



THE TEXAS SOLUTION

Certificate of Disposal

Date of Certificate: December 19, 2017

47-16933-02
03029384

Michael Otlowski
Alaron Nuclear Services
2138 State Route 18
Wampum, PA 16157-2926

Reference:

WCS Profile #: **WP-8653**
Manifest(s): **17-RW-0072**
Received On: **December 18, 2017**

This is to certify that the waste shipped to WCS on the above mentioned manifest was disposed of on **December 18, 2017** in the WCS Compact Waste Disposal Facility (CWF). Disposal is subject to the WCS Radioactive Material License R04100 along with all other applicable licenses, permits and regulations.

Waste Control Specialists LLC is pleased to have the opportunity to provide you with the quality waste management services that you need. If you have any questions or need further assistance, please feel free to contact me at (432) 525-8726.

Sincerely,
WASTE CONTROL SPECIALISTS LLC

Tom Hannah
Technical Services Project Manager

Corporate
5430 LBJ Freeway, Ste. 1700
Three Lincoln Centre
Dallas, TX 75240
Ph 972 715 9800
Fax 972 448 1419

Compact Waste Disposal Facility Certificate of Disposal RM-3.2.2-4
Records Management
RM-3.2.2 Issuance of Certificates of Disposal/Treatment Effective Date 12/01/2016
Revision 3

Facility
P.O. Box 1129
Andrews, TX 79714
Ph 888.789.2783
Fax 432.525.8904

Rec'd. in LAT- 07/10/2019

612398
RADIOACTIVE MATERIALS-002

FORM 540 Waste Control Specialists UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		SHIPPER - NAME AND FACILITY Alamos Nuclear Services 2136 38th Street Wilmington, PA 19127		SHIPPER ID NUMBER PALARALA <input type="checkbox"/> COLLECTOR <input checked="" type="checkbox"/> PROCESSOR		FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) FORM 541 AND 541A PAGE 2 OF 4 PAGE(S) FORM 542 AND 542A PAGE 3 OF 3 PAGE(S) ADDITIONAL INFORMATION (See PAGE(S))		MANIFEST NUMBER (Use this number on all other "manifest" pages) 17-RW-0072									
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 1-877-818-0887		WASTE GENERATOR CONTACT ID PALARALA		SHIPMENT NUMBER 17-RW-012		8. CONSIGNEE - Name and Facility Waste Control Specialists, LLC Compact Waste Facility 5998 West State Hwy 176 Ardmore, TX 79714		CONTACT Susan Van Leuven TELEPHONE (Include Area Code) (432) 525-8508 DATE 12-18-17									
ORGANIZATION EK Services contracted by VESTS		4. CARRIER - Name and Address Leadstar/Longer 12410 84th Ave. S Jacksonville, FL 32214		EPA ID NUMBER FLR96067167		9. SIGNATURE - Authorized Shipper/Receiving Party <i>[Signature]</i>		10. CERTIFICATION I/We certify that the contents of this manifest are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in a proper condition for transportation and disposed of in accordance with the requirements of 49 CFR Parts 20 and 171 or applicable state regulations.									
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 1		EPA MANIFEST NUMBER		SIGNATURE - Authorized Carrier/Driver/Receiver <i>[Signature]</i>		DATE 12/14/17									
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPLISH THIS SHIPMENT? If "Yes," provide Manifest Number (XXXXXX)		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		CONTACT John Dwyer Signature: <i>[Signature]</i>		DATE 12/14/17		AUTHORIZED SIGNATURE <i>[Signature]</i>									
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Include proper shipping name, hazard class, UN ID number, and any additional information)		12. DOT LABEL (Radioactive)		13. TRANSPORT INDEX		14. PHYSICAL AND CHEMICAL FORM		15. INCIPLIN RADIOISOTOPES		16. TOTAL PACKAGE ACTIVITY (LBS)		17. BASIC CLASS		18. TOTAL WEIGHT OF VOLUME (See appropriate unit)		19. IDENTIFICATION NUMBER OF PACKAGE	
RD, UN 2818, Radioactive material, Type A package, 7 Type A drum in shielded overpack, WP-8853		Yellow III		85.0		Solid Oxides		Am-241 Ba-133 Cs-137 Co-138 Ce-137 Co-60 Cs-137 Eu-155 Fr-223 Ga-67 Ge-68 Hg-203 Ir-192 K-40 K-42 K-43 K-45 Po-210 Ra-226 Sn-113 Sr-89 Sr-90 Th-230 Th-232 U-238 Y-88 Zr-95		3.8275E+06 (1.0345E+04)		NA		4984 LBS		71428	
FOR CONSIGNEE USE ONLY The original signed manifest remains with:				<input type="checkbox"/> Record Waste Description Inadequate <input type="checkbox"/> Contamination or Leakage Detected <input type="checkbox"/> Unexpected Exposure Rates Detected <input type="checkbox"/> Labels, Markings, etc. Inadequate <input type="checkbox"/> Container Integrity Inadequate <input type="checkbox"/> Other <input checked="" type="checkbox"/> No Violations Detected on this Shipment				20. This is an "Exclusive Use" Shipment. Class 7 (Radioactive) placards are required. Survey requirements of 49 CFR 173.433(c) apply. See Emergency Guide 163. Special Instructions - Deliver directly to consignee. Do not open containers. Do not transfer this shipment from the original carrier vehicle. Do not load, unload or rearrange the load without specific permission from the shipper.									

FORM 540 (2-82)

MCC + C-0715

FORM 541 Waste Control Specialists UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste	1. MANIFEST TOTALS								2. MANIFEST NUMBER			
	NUMBER OF PACKAGES/ DISPOSAL CONTAINERS		NET WASTE VOLUME		NET WASTE WEIGHT		SPECIAL NUCLEAR MATERIAL (grams)				17-RW-0072	
			U-233		U-235		Pu		Total		3. PAGE 1 OF 4 PAGE(S)	
	1		0.2122 m ³ 7.5000 b		515.7347 kg 1137.0000 lb		NP		NP		NP	
			ACTIVITY		C-14		Tc-99		I-128		SOURCE	
		ALL NUCLIDES		TRITIUM		NP		NP		NP		
		MSA		NP		NP		NP		(kg) 2.5103E-01		
		mCi		NP		NP		NP		(lb) 5.5342E-01		
										SHIPMENT ID NUMBER		
										PAALARALA		

DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										16. WASTE CLASSIFICATION AS-Class A Stable All-Class A Unstable B-Class B C-Class C						
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1 & Note 1A)	7. VOLUME (m ³) (b)	8. WASTE AND CONTAINER WEIGHT (kg) (lb)	9. SURFACE RADIATION LEVEL (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm ²) (cpm/100cm ²)		11. PHYSICAL DESCRIPTION		12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m ³) (FT ³)	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 1.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT									
					ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2 & Note 2A)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m ³) (FT ³)					13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 1.1%		RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
71428A/Aleron	4	0.2209 7.8000	538 4142 1187 0000	3.800E-01 3.800E-03	<1.870E-06 <1.800E-02	<1.870E-05 <1.900E-03															C	
							36-H	0.0088 0.3500	100 89 - Oufrete/ Oufrete 5000	Oxides/NP	NP		Ca-137 Subtotal	4.78854E+07 4.3216E+04	4.3216E+04 1.680E+03	1.680E+03 1.680E+03						
							36-H	0.0089 0.3500	100 88 - Oufrete/ Oufrete 5000	Oxides/NP	NP		Ca-137 Subtotal	6.45060E+06 5.8460E+03	5.8460E+03 1.5800E+02	1.5800E+02 1.5800E+02						
							36-H	0.0438 1.5500	100 88 - Oufrete/ Oufrete 5000	Oxides/NP	NP		Am-241 Ba-133 Co-57 Co-60 Cs-137 Fe-55 Gd-153 Po-210 Ra-226 Sr-113 Sr-90 Th-232 U-238	1.96605E+04 1.30869E-01 3.15092E-03 2.37602E-05 1.51890E-07 5.03341E-03 1.00668E-03 4.87234E-02 5.03442E+04 9.08014E+01 2.01336E+05 1.00668E+01 8.24473E+02	7.2261E+01 4.8100E-04 1.1581E+01 8.7331E+02 5.6752E+04 1.8500E+01 3.7000E-06 1.7908E-04 1.8504E+02 3.3300E-01 7.4000E+02 3.7000E+02 8.1900E-02	1.9530E+00 1.3000E-05 3.1300E-01 2.3603E+01 1.5868E-03 5.0000E-01 1.0000E-07 4.8400E-06 5.0010E+00 9.0000E-03 2.0000E+01 1.0000E-03 8.1900E-02						

Note 1 Container Description Codes. For containers/waste requiring disposal in approved structural vessels the numerical code must be followed by "-OP."

1. Wooden Box or Crate
2. Metal Box
3. Plastic Drum or Pail
4. Metal Drum or Pail
5. Metal Tank or Liner
6. Concrete Tank or Liner
7. Polyethylene Tank or Liner
8. Fiberglass Tank or Liner
9. Drum/Crate/Box
10. Gas Cylinder
11. Bulk Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
14. Other Describe in Item 8, or additional page

Note 1A Bulk Packaging Description Codes. (Choose one code as may be applicable.)

A Genotoxic
B Intermediate
C End-Dump
D Roll-off
E Seismic

NOTE 2 Waste Descriptor Codes. (Choose up to three which predominate by volume.)

20. Charcoal	29. Demolition Rubble	38. Evaporator Bottoms/Sludges/Concentrates
21. Incinerator Ash	30. Carbon Ion-exchange Media	39. Compatible Trash
22. Soil	31. Anion Ion-exchange Media	40. Non-compatible Trash
23. Gas	32. Mixed Bed Ion-exchange Media	41. Animal Carcass
24. Oil	33. Contaminated Equipment	42. Biological Material (except animal carcass)
25. Aqueous Liquid	34. Organic Liquid (except oil)	43. Activated Material
26. Filter Media	35. Glassware or Laboratory	44. Other, Describe in Item 11, or additional page
27. Mechanical Filter	36. Sealed Source/Device	
28. EPA or State Hazardous	37. Paint or Plating	

NOTE 2A Specific Waste Descriptions (Choose all applicable codes.)

G Dewatered
H Solid
I Comminuted
J Non-comminuted
K Air Filtration Fibers
L Asbestos

Note 3 Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume.) For media meeting all special structural stability requirements, the numerical code must be followed by "-S." and the media vendor and brand name must also be identified.

In Item 13, Code 100=NONE REQUIRED.

90. Cement	94. Vinyl Ester Systems
91. Concrete (encapsulation)	95. Other, Describe in Item 13, or additional page
92. Bitumen	96. Other, Describe in Item 13, or additional page
93. Vinyl Chloride	100. None Required

FORM 541A

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST**
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

Waste Control Specialists

2. MANIFEST NUMBER
17-RW-0072

3. PAGE 2 OF 4 PAGE(S)

DISPOSAL CONTAINER DESCRIPTION				WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										16. WASTE CLASSIFICATION A2-Class A Stable A1-Class A Unstable B-Class B C-Class C			
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1 & Note 1A)	7. VOLUME (m3) (G)	8. WASTE AND CONTAINER WEIGHT (kg) (lb)	9. SURFACE RADIATION LEVEL (mSv/hr) (mrem/hr)	10. SURFACE CONTAMINATION (Bq/100 cm ²) (dpm/100 cm ²)		11. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION					
					ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2 & Note 2A)	12. APPROXIMATE WASTE VOLUMES IN CONTAINER (FT ³)	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
												RADIONUCLIDES	µCi/gm		MBq	mCi	
													Subtotal		5.7656E+04	1.5583E+03	
	/Applied NP						36-H	0.0099 0.3500	100 99 - Oxidant/ Cultrate 5000	Oxidant/NP	NP	Co-60 Cs-137 Subtotal	1.2248E+05 4.30516E+07 3.9128E+04	1.1100E+02 3.9017E+04 9.7569E+04	3.0000E+00 1.0545E+03 2.6370E+03		
	[REDACTED]						36-H	0.0207 1.0500	100 99 - Oxidant/ Cultrate 5000	Oxidant/NP	NP	Cs-137 Subtotal	3.58865E+07 9.7569E+04	9.7569E+04 2.6370E+03	2.6370E+03 2.6370E+03		
	[REDACTED]						36-H	0.0099 0.3500	100 99 - Oxidant/ Cultrate 5000	Oxidant/NP	NP	Co-60 Ir-192 Subtotal	6.28729E+06 9.03492E+03 5.7062E+03	5.6980E+03 8.1881E+00 5.7062E+03	1.5400E+02 2.2130E-01 1.5422E+02		
	[REDACTED]						36-H	0.0099 0.3500	100 99 - Oxidant/ Cultrate 5000	Oxidant/NP	NP	Cs-137 Subtotal	9.79837E+05 8.8800E+02	8.8800E+02 2.4000E+01	2.4000E+01 2.4000E+01		
	[REDACTED]						36-H	0.0099 0.3500	100 99 - Oxidant/ Cultrate 5000	Oxidant/NP	NP	Cs-137 Subtotal	4.12348E+05 3.7370E+02	3.7370E+02 1.0100E+01	1.0100E+01 1.0100E+01		
	[REDACTED]						36-H	0.0099 0.3500	100 99 - Oxidant/ Cultrate 5000	Oxidant/NP	NP	Co-57 Cs-137 Fe-55 Ge-68 Subtotal	2.98034E+04 3.42843E+03 1.42893E+03 1.26971E+04	2.7010E+01 3.1080E+00 1.2950E+00 1.1507E+01	7.3000E-01 8.4000E-02 3.5000E-02 3.1100E-01		
	[REDACTED]						36-H	0.0099 0.3500	100 99 - Oxidant/ Cultrate 5000	Oxidant/NP	NP	Cs-137 Subtotal	5.91985E+02 5.3850E-01	5.3850E-01 1.4500E-02	1.4500E-02 1.4500E-02		

FORM 541A (03-00)

FORM 542		Waste Control Specialists		1. WASTE COLLECTOR/PROCESSOR						2. MANIFEST NUMBER							
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				NAME		SHIPPER USE ONLY		17-RW-0072									
MANIFEST INDEX AND REGIONAL COMPACT TABULATION				IDENTIFICATION NUMBER													
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.				SHIPPING DATE		12/14/2017		3. PAGE 1 OF 3 PAGE(S)									
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	6A. WASTE DESCRIPTION (NOMENCLATURE)	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME		8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL								
				(m3)	(B3)				A. SOURCE MATERIAL (kg)	(B)	B. SNM (g)	C. ACTIVITY (MBq) (mCi)		D. VOLUME (m3) (B3)		E. WEIGHT (lbs)	F. MAXIMUM PACKAGE RADIATION LEVEL (mrem/hr)
36			SEALED SOURCE/DEVICE	0.4250	15.0087	AL-2015-206 Received 07/22/2015	P	NY	0.0000E+00	0.0000E+00	0.0000E+00	4.3216E+04	1.1680E+03	0.0099	0.3500	54	3.0000E+03
m 36			SEALED SOURCE/DEVICE	1.0620	38.2105	AL-2015-184 Received 07/01/2015	P	OH	0.0000E+00	0.0000E+00	0.0000E+00	5.8460E+03	1.5800E+02	0.0099	0.3500	54	3.0000E+03
Alaron 36	Alaron Nuclear Services 724-579-5777	2138 State Route 18 Wampum, PA 16157	SEALED SOURCE/DEVICE				P	PA	2.4967E-01	5.5109E-01	0.0000E+00	5.7857E+04	1.5583E+03	0.0438	1.5500	219	3.0000E+03
Applied HP 36	Applied Health Physics, Inc. 412-835-8555	2988 Industrial Blvd. Bethel Park, PA 15102	SEALED SOURCE/DEVICE	1.4610	31.3947	AL-2015-285 Received 09/18/2015	P	PA	0.0000E+00	0.0000E+00	0.0000E+00	3.9128E+04	1.0575E+03	0.0099	0.3500	54	3.0000E+03
36			SEALED SOURCE/DEVICE	1.1050	38.0227	AL-202384 Received 08/10/2015 AL517644 Received 08/25/2015 AL517538 Received 11/25/2015	P	TN	0.0000E+00	0.0000E+00	0.0000E+00	9.7589E+04	2.8370E+03	0.0287	1.0500	182	3.0000E+03
36			SEALED SOURCE/DEVICE	0.2120	7.4867	AL-2015-284 Received 10/05/2015	P	MA	0.0000E+00	0.0000E+00	0.0000E+00	5.7062E+03	1.5422E+02	0.0099	0.3500	54	3.0000E+03
TOTALS OF ALL PAGES (FORMS 542 AND 542A)									2.5102E-01	5.3341E-01	0.0000E+00	3.8273E+05	1.0345E+04	0.2122	7.5600	1127.0000	N/A

Container # 1

55 Gallon Drum

lbs

Manufacturer	Model	Isotope	Activity	Serial Number	Generator
Robert Shaw (Nuclear Chicago)	5178A	Cs-137	50 mCi	B80	Koppers

Container # 3

55 Gallon Drum

lbs

Manufacturer	Model	Isotope	Activity	Serial Number	Generator
Texas Nuclear	5200	Cs-137	20 mCi	B2246	Koppers
Texas Nuclear	5200	Cs-137	50 mCi	B2244	Koppers

Container # 4

55 Gallon Drum

lbs

Manufacturer	Model	Isotope	Activity	Serial Number	Generator
Kay Ray	7062	Cs-137	50 mCi	13036	Koppers