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION; AND MEET THE WASTE ACCEPTANCE CRITERIA OF EM-SWO

PRINTED/TYPED NAME	SIGNATURE	DATE
Jackie Bustamante	x Jackie Bustamante	9/21/01

TRANSPORTER ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	DATE
FRED Moya	x Fred Moya	9/21/2001

CONTAINER PROFILE
LA00000057347
T-TRU-TEMP

WS ID: 563
C ID: 20127
ACTIVE

GENERAL INFORMATION

Container ID:	20127		
Labeled ID:	LA00000057347		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	563	**Container Subtype:**	55-gallon steel drum
Work Path:	T-TRU-TEMP	**Origin Date:**	30-Mar-2000 11:59 pm
Quantity (Univ):		**Accum Start Date:**	
Compactible:		**Closed Date:**	27-Nov-2000
Discard Matrix:			
TID(s):	(#1) (#2)		
Gen Contact:	CHESTER A JR SMITH (087715)		
Insert By:	WCATS APPLICATION (000000)		
Waste Desc:	TRUWM-TA55-DP01, INSPECTION AND PACKAGING OF CERTIFIABLE COMBUSTIBLE AND NON-COMBUSTIBLE TRU WASTE. WASTE ORIGINATIO...		

WEIGHTS AND VOLUMES

Container Volume:	55.00 gal	**Gross Weight:**	768.80 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	60.00 lb
		Net Weight:	607.00 lb

LOCATION

Pickup (Origin):	LANL: 55-PF4: 400-AREA
Current:	LANL: 54-G: 000232: STAGE: NS: NS

CONTAINER PROFILE
LA00000057347
T-TRU-TEMP

WS ID: 563
C ID: 20127
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: PR2777381 **Year of Manuf:** 2000

Lot No.: **Serial No:**

Solution Package: 07: SP CIN01 Lead Monoliths (#7) (AG Cement-Mono)

TRUCON Code: LA114B: SOLIDIFIED INORGANIC/PROCESS SOLIDS

Shipping Category: 1000400133

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-14: CEMENTED INORGANICS

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED HOMOGENEOUS SOLIDS

Defense Waste: YES **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): **Retrievable:** **BIR WS Code:**

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
8J07	KG19	3000	3000	100.00		INACTIVE	*SELECTION LIST*

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	NA	0	FS1940		9/2001

** Diffusivity is specified in moles per second per mole fraction*

LAYERS OF CONFINEMENT

Layer No.	Layer Status	Confinement Type: Subtype
1	Active	rigid drum liner: 125-mil rigid liner
2	Active	liner bag layer: 12-mil 26LB filtered drum liner bag
3	Active	payload container: 55-gallon drum (or pipe overpack)

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
39000.00 g	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
LA00000057347
T-TRU-TEMP

WS ID: 563
C ID: 20127
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 2221, Status: Inactive -> Date: 08/23/2013							
Controlling Task: WMS RCT SURVEY (Task #84180), 09/06/2001, Executed							
B/G Survey	003370	03/28/01	= 0.20	= 0.20	= 0.20	Not Applicable	
Neutron Survey	012159	03/28/01	= 0.30	= 0.10	= 0.10	Not Applicable	
Smear Results	090202	03/28/01	Not Applicable			= 0.00	= 0.00
Survey ID: 64608, Status: Active							
B/G Survey			= 0.00	=	=	Not Applicable	
Neutron Survey			= 0.00	=	=	Not Applicable	
Smear Results			Not Applicable			= 0.00	= 0.00

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 34731, Date: 03/28/2010, Derivation: System Partitioned (e.g., Packaging or Processing)								
44	4.02E+000	g	1.77E-001	N				NONE
52	1.46E+001	g	4.54E-001	N				NONE
Am-241	4.02E+000	g	1.78E-001	Y			Y	
Pu-238	1.46E-003	g	5.06E-005	Y			Y	
Pu-239	1.37E+001	g	4.75E-001	Y			Y	
Pu-240	8.77E-001	g	3.04E-002	Y			Y	
Pu-241	2.92E-002	g	1.01E-003	Y			Y	
Pu-242	2.92E-003	g	1.01E-004	Y			Y	

61818

Los Alamos
NATIONAL LABORATORY

TRU-WASTE STORAGE RECORD

LA00000061818

1. GENERATOR'S PRE-USE VISUAL INSPECTION

Purchase Order # 71327	Inspected Items		
This container has been visually inspected according to approved procedures and has been found to be free of damage that would make it unsuitable for TRU waste packaging	[X] Ring, Bolt, and Nut	[X] Chime	[X] Dents
	[X] Lid and Gasket	[X] Gouges	[X] Paint
Name LEHMAN CHARLES JR	Znumber 071894		Date JAN 9 2004

2. GENERATOR'S PACKAGE INFORMATION

Group NMT-7	Technical 55	Building PF-4	Program Code 8J0700 KG19 3000 3000

Additional Information
Handling Code: S01,T04
TID
Physical Form: Solid

Container	Liner
[X] Steel Drum (55 gal.)	[ ] None
[ ] Steel Drum (85 gal. Overpack)	[ ] 90 mil liner
[ ] Standard Waste Box	[X] 125 mil liner
[ ] RH Canister	**INTERNAL SHIELDING**
[ ] Other (Call TWCO)	[ ] None
[ ] Standard Waste Box Overpack	Type: — Thickness (in.): —
Carbon Filter ID 01 LANL-884	Type: LEAD Thickness (in.): 6.3E-2
Carbon Filter ID 02	Type: — Thickness (in.): —

RADIONUCLIDE CONTENT

Nuclide	Amount	Uncertainty	C=Curie M=Gram
PU-238	1.295E-2	2.055E-4	M
PU-239	1.215E+2	1.927E+0	M
PU-240	7.771E+0	1.233E-1	M
PU-241	2.590E-1	4.110E-3	M
PU-242	2.590E-2	4.110E-4	M
AM-241	6.396E+0	2.400E-2	M

Waste Profile Request Number	31409
Process Batch Code	NA
Gross Weight (lb.)	6.71E+2
Net Weight (lb.)	5.09E+2
Shipping Category	1000400133
LANL Waste Stream ID	TA-55-14
TRUCON Code	114B
Date Closed (MMDDYY)	MAR 24 2004

[X] DP [ ] NON DP If Non-DP waste, attach DOE approval document

NONRADIOACTIVE HAZARDOUS MATERIALS

Name	EPA Code	Quantity (g)
None		

Accumulation Start Date (MMDDYY)

The data in this section were collected, and the waste described herein was packaged and labeled according to approved procedures.

Name SMITH CHESTER A JR | Znumber 087715 | Date APR 1 2004

3. GENERATOR SITE HEALTH PHYSICS INFORMATION

		Survey Date	Survey Meter Model	Property Number	Calibration Void Date
Gamma Dose Rate (mrem/h) (contact)					
Neutron Dose Rate (mrem/h)					
Total Dose Rate (mrem/h) (contact)	0.0E+0				
Total Dose Rate (mrem/h) (1 meter)	0.0E+0	*The data in this section were collected accordig to approved procedures*			
Alpha Contamination ($dpm^2/100cm$)		Name Not Required			
Beta-Gamma Cont. ($dpm^2/100cm$)		Znumber		Date	

Modifications to Computer Generated Data Invalidate this Form

4. TRU WASTE MANAGEMENT REVIEW/AUTHORIZATION

The data package for this waste has been reviewed by TRU Waste Management. The generator is authorized to arrange transportation to TA-54	Name VALDEZ GABRIEL V	
	Znumber 119403	Date APR 7 2004

5. PRELOAD VISUAL INSPECTION

This waste package was visually inspected prior to transport according to approved procedures. It meets WAC packaging and labeling requirements and is free from obvious damage and defects	Printed Name Gail M. Welsh	Date *(Inspection Valid for 30 Days)* 6/8/06
	Signature Gail M. Welsh	

6. RECEIVING SITE HEALTH PHYSICS INFORMATION

Gamma Dose Rate (mrem/h)	1.0 E +/- 0	Survey Meter Model RO20	Property Number 9382	Calibration Void Date 8-22-06	
Neutron Dose Rate (mrem/h)	1.8 E +/- 0	Survey Meter Model SNRD	Property Number 13597	Calibration Void Date 3-22-07	
Total Dose Rate (mrem/h)	2.8 E +/- 0	The data in this section were collected accordig to approved procedures.			
Alpha Contamination ($dpm/100cm^2$)	1.9 E +/- 0	Printed Name Jessica Bustos		Date 6-20-06	
Beta-Gamma Cont. ($dpm/100cm^2$)	2.8 E +/- 0	Signature Jessica Bustos			

7. STORAGE SITE INFORMATION

Received By (Initials) JG	Date Received 6-8-06	ORIGINAL STORAGE DATA			
This waste package was visually inspected and found to be properly labeled and in good condition. It was accepted and inspected according to approved procedures.		Building Number 105	Layer 0	Row Number 0	
		Column Number 110	Date Stacked (MM,DD,YY) 060806		
Printed Name Juan Garcia	Date 6-8-06	Printed Name Juan Garcia		Date 6-8-06	
Signature Juan Garcia		Signature Juan Garcia			

8. WASTE ACCEPTANCE OFFICE

Initials/Date	WE Description

NCR Number	Initials/Date	NCR Description

9. DATA MANAGEMENT INFORMATION

	MM DD YY		
Date Entered in Database	06 30 06	Printed Name Bev Mtz.	Signature Bev Mtz.
Date Entry Verified	06 30 06	Printed Name Bev Mtz.	Signature Bev Mtz.

10. DUPLICATE COPY

	MM DD YY		
Date Duplicate Filed	06 30 06	Printed Name Bev Mtz.	Signature Bev Mtz.

*** IN CASE OF EMERGENCY CALL 505-667-6211 ***

SHIP FROM	SHIP TO
TWSR #: 61818 Requestor: CHESTER A JR SMITH Z #: 087715 Phone: 6672857 TA: 55 Bldg: PF4	EM-SWO Phone: 505-665-6158 Solid Radioactive Waste Management Los Alamos National Laboratory Location TA-54___ Area-L___ Area-G___ TA-50___ Bldg-1___ Bldg-37___ Transporter: LANL

Line Item	HM	DOT Shipping Description	Containers No./Type	Total Quantity	Unit / Vol
1	x	RQ, RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE ~~NON SPECIAL FORM~~, 7, UN3327	1 DM	671	P

61818: Solid,Elemental, AM241, PU238, PU239, PU240, PU241, PU242, 2.116e+00 TBq(5.719e+01Ci),T.I.=0.0 RADIOACTIVE YELLOW II,

ADDITIONAL DESCRIPTIONS FOR MATERIALS LISTED ABOVE
ERG#: 165

HMTF 2006.4794 61818

SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION
LIMITS WERE NOT EXCEEDED (SR 4.1.1, 4.1.2, 4.2.1, and 4.2.2)

THIS IS TO CERTIFY THAT THE ABOVE-NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, LABELED, AND PLACARDED; ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION; AND MEET THE WASTE ACCEPTANCE CRITERIA OF EM-SWO

PRINTED/TYPED NAME	SIGNATURE	DATE
Leslie Chamberlain	X	6/8/06

TRANSPORTER ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

PRINTED/TYPED NAME	SIGNATURE	DATE
LARRY HOWARD	X	8 JUNE 06

CONTAINER PROFILE
LA00000061818
T-TRU-TEMP

WS ID: 563
C ID: 20438
ACTIVE

GENERAL INFORMATION

Container ID:	20438		
Labeled ID:	LA00000061818		
Optional ID:		**Status:**	ACTIVE
Chemical Barcode:		**Decommissioned:**	NO
Physical State:	SOLID	**Container Type:**	DM: Metal drums, barrels, kegs
Waste Stream ID:	563	**Container Subtype:**	55-gallon steel drum
Work Path:	T-TRU-TEMP	**Origin Date:**	08-Jan-2004 11:59 pm
Quantity (Univ):		**Accum Start Date:**	
Compactible:		**Closed Date:**	24-Mar-2004

Discard Matrix:

TID(s): (#1) (#2)

Gen Contact: CHESTER A JR SMITH (087715)

Insert By: WCATS APPLICATION (000000)

Waste Desc: TRUWM-TA55-DP01, INSPECTION AND PACKAGING OF CERTIFIABLE COMBUSTIBLE AND NON-COMBUSTIBLE TRU WASTE. WASTE ORIGINATIO...

WEIGHTS AND VOLUMES

Container Volume:	55.00 gal	**Gross Weight:**	670.60 lb
Waste Volume:	NOT SPECIFIED	**Tare Weight:**	60.00 lb
		Net Weight:	509.00 lb

LOCATION

Pickup (Origin): LANL: 55-PF4: 400-AREA

Current: LANL: 54-G: 000232: C014: L01: R10

waste compliance and tracking system

CONTAINER PROFILE
LA00000061818
T-TRU-TEMP

WS ID: 563
C ID: 20438
ACTIVE

PAYLOAD INFORMATION

Container Procurement

P.O. Number: 71327 **Year of Manuf:** 2003

Lot No.: **Serial No:**

Solution Package: 07: SP CIN01 Lead Monoliths (#7) (AG Cement-Mono)

TRUCON Code: LA114B: SOLIDIFIED INORGANIC/PROCESS SOLIDS

Shipping Category: 1000400133

CCP AK Report: CCP-AK-LANL-006: LANL TA-55 Mixed Transuranic Waste

WIPP Waste Stream: TA-55-14: CEMENTED INORGANICS

Matrix Code: S3150 - HOMOGENEOUS SOLIDS: INORGANIC HOMOGENEOUS SOLIDS: SOLIDIFIED

Defense Waste: YES **Equiv. Comb. Matrix:** Non-combustible/Non-dispersible

Adeq. Ventilation: YES **Compliant Metal Cont.:** YES

Overpack (1 to 1): NO **Retrievable:** **BIR WS Code:**

Content Code:

COST CODES

Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
8J07	KG19	3000	3000	100.00		INACTIVE	*SELECTION LIST*

FILTERS

Manufacturer	Model	Style	Diffusivity*	Serial Number	Torque Ft-lbs	Mfg Date Mon/Year
Not Specified	NA	NA	0	LANL-884		6/2006

** Diffusivity is specified in moles per second per mole fraction*

LAYERS OF CONFINEMENT

Layer No.	Layer Status	Confinement Type: Subtype
1	Active	rigid drum liner: 125-mil rigid liner
2	Active	liner bag layer: 12-mil 26LB filtered drum liner bag
3	Active	payload container: 55-gallon drum (or pipe overpack)

PACKING MATERIAL ADDED

Weight	Material Name	Thickness Inches (if applicable)
39000.00 g	Lead (Pb) Shielding(Thickness = 0.060 in)	6.30E-002

waste compliance and tracking system

CONTAINER PROFILE
LA00000061818
T-TRU-TEMP

WS ID: 563
C ID: 20438
ACTIVE

RADIOLOGICAL SURVEY

Survey Type	Instrument Number	Survey Date	At Contact mrem/hr	At 30 cm mrem/hr	At 1 M mrem/hr	Alpha dpm/100cm2	Beta/Gama dpm/100 cm2
Survey ID: 67010, Status: Active							
B/G Survey			= 1.00	=	=	Not Applicable	
Neutron Survey			= 1.80	=	=	Not Applicable	
Smear Results			Not Applicable			= 1.90	= 2.80

RADIONUCLIDES

Nuclide	Amount	Unit	Uncert	MT Derived (Y/N)	Activated (Y/N)	MDA Result (Y/N)	Normal Form (Y/N)	Measurement Code/Comment
Status: Active, Assay Page: 34930, Date: 03/28/2010, Derivation: System Partitioned (e.g., Packaging or Processing)								
44	6.40E+000	g	2.06E-002	N				NONE
52	1.30E+002	g	1.53E+000	N				NONE
Am-241	6.40E+000	g	2.40E-002	Y			Y	
Pu-238	1.30E-002	g	2.06E-004	Y			Y	
Pu-239	1.21E+002	g	1.93E+000	Y			Y	
Pu-240	7.77E+000	g	1.23E-001	Y			Y	
Pu-241	2.59E-001	g	4.11E-003	Y			Y	
Pu-242	2.59E-002	g	4.11E-004	Y			Y	

ENCLOSURE 3

High-Energy Real-Time Radiography Prescreen Videos

ENV-DO-14-0146

LAUR-14-24671

Date: JUL 0 2 2014