

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		EnergySolutions, LLC		5. SHIPPER -- NAME AND FACILITY Cabrera Services for GE/UNC 71 Shelton Ave. New Haven, CT 06511			SHIPPER I.D. NUMBER GE/UNC 17-04 <input type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR <input checked="" type="checkbox"/> GENERATOR TYPE (Specify) FC		7. FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) FORM 541 AND 541A 1 PAGE(S) FORM 542 AND 542A None PAGE(S) ADDITIONAL INFORMATION None PAGE(S)			8. MANIFEST NUMBER (Use this number on all continuation pages) 7321-01-0096								
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 800-424-9300				Utah Generator Site Access Permit No. 0209001622		SHIPMENT NUMBER na		9. CONSIGNEE - Name and Facility EnergySolutions, LLC Clive Disposal Site (Bulk Waste Facility) Interstate 80, Exit 49 Clive, UT 84029			CONTACT Security Department TELEPHONE (Include Area Code) (801)649-2175 DATE									
ORGANIZATION Chemtrek contract # CCN3584				CONTACT Wade Fillingame			TELEPHONE NUMBER (Include Area Code) 865-300-5789		SIGNATURE -- <i>Authorized consignee acknowledging waste receipt</i>			10. CERTIFICATION This is to certify that the herein-named materials 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 proper condition for transportation and disposal as described in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.								
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST =====> 1		6. CARRIER -- Name and Address Greenfield Logistics 8731 Sandy Parkway Suite 107 Sandy, UT 84070			EPA I.D. NUMBER UTR000005728		SHIPPING DATE 06/13/2017			11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)								
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number =====>		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		EPA MANIFEST NUMBER			CONTACT Shane Johansen		TELEPHONE (Include Area Code) 801-676-1575		DATE		AUTHORIZED SIGNATURE		TITLE		DATE			
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including 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. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY MBq mCi		17. LSA/SCO CLASS		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE	
RQ, UN 3077, Environmentally Hazardous Substance, solid, nos, 9, III (Asbestos) soil and debris				NA		na		Solid Oxides		U-234 U-235 U-238			1.9488E+01 (5.2671E-01)		NA		32200 LBS; 486 FT3		GFLU002120	
FOR CONSIGNEE USE ONLY				____ Record Waste Description Inadequate ____ Contamination or Leakage Detected ____ Unexpected Exposure Rates Detected ____ Labels, Markings, etc. Inadequate ____ Container Integrity Inadequate ____ Other ____ No Violations Detected on this Shipment			20. TERMS AND CONDITIONS A. HAZARDOUS MATERIALS: Generator represents & warrants that Waste Material ___ is (or) <input checked="" type="checkbox"/> is not a hazardous waste as defined in 40 CFR 261. Where the material is a hazardous waste, this shipment is also accompanied by a separate and completed hazardous waste manifest, along with the appropriate land-disposal restriction notice and/or certification as required by 40 CFR 268.1. B. TITLE: Upon acceptance at the disposal site by EnergySolutions, LLC, and all appropriate regulatory authorities, title to the Waste Material which conforms to Generator's representations herein shall thereupon transfer from Generator and be vested in EnergySolutions, LLC C. WASTE MATERIAL: Generator represents and warrants that all data set forth in this (UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST) are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and EnergySolutions LLC's facility license. D. INDEMNIFICATION: Generator agrees to indemnify EnergySolutions, LLC, its officers, employees and agents against all losses and liability whatsoever if such losses or liability results from the failure of the Waste Material to conform in all material respects to the data supplied on the (UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST,) or if this shipment fails to meet the standards prescribed by the Department of Transportation or any governmental agency having jurisdiction over such matters.													

FORM 541 EnergySolutions, LLC 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 7321-01-0096		
	NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME		NET WASTE WEIGHT		SPECIAL NUCLEAR MATERIAL (grams)				
		U-233	U-235	Pu	Total					
	1	m3 13.7620	kg 11249.0915	NP		1.7600E+00	1 Container	NP	1.7600E+00	
		ft3 486.0000	ton 12.4000	NP		NP	NP	NP	NP	
	ACTIVITY							SOURCE (kg)		
ALL NUCLIDES		TRITIUM		C-14	Tc-99	I-129				
MBq		1.9488E+01		NP	NP	NP	NP	(kg)	5.2158E-02	
mCi		5.2671E-01		NP	NP	NP	NP	(tons)	5.7494E-05	
							SHIPMENT ID NUMBER GE/UNC 17-04			

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER							16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C			
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION <small>(See Note 1 & Note 1A)</small>	7. VOLUME <small>(m3) (ft3)</small>	8. WASTE AND CONTAINER WEIGHT <small>(kg) (ton)</small>	9. SURFACE RADIATION LEVEL <small>(mSv/hr) (mrem/hr)</small>	10. SURFACE CONTAMINATION <small>(MBq/100 cm2) (dpm/100cm2)</small>		11. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION					
					(See Note 2 & Note 2A)	APPROXIMATE WASTE VOLUME(S) IN CONTAINER <small>(m3) (FT3)</small>	SOLIDIFICATION OR STABILIZATION MEDIA <small>(See Note 3)</small>	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							
												pCi/gm	MBq	mCi			
GFLU002120/7321-01	2-B	13.7620	14605.6753	<1.0000E-03	<0.0000	<0.0000	29,22-HJL	13.7620	100 100	Oxides/none	na	U-234	[8.1483E-05 kg]	4.49100E+01	1.8692E+01	5.0519E-01	AU
		486.0000	16.1000	<1.0000E-01	<100.0000	<1000.0000		486.0000				U-235	[1.7600E+00 g]	3.39000E-01	1.4110E-01	3.8134E-03	
												U-238	[5.2076E-02 kg]	1.57400E+00	6.5512E-01	1.7706E-02	
												Subtotal					
												Total					
												SNM [1.7600E+00 g]					
												Source [5.2158E-02 kg]					
Shipment Totals		13.7620	14605.6753									SNM [1.7600E+00 g]		1.9488E+01	5.2671E-01		
		486.0000	16.1000									Source [5.2158E-02 kg]					

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

1. Wooden Box or Crate	9. Demineralizer
2. Metal Box	10. Gas Cylinder
3. Plastic Drum or Pail	11. Bulk, Unpackaged Waste
4. Metal Drum or Pail	12. Unpackaged Components
5. Metal Tank or Liner	13. High Integrity Container
6. Concrete Tank or Liner	19. Other. Describe in Item 6, or additional page
7. Polyethylene Tank or Liner	
8. Fiberglass Tank or Liner	

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

A Gondola
B Intermodal
C End-Dump
D Roll-off
E Seavan

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. Cation Ion-exchange Media	39. Compactible Trash
22. Soil	31. Anion Ion-exchange Media	40. Noncompactible 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 Labware	59. 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 Combustible
J Non-combustible
K Air Filtration Filters
L Asbestos

Note3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume.) For media meeting disposal site 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.

Solidification

90. Cement	94. Vinyl Ester Styrene
91. Concrete (encapsulation)	99. Other. Describe in item 13, or additional page
92. Bitumen	
93. Vinyl Chloride	100. None Required.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST
ISOTOPES REPORT

For Manifest # 7321-01-0096
EnergySolutions, LLC

<u>Isotope</u>	<u>Total Activity</u>	
	<u>(MBq)</u>	<u>(mCi)</u>
U-234	1.8692E+01	5.0519E-01
U-235	1.4110E-01	3.8134E-03
U-238	6.5512E-01	1.7706E-02