



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

April 20, 2015

10 CFR 30.36

Licensing Assistance Team
Division of Nuclear Materials Safety
U. S. Nuclear Regulatory Commission, Region I
2100 Renaissance Blvd., Suite 100
King of Prussia, Pennsylvania 19406-2713

Tennessee Valley Authority
Materials License Number 41-08165-19
Docket Number 030-38667
Mail Control No. 585991

Subject: By-Product Materials License Number 41-08165-19 for TVA's Mixed Waste Storage Facility – Response to the Request for Records Important to Decommissioning

- References:
1. Electronic Message from NRC to TVA, "Request for Records Important to Decommissioning" dated March 9, 2015.
 2. Letter from TVA to NRC, "By-Product Materials License Number 41-08165-19 for TVA's Mixed Waste Storage Facility – Request to Terminate NRC Materials License" dated January 27, 2015.

In Reference 1, the NRC requested TVA review the applicable regulations pertaining to the transfer of records of information important to decommissioning to the NRC to ensure their long-term availability. The NRC requested that the documents be provided within 30 days to enable the NRC to process TVA's license termination request that was provided in Reference 2. TVA's response, including the requested documents, is provided in the enclosures to this letter.

Information regarding the applicability of the regulations and associated records of information important to decommissioning is provided in Enclosure 1. Records of disposals, including waste manifests and waste disposal processing or disposal facility receipt records are provided in Enclosure 2. The records in Enclosure 2, waste manifests and associated documentation, provide the documentation necessary to demonstrate that all containers of mixed waste received and stored at the TVA's Mixed Waste Storage Facility as authorized by NRC Materials License No. 41-08165-19 were properly disposed by transfer to a waste processing or disposal facility.

NMSS/RGNI MATERIALS-002

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If you have any questions regarding this information, please contact Lee Miller at (423) 751-3197.

Respectfully,

A handwritten signature in black ink, appearing to read "JW Shea", written over a horizontal line.

J. W. Shea
Vice-President, Nuclear Licensing

Enclosures:

1. Records of Information Important to Decommissioning
2. Waste Manifests and Associated Documentation

Enclosure 1

Records of Information Important to Decommissioning

Records of Information Important to Decommissioning
For TVA's Mixed Waste Storage Facility
NRC Materials License No. 41-08165-19

- A. The regulations in 10 CFR 30.35(g), 40.36(f), and 70.25 (g), regard financial assurance and recordkeeping for decommissioning and apply to the licensed activities TVA conducted under NRC Materials License No. 41-08165-19 at the Mixed Waste Storage Facility (MWSF). TVA's response to each pertinent item of these regulations is provided below:

Each person licensed under this part shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. Information the Commission considers important to decommissioning consists of—

1. *Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.*

There are no records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site at the MWSF, and TVA has no knowledge that such events occurred. There are no known occurrences where licensed material spilled or otherwise leaked from the containers in which the waste was received and stored at the MWST. During the conduct of operations at the MWSF, surveys performed in support of receipt, storage, handling, routine operations, shipping, or other authorized licensed activities revealed no spills or leaks from waste containers and no areas of contamination were detected.

2. *As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.*

As-built drawings of the MWSF were provided in TVA's letter to NRC dated January 27, 2015, Subject: By-Product Materials License Number 41-08165-19 for TVA's Mixed Waste Storage Facility – Request to Terminate NRC Materials License, pages E2-10 through 12. There have been no modifications to the structures and equipment depicted in these drawings since the license was issued. There are no locations of possible inaccessible contamination such as buried pipes which may be subject to contamination at the MWSF.

3. *Except for areas containing only sealed sources (provided the sources have not leaked or no contamination remains after any leak) or byproduct materials having*

only half-lives of less than 65 days, a list contained in a single document and updated every 2 years of the following (30.35(g)(3) & 70.25(g)(3):

Or

Except for areas containing depleted uranium used only for shielding or as penetrators in unused munitions, a list contained in a single document and updated every 2 years, of the following (40.36(f)(3):

- a. All areas designated and formerly designated as restricted areas as defined under 10 CFR 20.1003;*

The areas designated and formerly designated as restricted areas are the two structures identified as Mixed Waste Storage Building 1 and Mixed Waste Storage Building 2 in the as-built drawings provided in TVA's letter to NRC dated January 27, 2015, Subject: By-Product Materials License Number 41-08165-19 for TVA's Mixed Waste Storage Facility – Request to Terminate NRC Materials License, pages E2-10 through 12.

- b. All areas outside of restricted areas that require documentation under §30.35(g)(1), 40.36(f)(1), or 70.25(g)(1);*

TVA has no records or knowledge of spills or other unusual occurrences involving the spread of contamination in areas outside of restricted areas at the MWSF.

- c. All areas outside of restricted areas where current and previous wastes have been buried as documented under 10 CFR 20.2108; and*

TVA has no records or knowledge of disposal of mixed waste received at the MWSF in any area outside of restricted areas where current and previous wastes have been buried. Records provided in the Enclosure 2 indicate that all containers of mixed hazardous waste received at the MWSF were shipped to authorized recipients for processing and/or disposal.

- d. All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in 10 CFR part 20, subpart E, or apply for approval for disposal under 10 CFR 20.2002.*

There are no records of areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in 10 CFR Part 20, subpart E, or apply for approval for disposal under 10 CFR 20.2002. The only mixed waste received at the MWSF was stored in the two Mixed Waste Storage Buildings described in the NRC materials license and this material was transferred for disposal to off-site facilities authorized to process and/or receive mixed waste. TVA has no records or knowledge that another means of disposal was utilized nor any knowledge of areas outside of restricted areas that contain material such that, if the license

expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in 10 CFR Part 20, subpart E, or apply for approval for disposal under 10 CFR 20.2002.

4. *Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.*

TVA's decommissioning cost estimate was updated and provided to the NRC in a letter dated March 17, 2014, Subject: "By-Product Materials License Number 41-08165-19 for TVA's Mixed Waste Storage Facility – Low Level Radioactive Waste Storage License – Decommissioning Cost Update, Control No. 582602." The Statement of Intent included with this document was the funding method used for assuring funds would be available for the decommissioning of the MWSF.

- B. The regulations in 10 CFR 30.51(d) & (f), 40.61(d) & (f), and 70.51(a) apply to licensees authorized to possess radioactive material with a half-life greater than 120 days, source, and special nuclear material in an unsealed form and require the licensee to forward records related to various radioactive material disposal methods, release of radioactive effluents to the environment, and the records related to section A above, to the appropriate NRC Regional Office.

As described below, the TVA does not have any records to forward to the NRC regarding the MWSF and these regulations for the reasons given below:

1. **The TVA did not apply for approval of proposed disposal procedures not otherwise authorized in the regulations in 10 CFR Part 20 and has no knowledge of disposal of licensed material in any manner at the MWSF other than authorized in 10 CFR 20.2006, "Transfer for disposal and manifests."**
2. **The TVA has no records or knowledge of the disposal of licensed material at the MWSF as authorized in:**

**20.2003, "Disposal by release into sanitary sewerage."
20.2004, "Treatment or disposal by incineration".
20.2005, "Disposal of specific wastes."**

3. **The TVA has no knowledge of the release of radioactive effluents to the environment at the MWSF and therefore there are no records of the results of measurements and calculations used to evaluate the release of radioactive effluents to the environment as required by 10 CFR 20.2103(b)(4).**

- C. **Records important to decommissioning associated with the MWSF are those records related to the transfer of the mixed waste to authorized waste processors and disposal facilities.**

The records, which represent the only method of waste disposal utilized to dispose of the mixed waste received and stored at the MWSF, include the waste manifests and related documents that serve as the record of receipt of the mixed waste by the waste processor and/or disposal facility. The records are provided in Enclosure 2.

Enclosure 2

Records Important to Decommissioning

Waste Manifests and Associated Documentation

NRC Form 540, Uniform Low-Level Radioactive Waste Manifest

Form 541 Uniform Low-Level Radioactive Waste Manifest -Container and Waste Description

Form 542 Uniform Low-Level Radioactive Waste Manifest - Manifest Index and Regional Compact Tabulation

EPA Form No. 8700-22, Uniform Hazardous Waste Manifest

Uniform Low-Level Radioactive Waste Manifest - Isotope Report

Certificate of Disposal

Mixed Waste Facility Excel Spreadsheet
Record of Receipts and Shipments
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	A	B	C	D	E	F	G	H	I	J	K	L	M
	DRUM NO	GEN DRUM NO	MANIFESTIN	RECEIVED	MANIFESTOUT	SHIPPED OUT	EPA CODES	WEIGHT	PROCESS	CHEMCOMP	GENERATOR	DISPOSER	BAY
1													
2	972293 91RWD407	HWSF003332	10/29/1997 00017	10/16/2000 D008	146 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
3	972294 LW101	HWSF003332	10/29/1997 00017	10/16/2000 D008	44 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
4	972295 LW102	HWSF003332	10/29/1997 00017	10/16/2000 D008	80 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
5	972296 95RWD010	HWSF003332	10/29/1997 00017	10/16/2000 D008	106 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
6	972297 95RWD050	HWSF003332	10/29/1997 00017	10/16/2000 D008	83 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
7	972298 96RWD001	HWSF003332	10/29/1997 00017	10/16/2000 D008	36 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
8	972299 96RWD050	HWSF003332	10/29/1997 00017	10/16/2000 D008	100 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
9	972300 97RWD028	HWSF003332	10/29/1997 00017	10/16/2000 D008	99 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
10	972301 97RWD035	HWSF003332	10/29/1997 00017	10/16/2000 D008	65 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
11	972302 97RWD053	HWSF003332	10/29/1997 00017	10/16/2000 D008	66 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
12	972303 97RWD083	HWSF003332	10/29/1997 00017	10/16/2000 D008	82 LEAD PAINT	LEAD PAINT SOLIDS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
13	980424 3709-05	HWSF003337	2/27/1998 00017	10/16/2000 D008	7 LEAD PAINT	RADIOACTIVE LEAD	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
14	981444 10777	HWSF003730	8/10/1998 003715093J/K	1/28/2008 D001 D007 D018 D035	183 PAINTING	LIQUID PAINT AND	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
15	981445 11079	HWSF003730	8/10/1998 003715093J/K	1/28/2008 D001 D008 D022 D035	146 PAINTING	LIQUID PAINT AND	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
16	982657 980842	HWSF003959	11/13/1998 003715093J/K	1/28/2008	8 CLEANUP OF	PCB DEBRIS INCLUDING	TVA SEQUOYAH NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
17	983035 4067-05-0	HWSF003734	12/21/1998 00017	10/16/2000 D008	10 LEAD BASE	LEAD PAINT CHIPS AND	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
18	983036 98-RWD-098	HWSF003734	12/21/1998 00017	10/16/2000 D008	53 LEAD BASE	LEAD CONTAMINATED	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
19	991418 98 RWD 137	HWSF004036	6/17/1999 00017	10/16/2000 D008	77 LEAD-BASED	LEAD-CONTAMINATED	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
20	991419 9995-05-0	HWSF004036	6/17/1999 00017	10/16/2000 D008	3 LEAD BASED	LEAD-CONTAM.	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
21	994269 HWSFMMW0304	ONSITEMW030400	3/4/2000 00017	10/16/2000 D008	62 NRC & ADEM	Hard Debris Items i.e.	TVA HAZARDOUS WASTE STORAGE FACILITY	ENVIROCAR OF UTAH, MW2					
22	994706 ERC-121-00	HWSF004680	6/27/2000 00017	10/16/2000 D008	1 DISCARDING	LEAD/RAD	TVA ENVIRONMENTAL RESEARCH CENTER	ENVIROCAR OF UTAH, MW2					
23	994767 6192-05-0	HWSF004042	6/28/2000 00017	10/16/2000 D008	12 LEAD BASED	LEAD PAINT CHIPS,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
24	1001494 98-rwd-092	HWSF004771	4/16/2002 003715093J/K	1/28/2008 D008	87 Lead base paint	Rubber & cork gaskets,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
25	1004276 980381	HWSF004940	1/27/2003 003715093J/K	1/28/2008 D006 D007 D008	100 Removal of lead	LEAD PAINT/PAINT	TVA SEQUOYAH NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
26	1004277 020630	HWSF004940	1/27/2003 003715093J/K	1/28/2008 D006 D007 D008	109 Removal of lead	LEAD PAINT/PAINT	TVA SEQUOYAH NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
27	1004278 020797	HWSF004940	1/27/2003 003715093J/K	1/28/2008 D006 D007 D008	104 Removal of lead	LEAD PAINT/PAINT	TVA SEQUOYAH NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
28	1005224 02RWD001	HWSF006010	5/9/2003 003715093J/K	1/28/2008 D008	54 LEAD-BASE	LEAD-CONTAM. WASTE	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
29	1005664 020647	HWSF006248	6/17/2003 003715093J/K	1/28/2008 D007 D008	136 Removal of	PAINT CHIPS,	TVA SEQUOYAH NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
30	1005665 030572	HWSF006248	6/17/2003 003715093J/K	1/28/2008 D007 D008	45 Removal of	PAINT CHIPS,	TVA SEQUOYAH NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
31	1022668 90RWD269	000121827J/K	10/18/2007 003715093J/K	1/28/2008	53	PCB DEBRIS GLOVES,	TVA BROWNS FERRY NUCLEAR PLANT	ENVIROCAR OF UTAH, MW2					
32	1022766 04-81	000121866J/K	10/26/2007 T074683	11/16/2007	217 This material is	USED OIL (RAD.	TVA POWER SERVICE SHOPS WILSON U-BUILDING	ENERGYSOLUTIONS, MW2					
33	1022767 02-77	000121866J/K	10/26/2007 T074683	11/16/2007	218 This material is	USED OIL (RAD.	TVA POWER SERVICE SHOPS WILSON U-BUILDING	ENERGYSOLUTIONS, MW2					
34	1022768 04-072	000121866J/K	10/26/2007 T074683	11/16/2007	123 spent voltz	SPENT VOLTZ CLEANER	TVA POWER SERVICE SHOPS WILSON U-BUILDING	ENERGYSOLUTIONS, MW2					
35	1023150 07-149	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	216 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
36	1023151 07-150	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	221 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
37	1023152 07-151	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	230 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
38	1023153 07-152	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	229 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
39	1023154 07-153	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	234 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
40	1023155 07-154	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	234 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
41	1023156 07-155	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
42	1023157 07-156	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	230 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
43	1023158 07-157	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	235 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
44	1023159 07-159	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
45	1023160 07-158	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	232 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
46	1023161 07-160	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
47	1023162 07-161	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
48	1023163 07-162	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	231 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
49	1023164 07-163	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	234 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
50	1023165 07-164	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
51	1023166 07-165	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	234 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
52	1023167 07-166	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	232 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
53	1023168 07-167	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	237 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
54	1023169 07-168	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	231 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW2					
55	1023170 07-169	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	236 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW1					
56	1023171 07-170	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	235 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW1					
57	1023172 07-171	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	236 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW1					
58	1023173 07-172	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	235 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW1					
59	1023174 07-173	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW1					
60	1023175 07-174	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	231 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW1					
61	1023176 07-175	PSS120307-01	12/4/2007 002785862J/K	12/13/2007 D001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC MW1					

Mixed Waste Facility Excel Spreadsheet
Record of Receipts and Shipments
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A	B	C	D	E	F	G	H	I	J	K	L	M	
1	DRUMNO	GEN DRUMNO	MANIFESTIN	RECEIVED	MANIFESTOUT	SHIPPED OUT	EPA CODES	WEIGHT	PROCESS	CHEMCOMP	GENERATOR	DISPOSER	BAY
82	1023177 07-176	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	234 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
83	1023178 07-177	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
84	1023179 07-178	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	162 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
85	1023180 07-179	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
86	1023181 07-180	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	232 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
87	1023182 07-181	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	235 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
88	1023183 07-182	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	236 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
89	1023184 07-183	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	234 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
90	1023185 07-184	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	234 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
91	1023186 07-185	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	232 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
92	1023187 07-186	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	236 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
93	1023188 07-187	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
94	1023189 07-188	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	232 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
95	1023190 07-189	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	232 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
96	1023191 07-190	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	234 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
97	1023192 07-191	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	231 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
98	1023193 07-192	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	236 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
99	1023194 07-193	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	235 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
100	1023195 07-194	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	231 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
101	1023196 07-195	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	236 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
102	1023197 07-196	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	235 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
103	1023198 07-197	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	213 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
104	1023199 07-198	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	238 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
105	1023200 07-199	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	237 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
106	1023201 07-200	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	237 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
107	1023202 07-201	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
108	1023203 07-202	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	237 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
109	1023204 07-203	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	230 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
110	1023205 07-204	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	232 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
111	1023206 07-205	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	232 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
112	1023207 07-206	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	233 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
113	1023208 07-207	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	228 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
114	1023209 07-208	PSS120307-01	12/4/2007 002785862JIK	12/13/2007 0001	39 Rebuilding Rad	FLAMMABLE VPI RESIN	TVA POWER SERVICE SHOPS	DIVERSIFIED SCIENTIFIC	MW1				
95	1044498 98-RWD-094	005679328JIK	7/31/2012 005342927FLE	4/25/2013 F002	53 Maintenance of	RAGS, PADS,	TVA BROWNS FERRY NUCLEAR PLANT	PERMA FIX OF FLORIDA,	MW2				
96	1044499 11-RWD-091	005679328JIK	7/31/2012 005342927FLE	4/25/2013 D039 D040 F002	48 Cleanup debris	PCB >500 PPM,	TVA BROWNS FERRY NUCLEAR PLANT	PERMA FIX OF FLORIDA,	MW2				
97	1045162 12-075	RA-120927-01	10/1/2012 005342927FLE	4/25/2013 D001	210 Varinsh tank	VARNISH, FILTERS,	TVA POWER SERVICE SHOPS	PERMA FIX OF FLORIDA,	MW2				
98	1045163 12-076	RA-120927-01	10/1/2012 005342927FLE	4/25/2013 D001	230 Varinsh tank	VARNISH, FILTERS,	TVA POWER SERVICE SHOPS	PERMA FIX OF FLORIDA,	MW2				
99	1045164 12-077	RA-120927-01	10/1/2012 005342927FLE	4/25/2013 D001	208 Varinsh tank	VARNISH, FILTERS,	TVA POWER SERVICE SHOPS	PERMA FIX OF FLORIDA,	MW2				
100	1045165 12-078	RA-120927-01	10/1/2012 005342927FLE	4/25/2013 D001	130 Varinsh tank	VARNISH, FILTERS,	TVA POWER SERVICE SHOPS	PERMA FIX OF FLORIDA,	MW2				
101	1045166 12-079	RA-120927-01	10/1/2012 005342927FLE	4/25/2013 D001	168 Varinsh tank	VARNISH, FILTERS,	TVA POWER SERVICE SHOPS	PERMA FIX OF FLORIDA,	MW2				
102	1045186 12-080	RA-121001-01	10/1/2012 005342927FLE	4/25/2013 D001	120 PSS4 varnish	VARNISH (<50%	TVA POWER SERVICE SHOPS	PERMA FIX OF FLORIDA,	MW2				
103	1046082 07-0030	005681089JIK	12/13/2012 002226727JIK	6/12/2013 D008	86	PEEL AWAY/LEAD	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
104	1046860 121050	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	62 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
105	1046861 121090	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	91 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
106	1046862 121007	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	70 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
107	1046863 121016	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	88 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
108	1046864 121067	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	60 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
109	1046865 121222	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	71 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
110	1046866 121354	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	52 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
111	1046867 121474	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	62 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
112	1046868 121325	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	75 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				
113	1046869 120953	005681089JIK	2/22/2013 002226727JIK	6/12/2013 D008	100 Paint removal	PAINT CHIPS, RAGS	TVA SEQUOYAH NUCLEAR PLANT	ENERGYSOLUTIONS,	MW2				

Attachment 1

Waste Manifest Numbers 0825-01-0001 and 0825-02-0001

NRC Form 540 Manifest No.	EPA Form 8700-22 Manifest No.	Containers	Date Shipped	Recipient	Date Received
0825-01-0001	00017	17	10/16/2000	Envirocare of Utah, Inc. Clive, UT	10/19/2000
0825-02-0001	00017	1	10/16/2000	Envirocare of Utah, Inc. Clive, UT	10/19/2000

NOTE: The contents of MWSF container number 994706 were placed inside MWSF container number 994269 (NRC Form 540 Manifest No. 0825-02-0001).

FORM 540 U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		5. SHIPPER - NAME AND FACILITY TVA Hazardous Waste Storage Facility Paul Bernauer - P.O. 1010 AL Highway 133 N. At Wilson Dam Muscle Shoals AL 35661		SHIPMENT ID NUMBER RS-00-212 <div style="border: 1px solid black; padding: 2px; display: inline-block;"> <input checked="" type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR </div>		7. FORM 540 AND 540A PAGE 1 OF <u>5</u> PAGE(S) FORM 541 AND 541A <u>21</u> PAGE(S) ADDITIONAL INFORMATION <u>1</u> PAGE(S)		8. TRACKING NUMBER (Use this number on all continuation pages) 0825-01-0001													
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 1-800-237-2322 TVA Duty Ops. / 1-800-424-9300 Chem Trec 1-800-424-8802 National Response Center (RQ) Lead		USER PERMIT NUMBER 0825-01-0001		GENERATOR TYPE ENVIROCARE OF UTAH, INC. <i>MO4294</i> US I-80, Exit 49 Tooele County License No. UT 2300249 Amendment 10 Clive UT 84083		CONTACT Robert English Receiving Department TELEPHONE NUMBER (Include Area Code) (435) 884-0155															
ORGANIZATION Tennessee Valley Authority - Hazardous Waste Storage Facility		CONTACT Paul Bernauer / Jim Colagross (256) 314-7870 / (256) 386-3019		6. CARRIER - Name and Address Tri-state Motor Transit P.O. Box 113 Joplin MO 64802		EPA I.D. NUMBER MOD095038998		SIGNATURE <i>[Signature]</i> DATE 10/19/00													
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 17		CONTACT Gerald Whisman SIGNATURE <i>[Signature]</i> DATE 10-16-00		10. SHIPPER CERTIFICATION "This is to certify that the here-in 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 part 20 and 61 or equivalent state regulations."															
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO EPA MANIFEST NUMBER 00017		11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information) Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>		12. DOT LABEL "RADIOACTIVE" NA		13. TRANSPORT INDEX NA		14. PHYSICAL AND CHEMICAL FORM Solid/ Metal Oxides		15. INDIVIDUAL RADIONUCLIDES Cr-51 Mn-54 Fe-55 Co-58 Co-60 Zn-65 Ag-110m Cs-137		16. TOTAL PACKAGE ACTIVITY MBq mCi 2.73E+01 7.37E-01 mCi		17. LSA/SCO CLASS LSA II		18. TOTAL WEIGHT OR VOLUME (Use appropriate units) 35.82 Kg 78.97 Lbs		19. IDENTIFICATION NUMBER OF PACKAGE (#1) 972298 96RWD001	
FOR CONSIGNEE USE ONLY																					
Record Waste Description Inadequate Contamination or Leakage Detected Unexpected Exposure Rates Detected Labels, Markings, etc. Inadequate Container Integrity Inadequate Other <input checked="" type="checkbox"/> No Violations Detected on this Shipment										20. Terms and Condition A. HAZARDOUS MATERIALS. Generator represents & warrants that this Waste Material <u>X</u> is (or) <u> </u> is not a hazardous waste as defined in 40CFR261. Where the material is a hazardous waste, this shipment is also accompanied by a separate and complete hazardous waste manifest, along with the appropriate land-disposal restriction notice and by certification as required by 40CFR268.1. B. TITLE: Upon acceptance at the disposal site by Envirocare of Utah, Inc. and all appropriate regulatory authorities, title to the Waste Material which to Generator's representations herein shall hereupon transfer from Generator and be vested in Envirocare of Utah, Inc. 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 Envirocare of Utah, Inc.'s facility license. D. INDEMNIFICATION: Generator agrees to indemnify Envirocare of Utah, Inc., 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 540A

U.S. NUCLEAR REGULATORY COMMISSION

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
SHIPPING PAPER (CONTINUATION)**

8. TRACKING NUMBER
(Use this number on all continuation pages)

0825-01-0001

PAGE 2 OF 5 PAGE(S)

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 RADIOISOTOPES	16. TOTAL PACKAGE ACTIVITY MBq mCi	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.25E+01 3.38E-01	LSA II	64.675 Kg 142.57 Lbs	(#2) 972301 97RWD035
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.23E+01 3.32E-01	LSA II	82.45 Kg 181.77 Lbs	(#3) 972297 95RWD050
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.25E+01 3.39E-01	LSA II	65.835 kg 145.14 Lbs	(#4) 972302 97RWD053
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.21E+01 3.26E-01	LSA II	43.56 Kg 95.11 Lbs	(#5) 972294 LW101
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.91E+01 5.16E-01	LSA II	105.735 Kg 233.10 Lbs	(#6) 972296 95RWD010
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.27E+01 3.44E-01	LSA II	99.85 Kg 220.13 Lbs	(#7) 972299 96RWD186
				Fe-55 Ag-110m Co-58 Cs-137				

FORM 540A (4-97)

FORM 540A

U. S. NUCLEAR REGULATORY COMMISSION

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
SHIPPING PAPER (CONTINUATION)**

8. MANIFEST NUMBER
(Use this number on all continuation pages)

0825-01-0001

PAGE 3 OF 5 PAGE(S)

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	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 Fissile Excepted (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.25E+01 3.37E-01	LSA II	81.755 Kg 180.27 Lbs	(#8) 972303 97RWD083
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.18E+01 3.20E-01	LSA II	80.41 Kg 183.29 Lbs	(#9) 972295 LW102
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.29E+01 3.47E-01	LSA II	145.854 kg 321.55 Lbs	(#10) 972293 91RWD407
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) <i>RG</i>	NA	NA	Solids/ Dep Metal Oxides	Cr-51 Co-60 Mn-54 Zn-65	1.27E+01 3.44E-01	LSA II	98.901 Kg 218.04 Lbs	(#11) 972300 97RWD028
				Fe-55 Ag-110m Co-58 Cs-137				
Waste, Radioactive Material, Excepted Package-Limited Quantity of Material, 7, UN2910, Fissile Excepted (EPA D008)	NA	NA	Solids/ Dep Metal Oxides	Mn-54 Cs-137 Fe-55 Ce-144	2.56E-03 6.92E-05	N/A	6.993 Kg 15.42 Lbs	(#12) 980424 3709-05
				Co-60 Pu-238 Ni-63 Cm-243				
				Zn-65 (H-3-LLD) Sr-90 (C-14-LLD)				
				Ag-110m (Tc-99-LLD) Cs-134 (I-129-LLD)				

FORM 540A (4-97)

FORM 540A

U. S. NUCLEAR REGULATORY COMMISSION

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
SHIPPING PAPER (CONTINUATION)**

8. MANIFEST NUMBER
(Use this number on all continuation pages)

0825-01-0001

PAGE 4 OF 5 PAGE(S)

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 RADIOISOTOPES	16. TOTAL PACKAGE ACTIVITY MBq	16. TOTAL PACKAGE ACTIVITY mCi	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 Fissile Excepted (EPA D008) (Lead Contaminated Solids)	NA	NA	Solids/ Dep Metal Oxides	C-14 Ce-144 Mn-54 Pu-238	7.80E-06	2.11E-07	LSA II	10 Kg 22.05 Lbs	(#13) 983035 ENV 4067-05-0
				Fe-55 Pu-241 Co-60 Cm-242					
				Ni-63 Cm-244 Sr-90 (H-3-LLD)					
				Ag-110m (Tc-99-LLD) Cs-134 (I-129-LLD)					
				Cs-137 (Ce-141-LLD)					
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 Fissile Excepted (EPA D008) (Lead Contaminated Solids)	NA	NA	Solids/ Dep Metal Oxides	C-14 Pu-238 Mn-54 Pu-241	2.31E-05	6.25E-07	LSA II	52.95 kg 116.52 Lbs	(#14) 983036 98RW0098
				Fe-55 Cm-242 Co-60 Cm-244					
				Ni-63 (H-3-LLD) Sr-90 (Tc-99-LLD)					
				Ag-110m (I-129-LLD) Cs-137 (Ce-141-LLD)					
				Ce-144					
Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 Fissile Excepted (EPA D008) (Lead Contaminated Solids)	NA	NA	Solids/ Dep Metal Oxides	C-14 Cs-137 Mn-54 Pu-241	1.25E-03	3.38E-05	LSA II	2.55 Kg 5.62 Lbs	(#15) 991419 3995-05-0
				Fe-55 Cm-242 Co-60 (H-3-LLD)					
				Ni-63 (Tc-99-LLD) Zn-65 (I-129-LLD)					
				Sr-90 (Ce-141-LLD) Cs-134					

FORM 540A (4-97)

FORM 541		U.S. NUCLEAR REGULATORY COMMISSION		1. MANIFEST TOTALS										TEST NUMBER J1-0001 0 825-01-0001					
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste				# OF CONTAINERS/ DISPOSAL 17		NET WASTE VOLUME m3 2.857		NET WASTE WEIGHT kg 1088.5		SPECIAL NUCLEAR MATERIAL U-233 NP		U-235 NP		PU (5 pkgs) 3.15E-10		TOTAL 3.15E-10		3. PAGE 1 OF 21 PAGES	
						m3 100.78		lb 2351.6											
				ACTIVITY (MBq/mCi)														4. GENERATOR NAME TVA Hazardous Waste Storage Facility SHIPMENT ID NUMBER RS-00-212	
				ALL NUCLIDES MBq 162.87		TRITIUM LLD(uCi/cc) [3.84E-15]		C-14 1.95E-04		TC-99 LLD		I-129 LLD		SOURCE NP					
		mCi 4.4		[3.84E-15]		5.27E-06		[5.19E-15]		[5.92E-15]									

DISPOSAL CONTAINER DESCRIPTION										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										16. WASTE CLASSIFICATION (AL, AS, B, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 ft3	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 ft3	13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION CHEMICAL FORM WEIGHT % CHELATING AGENT IF >0.1%	15. RADIOLOGICAL DESCRIPTION									
											INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL: OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT									
(1) 972298		0.212	35.82 Kg	0.04	<3.33E-7	<1.67E-5		0.207			Metal Oxide	Cr-51	1.97E+03	2.60E+00	7.04E-02					
96RWD001	3	7.5	78.97 Lb	4	<20	<1000	28	7.3	100	N/A	NP	Mn-54	2.12E+03	2.80E+00	7.59E-02					
												Fe-55	4.58E+03	6.07E+00	1.64E-01					
												Co-58	2.74E+02	3.64E-01	9.83E-03					
												Co-60	8.44E+03	1.12E+01	3.02E-01					
												Zn-65	1.74E+03	2.30E+00	6.22E-02					
												Ag-110m	1.32E+03	1.75E+00	4.74E-02					
												Cs-137	1.37E+02	1.81E-01	4.90E-03					
												TOTALS	2.06E+04	2.73E+01	7.37E-01					

NOTE 1: CONTAINER DESCRIPTION CODES.
 For containers/waste in overpacks, the numerical code must be followed by "-OP".

1. Wooden box or Crate	9. Demineralizer
2. Metal Totes	10. Gas Cylinder
3. Metal Drum or Pail	11. Bulk, Unpackaged Waste
4. Plastic Drum or Pail	12. Unpackaged Components
5. Tanker	13. High Integrity Container
6. Lab Pack	14. Other. Describe in item 6 or additional page
7. Polyethylene tote Liner	
8. Fiberglass Tote Liner	

NOTE 2: WASTE DESCRIPTOR CODES. (Choose up to three which predominate by volume.)

20. Charcoal	29. Demolition Rubble	38. Evaporator Bottoms/Sludges/Concentrations
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	43. Activated Material
26. Filter Media	35. Glassware or Labware	59. Other. See Waste Profile Sheet
27. Mechanical Filter	36. Sealed Source/Device	
28. EPA or State Hazardous	37. Paint or Plating	

Note 3: Sorption, solidification, stabilization, media codes.
 100 = None required

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

U.S. NUCLEAR REGULATORY COMMISSION

1. MANIFEST NUMBER

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DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION (AU, AS, B, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 l3	8. WASTE AND CONTAINER WEIGHT lbs kg	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION		13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL: OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
					ALPHA	BETA		APPROXIMATE WASTE VOLUME IN CONTAINERS m3 l3	CHEMICAL FORM CHELATING AGENT		WEIGHT % CHELATING AGENT IF >0.1%	RADIONUCLIDES	pCi/gm	MBq	mCi		
(2) 972301		0.212	64.675	0.003	<3.33E-07	<1.67E-05	28	0.207			METAL		Cr-51	4.98E+02	1.19E+00	3.22E-02	AU
97RWD035	3	7.5	142.58	0.3	<20	<1000		7.3	100		OXIDES / NA	NP	Mn-54	5.37E+02	1.28E+00	3.47E-02	
													Fe-55	1.16E+03	2.78E+00	7.51E-02	
													Co-58	6.94E+01	1.66E-01	4.49E-03	
													Co-60	2.15E+03	5.14E+00	1.39E-01	
													Zn-65	4.40E+02	1.05E+00	2.85E-02	
													Ag-110m	3.35E+02	8.03E-01	2.17E-02	
													Cs-137	3.48E+01	8.33E-02	2.25E-03	
													TOTALS	5.23E+03	1.25E+01	3.38E-01	
(3) 972297		0.212	82.45	0.001	<3.33E-07	<1.67E-05	28	0.207			METAL		Cr-51	3.85E+02	1.17E+00	3.17E-02	AU
95RWD050	3	7.5	181.77	0.1	<20	<1000		7.3	100		OXIDES / NA	NP	Mn-54	4.13E+02	1.26E+00	3.40E-02	
													Fe-55	8.94E+02	2.73E+00	7.37E-02	
													Co-58	5.35E+01	1.63E-01	4.41E-03	
													Continued on next page				

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

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

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DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER							15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION (AU, AS, S, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 B3	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION mSv/hr mR/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION		13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
					ALPHA	BETA		12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 B3	14. CHEMICAL FORM CHELATING AGENT		WEIGHT % CHELATING AGENT IF >0.1%	RADIONUCLIDES	pCi/gm	MBq	mCi			
(4) 972302		0.212	65.835	0.003	<3.33E-07	<1.67E-05	28	0.207			METAL		Cr-51	4.91E+02	1.20E+00	3.23E-02		
97RWD053	3	7.5	145.14	0.3	<20	<1000		7.3	100		OXIDES / NA	NP	Mn-54	5.29E+02	1.29E+00	3.48E-02	AU	
													Fe-55	1.14E+03	2.79E+00	7.53E-02		
													Co-58	6.83E+01	1.67E-01	4.50E-03		
													Co-60	2.12E+03	5.18E+00	1.40E-01		
													Zn-65	4.33E+02	1.05E+00	2.85E-02		
													Ag-110m	3.30E+02	8.03E-01	2.17E-02		
													Cs-137	3.42E+01	8.33E-02	2.25E-03		
													TOTALS	5.15E+03	1.25E+01	3.39E-01		
(5) 972294		0.212	43.56	<0.001	<3.33E-07	<1.67E-05	28	0.207			METAL		Cr-51	7.16E+02	1.15E+00	3.12E-02		
LW101	3	7.5	96.05	<0.1	<20	<1000		7.3	100		OXIDES / NA	NP	Mn-54	7.70E+02	1.24E+00	3.60E-02	AU	
													Fe-55	1.66E+03	2.68E+00	7.25E-02		
													Co58	9.95E+01	1.61E-01	4.34E-03		
													Continued on next page					

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WASTE MANIFEST
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)**

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DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER							15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI- CATION (AU, AS, B, C)		
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 B3	8. WASTE AND CONTAINER WEIGHT kg b	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION APPROXIMATE WASTE VOLUME IN CONTAINERS m3 B3		13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION CHEMICAL FORM CHELATING AGENT		15. RADIOLOGICAL DESCRIPTION WEIGHT % CHELATING AGENT IF >0.1%				
					ALPHA	BETA		12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 B3	14. CHEMICAL DESCRIPTION CHEMICAL FORM CHELATING AGENT								
											RADIONUCLIDES	pCi/gm				MBq	mCi
(6) 972296		0.212	105.735	0.001	<3.33E-07	<1.67E-05	28	0.207			METAL		Cr-51	4.67E+02	1.83E+00	4.94E-02	AU
95RWD010	3	7.5	233.1	0.1	<20	<1000		7.3	100	OXIDES / NA	NP	Mn-54	5.03E+02	1.97E+00	5.32E-02		
												Fe-55	1.08E+03	4.26E+00	1.15E-01		
												Co-58	6.50E+01	2.54E-01	6.87E-03		
												Co-60	2.00E+03	7.81E+00	2.11E-01		
												Zn-65	4.12E+02	1.61E+00	4.36E-02		
												Ag-110m	3.14E+02	1.23E+00	3.32E-02		
												Cs-137	3.25E+01	1.27E-02	3.43E-03		
												TOTALS	4.88E+03	1.91E+01	5.16E-01		
(7) 972296		0.212	99.85	<0.001	<3.33E-07	<1.67E-05	28	0.207			METAL		Cr-51	3.29E+02	1.22E+00	3.29E-02	
96RWD166	3	7.5	220.12	<0.1	<20	<1000		7.3	100	OXIDES / NA	NP	Mn-54	3.54E+02	1.31E+00	3.53E-02		
												Fe-55	7.65E+02	2.83E+00	7.64E-02		
												Co-58	4.59E+01	1.69E-01	4.58E-03		
												Continued on next page					

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DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION (AU, AS, B, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 83	8. WASTE AND CONTAINER WEIGHT lbs b	9. SURFACE RADIATION mSv/hr mR/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION APPROXIMATE WASTE VOLUME IN CONTAINERS m3 83		13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION CHEMICAL FORM CHELATING AGENT WEIGHT % CHELATING AGENT IF >0.1%		INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
					ALPHA	BETA							RADIONUCLIDES	pCi/gm	MBq	mCi	
(8) 972303		0.212	81.755	<0.001	<3.33E-07	<1.67E-05	28	0.207			METAL		Cr-51	3.94E+02	1.19E+00	3.22E-02	AU
97RWD083	3	7.5	180.24	<0.1	<20	<1000		7.3			100% OXIDES / NA NP		Mn-54	4.23E+02	1.28E+00	3.46E-02	
													Fe-55	9.16E+02	2.77E+00	7.49E-02	
													Co-58	5.48E+01	1.66E-01	4.48E-03	
													Co-60	1.70E+03	5.14E+00	1.39E-01	
													Zn-65	3.48E+02	1.05E+00	2.85E-02	
													Ag-110m	2.65E+02	8.02E-01	2.17E-02	AU
													Cs-137	2.73E+01	8.27E-02	2.24E-03	
													TOTALS	4.13E+03	1.25E+01	3.37E-01	
(9) 972295		0.212	80.41	<0.001	<3.33E-07	<1.67E-05	28	0.207			METAL		Cr-51	3.80E+02	1.13E+00	3.06E-02	AU
LW102	3	7.5	177.3	<0.1	<20	<1000		7.3			100% OXIDES / NA NP		Mn-54	4.08E+02	1.21E+00	3.28E-02	
													Fe-55	8.84E+02	2.63E+00	7.11E-02	
													Co-58	5.29E+01	1.57E-01	4.25E-03	
													Continued on next page				

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

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

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DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								15. RADIOLOGICAL DESCRIPTION				18. WASTE CLASSIFI- CATION (AU, AS, S, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 ft3	8. WASTE AND CONTAINER WEIGHT kgs lb	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)		12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 ft3		13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION		INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
					ALPHA	BETA			CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF >0.1%		RADIONUCLIDES	pCi/gm	MBq	mCi			
(10) 972293		0.326	145.854	0.001	<3.33E-07	<1.67E-05	28. OP		0.322			METAL		Cr-51	2.27E+02	1.22E+00	3.31E-02	AU
91RWD407	3	11.5	321.55	0.1	<20	<1000			11.36	100		OXIDES / NA	NP	Mn-54	2.45E+02	1.32E+00	3.57E-02	
														Fe-55	2.59E+02	2.86E+00	7.72E-02	
														Co-58	3.18E+01	1.72E-01	4.64E-03	
														Co-60	9.79E+02	5.29E+00	1.43E-01	
														Zn-65	2.01E+02	1.08E+00	2.93E-02	
														Ag-110m	1.53E+02	8.24E-01	2.23E-02	AU
														Cs-137	1.58E+01	8.54E-02	2.31E-03	
														TOTALS	2.38E+03	1.29E+01	3.47E-01	
(11) 972300		0.212	98.901	<0.001	<3.33E-07	<1.67E-05	28		0.207			METAL		Cr-51	3.31E+02	1.21E+00	3.28E-02	AU
97RWD028	3	7.5	218.04	<0.1	<20	<1000			7.3	100		OXIDES / NA	NP	Mn-54	3.58E+02	1.31E+00	3.54E-02	
														Fe-55	7.73E+02	2.83E+00	7.64E-02	
														Co-58	4.64E+01	1.70E-01	4.59E-03	
														Continued on next page				

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

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DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFI- CATION (A, AS, B, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 l3	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2 ALPHA BETA	11. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
						11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 l3	13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF >0.1%	RADIONUCLIDES	pCi/gm	MBq	mCi		
(11) 972300 97RWD028												Co-60	1.43E+03	5.25E+00	1.42E-01	
												Zn-65	2.93E+02	1.07E+00	2.90E-02	
												Ag-110m	2.22E+02	8.13E-01	2.20E-02	
												Cs-137	2.31E+01	8.46E-02	2.29E-03	
												TOTALS	3.48E+03	1.27E+01	3.44E-01	

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DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								16. WASTE CLASSIFI- CATION (A, AS, B, C)		
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 83	8. WASTE AND CONTAINER WEIGHT lgs lb	9. SURFACE RADIATION mSv/hr mR/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
					ALPHA	BETA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 83	13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF >0.1%	15. RADIONUCLIDES	pCi/gm		MBq	mCi
(12) 980424		0.019	6.993	<0.001	<3.33E-07	<1.67E-05	28	0.014		METAL		Mn-54	6.29E-01	1.63E-04	4.40E-06	AU
3709-05	3	0.67	15.42	<0.1	<20	<1000		0.5	100	OXIDES / NA	NP	Fe-55	2.74E+00	7.10E-04	1.92E-05	
												Co-60	3.96E+00	1.02E-03	2.77E-05	
												Ni-63	1.71E-01	4.44E-05	1.20E-06	
												Zn-65	3.29E-01	8.50E-05	2.30E-06	
												Sr-90	4.47E-03	1.16E-06	3.13E-08	
												Ag-110m	5.27E-01	1.36E-04	3.69E-06	
												Cs-134	7.70E-02	1.99E-05	5.38E-07	
												Cs-137	1.46E+00	3.77E-04	1.02E-05	
												Ce-144	7.11E-04	1.84E-07	4.98E-09	
												Pu-238	4.44E-05	1.15E-08	3.11E-10	
												Cm-243	4.94E-05	1.28E-08	3.46E-10	
												H-3 (LLD)	MBq/cc 4.33E-06	uCi/cc 1.17E-10		
												C-14 (LLD)	MBq/cc 3.07E-06	uCi/cc 8.30E-11		
												Continued on next page				

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

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

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DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						16. RADIOLOGICAL DESCRIPTION				18. WASTE CLASSIFICATION (AU, AS, S, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 ft3	8. WASTE AND CONTAINER WEIGHT lbs kg	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
					ALPHA	BETA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 ft3	13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF >0.1%	RADIONUCLIDES	pCi/gm	MBq	mCi	
(13) 983035		0.019	10	<0.001	<3.33E-07	<1.67E-05	28	0.014		METAL		C-14	1.10E-08	4.07E-10	1.10E-11	AU
ENV 4067-05-0	3	0.67	22	<0.1	<20	<1000		0.5	100	OXIDES / NA	NP	Mn-54	3.80E-04	1.41E-07	3.80E-09	
												Fe-55	7.22E-03	2.67E-08	7.22E-08	
												Co-60	9.13E-03	3.38E-06	9.13E-08	
												Ni-63	6.59E-05	2.44E-08	6.59E-10	
												Sr-90	7.07E-06	2.62E-09	7.07E-11	
												Ag110m	5.10E-04	1.89E-07	5.10E-09	
												Cs-134	2.15E-04	7.96E-08	2.15E-09	
												Cs-137	3.56E-03	1.32E-06	3.56E-08	
												Ce-144	8.11E-07	3.00E-10	8.11E-12	
												Pu-238	1.01E-08	3.74E-12	1.01E-13	
												Pu-241	4.61E-06	1.71E-09	4.61E-11	
												Cm-242	4.29E-08	1.59E-11	4.29E-13	
												Cm-244	1.24E-08	4.59E-12	1.24E-13	
											Continued on next page					

FORM 541A

U.S. NUCLEAR REGULATORY COMMISSION

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

2. MANIFEST NUMBER

0825-01-0001

3.

PAGE 16 OF 21 PAGES

DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION (AL, AS, B, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 R3	8. WASTE AND CONTAINER WEIGHT lbs Lb	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. PHYSICAL DESCRIPTION		14. CHEMICAL DESCRIPTION		INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
					11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 R3	13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF >0.1%	RADIONUCLIDES	pCi/gm	MBq	mCi			
(14) 983036		0.212	52.95	0.001	<3.33E-07	<1.67E-05	28	0.207		METAL		C-14	5.66E-07	1.11E-09	3.00E-11	
98-RWD-098	3	7.5	116.75	0.1	<20	<1000		7.3	100	OXIDES / NA	NP	Mn-54	1.31E-03	2.56E-06	6.92E-08	AL
												Fe-55	3.72E-03	7.28E-06	1.97E-07	
												Co-60	4.72E-03	9.24E-06	2.50E-07	
												Ni-63	3.40E-05	6.65E-08	1.80E-09	
												Sr-90	2.53E-06	4.95E-09	1.34E-10	
												Ag110m	7.47E-04	1.46E-06	3.96E-08	
												Cs-137	1.28E-03	2.50E-06	6.76E-08	
												Ce-144	2.91E-07	5.69E-10	1.54E-11	
												Pu-238	3.64E-09	7.13E-12	1.93E-13	
												Pu-241	1.65E-06	3.24E-09	8.75E-11	
												Cm-242	1.54E-08	3.02E-11	8.15E-13	
												Cm-244	4.45E-09	8.72E-12	2.36E-13	
												H-3 (LLD)		MBq/cc 1.42E-10	uCi/cc 3.84E-15	
												Continued on next page				

FORM 541A

U.S. NUCLEAR REGULATORY COMMISSION

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

MANIFEST NUMBER

0825-01-0001

PAGE

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DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER							15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFI- CATION (ALL AS, B, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 B3	8. WASTE AND CONTAINER WEIGHT lbs B3	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION APPROXIMATE WASTE VOLUME IN CONTAINERS m3 B3		13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION CHEMICAL FORM CHELATING AGENT WEIGHT % CHELATING AGENT IF >0.1%		INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
					ALPHA	BETA		RADIONUCLIDES	pCi/gm		MBq	mCi						
(15) 991419		0.019	2.55	<0.001	<3.33E-07	<1.67E-05	28	0.014			METAL		C-14	8.30E-04	7.83E-08	2.12E-09	AU	
3995-05-0	3	0.67	5.62	<0.1	<20	<1000		0.5	100		OXIDES / NA	NP	Mn-54	5.10E-01	4.81E-05	1.30E-06		
													Fe-55	4.40E+00	4.15E-04	1.12E-05		
													Co-60	6.20E+00	5.85E-04	1.58E-05		
													Ni-63	4.97E-02	4.69E-06	1.27E-07		
													Zn-65	2.89E-01	2.72E-05	7.36E-07		
													Sr-90	2.25E-03	2.12E-07	5.73E-09		
													Cs-134	6.50E-01	6.13E-05	1.66E-06		
													Cs-137	1.13E+00	1.07E-04	2.89E-06		
													Pu-241	1.43E-03	1.35E-07	3.66E-09		
													Cm-242	3.73E-06	3.52E-10	9.52E-12		
													H-3 (LLD)	1.98E-08	3.57E-12			
													Tc-99 (LLD)	2.68E-08	4.83E-12			
													I-129 (LLD)	3.05E-08	5.50E-12			
													Ce-141(LLD)	9.88E-08	1.78E-11			
													TOTALS	1.32E+01	1.25E-03	3.38E-05		

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

PAGE 19 OF 21 PAGES

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER							15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION (AU, AS, S, C)
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 B3	8. WASTE AND CONTAINER WEIGHT lbs B	9. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 B3	13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION CHEMICAL FORM CHELATING AGENT WEIGHT % CHELATING AGENT IF >0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT							
					ALPHA	BETA					RADIONUCLIDES	pCi/gm	MBq	mCi				
(16) 991418		0.212	77	0.12	<3.33E-07	<1.67E-05	28	0.207		METAL	C-14	6.84E-02	1.95E-04	5.27E-06	AU			
98RWD137	3	7.5	189.75	12	<20	<1000		7.3	100	OXIDES / NA NP	Mn-54	3.97E+01	1.13E-01	3.06E-03				
											Fe-55	3.62E+02	1.03E+00	2.79E-02				
											Co-60	5.09E+02	1.45E+00	3.92E-02				
											Ni-83	4.09E+00	1.17E-02	3.15E-04				
											Zn-65	6.35E+01	1.81E-01	4.89E-03				
											Sr-90	6.08E-01	1.73E-03	4.67E-05				
											Ag-110m	5.21E+01	1.48E-01	4.01E-03				
											Cs-134	1.49E+02	4.26E-01	1.15E-02				
											Cs-137	3.05E+02	8.70E-01	2.35E-02				
											Cm-242	1.01E-03	2.87E-06	7.75E-08				
											Pu-241	3.87E-01	1.10E-03	2.98E-05				
											H-3 (LLD)	MBq/cc 2.59E-05	uCi/cc 7.00E-10					
											Tc-99 (LLD)	MBq/cc 3.00E-05	uCi/cc 9.45E-10					
											Continued on next page							

FORM 541A

U.S. NUCLEAR REGULATORY COMMISSION

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

2. MANIFEST NUMBER

0825-01-0001

PAGE 21 OF 21 PAGES

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION (AL, AS, B, C)
5. CONTAINER IDENTIFICATION NUMBER	8. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m ³ B3	9. WASTE AND CONTAINER WEIGHT kg B	10. SURFACE RADIATION mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME IN CONTAINERS m ³ B3	13. SOLIDIFICATION OR STABILIZATION MEDIA See Note 3	14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
					ALPHA	BETA				CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF >0.1%	RADIONUCLIDES	pCi/gm	MBq	mCi		
(17) 6192-05-0 994767	3	0.019 0.67	12.2 26.9	<0.001 <0.1	<3.33E-07 <20	<1.67E-05 <1000	28	0.014 0.5		METAL OXIDES / NA		Mn-54 Fe-55	4.89E+00 2.89E+01	2.21E-03 1.30E-02	5.97E-05 3.52E-04	AU	
												Co-60 Ni-63	3.60E+01 7.16E-01	1.63E-02 3.23E-04	4.39E-04 8.74E-06		
												Zn-65 Ag-110m	1.95E+00 1.95E+00	8.82E-04 8.82E-04	2.38E-05 2.38E-05		
												Cs-134 Cs-137	1.11E+00 1.73E+01	5.03E-04 7.82E-03	1.36E-05 2.11E-04		
												H-3 (LLD) C-14 (LLD)	MBq/cc 2.86E-04	uCi/cc 7.74E-09	2.30E-08		
												Tc-99(LLD) I-129(LLD)	MBq/cc 1.88E-04 MBq/cc 1.04E-04	uCi/cc 5.07E-09 uCi/cc 2.80E-09			
												TOTALS	9.28E+01	4.19E-02	1.13E-03		
SHIPMENT		3.158	1066.53														
TOTAL:		111.7	2499										4.13E+03	1.63E+02	4.40E+00		

FORM 540 U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		5. SHIPPER - NAME AND FACILITY TVA Hazardous Waste Storage Facility Paul Bernauer - P.O. 1010 AL Highway 133 N. At Wilson Dam Muscle Shoals AL 35661		SHIPMENT ID NUMBER RS-00-212 <div style="border: 1px solid black; padding: 2px; text-align: center;"> COLLECTOR PROCESSOR </div>		7. FORM 540 AND 540A FORM 541 AND 541A ADDITIONAL INFORMATION PAGE 1 OF 1 PAGE(S) 2 PAGE(S) 1 PAGE(S)		8. TRACKING NUMBER (Use this number on all continuation pages) 0825-02-0001	
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 1-800-237-2322 TVA Duty Ops. / 1-800-424-9300 Chem Trec 1-800-424-8802 National Response Center (RQ) Lead		USER PERMIT NUMBER 0825-02-0001		GENERATOR TYPE CONTACT Paul Bernauer / Jim Colagross (256) 314-7870 / (256) 386-3019		9. COSIGNEE - Name and Facility Address ENVIROCORE OF UTAH, INC. Mo4293 US I-80, Exit 49 Tooele County License No. Clive UT 84083 UT 2300249 Amendment 10		CONTACT Robert English Receiving Department TELEPHONE NUMBER (Include Area Code) (435) 884-0155	
ORGANIZATION Tennessee Valley Authority - Hazardous Waste Storage Facility		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 1		6. CARRIER - Name and Address Tri-state Motor Transit P.O. Box 113 Joplin MO 64802		EPA I.D. NUMBER MOD095038998		SIGNATURE - Authorized CONSIGNEE acknowledging waste receipt DATE 10-16-00	
2. IS THIS AN "EXCLUSIVE USE SHIPMENT"? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If "Yes," provide Manifest Number 00017		CONTACT Gerald Whisman SIGNATURE - Authorized carrier acknowledging waste receipt DATE 10-16-00		10. SHIPPER CERTIFICATION "This is to certify that the here-in 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 part 20 and 61 or equivalent state regulations". AUTHORIZED SIGNATURE James B. Colgan TITLE RadCon Technician		DATE 10-16-00	
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information) Waste, Radioactive Material, LSA, n.o.s., 7, UN2912 (EPA D008) (Lead Contaminated Solids) RG		12. DOT LABEL "RADIOACTIVE" NA		13. TRANSPORT INDEX NA		14. PHYSICAL AND CHEMICAL FORM Solids/ Dep Metal Oxides		15. INDIVIDUAL RADIONUCLIDES Cr-51 Pu-238 Mn-54 Cm-243 Fe-55 (H-3-LLD) Co-58 (Tc-99-LLD) Co-60 (I-129-LLD) Zn-65 (C-14-LLD) Ag-110m Pu-241 Cs-137 Cm-242 Ni-63 Cm-244 Sr-90 (Ce-141-LLD) Cs-134 Ce-144	
16. TOTAL PACKAGE ACTIVITY MBq 1.84E+00 mCi 4.97E-02		17. LSA/SCO CLASS LSA II		18. TOTAL WEIGHT OR VOLUME (Use appropriate units) 62 kg 137.02 Lbs		19. IDENTIFICATION NUMBER OF PACKAGE (#1) 994269			
FOR CONSIGNEE USE ONLY <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. Terms and Condition A. HAZARDOUS MATERIALS. Generator represents & warrants that this Waste Material <u>X</u> is (or) <u> </u> is not a hazardous waste as defined in 40CFR261. Where the material is a hazardous waste, this shipment is also accompanied by a separate and complete hazardous waste manifest, along with the appropriate land-disposal restriction notice and by certification as required by 40CFR268.1. B. TITLE: Upon acceptance at the disposal site by Envirocare of Utah, Inc. and all appropriate regulatory authorities, title to the Waste Material which to Generator's representations herein shall hereupon transfer from Generator and be vested in Envirocare of Utah, Inc. C. WASTE MATERIAL: Generator represents and warrants that all date 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 Envirocare of Utah, Inc.'s facility license. D. INDEMNIFICATION: Generator agrees to indemnify Envirocare of Utah, Inc., 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.					

NRC Form 541

U.S. NUCLEAR REGULATORY COMMISSION

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 0825-02-0001	
# OF DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	SPECIAL NUCLEAR (GRAMS)
1	m3 212 lb 7.5	kg 62 lb 137.02	U-233 U-235 TOTAL NP NP (1 pkgs) 5.75E-15 5.75E-15
ACTIVITY (MBq/mCi)			4. GENERATOR NAME
ALL NUCLIDES	TRITIUM	C-14	TC-99
MBq 1.84E+00	LLD	LLD	LLD
mCi 4.97E-02	[8.46E-14]	[2.03E-14]	[1.27E-13] [1.71E-11] NP
SOURCE			4. GENERATOR NAME
NP			TVA Hazardous Waste Storage Facility
SHIPMENT ID NUMBER			RS-00-212

DISPOSAL CONTAINER DESCRIPTION

WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER

5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 lb	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION Level mSv/hr mRem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. PHYSICAL DESCRIPTION				14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION (NU, AS, B, C)
					ALPHA	BETA/GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME IN CONTAINERS m3 lb	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM Chelating Agent	WEIGHT % CHELATING AGENT IF >0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
(1) 994269	3	0.212 7.5	62 137.02	<0.001 <0.1	<3.33E-07 <20	<1.67E-05 <1000	28	0.207 7.3	100	METAL OXIDES / NA	NP	Cr-51 Mn-54 Fe-55 Co-58 Co-60 Zn-65 Ag-110m Cs-137 Package continued on next page	7.66E+01 8.22E+01 1.78E+02 1.07E+01 3.30E+02 6.76E+01 5.15E+01 5.29E+00	1.76E-01 1.89E-01 4.09E-01 2.45E-02 7.57E-01 1.55E-01 1.18E-01 1.23E-02	4.75E-03 5.09E-03 1.10E-02 6.61E-04 2.05E-02 4.19E-03 3.19E-03 3.28E-04	AU	

NOTE 1: CONTAINER DESCRIPTION CODES.
For containers/waste in overpacks, the numerical code must be followed by "OP".

- | | |
|----------------------------|--|
| 1. Wooden box or Crate | 9. Drum/Canister |
| 2. Metal Totes | 10. Gas Cylinder |
| 3. Metal Drum or Pail | 11. Bulk Unpackaged Waste |
| 4. Plastic Drum or Pail | 12. Unpackaged Components |
| 5. Tanker | 13. High Integrity Container |
| 6. Lab Pack | 14. Other: Describe in Item 6 or additional page |
| 7. Polyethylene tote Liner | |
| 8. Fiberglass Tote Liner | |

NOTE 2: WASTE DESCRIPTOR CODES. (Choose up to three which predominate by volume.)

- | | | |
|----------------------------|----------------------------------|---|
| 20. Charcoal | 28. Demolition Rubble | 38. Evaporator Bottoms/Sludges/Concentrations |
| 21. Incinerator Ash | 30. Cation Ion-exchange Media | 39. Compressible Trash |
| 22. Soil | 31. Anion Ion-exchange Media | 40. Noncompressible 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 | 43. Activated Material |
| 26. Filter Media | 35. Glassware or Labware | 50. Other: See Waste Profile Sheet |
| 27. Mechanical Filter | 36. Sealed Source/Device | |
| 28. EPA or State Hazardous | 37. Paint or Plating | |

Note 3: Sorption, solidification, stabilization, media codes.

100 = None required

10/16/2000

NRC Form 541A

U.S. NUCLEAR REGULATORY COMMISSION
**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST**
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

2. MANIFEST NUMBER
0825-02-0001

3. PAGE 2 OF 2 PAGES

DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION (AU, AS, S, C)		
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m3 B3	8. WASTE AND CONTAINER WEIGHT kg b	9. SURFACE RADIATION mSv/hr mR/hr	10. SURFACE CONTAMINATION		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION		13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF >0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
					MBq/100 cm2 dpm/100 cm2			m3 B3	RADIONUCLIDES				pCi/gm	MBq		mCi	
					ALPHA	BETA											
(1) 994269													Ni-63	3.80E-04	8.71E-07	2.36E-08	
													Sr-90	1.68E-05	3.86E-08	1.04E-09	
													Cs-134	4.73E-03	1.08E-05	2.93E-07	
													Ce-144	8.03E-08	1.85E-10	4.98E-12	
													Pu-238	5.02E-09	1.15E-11	3.11E-13	
													Cm-243	5.58E-09	1.28E-11	3.46E-13	
													H-3 (LLD)			uCi/cc 8.46E-14	
													Tc-99(LLD)			uCi/cc 1.27E-13	
													I-129 (LLD)			uCi/cc 1.71E-11	
													C-14 (LLD)			uCi/cc 2.03E-14	
													Pu-241	1.04E-05	2.39E-08	6.45E-10	
													Cm-242	2.71E-08	6.22E-11	1.68E-12	
													Cm-244	3.81E-12	8.73E-15	2.36E-16	
													Ce-141(LLD)			uCi/cc 2.79E-13	
													TOTALS	8.02E+02	1.84E+00	4.97E-02	

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. AL 264009000500017	Manifest Document No. 00017	2. Page 1 of 2	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address TVA-Hazardous Waste Storage Facility ATTN: Libby Pitts P.O. Box 1010 4. Generator's Phone (256) 314-7871 Muscle Shoals, AL 35662				A. State Manifest Document Number 00017		
5. Transporter 1 Company Name Tri-State Motor Transit Company				B. State Generator's ID		
6. US EPA ID Number M O D 0 9 5 0 3 8 9 9 8				C. State Transporter's ID		
7. Transporter 2 Company Name				D. Transporter's Phone 1-800-234-8768		
8. US EPA ID Number				E. State Transporter's ID		
9. Designated Facility Name and Site Address Envirocare of Utah, Inc. Clive Disposal Site Interstate 80, Exit 49				F. Transporter's Phone		
10. US EPA ID Number U T D 9 8 2 5 9 8 8 9 8				G. State Facility's ID		
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				H. Facility's Phone XX 1-435-884-0155		
a. RQ		Waste Radioactive Material, LSA, N.O.S., 7, UN2912, (EPA Waste Code D008-Solids)	12. Containers No. Type 0 0 1 D M	13. Total Quantity 0 0 0 6 2	14. Unit Wt/Vol K	1. Waste No. D008
b. RQ		Waste Radioactive Material, LSA, N.O.S., 7, UN2912 (EPA Waste Code D008-Solids)	0 1 0 D M	0 0 8 2 5	K	D008
c. RQ		Waste Radioactive Material, LSA, N.O.S., 7, UN2912, Fissile Excepted (EPA D008-Solids)	0 0 1 D M	0 0 0 8 2	K	D008
d. X		Waste Radioactive Material, LSA, N.O.S., 7, UN2912, Fissile Excepted (EPA D008-Solids)	0 0 4 D M	0 0 1 4 3	K	D008
J. Additional Descriptions for Materials Listed Above 11a. Mixed Waste-Disposal Profile 0825-02 (Debris D008) 11b. Mixed Waste-Disposal Profile 0825-01 (D008) 11c. Mixed Waste-Disposal Profile 0825-01 (D008) 11d. Mixed Waste-Disposal Profile 0825-01 (D008)				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information 11a. ERG 162 11d. ERG 162 11b. ERG 162 <i>shipment HS</i> 11c. ERG 162 <i>0825-01-0001</i> <i>0825-02-0001</i>				TVA Contract No. 99PFP-253768-000 <i>0825-02-M04294</i> Emergency Contact: Chemtrec 1-800-424-9300 TVA ODS Contact: 1-800-237-2322 <i>0825-01-M04294</i>		
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 B. Paul Bernauer				Signature <i>B Paul Bernauer</i>		Month Day Year 11/11/16
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name <i>Stephen Woodward</i>				Signature <i>Stephen Woodward</i>		Month Day Year 11/11/16
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 <i>J GARZA</i>				Signature <i>J Garza</i>		Month Day Year 11/11/16

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)		21. Generator's US EPA ID No. AL2640090005	Manifest Document No. 00017		22. Page 2 of 2	Information in the shaded areas is not required by Federal law.	
23. Generator's Name ATTN: Libby Pitts TVA-Hazardous Waste Storage Facility P. O. Box 1010 (256)314-7871 Muscle Shoals, Alabama 35662					L. State Manifest Document Number		
24. Transporter 1 Company Name Tri-State Motor Transit Company					25. US EPA ID Number MOD095038998		M. State Generator's ID
26. Transporter Company Name					27. US EPA ID Number		N. State Transporter's ID
							O. Transporter's Phone 1-800-234-8768
							P. State Transporter's ID
							Q. Transporter's Phone
28. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)					29. Containers	30. Total Quantity	31. Unit Wt/Vol
					No.	Type	R. Waste No.
a.	Waste Radioactive Material, Excepted Package-Limited Quantity of Material, 7, UN2910				001	DM	00007 K D008
b.	Waste Radioactive Material, Excepted Package-Limited Quantity of Material, 7, UN2910				001	DM	00012 K D008
c.							
d.							
e.							
f.							
g.							
h.							
i.							
S. Additional Descriptions for Materials Listed Above					T. Handling Codes for Wastes Listed Above		
11a. Mixed Waste Disposal Profile 0825-01 (Fissile Excepted-D008)							
11b. Mixed Waste Disposal Profile 0825-01 (D008)							
32. Special Handling Instructions and Additional Information					Shipment #s		
28a. ERG 161 TVA Contract No. 99PFP-253768-000					0825-01-0001		
28b. ERG 161 Emergency Contact: Chemtrec 1-800-424-9300					0825-02-0001		
TVA ODS Contact: 1-800-237-2322							
33. Transporter <u>L</u> Acknowledgement of Receipt of Materials					Date		
Printed/Typed Name Stephen W. Howard					Signature [Signature]		Month Day Year 10/16/98
34. Transporter <u> </u> Acknowledgement of Receipt of Materials					Date		
Printed/Typed Name					Signature		Month Day Year
35. Discrepancy Indication Space							

UNIFORM LOW LEVEL RADIOACTIVE WASTE MANIFEST

ISOTOPE REPORT

For Manifest # 0825-01-0001

Envirocare of Utah, Inc.

ISOTOPE			<u>Total Activity</u>	
			MBq	mCi
Cr-51			1.51E+01	4.09E-01
Mn-54			1.64E+01	4.43E-01
Fe-55			3.63E+01	9.80E-01
Co-58			2.11E+00	5.70E-02
Co-60			6.66E+01	1.80E+00
Zn-65			1.35E+01	3.66E-01
Ag-110m			1.03E+01	2.79E-01
Cs-137			1.93E+00	5.22E-02
Ni-63			1.20E-02	3.25E-04
Sr-90			1.73E-03	4.67E-05
Cs-134			4.26E-01	1.15E-02
Ce-144			1.85E-07	5.00E-09
Pu-238			1.15E-08	3.11E-10
Cm-243			1.28E-08	3.46E-10
C-14			1.95E-04	5.27E-06
Pu-241			1.10E-03	2.98E-05
Cm-242			2.87E-06	7.75E-08
Cm-244			1.33E-11	3.60E-13

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST
ISOTOPES REPORT
For Manifest # 0825-02-0001
Envirocare of Utah, Inc.

ISOTOPE	Total Activity	
	(MBq)	(mCi)
Cr-51	1.76E-01	4.75E-03
Mn-54	1.89E-01	5.09E-03
Fe-55	4.09E-01	1.10E-02
Co-58	2.45E-02	6.61E-04
Co-60	7.57E-01	2.05E-02
Zn-65	1.55E-01	4.19E-03
Ag-110m	1.18E-01	3.19E-03
Cs-137	1.23E-02	3.28E-04
Ni-63	8.71E-07	2.36E-08
Sr-90	3.86E-08	1.04E-09
Cs-134	1.08E-05	2.93E-07
Pu-238	1.15E-11	3.11E-13
Cm-243	1.28E-11	3.46E-13
Pu-241	2.39E-08	6.45E-10
Cm-242	6.22E-11	1.68E-12
Cm-244	8.73E-15	2.36E-16
Ce-144	1.85E-10	4.98E-12

CERTIFICATE OF DISPOSAL

3 miles South, Exit 49, I-80
Clive, Utah 84029
EPA ID: UTD982598898

Tennessee Valley Authority, Muscle Shoals

This certificate acknowledges that the following manifested shipments have been disposed of as listed below:

<u>Shipment</u>	<u>Manifest</u>	<u>Disposal Date</u>	<u>Volume (Cu/Ft)</u>	<u>Process</u>	<u>Disposal Location</u>
0825-01-0001	00017	06/19/2001	111.7	Landfill	Mixed Waste

The total volume above represents the cubic feet of waste disposed of at EnergySolutions' Disposal Facility Landfill. Disposal is subject to EnergySolutions' Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identification section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.



Date 7/17/15



ENVIROCARE OF UTAH, INC.

THE SAFE ALTERNATIVE

CERTIFICATE OF DISPOSAL

Tennessee Valley Authority

This Certificate acknowledges that the following manifested shipments:

0825-02-0001

Representing 7.5 cubic feet of waste have been disposed in Envirocare's Mixed Waste Disposal Facility. Disposal is subject to Envirocare's Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement.

Jesse C. Garcia
Mixed Waste Storage and Disposal Manager

2/20/01
Date

Attachment 2

Waste Manifest Numbers 0825-03-0001

NRC Form 540 Manifest No.	EPA Form 8700-22 Manifest No.	Containers	Date Shipped	Recipient	Date Received
0825-03-0001	003715092JJJ	2	1/28/2008	Energy Solutions Clive Disposal Site Clive, UT	2/1/2008

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by EPC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and Privacy Service Branch (T-8 P&S), U.S. Nuclear Regulatory Commission, Washington, DC 20545-0001, or by Internet e-mail to info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-16002, (202) 614-6040, Office of Management and Budget, Washington, DC 20503. If a waste used to improve an information collection does not display a currently valid OMB control number, the EPC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 540		EnergySolutions, Clive Disposal Site		SHIPPER - NAME AND FACILITY		SHIPMENT ID NUMBER		7. FORM 540 AND 546A		PAGE 1 OF 1 PAGE(S)		8. MANIFEST NUMBER	
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER				TVA Hazardous Waste Storage Facility C/O EnergySolutions TVA Reservation Road/Highway 133N near Wilson Dam Muscle Shoals, AL 35661		0625-03-0001		FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION		2 PAGE(S) 1 PAGE(S) 1 PAGE(S)		(Use this number on all continuation pages) 0625-03-0001	
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (865) 220-1655				UTAH DISPOSAL PERMIT NUMBER 0711 004 680		SHIPMENT NUMBER 0625-03-0001		X GENERATOR TYPE (Specify) O		9. CONSIGNEE - Name and Facility Address EnergySolutions, Clive Disposal Site Operated By EnergySolutions Tooele County, US I-80 Exit 49 Clive, UT 84029		CONTACT Treatment Facility TELEPHONE NUMBER (Include Area Code) 435-884-0155	
ORGANIZATION Duntek Inc.				CONTACT B. Bernauer		TELEPHONE NUMBER (Include Area Code) (258) 314-7870		SIGNATURE - Authorized consignee acknowledging waste receipt <i>Quint de</i>		DATE 2/1/08		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 in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulation.	
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 2		4. CARRIER - Name and Address Hibman Transport Services 1560 Bear Creek Road Oak Ridge, TN 37830		Truck #: 599 Trailer #: W45817		EPA I.D. NUMBER THD-66-778-3065		SHIPPING DATE 01/29/2008	
4. DOES EPA REGULATED WASTE REQUIRE A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If "Yes", provide Manifest Number				EPA MANIFEST NUMBER 003715092 JJK		CONTACT Karen Kirby		TELEPHONE NUMBER (Include Area Code) 800-233-9933		DATE 1-18-08		AUTHORIZED SIGNATURE <i>D.W. W/11</i>	
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	
NON DOT REGULATED SOLID-PCB (50 OR GREATER PPM, < 1 LB) DAW 1 - 5 GALLON DRUM				NA		NA		SOLID/METAL OXIDES		AG-110M; C-14; CE-144; CO-57; CO-58; CO-60; CR-51; CS-134; CS-137; FE-55; FE-69; H-3; I-129; MN-54; NB-95; NI-63; SB-124; SB-125; SN-113; TC-99; ZR-95		1.4684E-02 (3.9632E-04)	
UN2910, Radioactive material, excepted package-limited quantity of material, 7 DAW 1 - 55 GALLON DRUM				NA		NA		SOLID/METAL OXIDES		AG-110M; C-14; CO-60; CR-51; CS-134; CS-137; FE-55; H-3; I-129; MN-54; NI-63; TC-99; ZN-65		9.7371E+00 (2.6317E-01)	
FOR CONSIGNEE USE ONLY				Record Waste Description Inadequate Contamination or Leakage Detected Unexpected Exposure Rates Detected Labels, Markings, etc. Inadequate Container Integrity Inadequate Other <input checked="" type="checkbox"/> No Violations Detected on this Shipment		3A. TERMS AND CONDITIONS A. HAZARDOUS MATERIAL: Generator represents & warrants that Waste Material is (or) is not hazardous waste as defined in 40 CFR 261.1, 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, Inc. and all appropriate regulatory authority, title to the Waste Material which conforms to Generator's representations herein shall thereupon transfer from Generator and be vested in EnergySolutions, Inc. 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, and regulations and provisions of Utah, Inc.'s Facility Records. D. INDICIFICATION: Generator agrees to indemnify EnergySolutions, Inc., 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 to the data reported 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.							

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and Policy/Private Services Branch (T-6 P&S), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0891, or by internet e-mail to info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-18232, (310-0161) Office of Management and Budget, DC 20503. If a person wants to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

[illegible]

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (7-3 PSL, U.S. Nuclear Regulatory Commission, Washington, DC 20585-0861, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-10202, (3160-0108), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST												EnergySolutions, Clive Disposal Site		2. MANIFEST NUMBER 0625-03-0001		
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)												3. PAGE 2 OF 2 PAGE(S)				
DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								16. WASTE CLASSIFICATION A - Class A B - Class B C - Class C		
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1 & 1A)	7. VOLUME m³ ft³	8. WASTE AND CONTAINER WEIGHT kg ton	9. SURFACE RADIATION LEVEL mSv/hr rem/hr	10. SURFACE CONTAMINATION Bq/100 cm² dpm/100 cm²	11. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 6.1%	13. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
						11. WASTE DESCRIPTOR (See Note 2 & Note 2A)	12. APPROXIMATE WASTE VOLUMES IN CONTAINER m³ ft³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)			RADIONUCLIDES	pCi/gm	Bq		mCi	
08-000010 (1023689) Origin: AL TVA Hazardous Waste Storage Facility TVA Reservoir Road/Highway 133M near Wilson Dam Muscle Shoals, AL 35661	4	0.21238 7.50000	52.80000 0.05798	0.009 0.5	< 0.00003674 < 220	< 0.00003674 < 2200	H 40	0.21238 7.50000	108	SOLID METAL OXIDES / NP	NP	AG-110M C-14 CO-60 CR-51 CS-134 CS-137 FS-46 H-3 I-129 MN-54 NI-63 TC-99 Zn-65	3.5948E+02 1.2189E+00 3.8294E+03 8.7254E+01 2.9973E+02 7.2873E+02 2.8233E+03 3.8274E+00 4.3791E-01 3.8238E+02 7.0688E+01 7.9738E-01 3.1899E+02	4.8700E-01 1.3801E-03 3.9080E+00 9.8790E-02 3.3488E-01 8.2910E-01 3.1988E+00 4.1070E-03 4.9500E-04 4.3280E-01 7.9820E-02 9.0280E-04 3.5890E-01	1.9090E-02 3.7300E-05 1.0800E-01 2.6700E-03 8.0980E-03 2.2390E-02 8.8420E-02 1.1100E-04 1.3400E-03 1.1700E-02 2.1600E-03 2.4400E-05 9.7000E-03	AU
Package Total												Sub Total	6.8002E+03 6.8002E+03	9.7371E+00 9.7371E+00	2.6317E-01 2.6317E-01	
Shipment Total		0.23184 8.18000	60.80000 0.06880											9.7518E+00	2.6366E-01	

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (7-1 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocentral@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NECB-16202, (3150-0158), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

[illegible]

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number AL 26H0090005		2. Page 1 of 1		3. Emergency Response Phone 865 220 1555		4. Manifest Tracking Number 003715092 JJK		
		5. Generator's Name and Mailing Address TVA Hazardous Waste Storage Facility Elo Energy Solutions TVA RESERVATION ROAD HWY 155 N. near Wilson Dam		Generator's Site Address (if different than mailing address)						
Generator's Phone: (256) 314-7876		Mobile Shocks AL 356611								
6. Transporter 1 Company Name Hittman Transport Services		U.S. EPA ID Number TND 987783065								
7. Transporter 2 Company Name		U.S. EPA ID Number								
8. Designated Facility Name and Site Address Energy Solutions, Chlorine Disposal Site Tooele County, UT 84029 CLIVE UT 84029		U.S. EPA ID Number UTD 982598898								
Facility's Phone: (435) 884-0155										
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
		1. NON DOT REGULATED SOLID - PCB (500g greater PPM, < 1 lb)				01 DM		8	K	
	X	2. UN 2910, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL, 7				01 DM		53	K	
		3.								
		4.								
14. Special Handling Instructions and Additional Information 1) PCB type-debris out of service date - 10/15/98 ERG-NA 2) PCB type-debris out of service date - 12/20/89 ERG-161 Contract 26316 - RD 2004530 Shipment #025-03-0001										
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.										
Generator's/Officer's Printed/Typed Name DAVID W WIFFEN					Signature DW Wiffen		Month Day Year 10 28 08			
INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:									
	Transporter signature (for exports only):									
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials									
	Transporter 1 Printed/Typed Name ERNEST PROCTOR					Signature Ernest Proctor		Month Day Year 1 18 08		
DESIGNATED FACILITY	Transporter 2 Printed/Typed Name					Signature		Month Day Year		
	18. Discrepancy									
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
	Manifest Reference Number:									
	18b. Alternate Facility (or Generator) U.S. EPA ID Number									
Facility's Phone:										
18c. Signature of Alternate Facility (or Generator) Month Day Year										
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)										
1. H129		2. H129		3.		4.				
20. Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a										
Printed/Typed Name Justin Lee					Signature Justin Lee		Month Day Year 12 1 08			

**UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST
ISOTOPIC SUMMARY**

For Manifest # 0825-03-0001

EnergySolutions, Clive Disposal Site

Isotopes	Total Activity			Total SNM	Total Source
	(MBq)	(mCi)	(Ci)	(gm)	(lb)
AG-110M	4.0703E-01	1.1001E-02	1.1001E-05	.0000E+00	.0000E+00
C-14	1.4201E-03	3.8380E-05	3.8380E-08	.0000E+00	.0000E+00
CE-144	3.4410E-05	9.3000E-07	9.3000E-10	.0000E+00	.0000E+00
CO-57	2.0831E-05	5.6300E-07	5.6300E-10	.0000E+00	.0000E+00
CO-58	6.0680E-03	1.6400E-04	1.6400E-07	.0000E+00	.0000E+00
CO-60	3.8971E+00	1.0803E-01	1.0803E-04	.0000E+00	.0000E+00
CR-51	9.9167E-02	2.6802E-03	2.6802E-06	.0000E+00	.0000E+00
CS-134	3.3493E-01	9.0523E-03	9.0523E-06	.0000E+00	.0000E+00
CS-137	8.2548E-01	2.2310E-02	2.2310E-05	.0000E+00	.0000E+00
FE-55	3.1892E+00	8.6466E-02	8.6466E-05	.0000E+00	.0000E+00
FE-59	4.8840E-05	1.3200E-06	1.3200E-09	.0000E+00	.0000E+00
H-3	4.2010E-03	1.1354E-04	1.1354E-07	.0000E+00	.0000E+00
I-129	5.1730E-04	1.3981E-05	1.3981E-08	.0000E+00	.0000E+00
MN-54	4.3299E-01	1.1702E-02	1.1702E-05	.0000E+00	.0000E+00
NB-95	1.2728E-03	3.4400E-05	3.4400E-08	.0000E+00	.0000E+00
NI-63	6.1204E-02	2.1947E-03	2.1947E-06	.0000E+00	.0000E+00
SB-124	1.5022E-05	4.0600E-07	4.0600E-10	.0000E+00	.0000E+00
SB-125	1.8537E-04	5.0100E-06	5.0100E-09	.0000E+00	.0000E+00
SN-113	5.5130E-05	1.4900E-06	1.4900E-09	.0000E+00	.0000E+00
TC-99	9.4128E-04	2.5440E-05	2.5440E-08	.0000E+00	.0000E+00
ZN-65	3.5890E-01	9.7000E-03	9.7000E-06	.0000E+00	.0000E+00
ZR-95	9.8790E-04	2.6700E-05	2.6700E-08	.0000E+00	.0000E+00
Totals:	9.7518E+00	2.6356E-01	2.6356E-04	.0000E+00	.0000E+00

CERTIFICATE OF DISPOSAL

3 mi. S. Ext. 49, I-80 Clive, Utah
84029 EPA ID: UT982598898

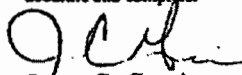
Tennessee Valley Authority, Muscle Shoals

This Certificate acknowledges that the following manifested shipments:

<u>Shipment</u>	<u>Manifest</u>	<u>Date(s) of Disposal</u>	<u>Cu/Ft</u>	<u>Process</u>	<u>Disposal Location</u>
0825-03-0001	15092	3/7/2008	8.18	Landfill	Mixed Waste

Representing 8.18 Cubic feet of waste disposed of at EnergySolutions' above listed Disposal Facility landfill. Disposal is subject to EnergySolutions' Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identification section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.



Jesse C. Garcia
Mixed Waste Site Manager

3/18/08
Date

423 West 300 South, Salt Lake City, Utah 84101 Telephone (801) 649-2000

Attachment 3

Waste Manifest Numbers 0825-04-0001

NRC Form 540 Manifest No.	EPA Form 8700-22 Manifest No.	Containers	Date Shipped	Recipient	Date Received
0825-04-0001	003715093JJJ	2	1/28/2008	Energy Solutions Clive Disposal Site Clive, UT	2/1/2008

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-4 PS2), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-10202, (202-418-6104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		EnergySolutions, Clive Disposal Site		SHIPPER - NAME AND FACILITY TVA Hazardous Waste Storage Facility CVO EnergySolutions TVA Reservation Road/Hwy 153N near Wilson Dam Muscle Shoals, AL 35881		SHIPMENT ID NUMBER 0625-04-0001		7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION		PAGE 1 OF 1 PAGE(S) 2 PAGE(S) 1 PAGE(S) 1 PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 0625-04-0001	
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (865) 220-1555				UTAH DISPOSAL PERMIT NUMBER 0711 004 580		SHIPMENT NUMBER 0625-04-0001		X GENERATOR TYPE (Specify) O		9. CONSIGNEE - Name and Facility Address EnergySolutions, Clive Disposal Site Operated By EnergySolutions Tooele County, US I-80 Exit 49 Clive, UT 84029			
ORGANIZATION Dursak Inc.				CONTACT B. Bernauer		TELEPHONE NUMBER (Include Area Code) (256) 314-7870		EPA ID NUMBER TND-98-778-3085		SIGNATURE - Authorized consignee acknowledging waste receipt <i>Quels de</i>		CONTACT Treatment Facility TELEPHONE NUMBER (Include Area Code) 435-884-0155	
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 2		6. CARRIER - Name and Address Hitman Transport Services 1560 Bear Creek Road Oak Ridge, TN 37830		Truck #: 599 Trailer #: W45817		SHIPPING DATE 01/29/2008		DATE 2/1/08	
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes", provide Manifest Number _____				EPA MANIFEST NUMBER 003715083 JJK		CONTACT Karen Kirby		TELEPHONE NUMBER (Include Area Code) 800-233-9933		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 in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulation.		DATE 01/28/08	
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	
UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S.(D001), 3; III LIQUID 1 - 55 GALLON DRUM				NA		NA		LIQUID/METAL OXIDES		C-14; CE-144; CM-243; CO-60; CS-137; FE-55; H-3; I-129; NH-63; PU-238; SR-90; TC-99		3.6644E-01 (9.9039E-03)	
UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S.(D001), (LIMITED QUANTITY RADIOACTIVE MATERIAL), 3; III LIQUID 1 - 110 GAL. DRUM				NA		NA		LIQUID/METAL OXIDES		C-14; CM-243; CO-60; CS-137; FE-55; H-3; I-129; NI-63; PU-238; SR-90; TC-99		3.1454E+00 (8.5010E-02)	
FOR CONSIGNEE USE ONLY				Record Waste Description Inadequate Contamination or Leakage Detected Unexpected Exposure Rates Detected Labels, Markings, etc. Inadequate Container Integrity Inadequate Other <input checked="" type="checkbox"/> No Violations Detected on this Shipment		20. TERMS AND CONDITIONS A. HAZARDOUS MATERIALS: Generator represents and warrants that Waste Material is (or) is not 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 under certification as required by 40 CFR 265.1. B. TITLE: Upon acceptance at the disposal site by EnergySolutions, Inc. and all appropriate regulatory authorities, title to the Waste Material which conforms to Department's representations herein shall thereupon transfer from Generator and be vested in EnergySolutions, Inc. 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, and regulations and provisions of Utah, Inc.'s Facility License. D. INDEMNIFICATION: Generator agrees to indemnify EnergySolutions, Inc., its officers, employees, and agents against all losses and liability whatsoever if such losses or liability result from the failure of the Waste Material to conform 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.							

Estimated burden per response to comply with this information collection request: 1.5 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (F-4 FES), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEIS-10202, (2150-0160), Office of Management and Budget, Washington, DC 20503. If a means used to improve an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 541 EnergySolutions, Clive Disposal Site										1. MANIFEST TOTALS				2. MANIFEST NUMBER					
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										SPECIAL NUCLEAR MATERIAL (grams)				0025-04-0001					
CONTAINER AND WASTE DESCRIPTION										U-233 U-235 Pu TOTAL				PAGE 1 OF 2 PAGE(S)					
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste										NP NP 2.3029E-12 g 2.3029E-12 g (2 pkg.) (2 pkg.)				4. SHIPPER NAME					
										ACTIVITY (MBq/mCi) (LLD UNITS in mCi/g)				TVA Hazardous Waste Storage Facility/CO Ent					
ALL NUCLIDES										C-14 Tc-99 I-129				SAPPHIRE ID NUMBER					
MBq mCi										NP NP 1.5322E-04 1.5322E-04 5.0431E-05 5.0431E-05				0025-04-0001					
DISPOSAL CONTAINER DESCRIPTION										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER									
CONTAINER IDENTIFICATION NUMBER	CONTAINER DESCRIPTION (See Note 1 & 1A)	VOLUME m³ (ft³)	WASTE AND CONTAINER WEIGHT kg (lb)	SURFACE RADIATION LEVEL mSv/hr (mrem/hr)	SURFACE CONTAMINATION Bq/100 cm² (dpm/100 cm²)		WASTE DESCRIPTION (See Note 2 & 2A)	APPROXIMATE WASTE VOLUME(S) IN CONTAINER m³ (ft³)	SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	16. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION			
					ALPHA	BETA-GAMMA						INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	RADIONUCLIDES	pCi/gm	MBq		mCi		
09-000011 (981444)	4	0.21238	183.00000	0.0051	< 0.000003674	< 0.000003674	25	0.21238	100	LIQUID METAL OXIDES / NP	NP	C-14	1.0487E-03	6.2530E-06	1.8905E-07	AU			
Origin: AL		7.50000	0.20172	0.51	< 220	< 2200		7.50000				CE-144	3.3727E-03	2.0091E-06	5.4305E-07				
TVA Hazardous Waste Storage Facility												CM-243	2.2857E-04	1.3618E-06	3.6805E-08				
TVA Reservation Road/Highway 133N near Wilson Dam												CO-60	3.1481E-01	1.8736E-01	5.0705E-03				
Muscle Shoals, AL 35951												CS-137	6.7080E+00	3.8886E-02	1.8805E-03				
												FS-95	2.1825E-01	1.3081E-01	3.5305E-03				
												H-3	1.4945E-03	8.8430E-06	2.3805E-07				
												I-129	6.8919E-04	5.3910E-06	1.4305E-07				
												N-63	1.3802E-03	6.1030E-03	2.1005E-04				
												PU-238	2.0487E-04	1.2210E-06	3.3805E-08				
													[1.9412E-12 g]						
												SR-90	2.0821E-02	1.2284E-04	3.3205E-06				
												TC-99	2.8770E-03	1.8947E-06	4.3105E-07				
												Sub Total	6.1515E-01	3.8944E-01	9.9039E-03				
													[1.9412E-12 g]						
Package Total													6.1515E-01	3.8944E-01	9.9039E-03				

NOTE 1: Container Description Codes. For each container, the shipping description is approved and certified, the material must be followed by "C".

A. Wooden Box or Crate
B. Metal Box
C. Plastic Drum or Pail
D. Metal Drum or Pail
E. Metal Tank or Tanker
F. Composite Tank or Tanker
G. Polyethylene Tank or Tanker
H. Polyethylene Tank or Tanker

I. Drum/Crate/Box
J. Gas Cylinder
K. Solid, Unpackaged Waste
L. Unpackaged Composites
M. High Integrity Container
N. Other, Describe in Note 1, or additional page

NOTE 1A: Bulk Packaging Description Codes (Choose one code or more as applicable.)

A. Compressed Gas
B. Liquefied Gas
C. Solid
D. Powder
E. Other

NOTE 2: Waste Description Codes. (Choose up to three which best describe by volume.)

20. Chemical
21. Inorganic Ash
22. Soil
23. Oil
24. Organic Liquid (except oil)
25. Filter Sludge
26. Inorganic Solid
27. EPA or RCRA Hazardous
28. Corrosive
29. Oxidizing
30. Flammable
31. Toxic
32. Other, Describe in Note 1, or additional page

NOTE 3: Solidification and Stabilization Media Codes. (Choose up to three which best describe by volume.) For waste meeting design and structural stability requirements, the material must be followed by "S" and the media vendor and brand name must also be identified in Note 15, Data Worksheet Required.

33. Cement
34. Concrete
35. Grout
36. Mortar
37. Other, Describe in Note 1, or additional page

NOTE 4: Waste Classification Codes. (Choose up to three which best describe by volume.)

40. Radioactive
41. Corrosive
42. Flammable
43. Toxic
44. Other, Describe in Note 1, or additional page

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-6 F32), U.S. Nuclear Regulatory Commission, Washington, DC 20585-0001, or by e-mail to info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-16222, (3150-0198), Office of Management and Budget, Washington, DC 20503. If a system used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										EnergySolutions, Clive Disposal Site		2. MANIFEST NUMBER 0829-04-0001					
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)												3. PAGE 2 OF 2 PAGE(S)					
DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER											
9. CONTAINER IDENTIFICATION NUMBER	10. CONTAINER DESCRIPTION (See Note 1 & 1A)	11. VOLUME m³ or ft³	12. WASTE AND CONTAINER WEIGHT kg and lbs	13. SURFACE RADIATION LEVEL mSv/hr and R/hr	14. SURFACE CONTAMINATION MBq/100 cm² and dpm/100 cm²		15. WASTE DESCRIPTION (See Note 2 & Note 2A)	16. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m³ or ft³	17. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	18. CHEMICAL FORM CHELATING AGENT	19. WEIGHT % CHELATING AGENT IF > 0.1%	20. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIOISOTOPES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIOISOTOPES PERCENT				21. WASTE CLASSIFICATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C	
					ALPHA	BETA-GAMMA						RADIOISOTOPES	pCi/gm	MBq	mCi		
95-000012 (081448) Origin: AL TVA Hazardous Waste Storage Facility TVA Reservation Roadway 130M near Wilson Dam Muscle Shoals, AL 35661	(110 GAL DRUM) 4	0.42478	148.00000	0.005	< 0.00003874	< 0.00003874	1 25	0.42478 15.00000	100	LIQUID METAL OXIDES / NP	NP		C-14 CM-243 CO-60 CS-137 FE-55 H-3 I-129 K-43 PU-238 Sub Total	1.8200E-02 8.8000E-05 6.1000E-02 2.6100E-01 4.2370E-02 2.9800E-02 1.3200E-02 2.8200E-01 7.8870E-05 1.0820E-03	6.4000E-05 2.3300E-07 1.8000E-09 7.4970E-03 1.2943E-02 7.5800E-05 4.5140E-05 7.7700E-02 2.2780E-07 3.1454E+00	1.4000E-08 8.9400E-09 4.8600E-02 2.6100E-04 3.3900E-02 2.0000E-08 1.2000E-08 2.1000E-03 6.1000E-09 8.5010E-02	AU
Package Total														1.0820E-03 3.1454E+00 3.6176E-13 g	8.5010E-02		
Shipment Total		0.63714 22.90000	329.00000 0.36288											3.6118E+00 2.3028E-12 g	9.4914E-02		

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by HRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimates to the Records and FOIA/Privacy Services Branch (7-4 PS2), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollect@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, KE03-10302, (2150-0146), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 542		EnergySolutions, Clive Disposal Site		1. WASTE COLLECTOR/PROCESSOR				2. MANIFEST NUMBER				
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				NAME TVA Hazardous Waste Storage Facility/C/O EnergySolutions				SHIPPER USE ONLY				
MANIFEST INDEX AND REGIONAL COMPACT TABULATION				SHIPPING DATE 01/28/2006				3. PAGE 1 OF 1 PAGE(S)				
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators				AS PROCESSED/COLLECTED TOTAL								
6. GENERATOR NAME AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	6A. WASTE DESCRIPTION (NOMENCLATURE)	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME	8. MANIFEST NUMBER UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE	10. ORIGINATING REGION OR STATE	11. A. SOURCE MATERIAL	B. SHW	C. ACTIVITY	D. VOLUME	E. WEIGHT	F. MAXIMUM RADIATION LEVEL
			m ³ lb				(kg) (lb)	(g)	Bq Ci	m ³ ft ³	(kg) (lb)	(mrem/hr)
TVA Hazardous Waste Storage Facility (256) 314-7670	TVA Reservation Road/Hwy 133N near Wilson Dam Muscle Shoals, AL 35891	Aqueous Liquid Combustible	0.63714 22.50000	On-site Generation 01/28/2006	C	AL	NP NP	2.3029E-12	3.5118E+00	6.4914E-02	0.63714 22.50000	531.31679 0.5
TOTALS OF ALL PAGES (FORMS 542 AND 542A)												
						NP	NP	2.3029E-12	3.5118E+00	6.4914E-02	0.63714 22.50000	531.31679 N/A

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number AL 2640090005		2. Page 1 of 1	3. Emergency Response Phone 865 220 1553	4. Manifest Tracking Number 003715093 JJK					
		5. Generator's Name and Mailing Address TVA HAZARDOUS WASTE STORAGE FACILITY c/o Garvey Solutions TVA Reservation Road/Hwy 133N near Wilson Dam									
Generator's Phone (256) 344 7874		Generator's Site Address (if different than mailing address) AL 35661									
6. Transporter 1 Company Name Hittman Transport Services		U.S. EPA ID Number UTD 987783065									
7. Transporter 2 Company Name		U.S. EPA ID Number									
8. Designated Facility Name and Site Address EMERY SOLUTIONS, CLIVE DISPOSAL SITE TOWLE COUNTY, US E-BOXKIT 49 CLIVE UT 84029		U.S. EPA ID Number UTD 982598898									
Facility's Phone (435) 884-0155											
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))			10. Containers No. Type		11. Total Quantity	12. Unit WL/Vol.	13. Waste Codes		
	X	1. UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., (D001), 3, III			01	DM	161	K	D001	D007	D018
	X	2. UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., (D001) (LIMITED QUANTITY RADIOACTIVE MATERIAL), 3, III			01	DM	80	K	D001	D008	D022
		3.							D035	D039	
		4.									
14. Special Handling Instructions and Additional Information ERG-128 SHIPMENT # 0825-04-0001 Contract # 26316 - RD 2004530											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Officer's Printed/Typed Name DAVID W WIFFEN											
Signature DW Wiffen											
Month Day Year 01 28 08											
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____										
	Transporter signature (for exports only): _____										
TRANSPORTER	17. Transporter Acknowledgment of Receipt of Materials										
	Transporter 1 Printed/Typed Name Robert Proctor										
Signature Robert Proctor											
Month Day Year 1 18 08											
Transporter 2 Printed/Typed Name _____ Signature _____ Month Day Year ____											
DESIGNATED FACILITY	18. Discrepancy										
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection										
	Manifest Reference Number: _____										
	18b. Alternate Facility (or Generator) U.S. EPA ID Number _____										
	Facility's Phone: _____										
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____											
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1. H129		2. H129		3. _____		4. _____					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a											
Printed/Typed Name Justin Lee											
Signature Justin Lee											
Month Day Year 12 11 08											

ISOTOPIC SUMMARY
For Manifest # 0825-04-0001
EnergySolutions, Clive Disposal Site

Isotops	Total Activity			Total SNM	Total Source
	(MBq)	(mCi)	(Ci)	(gm)	(lb)
C-14	6.0273E-05	1.6290E-06	1.6290E-09	.0000E+00	.0000E+00
CE-144	2.0091E-05	5.4300E-07	5.4300E-10	.0000E+00	.0000E+00
CM-243	1.6147E-06	4.3640E-08	4.3640E-11	.0000E+00	.0000E+00
CO-60	1.9932E+00	5.3870E-02	5.3870E-05	.0000E+00	.0000E+00
CS-137	4.7397E-02	1.2810E-03	1.2810E-06	.0000E+00	.0000E+00
FE-55	1.3849E+00	3.7430E-02	3.7430E-05	.0000E+00	.0000E+00
H-3	8.4893E-05	2.2890E-06	2.2890E-09	.0000E+00	.0000E+00
I-129	5.0431E-05	1.3630E-06	1.3630E-09	.0000E+00	.0000E+00
NI-63	8.5803E-02	2.3190E-03	2.3190E-06	.0000E+00	.0000E+00
PU-238	1.4486E-06	3.9150E-08	3.9150E-11	2.3029E-12	.0000E+00
SR-90	1.4574E-04	3.9390E-06	3.9390E-09	.0000E+00	.0000E+00
TC-99	1.5322E-04	4.1410E-06	4.1410E-09	.0000E+00	.0000E+00
Totals:	3.5118E+00	9.4914E-02	9.4914E-05	2.3029E-12	.0000E+00



3 mi. S. Ext. 49, I-80
Clive, Utah 84029 EPA
ID: UT982598898

CERTIFICATE OF DISPOSAL

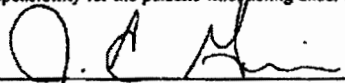
Rev. 0

This Certificate acknowledges that the following manifested shipment(s):

<u>Shipment</u>	<u>Manifest</u>	<u>Date(s) of Disposal</u>	<u>Cu/Ft</u>	<u>Process</u>	<u>Disposal Location</u>
0825-04-0001	15093	06/23/08	22.5	Landfill	Mixed Waste Cell

Representing 22.5 Cubic feet of waste of at listed Disposal Facility landfill. Disposal is subject to EnergySolutions Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement. This does not include the treatment byproduct secondary waste (condensate). Treatment byproduct secondary waste is awaiting incineration at a third party incinerator.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identification section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.



Jesse C. Garcia
Director of Mixed Waste Operations

7/21/08

Date

423 W. 300 S. Suite 200 Salt Lake City, Utah 84101 Telephone (801) 649-2000

Attachment 4

Waste Manifest Numbers 0825-02-0002

NRC Form 540 Manifest No.	EPA Form 8700-22 Manifest No.	Containers	Date Shipped	Recipient	Date Received
0825-02-0002	003715091JJJ	7	1/28/2008	Energy Solutions Clive Disposal Site Clive, UT	2/1/2008

Estimated burden per response to comply with this information collection request: 40 minutes. This estimate is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and Policy/Privacy Services Branch (T-4 PDS), U.S. Nuclear Regulatory Commission, Washington, DC 20545-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NECH-10302, (202-456-6044), Office of Management and Budget, Washington, DC 20503. If a response is used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 540 EnergySolutions, Clive Disposal Site UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		1. SHIPPER - NAME AND FACILITY TVA Hazardous Waste Storage Facility C/O EnergySolutions TVA Reservation Road/Highway 153N near Wilson Dam Muscle Shoals, AL 36661		SHIPMENT ID NUMBER 0625-02-0002 COLLECTOR PROCESSOR		7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION PAGE 1 OF 2 PAGE(S) 4 PAGE(S) 1 PAGE(S) 1 PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 0625-02-0002									
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (865) 220-1555 ORGANIZATION Duratek Inc.		UTAH DISPOSAL PERMIT NUMBER 0711 004 880 SHIPMENT NUMBER 0625-02-0002		X GENERATOR TYPE (Specify) O TELEPHONE NUMBER (Include Area Code) (208) 314-7870		9. CONSIGNEE - Name and Facility Address EnergySolutions, Clive Disposal Site M10360 Operated By EnergySolutions Tooele County, UT 84029 CONTACT Treatment Facility TELEPHONE NUMBER (Include Area Code) 435-694-0165		SIGNATURE - Authorized consignee acknowledging waste receipt <i>Justine</i> DATE 2/1/08									
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 7		6. CARRIER - Name and Address Hittman Transport Services 1600 Bear Creek Road Oak Ridge, TN 37830 Truck #: 609 Trailer #: W46817		EPA LD. NUMBER TND-86-776-3085 SHIPPING DATE 01/28/2008		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 in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulation.									
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If "Yes", provide Manifest Number: 003715091 JK		EPA MANIFEST NUMBER 003715091 JK		CONTACT Karen Kirby SIGNATURE - Authorized carrier acknowledging waste receipt <i>Karen Kirby #48937</i> DATE 1-28-08		AUTHORIZED SIGNATURE <i>D.W. Baker</i> TITLE Certified Baker DATE 01/28/08											
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	
NA3077, HAZARDOUS WASTE, SOLID, N.O.S.(D008), 9; III DAW 1 - 55 GALLON DRUM		NA		NA		SOLID/METAL OXIDES		C-14; CE-144; CM-242; CM-243; CM-244; CO-60; CS-137; FE-55; H-3; I-129; NI-63; SR-90; TC-99; U-235		1.4873E-02 (4.0198E-04)		NA		7.50 R ³		08-000002 (1001494)	
NA3077, HAZARDOUS WASTE, SOLID, N.O.S.(D008,D007,D008), 9; III DAW 1 - 55 GALLON DRUM		NA		NA		SOLID/METAL OXIDES		AG-110M; C-14; CO-67; CO-58; CO-60; CR-51; CS-134; CS-137; FE-55; FE-59; H-3; I-129; MN-54; NB-95; NI-63; SB-125; SN-113; TC-99; ZN-65; ZR-95		9.8109E-02 (2.6618E-03)		NA		7.50 R ³		08-000003 (1004276)	
NA3077, HAZARDOUS WASTE, SOLID, N.O.S.(D008,D007,D008), 9; III DAW 1 - 55 GALLON DRUM		NA		NA		SOLID/METAL OXIDES		C-14; CR-51; CS-137; H-3; MN-54; NI-63; SB-125; ZN-65		3.1678E-02 (8.5346E-04)		NA		7.50 R ³		08-000004 (1004277)	
NA3077, HAZARDOUS WASTE, SOLID, N.O.S.(D008,D007,D008), 9; III DAW 1 - 55 GALLON DRUM		NA		NA		SOLID/METAL OXIDES		CO-57; CR-51; FE-59; MN-54; SB-125		6.9312E-03 (1.8733E-04)		NA		7.50 R ³		08-000005 (1004278)	
NA3077, HAZARDOUS WASTE, SOLID, N.O.S.(D008), 9; III DAW 1 - 55 GALLON DRUM		NA		NA		SOLID/METAL OXIDES		AG-110M; AM-241; C-14; CM-243; CM-244; CS-134; CS-137; FE-55; H-3; MN-54; PU-238; PU-239; PU-240; PU-241; SR-90		4.7170E-02 (1.2749E-03)		NA		7.50 R ³		08-000006 (1005224)	
FOR CONSIGNEE USE ONLY Record Waste Description Inadequate Contamination or Leakage Detected Unexpected Exposure Rates Detected Labels, Markings, etc. Inadequate Container Integrity Inadequate Other <input checked="" type="checkbox"/> No Violations Detected on this Shipment																	

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (7-3 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollecta@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-10202, (3150-0164), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 540A		UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)						EnergySolutions, Clive Disposal Site		8. MANIFEST NUMBER (Use this number on all continuation pages) 0825-02-0002 PAGE 2 OF 2 PAGE(S)	
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		
NA3077, HAZARDOUS WASTE, SOLID, N.O.S.(D007,D008), 9; III DAW 1 - 55 GALLON DRUM	NA	NA	SOLID/METAL OXIDES	CR-51 ; SB-125	8.1844E-03	(2.2120E-04)	NA	7.50 ft ³	08-000007 (1005664)		
NA3077, HAZARDOUS WASTE, SOLID, N.O.S.(D007,D008), 9; III DAW 1 - 55 GALLON DRUM	NA	NA	SOLID/METAL OXIDES	C-14 ; CO-57 ; CO-58 ; CO-60 ; CR-51 ; CS-134 ; CS-137 ; FE-55 ; FE-59 ; H-3 ; MN-54 ; SB-125	9.6470E-02	(2.6073E-03)	NA	7.50 ft ³	08-000008 (1005665)		

Form 541 (10-86) * - Indicates Cross Contamination

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F32), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEGB-14202, (3150-0186), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST														EnergySolutions, Clive Disposal Site		2. MANIFEST NUMBER 0825-02-0002		
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)														PAGE 2 OF 4 PAGE(S)				
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		
6. CONTAINER IDENTIFICATION NUMBER	7. CONTAINER DESCRIPTION (See Note 1 & 1A)	8. VOLUME m ³ ft ³	9. WASTE AND CONTAINER WEIGHT kg ton	10. SURFACE RADIATION LEVEL mSv/hr mrem/hr	11. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		12. WASTE DESCRIPTION (See Note 2 & Note 2A)	13. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ ft ³	14. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	15. CHEMICAL FORM / CHELATING AGENT	16. WEIGHT % CHELATING AGENT IF > 0.1%	17. RADIOLOGICAL DESCRIPTION						
					ALPHA	BETA-GAMMA						18. INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL: OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT						
															RADIONUCLIDES			
															19. pCi/gm	20. MBq	21. mCi	
08-000003 (1004278) Origin: AL TVA Hazardous Waste Storage Facility TVA Reservation Road/ Hwy 133N near Wilson Dam Muscle Shoals, AL 35661	4	0.21238 7.50000	100.00000 0.11023	0.005 0.5	< 0.000003674 < 220	< 0.00003674 < 2200	H 40	0.21238 7.50000	100	SOLID METAL OXIDES / NP	NP		AG-110M C-14 CO-57 CO-58 CO-60 CR-51 CS-134 CS-137 FE-55 FE-59 H-3 I-129 MN-54 NI-63 NI-65 NI-113 SR-125 SN-113 TC-99 ZN-65 ZR-95	1.1410E-01 1.1397E-01 4.0641E-02 7.2820E+00 3.0128E+00 1.2103E+00 1.5789E-01 7.2892E-01 1.2949E-01 1.0744E-01 1.0603E+00 1.4231E-01 5.4359E-01 1.2205E-01 5.7438E+00 1.9231E-01 4.7564E-02 2.5000E-01 1.0258E-01 7.5897E-02	3.2930E-04 3.2893E-04 1.1723E-04 2.1016E-02 8.8950E-03 3.4828E-03 4.5510E-04 2.0970E-03 3.7370E-02 3.1006E-04 3.0599E-03 4.1070E-04 1.5686E-03 3.5224E-04 1.6570E-02 5.5900E-04 1.3727E-04 7.2150E-04 2.9800E-04 2.1904E-04	8.9000E-06 8.8900E-06 3.1700E-05 5.6800E-04 2.3500E-04 9.4400E-05 1.2300E-05 5.8700E-05 1.0100E-03 8.3800E-06 8.2700E-05 1.1100E-05 4.2400E-05 9.5200E-06 4.4800E-04 1.5000E-05 3.7100E-08 1.9500E-05 8.0000E-08 5.9200E-08	AU	
Package Total															3.3895E+01	9.8109E-02	2.6516E-03	
08-000004 (1004277) Origin: AL TVA Hazardous Waste Storage Facility TVA Reservation Road/ Hwy 133N near Wilson Dam Muscle Shoals, AL 35661	4	0.21238 7.50000	108.00000 0.12019	0.005 0.5	< 0.000003674 < 220	< 0.00003674 < 2200	H 40	0.21238 7.50000	100	SOLID METAL OXIDES / NP	NP		C-14 CR-51 CS-137 H-3 MN-54 NI-63 NI-65 NI-113 SR-125 ZN-65	1.1809E-01 1.2299E+00 7.1494E-01 1.0747E+00 5.5287E-01 5.8278E+00 1.8985E-01 1.0414E-01	3.7370E-04 3.9580E-03 2.3014E-03 3.4989E-03 1.7797E-03 1.6789E-02 6.1050E-04 3.3522E-04	1.0100E-05 1.0700E-04 6.2200E-05 9.3900E-05 4.8100E-05 5.0700E-04 1.6500E-05 9.0800E-08	AU	
Package Total															9.8098E+00	3.1578E-02	8.5348E-04	
															9.8098E+00	3.1578E-02	8.5348E-04	

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimates to the Records and FOIA/Privacy Services Branch (T-5 P32), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10202, (3150-0156), Office of Management and Budget, Washington, DC 20503. If a measure used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										EnergySolutions, Clive Disposal Site		2. MANIFEST NUMBER 0825-02-0002				
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)												3. PAGE 3 OF 4 PAGE(S)				
DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1 & 1A)	7. VOLUME m ³ (ft ³)	8. WASTE AND CONTAINER WEIGHT kg (lb)	9. SURFACE RADIATION LEVEL mSv/hr (mrem/hr)	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		11. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C
					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)	CHEMICAL FORM / CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
# - Inspect Container																
08-000005 (1004278)	4	0.21238	104.00000	0.005	< 0.000003674	< 0.00003674	H 40	0.21238	100	SOLID METAL OXIDES / NP	NP	CO-57	4.4268E-02	1.3431E-04	3.6300E-06	AU
Origin: AL		7.50000	0.11484	0.5	< 220	< 2200		7.50000				CR-51	1.3171E+00	3.9680E-03	1.0800E-04	
TVA Hazardous Waste Storage Facility												FE-59	1.1707E-01	3.5520E-04	9.8000E-06	
TVA Reservation Road/Hwy 133W near Wilson Dam												MN-54	5.9268E-01	1.7982E-03	4.8000E-05	
Muscle Shoals, AL 35661												SB-125	2.1341E-01	6.4750E-04	1.7500E-05	
Package Total												Sub Total	2.2845E+00	6.9312E-03	1.6733E-04	
08-000008 (1005224)	4	0.21238	54.00000	0.005	< 0.000003674	< 0.00003674	H 40	0.21238	100	SOLID METAL OXIDES / NP	NP	AG-110M	6.1875E-01	9.6940E-04	2.6200E-05	AU
Origin: AL		7.50000	0.05953	0.5	< 220	< 2200		7.50000				AM-241	4.4375E-02	5.2540E-05	1.4200E-06	
TVA Hazardous Waste Storage Facility												C-14	5.8437E-03	6.9190E-06	1.6700E-07	
TVA Reservation Road/Hwy 133W near Wilson Dam												CM-243	9.1250E-03	1.0604E-05	2.9200E-07	
Muscle Shoals, AL 35661												CM-244	9.1250E-03	1.0604E-05	2.9200E-07	
												CS-134	3.5937E+00	4.2550E-03	1.1500E-04	
												CS-137	1.3250E+01	1.5688E-02	4.2400E-04	
												FE-55	1.4562E+01	1.7242E-02	4.8000E-04	
												H-3	1.7312E-02	2.0488E-05	5.5400E-07	
												MN-54	6.4887E+00	7.6580E-03	2.0700E-04	
												PU-238	4.0625E-02	4.8100E-05	1.3000E-06	
													[7.8471E-11 g]			
												PU-239	1.0969E-02	1.2987E-05	3.5100E-07	
													[5.6613E-09 g]			
												PU-240	1.0969E-02	1.2987E-05	3.5100E-07	
													[1.5261E-08 g]			
												PU-241	6.7157E-01	1.0323E-03	2.7900E-05	
													[2.7900E-10 g]			
												SR-90	1.2531E-01	1.4637E-04	4.0100E-06	
Package Total												Sub Total	3.9839E+01	4.7170E-02	1.2749E-03	
														[7.5428E-09 g]		
													3.9839E+01	4.7170E-02	1.2749E-03	
														[7.5428E-09 g]		

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 P32), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-10202, (3150-0168), Office of Management and Budget, Washington, DC 20503. If a release used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										EnergySolutions, Clive Disposal Site		2. MANIFEST NUMBER 0825-02-0002				
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)												3. PAGE 4 OF 4 PAGE(S)				
DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								18. WASTE CLASSIFICATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C		
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1 & 1A)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT kg ton	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		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 WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT					
					ALPHA	BETA-GAMMA					RADIONUCLIDES	pCi/gm	MBq		mCi	
08-000007 (1005664) Origin: AL TVA Hazardous Waste Storage Facility TVA Reservation Road/Hwy 133N near Wilson Dam Muscle Shoals, AL 35881	4	0.21238 7.50000	138.00000 0.14982	0.005 0.5	< 0.000003674 < 220	< 0.00003674 < 2200	H 40	0.21238 7.50000	100	SOLID METAL OXIDES / NP	NP	CR-51 SB-125 Sub Total	1.4123E+00 5.2807E-01 1.9403E+00	5.9570E-03 2.2274E-03 8.1844E-03	1.8100E-04 6.0200E-05 2.2120E-04	AU
Package Total													1.9403E+00	8.1844E-03	2.2120E-04	
08-000008 (1005665) Origin: AL TVA Hazardous Waste Storage Facility TVA Reservation Road/Hwy 133N near Wilson Dam Muscle Shoals, AL 35881	4	0.21238 7.50000	45.00000 0.04980	0.005 0.5	< 0.000003674 < 220	< 0.00003674 < 2200	H 40	0.21238 7.50000	100	SOLID METAL OXIDES / NP	NP	C-14 CO-57 CO-58 CO-60 CR-51 CS-134 CS-137 FE-55 FE-59 H-3 Mn-54 SB-125 Sub Total	4.7828E-01 2.0478E-01 5.5217E+00 1.4958E+01 7.0000E+00 2.1585E+00 9.8280E+00 6.4782E+01 5.8695E-01 4.4348E+00 7.9905E-01 2.8174E+00 1.1336E+02	4.0700E-04 1.7427E-04 4.9990E-03 1.2728E-02 5.9570E-03 1.8352E-03 8.3620E-03 5.5130E-02 4.9950E-04 3.7740E-03 8.7710E-04 2.2274E-03 9.8470E-02	1.1000E-05 4.7100E-06 1.2700E-04 3.4400E-04 1.8100E-04 4.9800E-05 2.2600E-04 1.4900E-03 1.3500E-05 1.0200E-04 1.8300E-05 6.0200E-05 2.6073E-03	AU
Package Total													1.1336E+02	9.8470E-02	2.6073E-03	
Shipment Total			1.48886 32.50000	835.00000 0.89997										3.0332E-01 (9.0905E-03 g)	8.1977E-03	

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 FS2), U.S. Nuclear Regulatory Commission, Washington, DC 20565-0001, or by Internet e-mail to infocollect@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-18202, (2150-0185), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 542		EnergySolutions, Clive Disposal Site		1. WASTE COLLECTOR/PROCESSOR						2. MANIFEST NUMBER			
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				NAME TVA Hazardous Waste Storage Facility/EO EnergySolutions						SHIPPER USE ONLY			
MANIFEST INDEX AND REGIONAL COMPACT TABULATION				SHIPPING DATE 01/28/2008						3. PAGE 1 OF 1 PAGE(S)			
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators													
5.	6.	6A.	7.	8.	9.	10.	11.	AS PROCESSED/COLLECTED TOTAL					
GENERATOR NAME AND TELEPHONE NUMBER	GENERATOR FACILITY ADDRESS	WASTE DESCRIPTION (NOMENCLATURE)	PREPROCESSED WASTE (OR MATERIAL) VOLUME	MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	WASTE CODE	ORIGINATING COMPACT REGION OR STATE	A. SOURCE MATERIAL	B. SNM	C. ACTIVITY	D. VOLUME	E. WEIGHT	F. MAXIMUM PACKAGE RADIATION LEVEL	
			m ³ l ³				(kg) (lb)	(g)	Bq Ci	m ³ l ³	(lb)	(mrem/hr)	
TVA Hazardous Waste Storage Facility	TVA Remediation Road/Hwy 133N near Wilson Dam Muscle Shoals, AL 35661	Solid	1.48668 52.58000	One Manifest Generation 01/28/2008	C	AL	NP NP	9.0909E-03	3.8332E-01	8.1977E-03	1.48668 52.58000	1060.42896 0.5	
TOTALS OF ALL PAGES (FORMS 542 AND 542A)													
							NP NP	9.0909E-03	3.8332E-01	8.1977E-03	1.48668 52.58000	1060.42896 N/A	

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number AL 2640090005	2. Page 1 of 1	3. Emergency Response Phone 865 220 1555	4. Manifest Tracking Number 003715091 JJK			
5. Generator's Name and Mailing Address TVA Hazardous Waste Storage Facility 40 Energy Solutions TVA Reservation Road Hwy 133 Near Wagon Dam		Generator's Site Address (if different than mailing address)						
Generator's Phone: (256) 314-7876		Muscle Shoals AL 35661						
6. Transporter 1 Company Name Hittman Transport Services		U.S. EPA ID Number TND 98 7783065						
7. Transporter 2 Company Name		U.S. EPA ID Number						
8. Designated Facility Name and Site Address Energy Solutions, Clive Disposal Site TOOELE COUNTY, UT 84029 CLIVE UT 84029		U.S. EPA ID Number 1UTD 982598898						
Facility's Phone: (435) 884-0155								
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
		No.	Type					
X	1. NA3077, HAZARDOUS WASTE, SOLID, U.O.S. (D008), 9, III	02	DM	97	K	D008		
X	2. NA3077, HAZARDOUS WASTE, SOLID, U.O.S. (D006, D007, D008), 9, III	03	DM	247	K	D006	D007	D008
X	3. NA3077, HAZARDOUS WASTE, SOLID, U.O.S. (D007, D008), 9, III	02	DM	137	K	D007	D008	
14. Special Handling Instructions and Additional Information ERG-171 SHIPMENT # 0825-02-0002 Contract # 26316 - RD 2004530								
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.								
Generator's/Offeror's Printed/Typed Name DAVID W WIFFEN		Signature DW W			Month Day Year 10 28 08			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____								
17. Transporter Acknowledgment of Receipt of Materials								
Transporter 1 Printed/Typed Name Ernest PACTOA		Signature Ernest PACTOA			Month Day Year 1 28 08			
Transporter 2 Printed/Typed Name		Signature			Month Day Year			
18. Discrepancy								
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection								
Manifest Reference Number: _____								
18b. Alternate Facility (or Generator) U.S. EPA ID Number								
Facility's Phone: _____								
18c. Signature of Alternate Facility (or Generator) Month Day Year								
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)								
1. H129		2. H129		3. H129		4.		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a								
Printed/Typed Name Justin Lee		Signature Justin Lee			Month Day Year 12 1 08			

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST ISOTOPIC SUMMARY

For Manifest # 0825-02-0002

Energy Solutions, Clive Disposal Site

Isotope	Total Activity			Total SNM	Total Source
	(MBq)	(mCi)	(Ci)	(gm)	(lb)
AG-110M	1.2987E-03	3.5100E-05	3.5100E-08	.0000E+00	.0000E+00
AM-241	6.2540E-05	1.4200E-06	1.4200E-09	.0000E+00	.0000E+00
C-14	1.1188E-03	3.0178E-05	3.0178E-08	.0000E+00	.0000E+00
CE-144	3.7370E-05	1.0100E-06	1.0100E-09	.0000E+00	.0000E+00
CM-242	6.9830E-08	1.8900E-08	1.8900E-12	.0000E+00	.0000E+00
CM-243	1.0862E-05	2.9358E-07	2.9358E-10	.0000E+00	.0000E+00
CM-244	1.0662E-05	2.9358E-07	2.9358E-10	.0000E+00	.0000E+00
CO-57	4.2587E-04	1.1510E-05	1.1510E-08	.0000E+00	.0000E+00
CO-58	2.5715E-02	6.9500E-04	6.9500E-07	.0000E+00	.0000E+00
CO-60	2.2848E-02	6.1750E-04	6.1750E-07	.0000E+00	.0000E+00
CR-51	2.3362E-02	6.3140E-04	6.3140E-07	.0000E+00	.0000E+00
CS-134	6.5453E-03	1.7690E-04	1.7690E-07	.0000E+00	.0000E+00
CS-137	2.9896E-02	8.0260E-04	8.0260E-07	.0000E+00	.0000E+00
FE-55	1.2114E-01	3.2740E-03	3.2740E-06	.0000E+00	.0000E+00
FE-59	1.1648E-03	3.1480E-05	3.1480E-08	.0000E+00	.0000E+00
H-3	1.0314E-02	2.7876E-04	2.7876E-07	.0000E+00	.0000E+00
I-129	4.1074E-04	1.1101E-05	1.1101E-08	.0000E+00	.0000E+00
IN-54	1.3483E-02	3.6440E-04	3.6440E-07	.0000E+00	.0000E+00
NO-95	3.5224E-04	9.5200E-06	9.5200E-09	.0000E+00	.0000E+00
NI-63	3.5361E-02	9.5571E-04	9.5571E-07	.0000E+00	.0000E+00
PU-238	4.8100E-05	1.3000E-06	1.3000E-09	7.6471E-11	.0000E+00
PU-239	1.2987E-05	3.5100E-07	3.5100E-10	5.6613E-08	.0000E+00
PU-240	1.2987E-05	3.5100E-07	3.5100E-10	1.5261E-09	.0000E+00
PU-241	1.0323E-03	2.7900E-05	2.7900E-08	2.7900E-10	.0000E+00
SB-125	6.2678E-03	1.6940E-04	1.6940E-07	.0000E+00	.0000E+00
SN-113	1.3727E-04	3.7100E-06	3.7100E-09	.0000E+00	.0000E+00
SR-90	1.5029E-04	4.0618E-06	4.0618E-09	.0000E+00	.0000E+00
TC-99	7.2156E-04	1.9502E-05	1.9502E-08	.0000E+00	.0000E+00
U-235	7.4000E-04	2.0000E-05	2.0000E-08	9.0909E-03	.0000E+00
ZN-65	6.3122E-04	1.7060E-05	1.7060E-08	.0000E+00	.0000E+00
ZR-95	2.1904E-04	5.9200E-06	5.9200E-09	.0000E+00	.0000E+00
Totals:	3.0332E-01	8.1977E-03	8.1977E-06	9.0909E-03	.0000E+00

CERTIFICATE OF DISPOSAL

3 mi. S. Ext. 49, I-80 Clive, Utah
84029 EPA ID: UT982598898

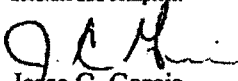
Tennessee Valley Authority, Muscle Shoals

This Certificate acknowledges that the following manifested shipments:

<u>Shipment</u>	<u>Manifest</u>	<u>Date(s) of Disposal</u>	<u>Cu/Ft</u>	<u>Process</u>	<u>Disposal Location</u>
0825-02-0002	15091	3/19/2008	52.5	Landfill	Mixed Waste

Representing 52.5 Cubic feet of waste disposed of at EnergySolutions' above listed Disposal Facility landfill. Disposal is subject to EnergySolutions' Radioactive Material License, all other applicable licenses, permits and regulations, and the Disposal Agreement.

Under civil and criminal penalties of law for the making or submission of false or fraudulent statements or representations (18 U.S.C. 1001 and 15 U.S.C. 2615) I certify that the information contained in or accompanying this document is true, accurate and complete. As to the identification section(s) of this document for which I cannot personally verify truth and accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete.



Jesse C. Garcia

Mixed Waste Site Manager

4/2/08
Date

423 West 300 South, Salt Lake City, Utah 84101 Telephone (801) 649-2000

Attachment 5

Waste Manifest Numbers T074683

NRC Form 540 Manifest No.	EPA Form 8700-22 Manifest No.	Containers	Date Shipped	Recipient	Date Received
T074683		3	11/16/2007	Energy Solutions Clive Disposal Site Clive, UT	11/21/2007

NOTE: The container numbers routinely used on the NRC Form 540 is the number assigned to the container by the Mixed Waste Storage Facility. In this case, the container numbers listed on the NRC Form 540 are the Generator assigned container numbers. The numbers correspond as listed below:

Generator Container No.	MWSF Container No.
DR04-081	1022766
DR02-077	1022767
DR04-072	1022768

As noted on NRC Form 540 Item 4 No EPA Manifest is required.

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform burden is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and Communications Services Branch (F-123), U.S. Nuclear Regulatory Commission, Washington, DC 20545-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10222, (202) 368-0164. Office of Management and Budget, Washington, DC 20503. If a response would impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

[illegible]

Form 540 (10-86)

Modified Date: 11/15/2007 09:08

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 FS2), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOF-10202, (3150-0166), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 541		EnergySolutions, Bear Creek Processing Operations		1. MANIFEST TOTALS										2. MANIFEST NUMBER	
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	SPECIAL NUCLEAR MATERIAL (grams)				T074683				
CONTAINER AND WASTE DESCRIPTION				3	m ³ 0.83 ft ³ 22.50	kg 380.12 lb 838.00	U-233	U-235	Pu	TOTAL	PAGE 1 OF 1 PAGE(S)				
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste				ACTIVITY (MBq/mCi) (LLD UNITS IN uCi/cc)				SOURCE				4. SHIPPER NAME			
				ALL NUCLIDES		TRITIUM	C-14	Co-60	I-129			TVA Power Service Center/CJO Energy Solution			
				MBq	9.2352E-02	NP	NP	NP	NP			SHIPMENT ID NUMBER			
				mCi	2.4960E-03	NP	NP	NP	NP			T074683			
DISPOSAL CONTAINER DESCRIPTION															
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		11. PHYSICAL DESCRIPTION		12. CHEMICAL DESCRIPTION		13. RADIOLOGICAL DESCRIPTION		14. WASTE CLASSIFICATION		
					ALPHA	BETA-GAMMA	WASTE DESCRIPTOR (See Note 2)	APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ ft ³	SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
07-001561 (DR04-072) 3650	4 LI E	0.33 11.50	127.92 271.00	< 5.0000E-03 < 5.0000E-01	< 1.6700E-06 < 1.0000E+02	< 1.6700E-05 < 1.0000E+03	25	0.21 7.50	100	LIQUID METAL OXIDES / NP	NP	RADIONUCLIDES CS-137 4.2180E-04 1.1400E-05 Sub Total 4.2180E-04 1.1400E-05 Package Total 4.2180E-04 1.1400E-05	AU		
07-001562 (DR02-77) 3650	4 LI E	0.33 11.50	217.72 480.00	< 5.0000E-03 < 5.0000E-01	< 1.6700E-06 < 1.0000E+02	< 1.6700E-05 < 1.0000E+03	24	0.21 7.50	100	LIQUID METAL OXIDES / NP	NP	CO-60 3.2412E-03 8.7800E-05 CS-137 2.2100E-02 6.0000E-04 Sub Total 2.5404E-02 8.8800E-04 Package Total 2.5404E-02 8.8800E-04	AU		
07-001563 (DR04-061) 3650	4 LI E	0.33 11.50	218.38 477.00	< 5.0000E-03 < 5.0000E-01	< 1.6700E-06 < 1.0000E+02	< 1.6700E-05 < 1.0000E+03	24	0.21 7.50	100	LIQUID METAL OXIDES / NP	NP	CO-60 2.8580E-02 7.1800E-04 CS-137 3.9800E-02 1.0800E-03 Sub Total 6.8526E-02 1.7980E-03 Package Total 6.8526E-02 1.7980E-03	AU		
Shipment Total		0.99 34.50	557.00 1228.00									9.2352E-02 2.4960E-03			

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	14. Other. Describe in Item 6, or additional page
7. Polyethylene Tank or Liner	
8. Fiberglass Tank or Liner	

NOTE 1A: Process Requested

C. Compaction
SL. Steam Refining
DL. Direct Incineration
SI. Sort & Incinerate
D. Dismantle
G. Green to Clean
M. Metal Melt
T. Trans-Ship
LI. Liquid for Incineration
OL. Oil for Incineration
O. Other (describe)

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

20. Chemical	29. Demolition Rubble	38. Evaporator Bottoms/Sludge/ 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	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: Burial/Disposition Site

S. Barnwell Waste Management Facility
E. Envirocare
R. Richland, WA
PR. Process and Return
O. Other

NOTE 3: 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

94. Vinyl Ester/ Styrene
95. Other. Describe in Item 13, or additional page
96. Cement
97. Concrete (unpacked)
98. Bitumen
99. Vinyl Chloride
100. None Required

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC in most reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to InfoCollection@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-10202, (3159-0180), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 542 (7-2001)			Energy Solutions, Bear Creek Processing Operations				1. WASTE COLLECTOR/PROCESSOR		2. MANIFEST NUMBER			
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST			NAME TVA-Power Service Center/EO Energy Solutions		SHIPPER USE ONLY		TD74863		PAGE 1 OF 1 PAGE(S)			
MANIFEST INDEX AND REGIONAL COMPACT TABULATION			IDENTIFICATION NUMBER 3650									
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators			SHIPPING DATE 11/19/2007									
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME m ³	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					
							A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY MBq	D. VOLUME m ³		
3650	TVA-Power Service Center EPA #: 256 314-7970	127 Reservation Road Muscle Shoals, AL 35661	0.63	Onsite Generation 11/19/2007	C	AL	NP	NP	9.33E-02	0.63		
TOTALS OF ALL PAGES (FORMS 542 AND 542A)							NP	NP	9.33E-02	0.63		

ISOTOPIC SUMMARY

For Manifest # T074683

EnergySolutions. Bear Creek Processing Operations

Isotope	Total Activity		Ci	Total SNM	Total Source
	(MBq)	(mCi)		(gm)	(lb)
CO-60	2.9807E-02	8.0560E-04	8.0560E-07	.0000E+00	.0000E+00
CS-137	6.2545E-02	1.5904E-03	1.6904E-06	.0000E+00	.0000E+00
Totals:	9.2352E-02	2.4960E-03	2.4960E-06	.0000E+00	.0000E+00



Wednesday, November 21, 2007

Bobby Davis
Tennessee Valley Authority (Power Service Shop)/AL
1490 Dock Street
Memphis, TN 38113

Dear Mr. Davis:

The attached signed shipping manifest copies are your notice of receipt of the radioactive waste materials shipment specified on the manifest number below.

Manifest Number

3650-T074683

Date Received

11/21/2007

Thank you for your business.

Sincerely,

A handwritten signature in black ink that reads "Pam Thompson". The signature is written in a cursive, flowing style.

Shipping and Receiving

cc: Manifest File
Shipping and Receiving file



February 11, 2008

Mr. Jim Colagross
Tennessee Valley Authority (Power Service Shop)/AL
Reservation Road
Muscle Shoals, AL 35662

Dear Mr. Colagross:

This letter certifies that Duratek, Inc. has completed processing and/or shipment of all the radioactive materials shipped to Duratek, Inc. on the following manifest(s) sent by Tennessee Valley Authority (Power Service Shop)/AL.

Manifest Number
3650-T074683

Close Date
01/03/08

Should you have any questions concerning the processing of the waste, please refer to your monthly Customer Summary Report. Please contact your Account Executive if further data is required.

Duratek Tracking Systems

To: Jim Colagross

Attachment 6

Waste Manifest Numbers 002785862JJJ

NRC Form 540 Manifest No.	EPA Form 8700-22 Manifest No.	Containers	Date Shipped	Recipient	Date Received
002785862JJJ	002785862JJJ	60	12/13/2007	Diversified Scientific Services, Inc. Kingston, TN	12/13/2007

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform instrument is required by HRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (7-4 D65), U.S. Nuclear Regulatory Commission, Washington, DC 20545, or by e-mail to info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, HHS-2022, (716)-01-21, Office of Management and Budget, Washington, DC 20503. If it means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 540 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		3. SHIPPER - NAME AND FACILITY Diversified Scientific Services, Inc. 687 Gallaher Road Kingston, TN 37763		SHIPPER I.D. NUMBER TDS063109142 <input checked="" type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR		7. NRC FORM 540 AND 540A PAGE 1 OF 8 NRC FORM 541 AND 541A 8 PAGE(S) NRC FORM 542 AND 542A 94 PAGE(S) ADDITIONAL INFORMATION 1 PAGE(S) Name: PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 002786062 JJK													
		USER PERMIT NUMBER T-TM011-L07		SHIPMENT NUMBER 013-265-1844		9. CONSIGNEE - Name and Facility Address Diversified Scientific Services, Inc. 687 Gallaher Road Kingston, TN 37763		CONTACT Waste Tracking TELEPHONE NUMBER (Include Area Code) 865-376-8747 DATE 12/13/07													
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 800-257-2322		CONTACT Ready Patcher		TELEPHONE NUMBER (Include Area Code) 913-265-1844		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 applicable requirements of 10 CFR Parts 20 and 61, or any other state regulations.		SIGNATURE - <i>Dawn Gault</i>													
ORGANIZATION TVA Operation Duty Schedule		6. CARRIER - Name and Address Hittman Transportation Services 628 Gallaher Road Kingston, TN 37763		EPA I.D. NUMBER TDS06783068		SHIPPING DATE 12/13/2007		TELEPHONE NUMBER (Include Area Code) 865-376-8187													
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 60		CONTACT Jeff Puckett		SIGNATURE - <i>Mark Fletcher</i> DATE 12-13-07		AUTHORIZED SUBMITTER TITLE <i>Permit Fix Broker</i> DATE 12/13/07													
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number:		EPA MANIFEST NUMBER 002786062 JJK		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)		17. LEASCO CLASS		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE	
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish <i>(Rq, D001)</i>		NA		NA		Liquid Oxide		Co-137						1.4763E-02		NA		476 LBS; 7.35 FT3		1023150	
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish <i>(Rq, D001)</i>		NA		NA		Liquid Oxide		Co-137						1.6133E-02		NA		486 LBS; 7.35 FT3		1023151	
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish <i>(Rq, D001)</i>		NA		NA		Liquid Oxide		Co-137						1.5836E-02		NA		506 LBS; 7.35 FT3		1023152	
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish <i>(Rq, D001)</i>		NA		NA		Liquid Oxide		Co-137						1.5762E-02		NA		504 LBS; 7.35 FT3		1023153	
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish <i>(Rq, D001)</i>		NA		NA		Liquid Oxide		Co-137						1.6132E-02		NA		515 LBS; 7.35 FT3		1023154	
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish <i>(Rq, D001)</i>		NA		NA		Liquid Oxide		Co-137						1.6132E-02		NA		515 LBS; 7.35 FT3		1023155	
FOR CONSIGNEE USE ONLY																					

References

RECEIVED AT NM
DEC 18 2007
MUSCLE SHOALS

NRC FORM 540A
(3-95)

UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
SHIPPING PAPER (CONTINUATION)

U.S. NUCLEAR REGULATORY COMMISSION

8. MANIFEST NUMBER
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002785862 JJK

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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)	17. LSASCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023158 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.5836E-02	NA	506 LBS; 7.35 FT3	1023157 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6206E-02	NA	517 LBS; 7.35 FT3	1023158 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023159 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.5984E-02	NA	510 LBS; 7.35 FT3	1023160 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023161 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023162 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.5910E-02	NA	508 LBS; 7.35 FT3	1023163 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6132E-02	NA	515 LBS; 7.35 FT3	1023164 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023165 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6132E-02	NA	515 LBS; 7.35 FT3	1023166 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.5984E-02	NA	510 LBS; 7.35 FT3	1023167 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ(1001)	NA	NA	Liquid Oxide	Cs-137	1.6354E-02	NA	521 LBS; 7.35 FT3	1023168 ✓

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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)	17 LSA/SCO CLASS	18 TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5910E-02	NA	508 LBS; 7.35 FT3	1023169 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6280E-02	NA	519 LBS; 7.35 FT3	1023170 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6206E-02	NA	517 LBS; 7.35 FT3	1023171 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6280E-02	NA	519 LBS; 7.35 FT3	1023172 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6206E-02	NA	517 LBS; 7.35 FT3	1023173 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023174 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5910E-02	NA	508 LBS; 7.35 FT3	1023175 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023176 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6132E-02	NA	515 LBS; 7.35 FT3	1023177 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023178 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.0619E-02	NA	356 LBS; 7.35 FT3	1023179 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023180 ✓
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5984E-02	NA	510 LBS; 7.35 FT3	1023181 ✓

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Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6206E-02	NA	517 LBS; 7.35 FT3	1023182
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6280E-02	NA	519 LBS; 7.35 FT3	1023183
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6132E-02	NA	515 LBS; 7.35 FT3	1023184
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6132E-02	NA	515 LBS; 7.35 FT3	1023185
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5984E-02	NA	510 LBS; 7.35 FT3	1023186
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6280E-02	NA	519 LBS; 7.35 FT3	1023187
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023188
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5984E-02	NA	510 LBS; 7.35 FT3	1023189
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5984E-02	NA	510 LBS; 7.35 FT3	1023190
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6132E-02	NA	515 LBS; 7.35 FT3	1023191
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5910E-02	NA	508 LBS; 7.35 FT3	1023192
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6280E-02	NA	519 LBS; 7.35 FT3	1023193
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6206E-02	NA	517 LBS; 7.35 FT3	1023194

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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)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5910E-02	NA	508 LBS; 7.35 FT3	1023195
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6280E-02	NA	519 LBS; 7.35 FT3	1023196
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6206E-02	NA	517 LBS; 7.35 FT3	1023197
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.4541E-02	NA	469 LBS; 7.35 FT3	1023198
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6465E-02	NA	524 LBS; 7.35 FT3	1023199
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6354E-02	NA	521 LBS; 7.35 FT3	1023200
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6354E-02	NA	521 LBS; 7.35 FT3	1023201
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023202
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6354E-02	NA	521 LBS; 7.35 FT3	1023203
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5836E-02	NA	506 LBS; 7.35 FT3	1023204
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5984E-02	NA	510 LBS; 7.35 FT3	1023205
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.5984E-02	NA	510 LBS; 7.35 FT3	1023206
Waste, Resin solution, flammable 3 UN1866 PGIII, Spent Insulating Varnish RQ (D001)	NA	NA	Liquid Oxide	Cs-137	1.6058E-02	NA	513 LBS; 7.35 FT3	1023207

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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)	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
Waste, Resin solution, flammable 3 UN1886 PGIII, Spent Insulating Varnish <i>RA (D01)</i>	NA	NA	Liquid Oxide	Cs-137	1.5688E-02	NA	502 LBS; 7.35 FT3	1023208
Waste, Resin solution, flammable 3 UN1886 PGIII, Spent Insulating Varnish <i>RA (D01)</i>	NA	NA	Liquid Oxide	Cs-137	1.2247E-03	NA	86 LBS; 7.35 FT3	1023209

APPROVED BY OMB: NO. 3150-0186
EXPIRES: 06/30/2007

Estimated burden per response to comply with this information collection request: 1.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 P52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10202, (3150-0186), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 541 (6-2004) 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 002785862 JJK					
NUMBER OF PACKAGES/ DISPOSAL CONTAINERS		NET WASTE VOLUME (m3)		NET WASTE WEIGHT (kg)		SPECIAL NUCLEAR MATERIAL (grams)		Total		3. PAGE 1 OF 14 PAGE(S)		4. SHIPPER NAME Diversified Scientific Services, Inc.							
60		12.4860		13660.3888		NP		NP		NP		NP							
ALL NUCLIDES		TRITIUM		C-14		Tc-99		I-129		SOURCE (kg)		SHIPPER ID NUMBER TND982109142							
9.4121E-01		NP		NP		NP		NP		NA									
DISPOSAL CONTAINER DESCRIPTION										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER									
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIP- TION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)		11. WASTE DESCRIP- TOR (See Note 2)	12. APPROXIMATE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		16. WASTE CLASSIFI- CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C					
10231501/AL284009000 5	4	0.2081	215.4564	<5.0000E-00	<3.6740E-08	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.4763E-02	AU					
												Total	1.4763E-02 MBq						
10231511/AL284009000 5	4	0.2081	220.4459	<5.0000E-00	<3.6740E-08	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.5133E-02	AU					
												Total	1.5133E-02 MBq						
10231521/AL284009000 5	4	0.2081	229.5178	<5.0000E-00	<3.6740E-08	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.5838E-02	AU					
												Total	1.5838E-02 MBq						

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
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. Demineralizer
10. Gas Cylinder
11. Bulk, Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
14. Other. Describe in item 6, or additional page

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

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

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in item 13. Code 100=NONE REQUIRED.

Sorption

60. Speedi Dri
61. Celatom
62. Floor Dry/Supertone
63. Hi Dri
64. Safe T Sorb
65. Safe N Dri
66. Safe A Sorb
69. Chemasil 30
70. Chemasil 50
71. Chemasil 3030
72. Dicaperl HP200
73. Dicaperl HP500

Solidification

74. Petrosel
75. Petrosel II
76. Aquaset
77. Aquaset II
78. Other. Describe in item 13, or additional page
79. Cement
80. Concrete (encapsulation)
81. Bitumen
82. Vinyl Chloride
83. Vinyl Ester Styrene
84. Other. Describe in item 13, or additional page
100. None Required

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CONTAINER AND WASTE DESCRIPTION

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DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER						18. 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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)		12. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION	15. RADIOLOGICAL DESCRIPTION		
					ALPHA	BETA-GAMMA	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)				15. INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT
1023153/AL264008000 5	4	0.2081	228.6106	<5.0000E-00	<3.6740E-05	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.5762E-02	AU
												Total 1.5762E-02 MBq	
1023154/AL264008000 5	4	0.2081	233.6001	<5.0000E-00	<3.6740E-05	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6132E-02	AU
												Total 1.6132E-02 MBq	
1023155/AL264008000 5	4	0.2081	233.6001	<5.0000E-00	<3.6740E-05	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6132E-02	AU
												Total 1.6132E-02 MBq	
1023157/AL264008000 5	4	0.2081	232.6929	<5.0000E-00	<3.6740E-05	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6058E-02	AU
												Total 1.6058E-02 MBq	
1023157/AL264008000 5	4	0.2081	229.5178	<5.0000E-00	<3.6740E-05	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.5836E-02	AU

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CONTAINER AND WASTE DESCRIPTION

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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (μ Sv/hr) <input checked="" type="checkbox"/> (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)		11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		
					ALPHA	BETA-GAMMA							
												Total 1.5838E-02 MBq	
1023158/AL284009000 5	4	0.2081	234.5973	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6206E-02	AU
												Total 1.6206E-02 MBq	
1023158/AL284009000 5	4	0.2081	232.5929	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6058E-02	AU
												Total 1.6058E-02 MBq	
1023160/AL284009000 5	4	0.2081	231.3321	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.5984E-02	AU
												Total 1.5984E-02 MBq	
1023161/AL284009000 5	4	0.2081	232.6929	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6058E-02	AU
												Total 1.6058E-02 MBq	

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704
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NRC FORM 541A (3-95)

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UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER
002785862 JJK

CONTAINER AND WASTE DESCRIPTION

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DISPOSAL CONTAINER DESCRIPTION										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					18. 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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL <input checked="" type="checkbox"/> (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)		11. WASTE DESCRIPTION (See Note 2)	12. PHYSICAL DESCRIPTION		13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		
					ALPHA	BETA-GAMMA		APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)							
1023162/AL264009000 5	4	0.2081	232.6929	<5.0000E+00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6058E-02	AU	
													Total	1.6058E-02 MBq	
1023163/AL264009000 5	4	0.2081	230.4249	<5.0000E+00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.5910E-02	AU	
													Total	1.5910E-02 MBq	
1023164/AL264009000 5	4	0.2081	233.6001	<5.0000E+00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6132E-02	AU	
													Total	1.6132E-02 MBq	
1023165/AL264009000 5	4	0.2081	232.6929	<5.0000E+00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6058E-02	AU	
													Total	1.6058E-02 MBq	
1023166/AL264009000 5	4	0.2081	233.6001	<5.0000E+00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6132E-02	AU	

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UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

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2. MANIFEST NUMBER
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CONTAINER AND WASTE DESCRIPTION

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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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL <input type="checkbox"/> (uSv/hr) <input type="checkbox"/> (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2) ALPHA BETA-GAMMA	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL FORM/ CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		
											Total 1.6132E-02 MBq		
1023187/AL2840090005	4	0.2081	231.3321	<5.0000E-00	<3.6740E-08	<3.6740E-08	34	0.2081	100 100	Code N/A	NP	Cs-137 1.5984E-02	AU
											Total 1.5984E-02 MBq		
1023188/AL2840090005	4	0.2081	236.3216	<5.0000E-00	<3.6740E-08	<3.6740E-08	34	0.2081	100 100	Code N/A	NP	Cs-137 1.6354E-02	AU
											Total 1.6354E-02 MBq		
1023189/AL2840090005	4	0.2081	230.4249	<5.0000E-00	<3.6740E-08	<3.6740E-08	34	0.2081	100 100	Code N/A	NP	Cs-137 1.5910E-02	AU
											Total 1.5910E-02 MBq		
1023170/AL2840090005	4	0.2081	235.4145	<5.0000E-00	<3.6740E-08	<3.6740E-08	34	0.2081	100 100	Code N/A	NP	Cs-137 1.6280E-02	AU
											Total 1.6280E-02 MBq		

NRC FORM 541A (3-95)

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UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION					WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					18. WASTE CLASSIFICATION AS-Class A Bottle AU-Class A Unstable B-Class B C-Class C			
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2) ALPHA BETA-GAMMA		11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)		14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 0.1%	16. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT
1023171/AL2840090005	4	0.2081	234.5073	<5.0000E+00	<3.6740E-08	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6206E-02	AU
												Total 1.6206E-02 MBq	
1023172/AL2840090005	4	0.2081	238.4145	<5.0000E+00	<3.6740E-08	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6280E-02	AU
												Total 1.6280E-02 MBq	
1023173/AL2840090005	4	0.2081	234.5073	<5.0000E+00	<3.6740E-08	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6206E-02	AU
												Total 1.6206E-02 MBq	
1023174/AL2840090005	4	0.2081	232.6629	<5.0000E+00	<3.6740E-08	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6058E-02	AU
												Total 1.6058E-02 MBq	
1023175/AL2840090005	4	0.2081	230.4240	<5.0000E+00	<3.6740E-08	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.5910E-02	AU

NRC FORM 541A (3-95)

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(3-95)

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST**

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2. MANIFEST NUMBER
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CONTAINER AND WASTE DESCRIPTION

DISPOSAL CONTAINER DESCRIPTION					WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					14. WASTE CLASSIFICATION AS-Class A Subclass AU-Class A Unstable B-Class B C-Class C					
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)			11. PHYSICAL DESCRIPTION			12. CHEMICAL DESCRIPTION		13. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		
					ALPHA	BETA-GAMMA	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)		14. CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT (F > 0.1%)			
													Total	1.5910E-02 MBq	
1023176/AL284008000 5	4	0.2081	232.8929	<5.0000E+00	<3.8740E-08	<3.8740E-08	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6058E-02	AU	
													Total	1.6058E-02 MBq	
1023177/AL284008000 5	4	0.2081	233.6001	<5.0000E+00	<3.8740E-08	<3.8740E-08	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6132E-02	AU	
													Total	1.6132E-02 MBq	
1023178/AL284008000 5	4	0.2081	232.6629	<5.0000E+00	<3.8740E-08	<3.8740E-08	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6058E-02	AU	
													Total	1.6058E-02 MBq	
1023179/AL284008000 5	4	0.2081	161.4789	<5.0000E+00	<3.8740E-08	<3.8740E-08	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.0619E-02	AU	
													Total	1.0619E-02 MBq	

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**UNIFORM LOW-LEVEL RADIOACTIVE
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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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL <input checked="" type="checkbox"/> (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)		11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
					ALPHA	BETA-GAMMA				CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%				
1023180/AL284009000 5	4	0.2081	232.6829	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6058E-02	AU		
												Total 1.6058E-02 MBq			
1023181/AL284009000 5	4	0.2081	231.3321	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.5984E-02	AU		
												Total 1.5984E-02 MBq			
1023182/AL284009000 5	4	0.2081	234.5073	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6206E-02	AU		
												Total 1.6206E-02 MBq			
1023183/AL284009000 5	4	0.2081	235.4145	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6280E-02	AU		
												Total 1.6280E-02 MBq			
1023184/AL284009000 5	4	0.2081	233.5001	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6132E-02	AU		

NRC FORM 541A (3-95)

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UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER
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CONTAINER AND WASTE DESCRIPTION

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DISPOSAL CONTAINER DESCRIPTION					WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					16. WASTE CLASSIFICATION AS-Class A Suble AU-Class A Unstable B-Class B C-Class C						
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL <input type="checkbox"/> (uSv/hr) <input type="checkbox"/> (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)			11. PHYSICAL DESCRIPTION			12. CHEMICAL DESCRIPTION		13. RADIOLOGICAL DESCRIPTION			
					ALPHA	BETA-GAMMA	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)		14. CHEMICAL FORM/ CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 0.1%	16. INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
														Total	1.6132E-02 MBq	
1023185/AL2840090005	4	0.2081	233.6091	<5.0000E-00	<3.6740E-06	<3.6740E-05	34		0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6132E-02		AU
														Total	1.6132E-02 MBq	
1023188/AL2840090005	4	0.2081	231.3321	<5.0000E-00	<3.6740E-06	<3.6740E-05	34		0.2081	100 100	Oxide/N/A	NP	Cs-137	1.5984E-02		AU
														Total	1.5984E-02 MBq	
1023187/AL2840090005	4	0.2081	235.4145	<5.0000E-00	<3.6740E-06	<3.6740E-05	34		0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6280E-02		AU
														Total	1.6280E-02 MBq	
1023189/AL2840090005	4	0.2081	232.9929	<5.0000E-00	<3.6740E-06	<3.6740E-05	34		0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6058E-02		AU
														Total	1.6058E-02 MBq	

NRC FORM 541A (3-95)

UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST

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CONTAINER AND WASTE DESCRIPTION

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DISPOSAL CONTAINER DESCRIPTION					WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					15. 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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL	10. SURFACE CONTAMINATION (MBq/100 cm2)		11. PHYSICAL DESCRIPTION				14. CHEMICAL DESCRIPTION	15. RADIOLOGICAL DESCRIPTION	
				9. SURFACE RADIATION LEVEL (μSv/hr) <input checked="" type="checkbox"/>	ALPHA	BETA-GAMMA	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)				
1023189/AL264009000 5	4	0.2081	231.3321	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.5984E-02	AU
												Total 1.5984E-02 MBq	
1023190/AL264009000 5	4	0.2081	231.3321	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.5984E-02	AU
												Total 1.5984E-02 MBq	
1023191/AL264009000 5	4	0.2081	233.6001	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6132E-02	AU
												Total 1.6132E-02 MBq	
1023192/AL264009000 5	4	0.2081	230.4249	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.5910E-02	AU
												Total 1.5910E-02 MBq	
1023193/AL264009000 5	4	0.2081	235.4145	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP	Cs-137 1.6280E-02	AU

NRC FORM 541A
(3-95)

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST**

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER
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DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER							18. 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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL	10. SURFACE CONTAMINATION (MBq/100 cm2)		11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 0.1%	16. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL, OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		
				<input checked="" type="checkbox"/> (μSv/hr) (mSv/hr)	ALPHA	BETA-GAMMA								
												Total	1.6280E-02 MBq	
1023194/AL284008000 5	4	0.2081	234.5073	<5.0000E+00	<3.6740E-08	<3.6740E-08	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6206E-02	AU
												Total	1.6206E-02 MBq	
1023195/AL284008000 5	4	0.2081	230.4249	<5.0000E+00	<3.6740E-08	<3.6740E-08	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.5910E-02	AU
												Total	1.5910E-02 MBq	
1023196/AL284008000 5	4	0.2081	235.4145	<5.0000E+00	<3.6740E-08	<3.6740E-08	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6280E-02	AU
												Total	1.6280E-02 MBq	
1023197/AL284008000 5	4	0.2081	234.5073	<5.0000E+00	<3.6740E-08	<3.6740E-08	34	0.2081	100 100	Oxide/N/A	NP	Cs-137	1.6206E-02	AU
												Total	1.6206E-02 MBq	

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UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

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2. MANIFEST NUMBER
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CONTAINER AND WASTE DESCRIPTION

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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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (μSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)		11. WASTE DESCRIPTION (See Note 2)	12. PHYSICAL DESCRIPTION APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)		13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		
					ALPHA	BETA-GAMMA									
1023198/AL284009000 5	4	0.2081	212.7348	<input checked="" type="checkbox"/> <5.0000E-00	<3.6740E-06	<3.6740E-06	34	0.2081	100 100		Oxide/N/A	NP	Cs-137 1.4541E-02	AU	
													Total 1.4541E-02 MBq		
1023199/AL284009000 5	4	0.2081	237.8824	<5.0000E-00	<3.6740E-06	<3.6740E-06	34	0.2081	100 100		Oxide/N/A	NP	Cs-137 1.6465E-02	AU	
													Total 1.6465E-02 MBq		
1023200/AL284009000 5	4	0.2081	238.3218	<5.0000E-00	<3.6740E-06	<3.6740E-06	34	0.2081	100 100		Oxide/N/A	NP	Cs-137 1.6354E-02	AU	
													Total 1.6354E-02 MBq		
1023201/AL284009000 5	4	0.2081	238.3218	<5.0000E-00	<3.6740E-06	<3.6740E-06	34	0.2081	100 100		Oxide/N/A	NP	Cs-137 1.6354E-02	AU	
													Total 1.6354E-02 MBq		
1023202/AL284009000 5	4	0.2081	232.8828	<5.0000E-00	<3.6740E-06	<3.6740E-06	34	0.2081	100 100		Oxide/N/A	NP	Cs-137 1.6058E-02	AU	

NRC FORM 641A (3-95)

NRC FORM 541A
(3-95)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER
002785882 JJK

CONTAINER AND WASTE DESCRIPTION

3. PAGE 13 OF 14 PAGE(S)

DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					18. 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 (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (μ Sv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2) ALPHA BETA-GAMMA	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. RADIOLOGICAL DESCRIPTION WEIGHT % CHELATING AGENT IF > 0.1% INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	
										Total 1.6058E-02 MBq	
1023203/AL284009000 5	4	0.2081	236.3216	<3.0000E-00	<3.6740E-08 <3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP Cs-137 1.6354E-02	AU
										Total 1.6354E-02 MBq	
1023204/AL284009000 5	4	0.2081	229.5178	<3.0000E-00	<3.6740E-08 <3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP Cs-137 1.5836E-02	AU
										Total 1.5836E-02 MBq	
1023205/AL284009000 5	4	0.2081	231.3321	<3.0000E-00	<3.6740E-08 <3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP Cs-137 1.5984E-02	AU
										Total 1.5984E-02 MBq	
1023208/AL284009000 5	4	0.2081	231.3321	<3.0000E-00	<3.6740E-08 <3.6740E-05	34	0.2081	100 100	Oxide/N/A	NP Cs-137 1.5984E-02	AU
										Total 1.5984E-02 MBq	

NRC FORM 541A (3-96)

NRC FORM 541A
(3-95)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR REGULATORY COMMISSION

2. MANIFEST NUMBER
002785862 JJK

CONTAINER AND WASTE DESCRIPTION

3. PAGE 14 OF 14 PAGE(S)

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
3. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL <input checked="" type="checkbox"/> (uSv/hr) (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm2)		11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION			
					ALPHA	BETA-GAMMA				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			
1023207/AL284008000 5	4	0.2081	232.8929	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/NIA	NP	Cs-137	1.6058E-02	AU	
												Total	1.6058E-02 MBq		
1023208/AL284008000 5	4	0.2081	227.7034	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/NIA	NP	Cs-137	1.5688E-02	AU	
												Total	1.5688E-02 MBq		
1023209/AL284008000 5	4	0.2081	38.0089	<5.0000E-00	<3.6740E-06	<3.6740E-05	34	0.2081	100 100	Oxide/NIA	NP	Cs-137	1.2247E-03	AU	
												Total	1.2247E-03 MBq		

NRC FORM 541A (3-95)

NRC FORM 542 (6-2004)			U.S. NUCLEAR REGULATORY COMMISSION			1. WASTE COLLECTOR/PROCESSOR			2. MANIFEST NUMBER															
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST			MANIFEST INDEX AND REGIONAL COMPACT TABULATION			NAME			SHIPPER USE ONLY															
						Diversified Scientific Services, Inc.																		
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.			IDENTIFICATION NUMBER			SHIPPING DATE			3. PAGE 1 OF 1 PAGE(S)															
													TND982109142											
4. GENERATOR IDENTIFICATION NUMBER			5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE) AND TELEPHONE NUMBER			6. GENERATOR FACILITY ADDRESS			7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)			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			
																					A. SOURCE MATERIAL (kg)			
AL2840090005	TVA Power Service Ctr. Waste Storage Facility 256-314-7870	Hwy 133 North PO Box 1010 Muscle Shoals, AL 35662-1010	12.4860	002785982 JJX (12/13/2007)	C	AL	0.0000E+00	0.0000E+00	9.4121E-01	12.4877														
TOTALS OF ALL PAGES (FORMS 542 AND 542A):							0.0000E+00	0.0000E+00	9.4121E-01	12.4877														

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number AL2640090005	2. Page 1 of 1	3. Emergency Response Phone 1-800-237-2322	4. Manifest Tracking Number 002785862 JJK
5. Generator's Name and Mailing Address ATTN: LARRY MITTS. TVA-Hazardous Waste Storage Facility PSC 1E-M. R.D. Box 1010, HWY 133N near Wilson Dam Muscle Shoals, AL 35662					
Generator's Phone: 256-314-7571			Generator's Site Address (if different than mailing address)		
6. Transporter 1 Company Name Hittman Transport Services			U.S. EPA ID Number TND987783065		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Diversified Scientific Sys. Inc. (DSSI) 657 Gallagher Road Kingsport, TN 37763			U.S. EPA ID Number TND982109142		
Facility's Phone: 965-376-8586					
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity
			No.	Type	12. Unit Wt/Vol.
	RG1	Waste Resin Solution, 3, UN1866, PG III	60	CM	13689 K
	2.				
	3.				
					13. Waste Codes
					DD01
14. Special Handling Instructions and Additional Information See Attached Manifest Info Sheet 961-ERG 127 TVA Contract No. 66726 WPS # 07-11-015 Note: Material in each package contains radioactivity at a concentration less than that specified in 49CFR 173.403, 10CFR 71.5, and IATA Regulation 10.3.1					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Offeror's Printed/Typed Name P. Paul Bernauer			Signature <i>P. Paul Bernauer</i>		Month Day Year 12 13 87
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:					
17. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name RICHARD STEPHENS			Signature <i>Richard Stephens</i>		Month Day Year 12 13 87
Transporter 2 Printed/Typed Name			Signature		Month Day Year
18. Discrepancy					
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
18b. Alternate Facility (or Generator) U.S. EPA ID Number					
Facility's Phone:					
18c. Signature of Alternate Facility (or Generator) Month Day Year					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
1. H129		2.		3.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a					
Printed/Typed Name Dawn Garrett			Signature <i>Dawn Garrett</i>		Month Day Year 12 13 87

ISOTOPIC SUMMARY

For Manifest # T074683

EnergySolutions, Bear Creek Processing Operations

Isotope	Total Activity			Total SNM	Total Source
	(MBq)	(mCi)	(Ci)	(gm)	(lb)
CO-60	2.9807E-02	8.0560E-04	8.0560E-07	.0000E+00	.0000E+00
CS-137	6.2545E-02	1.6904E-03	1.6904E-06	.0000E+00	.0000E+00
Totals:	9.2352E-02	2.4960E-03	2.4960E-06	.0000E+00	.0000E+00



Diversified Scientific Services, Inc.
657 Gallaher Road Kingston, TN 37763
Phone: 865-376-0084
Fax: 865-376-0087

Date Sent: 12/13/07

ACKNOWLEDGMENT OF RECEIPT OF RADIOACTIVE WASTE

This is to certify that the radioactive material described below was received at the Diversified Scientific Services, Inc. (DSSI) facility in Kingston, Tennessee. This certification satisfies the requirements of Title 10 Code of Federal Regulations Part 20, Appendix G and the Tennessee "State Regulations for Protection Against Radiation". This letter acknowledges receipt of the waste only. Waste analysis has not been completed. If any discrepancies exist after waste analysis is complete, you will be contacted by separate correspondence.

Manifest Number: 002785862JJK

Shipment Authorization #: DSSI-07-224

Generator Name: TVA Power Service Center
Address: P.O. Box 1010, Hwy. 133N near Wilson
Dam
Muscle Shoals, AL 35662-1010

Attention: Paul Bernauer

Shipper: Hittman Transport Services

Date Received: 12/13/07

Waste Tracking Specialist Signature: Dawn Garrett Date: 12/13/07

Discrepancies (if any):

RECEIVED AT HWL
DEC 18 2007
MUSCLE SHOALS

AD-013, REV. 22
APPENDIX B, PAGE 1

Attachment 7

Waste Manifest Numbers TVA-April-2013

NRC Form 540 Manifest No.	EPA Form 8700-22 Manifest No.	Containers	Date Shipped	Recipient	Date Received
TVA-April- 2013	005342927FLE	8 (MWSF)	4/25/2013	Perma-Fix of Florida Gainesville, FL	4/26/2013

NOTE: The container numbers routinely used on the NRC Form 540 is the number assigned to the container by the Mixed Waste Storage Facility. In this case, the container numbers listed on the NRC Form 540 are the Generator assigned container numbers. The numbers correspond as listed below:

Generator Container No.	MWSF Container No.
11-RW0091	1044499
98-RWD-094	1044498
12-075	1045162
12-076	1045163
12-077	1045164
12-078	1045165
12-079	1045166
12-080	1045186

The NRC Form 540 includes 6 containers of low-level radioactive waste that are not hazardous waste and were not received or stored at the MWSF. This material is identified on the NRC Form 540 as Non-Regulated Material and was generated by the TVA's Power Services Shop under NRC Materials License No. 41-08165-08. The container numbers for this material as listed on the NRC Form 540 are provided below:

12-081	12-082	12-088
12-089	12-090	12-115

APPROVED
EXPI:40. 3150-0164
1/2013

Estimated burden per response to comply with this information collection requirement regarding burden estimate to the Records and FOIA/Privacy Services Branch (1 NEOS-10202, 3150-0164), Office of Management and Budget, Washington, DC 20503.

Notes: This uniform manifest is required by NRC to meet reporting requirements of Federal and State. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to Infocoll@nrc.gov, and to the Desk Officer, Office of Information Management, NRC, Washington, DC 20555-0001. This means used to impose an information collection does not display a currently valid OMB control no.

Notes for the safe transportation and disposal of low-level waste: NRC, Washington, DC 20555-0001, or by Internet e-mail to Infocoll@nrc.gov, and to the Desk Officer, Office of Information Management, NRC, Washington, DC 20555-0001. This means used to impose an information collection does not display a currently valid OMB control no.

and comments regarding safety of the waste, to respond to, the

NRC FORM 540 (8-2010)		U.S. NUCLEAR REGULATORY COMMISSION		5. SHIPPER - NAME AND FACILITY		SHIPPER I.D. NUMBER		7. NRC FORM 540 AND 540A		8. MANIFEST NUMBER	
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		TVA PSC Hazardous Waste Storage Facility 283 Materials Drive Muscle Shoals, AL 35661		USER PERMIT NUMBER		NA		NRC FORM 541 AND 541A NRC FORM 542 AND 542A ADDITIONAL INFORMATION		(Use this number on all continuation pages) TVA-April-2013	
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 1-800-535-5053		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 14		CONTACT Stacey McCluskey		SHIPMENT NUMBER		9. CONSIGNEE - Name and Facility Address Perma-Fix of Florida 1940 NW 67th Place Gainesville, FL 32653		CONTACT Tom McCartt TELEPHONE NUMBER (Include Area Code) 800-365-6066	
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		4. DOES EPA REGULATE WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number		6. CARRIER - Name and Address Hubbard Trucking 1017 Highway 223 Flat Lick, KY 40535		EPA I.D. NUMBER KYR000033241		SIGNATURE - Authorized consignee acknowledging waste receipt <i>Tom McCartt</i>		DATE 4-26-13	
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)	
RQ, NA3077, Hazardous waste, solid, n.o.s., 9, PG III (Polychlorinated Biphenyls, Tetrachloroethylene) ERG #171 Profile #R9997		NA		NA		Solid Oxide		Ag-110m Co-60 Mn-54		1.6495E-04	
RQ, UN1993, Waste flammable liquids, n.o.s., 3, PG II (Vinyl Toluene, Resin) ERG #128 Profile #R9964		NA		NA		Liquid Oxide		Ce-137		3.1043E-03	
RQ, UN1993, Waste flammable liquids, n.o.s., 3, PG II (Vinyl Toluene, Resin) ERG #128 Profile #R9964		NA		NA		Liquid Oxide		Ce-137		4.8840E-03	
RQ, UN1993, Waste flammable liquids, n.o.s., 3, PG II (Vinyl Toluene, Resin) ERG #128 Profile #R9964		NA		NA		Liquid Oxide		Ce-137		2.1867E-03	
RQ, UN1993, Waste flammable liquids, n.o.s., 3, PG II (Vinyl Toluene, Resin) ERG #128 Profile #R9964		NA		NA		Liquid Oxide		Ce-137		2.9933E-03	
RQ, UN1993, Waste flammable liquids, n.o.s., 3, PG II (Vinyl Toluene, Resin) ERG #128 Profile #R9964		NA		NA		Liquid Oxide		Ce-137		8.1770E-03	
17. TOTAL WEIGHT OR VOLUME (Use appropriate units)		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE		20. TOTAL WEIGHT OR VOLUME (Use appropriate units)		21. TOTAL WEIGHT OR VOLUME (Use appropriate units)		22. TOTAL WEIGHT OR VOLUME (Use appropriate units)	
105.84 LBS; 7.4 FT3		483.05 LBS; 7.4 FT3		11-RWD-091		507.15 LBS; 7.4 FT3		458.64 LBS; 7.4 FT3		286.65 LBS; 7.4 FT3	
12-075		12-076		12-077		12-078		12-079		12-079	
FOR CONSIGNEE USE ONLY											
Serial # 610284											

NRC FORM 640A
(8-2010)

UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
SHIPPING PAPER (CONTINUATION)

U.S. NUCLEAR REGULATORY COMMISSION

5. MANIFEST NUMBER
(See this number on all continuation pages)
TVW-0404-2013

Page 2 of 2 Pages

1. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)	2. DOT LABEL "RADIOACTIVE"	3. TRANSPORT INDEX	4. PHYSICAL AND CHEMICAL FORM	5. ISOTOPES	6. TOTAL PACKAGE ACTIVITY (mCi)	7. LEAKAGE CLASS	8. TOTAL WEIGHT OR VOLUME (Use appropriate units)	9. IDENTIFICATION NUMBER OF PACKAGE
RG, UN1993, Waste flammable liquids, n.o.s., 3, PG II (Vinyl Toluene, Resin) ERG #120 - Profile RRS0004	NA	NA	Liquid Oxide	Cs-137	4.3960E-03	NA	264.6 LBS; 7.4 FT3	12-080
Non-Regulated Material Profile RRS0004	NA	NA	Solid Oxide	Cs-137	6.8870E-03	NA	249.348 LBS; 7.4 FT3	12-081
Non-Regulated Material Profile RRS0004	NA	NA	Solid Oxide	Cs-137	4.8610E-03	NA	264.448 LBS; 7.4 FT3	12-082
Non-Regulated Material Profile RRS0004	NA	NA	Solid Oxide	Cs-137	6.4390E-03	NA	264.6 LBS; 7.4 FT3	12-083
Non-Regulated Material Profile RRS0004	NA	NA	Solid Oxide	Cs-137	9.5790E-04	NA	260.038 LBS; 7.4 FT3	12-089
Non-Regulated Material Profile RRS0004	NA	NA	Solid Oxide	Cs-137	1.9428E-02	NA	263.875 LBS; 7.4 FT3	12-090
Non-Regulated Material Profile RRS0004	NA	NA	Solid Oxide	Cs-137	1.0688E-03	NA	99.228 LBS; 7.4 FT3	12-118
VA3077, Hazardous waste, solid, n.o.s., 8, PG III (Methylene Chloride, Methanol) Profile RRS0008	NA	NA	Solid Oxide	Ag-110m, Co-60 Nb-97 Zn-69	Co-134 Co-137 P-32 Mn-54	3.2834E-04	919.868 LBS; 7.4 FT3	98-RWD-094

NRC FORM 640A (8-2010)

APPROVED BY OMB: NO. 3150-0166
EXPIRES: 08/31/2013

Estimated burden per response to comply with this information collection request is 15 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State laws for the safe transportation and disposal of low-level radioactive waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollection@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0166), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 541 (8-2010) 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 TVA-April-2013										
NUMBER OF PACKAGES/ DISPOSAL CONTAINERS		NET WASTE VOLUME (m ³)		NET WASTE WEIGHT (kg)		SPECIAL NUCLEAR MATERIAL (grams)				U-233		U-235		Pu		Total		3. PAGE 1 OF 4 PAGE(S)									
14		2.9330		1812.3103		NP				NP		NP		NP		NP		4. SHIPPER NAME TVA PSC Hazardous Waste Storage Facility									
ALL NUCLIDES		TRITIUM		C-14		Tc-99		I-129		SOURCE (kg)		NA		SHIPPER I.D. NUMBER NA													
6.0633E-02		NP		NP		NP		NP		NA																	
DISPOSAL CONTAINER DESCRIPTION										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										16. WASTE CLASSIFI- CATION							
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S)		6. CONTAINER DESCRIP- TION (See Note 1)		7. VOLUME (m ³)		8. WASTE AND CONTAINER WEIGHT (kg)		9. SURFACE RADIATION LEVEL (μSv/hr) (mSv/hr)		10. SURFACE CONTAMINATION (MBq/100 cm ²) ALPHA BETA- GAMMA		11. WASTE DESCRIP- TOR (See Note 2)		12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m ³)		13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)		14. CHEMICAL FORM/ CHELATING AGENT		15. WEIGHT % CHELATING AGENT IF > 0.1%		15. INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		16. WASTE CLASSIFI- CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C			
11-RWD-091AL264009 0005 1044499		4		0.2095		48.0082		<5.000E-03		<3.6740E-06		<3.6740E-05		59-SOLID, 28		0.2095		100 100		Oxide/NP		NP		Ag-110m 9.2130E-06 Co-60 1.5022E-04 Mn-54 5.5130E-06 Total 1.6495E-04 MBq		AU	
12-075/AL2640090005 1045162		4		0.2095		210.0360		<5.000E-03		<3.6740E-06		<3.6740E-05		34.28		0.2095		100 100		Oxide/NP		NP		Cs-137 3.1043E-03 Total 3.1043E-03 MBq		AU	
12-076/AL2640090005 1045163		4		0.2095		230.0394		<5.000E-03		<3.6740E-06		<3.6740E-05		34.28		0.2095		100 100		Oxide/NP		NP		Cs-137 4.8840E-03 Total 4.8840E-03 MBq		AU	

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
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. Demineralizer
10. Gas Cylinder
11. Bulk Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
14. Other. Describe in item 5,
or additional page

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

29. Charcoal
30. Incinerator Ash
31. Soil
32. Gas
33. Oil
34. Aqueous Liquid
35. Filter Media
36. Mechanical Filter
37. EPA or State Hazardous
38. Demolition Rubble
39. Cation Ion-exchange Media
40. Anion Ion-exchange Media
41. Mixed Bed Ion-exchange Media
42. Contaminated Equipment
43. Organic Liquid (except oil)
44. Glassware or Labware
45. Sealed Source/Device
46. Paint or Plating
47. Evaporator Bottoms/Sludges/Concentrates
48. Compactible Trash
49. Noncompactible Trash
50. Animal Carcass
51. Biological Material (except animal carcass)
52. Activated Material
53. Other. Describe in item 11,
or additional page

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "S."
For all solidification media, the vendor (manufacturer) and brand name must also be identified in item 13. Code 100=NONE REQUIRED.

Sorption

54. Speedi On
55. Celerom
56. Floor Dry/
57. Superfine
58. Hi On
59. Safe T Sorb
60. Safe N On
61. Florco
62. Florco X
63. Solid A Sorb
64. Chemfil 30
65. Chemfil 50
66. Chemfil 3030
67. Diapan HP200
68. Diapan HP500

Solidification

69. Other. Describe in item 13, or additional page
70. Cement
71. Concrete (encapsulation)
72. Bitumen
73. Vinyl Chloride
74. Vinyl Ester Styrene
75. Other. Describe in item 13, or additional page
76. None Required

4/25/13

NRC FORM
(8-2010)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

U.S. NUCLEAR

REGULATORY COMMISSION

2. MANIFEST

ABER

1... April-2013

3. PAGE 2 OF 4 PAGE(S)

CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

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 (See Note 1)	7. VOLUME (m³)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL <input type="checkbox"/> (µSv/hr) <input checked="" type="checkbox"/> (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm²)		11. PHYSICAL DESCRIPTION		13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/CHELATING AGENT	WEIGHT % CHELATING AGENT (if > 0.1%)		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	
					ALPHA	BETA-GAMMA	12. WASTE DESCRIPTION (See Note 2)	APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m³)						
12-077/AL2640090005 1045164	4	0.2095	208.0356	<input checked="" type="checkbox"/>	<5.0000E-03	<3.6740E-06	<3.6740E-05	34.28	0.2095	100 100	Oxide/NP	NP	Cs-137 2.1867E-03	AU
													Total 2.1867E-03 MBq	
12-078/AL2640090005 1045165	4	0.2095	130.0223		<5.0000E-03	<3.6740E-06	<3.6740E-05	34.28	0.2095	100 100	Oxide/NP	NP	Cs-137 2.9933E-03	AU
													Total 2.9933E-03 MBq	
12-079/AL2640090005 1045166	4	0.2095	168.0288		<5.0000E-03	<3.6740E-06	<3.6740E-05	34.28	0.2095	100 100	Oxide/NP	NP	Cs-137 8.1770E-03	AU
													Total 8.1770E-03 MBq	
12-080/AL2640090005 1045186	4	0.2095	120.0265		<5.0000E-03	<3.6740E-06	<3.6740E-05	34.28	0.2095	100 100	Oxide/NP	NP	Cs-137 4.3660E-03	AU
													Total 4.3660E-03 MBq	
12-081/AL2640090005 N.W.	4	0.2095	109.0187		<5.0000E-03	<3.6740E-06	<3.6740E-05	59-SOLID	0.2095	100 100	Oxide/NP	NP	Cs-137 5.9570E-03	AU

NRC FORM 54-1A (8-2010)

N.W. - NOT MIXED WASTE

UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST

U.S. NUCLEAR

REGULATORY COMMISSION

2. MANIFEST

NUMBER

1 April-2013

CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

3. PAGE 3 OF 4 PAGE(S)

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 (See Note 1)	7. VOLUME (m ³)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL		10. SURFACE CONTAMINATION (MBq/100 cm ²)		11. PHYSICAL DESCRIPTION		13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)		14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	
				<input type="checkbox"/> (μSv/hr) <input checked="" type="checkbox"/> (mSv/hr)		ALPHA	BETA-GAMMA	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m ³)					WEIGHT % CHELATING AGENT IF > 0.1%
												Total	5.9570E-03 MBq	
12-082/AL2640090005 NMW	4	0.2095	129.0221	<5.0000E-03	<3.6740E-06	<3.6740E-05	99-SOLID	0.2095	100 100	Oxide/NP	NP	Cs-137	4.5510E-03	AU
												Total	4.5510E-03 MBq	
12-082/AL2640090005 NMW	4	0.2095	120.0205	<5.0000E-03	<3.6740E-06	<3.6740E-05	99-SOLID	0.2095	100 100	Oxide/NP	NP	Cs-137	5.4390E-03	AU
												Total	5.4390E-03 MBq	
12-089/AL2640090005 NMW	4	0.2095	127.0217	<5.0000E-03	<3.6740E-06	<3.6740E-05	99-SOLID	0.2095	100 100	Oxide/NP	NP	Cs-137	9.8790E-04	AU
												Total	9.8790E-04 MBq	
12-090/AL2640090005 NMW	4	0.2095	115.0197	<5.0000E-03	<3.6740E-06	<3.6740E-05	99-SOLID	0.2095	100 100	Oxide/NP	NP	Cs-137	1.6428E-02	AU
												Total	1.6428E-02 MBq	

UNIFORM LOW LEVEL RADIOACTIVE
WASTE MANIFEST

U.S. NUCLEAR

REGULATORY COMMISSION

2. MANIF

NUMBER

April-2013

CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

3. PAGE 4 OF 4 PAGE(S)

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 (See Note 1)	7. VOLUME (m ³)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL <input type="checkbox"/> (μSv/hr) <input checked="" type="checkbox"/> (mSv/hr)	10. SURFACE CONTAMINATION (MBq/100 cm ²)		11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m ³)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	
12-115/AL2840090005 NMW	4	0.2095	45.0077	<input checked="" type="checkbox"/> <5.0000E-03	<3.6740E-06	<3.6740E-05	59-SOLID	0.2095	100 100	Oxide/NP	NP	Cs-137 1.0656E-03 Total 1.0656E-03 MBq	AU
38-RWD-034/AL2840090005 1044478	4	0.2095	53.0091	<5.0000E-03	<3.6740E-06	<3.6740E-05	59-SOLID 28	0.2095	100 100	Oxide/NP	NP	Ag-110m 8.1770E-06 Co-60 5.1430E-05 Cs-134 1.0841E-04 Cs-137 8.3620E-05 F-18 7.4740E-06 Mn-54 2.1460E-05 Nb-97 9.2870E-06 Zn-65 3.8480E-05 Total 3.2834E-04 MBq	AU

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
		AL 2840000005	1	800-535-5053	005342927 FLE
5. Generator's Name and Mailing Address					
TVA PSC Hazardous Waste Storage Facility PO Box 1010 Muscle Shoals, AL 35662 Generator's Phone: 256-344-7879 Attn: Libby Pitts					
283 Materials Drive Muscle Shoals, AL 35661					
6. Transporter 1 Company Name					
Hubbard Trucking, Inc.					
U.S. EPA ID Number					
KYR000033241					
7. Transporter 2 Company Name					
U.S. EPA ID Number					
8. Designated Facility Name and Site Address					
Perma-Fix of Florida, Inc. 1840 NW 87th Pl Gainesville, FL 32653					
U.S. EPA ID Number					
FLD980711071					
Facility's Phone: 800-365-8066					
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers	11. Total Quantity	12. Unit Wt/Vol.	13. Waste Codes
		No. Type			
X	1. RQ, UN1993, Waste flammable liquids, n.o.s., 3, PG II (Vinyl Toluene, Resin) ERG #128 2, 3, 4, 5, 6, 7	8 DM	1088	K	DD01
X	2. NA3077, Hazardous waste, solid, n.o.s., 9, PG III (Methylene Chloride, Methanol) ERG #171 Profile #RS9865 14	1 DM	53	K	FD02
X	3. RQ, NA3077, Hazardous waste, solid, n.o.s., 9, PG III (Polychlorinated Biphenyls, Tetrachloroethylene) ERG #171 Profile #RS9867 out of service date: 10/6/2009	1 DM	48	K	DD39 DD40 FD02
	4. Non-Regulated Material 8, 9, 10, 11, 12, 13	8 DM	845	K	
14. Special Handling Instructions and Additional Information					
9-1) 12-075, 12-076, 12-077, 12-078, 12-079, 12-080; 9-2) 98-RWD-094; 9-3) 11-RWD-081; 9-4) 12-081, 12-082, 12-088, 12-089, 12-090, 12-115 Emergency Contact #: Infotrac 1-800-535-5053 (Account #98800) 964- P55-4 Exclusive Use Shipment PCB Manifest Contract #: 534716					
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.					
Generator's/Offor's Printed/Typed Name					
Stacey S McCluskey					
Signature					
Month Day Year					
4 25 13					
16. International Shipments					
<input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit:					
Transporter signature (for exports only):					
Date leaving U.S.:					
17. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name					
James Blakley					
Signature					
Month Day Year					
4 25 13					
Transporter 2 Printed/Typed Name					
Signature					
Month Day Year					
18. Discrepancy					
18a. Discrepancy Indication Space					
<input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
U.S. EPA ID Number					
18b. Alternate Facility (or Generator)					
Facility's Phone:					
18c. Signature of Alternate Facility (or Generator)					
Month Day Year					
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)					
1. H01 2. H41 3. H41 4. H41					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a					
Printed/Typed Name					
Tom McGarry					
Signature					
Month Day Year					
7 26 13					

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST ISOTOPES REPORT

For Manifest # TVA-April-2013
U.S. NUCLEAR REGULATORY COMMISSION

<u>Isotope</u>	Total Activity	
	<u>(MBq)</u>	<u>(mCi)</u>
Ag-110m	1.7390E-05	4.7000E-07
Co-60	2.0165E-04	5.4500E-06
Cs-134	1.0841E-04	2.9300E-06
Cs-137	6.0223E-02	1.6277E-03
F-18	7.4740E-06	2.0200E-07
Mn-54	2.6973E-05	7.2900E-07
Nb-97	9.2870E-06	2.5100E-07
Zn-65	3.8480E-05	1.0400E-06



01-May-13

TVA PSC HAZARDOUS WASTE STORAGE FAC
LIBBY PITTS
ENVIRONMENTAL SAFETY
PO BOX 1010
MUSCLE SHOALS AL 35662

REF: MANIFEST NUMBER: 005342927FLE
SHIPMENT NUMBER: DSSI-942-O
SHIPMENT DATE: 04/26/2013

ON THE ABOVE DATE, YOUR WASTE MATERIAL WAS RECEIVED AT OUR FACILITY.
PERMA-FIX OF FLORIDA EPA ID NUMBER FLD980711071

Received at HWSF

MAY 06 2013

Muscle Shoals, AL



EPA ID No. : FLD 980 711 071
Florida Part B Permit No. : 17680-010-HC

Certificate No. 20150331-001



Certificate of Management

Perma-Fix of Florida, Inc. has
managed wastes received from: TVA PSC Hazardous Waste Storage Facility

EPA ID Number: AL2640090005

Manifest Number: 005342927FLE

3/31/2015

as identified in waste
and hereby certifies such management as of
in accordance with applicable Federal and
State Regulations.

(Refer to the attached table for container specific information)

Shipment ID Number: DSSI-942-O

Date Received: 4/26/2013

Generator: TVA PSC Hazardous Waste Storage Facility

Address: P.O. Box

Muscle Shoals, AL 35662

ATTN: Libby Pitts

By: Randy Self

Title: Site Nuclear Manager

Signature: _____

A handwritten signature in black ink, appearing to be "Randy Self", written over a horizontal line.



**Certificate
of
Management**

1 of 1

PermaFix ID No.	Generator ID No.	Profile No.	Final Package ID No.
DSSI-942-01	11-RWD-091	RS-9697	E-3326
DSSI-942-02	12-075	RS-9664	P14-05-068
DSSI-942-03	12-076	RS-9664	P14-05-068
DSSI-942-04	12-077	RS-9664	P14-05-068
DSSI-942-05	12-078	RS-9664	E-3245
DSSI-942-06	12-079	RS-9664	E-3245
DSSI-942-07	12-080	RS-9664	E-3245

PermaFix ID No.	Generator ID No.	Profile No.	Final Package ID No.
DSSI-942-08	12-081	RS-9666	E-3195
DSSI-942-09	12-082	RS-9666	E-3195
DSSI-942-10	12-088	RS-9666	E-3179
DSSI-942-11	12-089	RS-9666	E-3195
DSSI-942-12	12-090	RS-9666	E-3195
DSSI-942-13	12-115	RS-9666	E-3156
DSSI-942-14	98-RWD-094	RS-9665	E-3177 E-3245

Attachment 8

Waste Manifest Numbers 2764-01

NRC Form 540 Manifest No.	EPA Form 8700-22 Manifest No.	Containers	Date Shipped	Recipient	Date Received
2764-01	002226727JJJ	11	6/12/2013	Diversified Scientific Services, Inc. Kingston, TN	6/13/2013

Excluded from response to comply with this information collection request: 45 minutes. This uniform manifest is required by HRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of hazardous waste. Send comments regarding burden estimate to the Records and Privacy Services Branch (TS-PSS), U.S. Nuclear Regulatory Commission, Washington, DC 20545-0001, or by Internet e-mail to information@nrc.gov, and in the Staff Office, Office of Information and Regulatory Affairs, NRC-1022, (1100-0104), Office of Management and Budget, Washington, DC 20503. If a notice used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 540 Energy Solutions / Bear Creek Operations UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		SHIPPER - NAME AND FACILITY TVA Power Service Center C/O EnergySolutions 253 Materials Drive, PO Box 1010 Muscle Shoals, AL 35662		SHIPMENT ID NUMBER T132323		7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION		PAGE 1 OF 2 PAGE(S) 6 PAGE(S) 1 PAGE(S) 3 PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 2784-01	
1. EMERGENCY TELEPHONE NUMBER (include Area Code) 865-220-1655		USER PERMIT NUMBER T-TN012-L13		SHIPMENT NUMBER T132323		PROCESSOR GENERATOR TYPE (Specify)		9. CONSIGNEE - Name and Facility Address Energy Solutions / Bear Creek Operations Operated by EnergySolutions 1800 Bear Creek Road Oak Ridge, TN 37830		CONTACT Fred Schute	
ORGANIZATION EnergySolutions / Brad Melton, Attn: Emergency Duty Officer		CONTACT Stacey McCloskey		TELEPHONE NUMBER (include Area Code) (208) 314-7872		TELEPHONE NUMBER (include Area Code) (208) 314-7872		DATE 6/13/13		TELEPHONE NUMBER (include Area Code) (605) 461-0222	
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? [] YES [X] NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 11		4. CARRIER - Name and Address Hixson Transport Services 1800 Bear Creek Road Oak Ridge, TN 37830		Truck #: 5437 Trailer #: 730686		5. EPA ID NUMBER TN000004486		6. SHIPMENT DATE 06/12/2013	
4. DOES EPA REGULATE THIS WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? [X] YES [] NO If "Yes", provide Manifest Number		EPA MANIFEST NUMBER 002229727 JK		CONTACT Karen Kirby		TELEPHONE NUMBER (include Area Code) 860-233-6933		DATE 6/12/13		SIGNATURE - Authorized employee acknowledging waste receipt [Signature]	
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 RADIOISOTOPES		16. TOTAL PACKAGE ACTIVITY mCi	
UN2910, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOOR) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM		NA		NA		SOLID/METAL OXIDES		C-14; C5-144; CO-58; CO-60; C5-137; FE-55; MN-54; NB-95; NI-63; ZN-65		2.885E+00 (7.7627E-02)	
UN2910, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOOR) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM		NA		NA		SOLID/METAL OXIDES		C-14; C5-144; CO-58; CO-60; C5-137; FE-55; MN-54; NB-95; NI-63; ZN-65		3.0119E+00 (8.1394E-02)	
UN2910, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOOR) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM		NA		NA		SOLID/METAL OXIDES		C-14; C5-144; CO-58; CO-60; C5-137; FE-55; MN-54; NB-95; NI-63; ZN-65		2.8220E+00 (7.8270E-02)	
UN2910, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOOR) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM		NA		NA		SOLID/METAL OXIDES		C-14; C5-144; CO-58; CO-60; C5-137; FE-55; MN-54; NB-95; NI-63; ZN-65		2.7642E+00 (7.4707E-02)	
UN2910, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOOR) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM		NA		NA		SOLID/METAL OXIDES		C-14; C5-144; CO-58; CO-60; C5-137; FE-55; MN-54; NB-95; NI-63; ZN-65		2.3482E+00 (7.3627E-02)	
17. LEASCO CLASS		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE							
NA		7.50 R ³ 170.00 lb		13-000036 (121007 (1046842))							
NA		7.50 R ³ 225.00 lb		13-000036 (120963 (1046846))							
NA		7.50 R ³ 180.00 lb		13-000037 (121003 (1046880))							
NA		7.50 R ³ 120.00 lb		13-000038 (121007 (1046884))							
NA		7.50 R ³ 200.00 lb		13-000039 (121080 (1046861))							
FOR CONSIGNEE USE ONLY											
Tennessee "License For Delivery" No. _____											
South Carolina Transport Permit No. _____											
US Ecology Generator No. _____											
US Ecology Permit No. _____											
25. Generator Certification Statement A) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. B) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. C) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. D) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. E) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. F) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. G) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. H) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. I) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. J) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. K) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. L) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. M) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. N) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. O) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. P) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. Q) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. R) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. S) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. T) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. U) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. V) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. W) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. X) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. Y) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. Z) Radioactive materials, quantities to be shipped that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission at an Agreement State regulatory agency and with the general provisions of the site license for the generator. [Signature: Stacey S. McCloskey] 6/12/13											

Form 540 (10-08)

Modified Date: 08/10/2013 10:30

Received 6/12/13
B. Horvath

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and Privacy Services Branch (7-6 P&S), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10202, (202-418-0184), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 540A		UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)						Energy Solutions / Bear Creek Operations		8. MANIFEST NUMBER (Use this number on all continuation pages) 2764-01	
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	
UN2810, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOO8) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM	NA	NA	SOLID/METAL OXIDES	C-14 ; CE-144 ; CO-58 ; CO-60 ; CS-137 ; FE-55 ; MN-54 ; NB-95 ; NI-63 ; ZN-65	5.7851E+00	(1.5635E-01)	NA	7.50 ft ³ 180.00 lb	13-000040 (121326 (1046868))		
UN2810, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOO8) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM	NA	NA	SOLID/METAL OXIDES	C-14 ; CE-144 ; CO-58 ; CO-60 ; CS-137 ; FE-55 ; MN-54 ; NB-95 ; NI-63 ; ZN-65	2.7383E+00	(7.4008E-02)	NA	7.50 ft ³ 165.00 lb	13-000041 (121354 (1046865))		
UN2810, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOO8) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM	NA	NA	SOLID/METAL OXIDES	C-14 ; CE-144 ; CO-58 ; CO-60 ; CS-137 ; FE-55 ; MN-54 ; NB-95 ; NI-63 ; ZN-65	2.7283E+00	(7.3738E-02)	NA	7.50 ft ³ 100.00 lb	13-000042 (121474 (1046867))		
UN2810, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOO8) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM	NA	NA	SOLID/METAL OXIDES	CE-144 ; CO-67 ; CO-58 ; CO-60 ; CR-51 ; CS-137 ; FE-55 ; FE-59 ; MN-54 ; NB-95 ; NI-63 ; ZN-65 ; ZR-95	5.6058E+01	(1.5161E+00)	NA	7.50 ft ³ 180.00 lb	13-000043 (07-0030 (1046862))		
UN2810, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOO8) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM	NA	NA	SOLID/METAL OXIDES	C-14 ; CE-144 ; CO-58 ; CO-60 ; CS-137 ; FE-55 ; MN-54 ; NB-95 ; NI-63 ; ZN-65	2.8220E+00	(7.6270E-02)	NA	7.50 ft ³ 150.00 lb	13-000044 (121222 (1046865))		
UN2810, WASTE, RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, 7; RQ (DOO8) DAW; EPA OR STATE HAZARDOUS; LEAD; PAINT OR PLATING 1 - METAL DRUM	NA	NA	SOLID/METAL OXIDES	C-14 ; CE-144 ; CO-58 ; CO-60 ; CS-137 ; FE-55 ; MN-54 ; NB-95 ; NI-63 ; ZN-65	2.9462E+00	(7.9827E-02)	NA	7.50 ft ³ 200.00 lb	13-000045 (121016 (1046863))		

540A (10-98)

Modified Date: 08/05/2013 13:50

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimates to the Records and FOIA/Privacy Services Branch (7-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollect@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0180), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 541 Energy Solutions / Bear Creek Operations										1. MANIFEST TOTALS								2. MANIFEST NUMBER							
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										SPECIAL NUCLEAR MATERIAL (grams)				2754-01											
CONTAINER AND WASTE DESCRIPTION										U-233				U-235				Pu				TOTAL			
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste										NP				NP				NP				NP			
3. SHIPPER NAME										TVA Power Service Center/O Energy Solutions				SHIPMENT ID NUMBER				T132323							
4. SHIPPER NAME										TVA Power Service Center/O Energy Solutions				SHIPMENT ID NUMBER				T132323							
5. WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										C-14				Tc-99				I-129							
ALL NUCLIDES										TRITIUM				C-14				Tc-99				I-129			
MBq										NP				2.7102E-02				NP				NP			
mCi										NP				7.4870E-02				NP				NP			
6. CONTAINER IDENTIFICATION NUMBER/GENERATOR NUMBER	7. CONTAINER DESCRIPTION (See Note 1) PROCESSED REQUESTED (See Note 1A) BURNAL POSITION (See Note 2A)	8. VOLUME m³	9. WASTE AND CONTAINER WEIGHT kg	10. SURFACE RADIATION LEVEL mSv/hr	11. SURFACE CONTAMINATION MBq/100 cm²	12. WASTE DESCRIPTION (See Note 2)	13. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m³	14. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	15. CHEMICAL FORM/ CHELATING AGENT	16. WEIGHT % CHELATING AGENT IF > 0.1%	17. INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	18. RADIOLOGICAL DESCRIPTION	19. WASTE CLASSIFICATION												
13-000035 (121057 (1046852)) 2754	4 O-PROCESS TO BE DETERMINED E	0.2124	77.11	< 5.0000E-03	< 1.8700E-06	59(LEAD) 59(DAW) 37 28	0.2124	100	SOLID METAL OXIDES / NP	NP	C-14 2.5271E-01 CE-144 1.2173E-02 CO-58 1.2543E-01 CO-60 4.1070E-01 CS-137 2.6540E-02 FE-55 1.6205E-00 MN-54 1.2839E-01 NB-95 3.5929E-02 NI-63 2.1667E-01 ZN-65 3.6265E-02	MBq 6.8310E-03 3.2900E-04 3.3900E-03 1.1100E-02 7.2000E-04 4.3900E-02 3.4700E-03 9.9800E-04 5.9100E-03 9.8000E-04	mCi 8.8310E-03 3.2900E-04 3.3900E-03 1.1100E-02 7.2000E-04 4.3900E-02 3.4700E-03 9.9800E-04 5.9100E-03 9.8000E-04	ALJ											
13-000038 (120993 (1046869)) 2754	4 C-PROCESS TO BE DETERMINED E	0.2124	102.06	< 5.0000E-03	< 1.8700E-06	59(LEAD) 59(DAW) 37 28	0.2124	100	SOLID METAL OXIDES / NP	NP	C-14 2.5666E-01 CE-144 1.2802E-02 CO-58 1.3172E-01 CO-60 4.2920E-01 CS-137 2.8009E-02 FE-55 1.7020E-00 MN-54 1.3905E-01 NB-95 3.8600E-02 NI-63 2.3016E-01 ZN-65 3.8110E-02	MBq 7.1900E-04 3.1500E-04 3.5600E-03 1.1600E-02 7.5700E-04 4.6000E-02 3.6500E-03 1.0500E-03 6.2210E-03 1.0300E-03	mCi 7.1900E-04 3.1500E-04 3.5600E-03 1.1600E-02 7.5700E-04 4.6000E-02 3.6500E-03 1.0500E-03 6.2210E-03 1.0300E-03	ALJ											
Sub Total										2.8685E-00				7.7527E-02											
Package Total										2.8685E-00				7.7527E-02											
Sub Total										3.0116E-00				8.1394E-02											
Package Total										3.0116E-00				8.1394E-02											

NOTE 1: Container Description Codes. For containers/wastes requiring disposal in approved structural overpacks, 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/wrapper
- 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: Process Requested

- C. Compositon
- SR. Steam Refining
- DI. Direct Incineration
- B. Sort & Incinerate
- O. Oxidize
- G. Green in Cream
- M. Metal Melt
- T. Transmute
- L. Liquid for Incineration
- LI. Oil for Incineration
- O. Other (describe)

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

- 20. Glass
- 21. Incinerator Ash
- 22. Soil
- 23. Ore
- 24. Oil
- 25. Aqueous Liquids
- 26. Other Media
- 27. Mechanical Filter
- 28. EPA or State Hazardous
- 29. Demolition Rubble
- 30. Cotton Ion Exchange Media
- 31. Anion Ion Exchange Media
- 32. Mixed Bed Ion Exchange Media
- 33. Contaminated Equipment
- 34. Organic Liquids (except oil)
- 35. Grease or Lubricants
- 36. Sealed Source Device
- 37. Paint or Plating
- 38. Evaporator Bottoms/Sludges
- 39. Compositable Trash
- 40. Noncompositable Trash
- 41. Animal Carcass
- 42. Biological Material (except animal carcasses)
- 43. Activated Material
- 44. Other. Describe in Item 11, or additional page

NOTE 2A: Disposal Site

- B. Bore. At Waste Management Facility
- E. Envelope
- R. Richmond, VA
- PH. Process and Return
- O. Other

NOTE 3: 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.

- 84. Vinyl Ester Styrene
- 85. Other. Describe in Item 13, or additional page
- 86. Cement
- 87. Concrete (encapsulation)
- 88. Bitumen
- 89. Vinyl Chloride
- 100. None Required

6/12/93

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimates to the Records and FOIA/Privacy Services Branch (T-3 P52), U.S. Nuclear Regulatory Commission, Washington, DC 20455-0901, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10242, (3150-0168), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 541A										Energy Solutions / Bear Creek Operations			2. MANIFEST NUMBER 2764-01		
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										3. PAGE 2 OF 6 PAGE(S)					
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					16 WASTE CLASSIFICATION A5 - Class A Stable AU - Class A Unstable B - Class B C - Class C
DISPOSAL CONTAINER DESCRIPTION					PHYSICAL DESCRIPTION					15. RADIOLOGICAL DESCRIPTION					
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/POSITION (See Note 2A)	7. VOLUME m³ ft³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm² dpm/100 cm²		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m³ ft³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
					ALPHA	BETA-GAMMA						RADIONUCLIDES	MBq	mCi	
13-000037 (121050 (1046860)) 2764	4 O - PROCESS TO BE DETERMINED E	0.2124 7.5000	66.04 150.00	< 6.0000E-03 < 6.0000E-01	< 1.6700E-06 < 1.0000E-02	< 1.6700E-06 < 1.0000E-03	69(LEAD) 59(DAW) 37 28	0.2124 7.5000	100	SOLID METAL OXIDES / NP	NP	C-14 CE-144 CO-58 CO-60 CS-137 FE-55 MN-54 NB-95 NI-63 ZN-65	2.4864E-01 1.1988E-02 1.2368E-01 4.0330E-01 2.6233E-02 1.6947E-00 1.2554E-01 3.6334E-02 2.1497E-01 3.5709E-02	6.7200E-03 3.2400E-04 3.3400E-03 1.0900E-02 7.0900E-04 4.3100E-02 3.4200E-03 9.6200E-04 5.8100E-03 9.6500E-04	AU
13-000038 (121067 (1046864)) 2764	4 O - PROCESS TO BE DETERMINED E	0.2124 7.5000	64.43 120.00	< 5.0000E-03 < 5.0000E-01	< 1.6700E-06 < 1.0000E-02	< 1.6700E-06 < 1.0000E-03	69(LEAD) 59(DAW) 37 28	0.2124 7.5000	100	SOLID METAL OXIDES / NP	NP	C-14 CE-144 CO-58 CO-60 CS-137 FE-55 MN-54 NB-95 NI-63 ZN-65	2.4345E-01 1.1729E-02 1.2099E-01 3.9500E-01 2.5678E-02 1.5614E-00 1.2395E-01 3.5594E-02 2.1053E-01 3.4928E-02	5.5800E-03 3.1700E-04 3.2700E-03 1.0700E-02 6.9400E-04 4.2200E-02 3.3500E-03 9.6200E-04 5.6900E-03 9.4400E-04	AU
												Sub Total	2.8220E-00	7.6270E-02	
												Package Total	2.8220E-00	7.6270E-02	
												Sub Total	2.7642E-00	7.4707E-02	
												Package Total	2.7642E-00	7.4707E-02	

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-8 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0901, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NECB-10202, (3150-0168), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST											2. MANIFEST NUMBER				
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)											2764-01				
3. PAGE 3 OF 6 PAGE(S)															
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	
6. CONTAINER IDENTIFICATION NUMBER/GENERATOR NUMBER	8. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) SPECIAL DISPOSITION (See Note 2A)	7. VOLUME m ³ ft ³	9. WASTE AND CONTAINER WEIGHT kg lb	10. SURFACE RADIATION LEVEL mSv/hr mrem/hr	11. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		12. PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION			
					ALPHA	BETA-GAMMA	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ ft ³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	15. INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
												RADIONUCLIDES	MBq		mCi
13-000039 (121090 (1046881)) 2764	4 O - PROCESS TO BE DETERMINED E	0.2124 7.5000	90.72 200.00	< 5.0000E-03 < 5.0000E-01	< 1.6700E-06 < 1.0000E-02	< 1.6700E-05 < 1.0000E-03	69(LEAD) 69(DAW) 37 28	0.2124 7.5000	100	SOLID METAL OXIDES / NP	NP	C-14 CE-144 CO-60 CO-60 CS-137 FE-55 MN-54 NB-95 NI-63 ZN-65	2.8937E-01 1.2606E-02 1.2676E-01 4.2180E-01 2.7343E-02 1.8650E-00 1.3208E-01 3.7740E-02 2.2422E-01 3.7370E-02	7.0100E-03 3.3900E-04 3.4800E-03 1.1400E-02 7.3900E-04 4.5000E-02 3.5700E-03 1.0200E-03 8.0800E-01 1.0100E-03	AU
											Sub Total	2.9452E-00	7.9627E-02		
											Package Total	2.9452E-00	7.9627E-02		
13-000040 (121326 (1049888)) 2764	4 O - PROCESS TO BE DETERMINED E	0.2124 7.5000	81.65 180.00	< 5.0000E-03 < 5.0000E-01	< 1.6700E-06 < 1.0000E-02	< 1.6700E-05 < 1.0000E-03	69(LEAD) 59(DAW) 37 28	0.2124 7.5000	100	SOLID METAL OXIDES / NP	NP	C-14 CE-144 CO-58 CO-80 CS-137 FE-55 MN-54 NB-95 NI-63 ZN-65	5.1060E-01 2.4568E-02 2.5308E-01 8.2510E-01 5.3650E-02 3.2708E-00 2.5937E-01 7.4370E-02 4.4030E-01 7.3260E-02	1.3800E-02 6.6400E-04 6.8400E-03 2.2300E-02 1.4500E-03 8.8400E-02 7.0100E-03 2.0100E-03 1.1900E-02 1.9800E-03	AU
											Sub Total	5.7851E-00	1.5638E-01		
											Package Total	6.7851E-00	1.5638E-01		

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F&T), U.S. Nuclear Regulatory Commission, Washington, DC 20553-0001, or by Internet e-mail to infocollection@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150 0165), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										Energy Solutions / Bear Creek Operations		2. MANIFEST NUMBER 2754-G1			
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)										3. PAGE 4 OF 5 PAGE(S)					
DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								15. WASTE CLASSIFICATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C	
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) SURRENDER POSITION (See Note 2A)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME (ft ³) IN CONTAINER (ft ³)	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL, OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
					ALPHA	BETA-GAMMA					RADIONUCLIDES	MBq	mCi		
13-000041 (121354 (1046866)) 2754	4 O - PROCESS TO BE DETERMINED E	0.2124 7.5000	47.83 106.00	< 5.0000E-03 < 5.0000E-01	< 1.8700E-06 < 1.0000E+02	< 1.8700E-06 < 1.0000E-03	59(LEAD) 59(DAW) 37 26	0.2124 7.5000	100	SOLID METAL OXIDES / NP	NP	C-14 CE-144 CO-58 CO-60 CS-137 FE-55 MN-54 NB-95 NI-63 ZN-65 Sub Total	2.4124E-01 1.1618E-02 1.1980E-01 3.9220E-01 2.5419E-02 1.5456E+00 1.2247E-01 3.5224E-02 2.0868E-01 3.4595E-02 2.7383E+00	6.6200E-03 3.1400E-04 3.2400E-03 1.0500E-02 6.8700E-04 4.1800E-02 3.3200E-03 9.5260E-04 5.8400E-03 9.3500E-04 7.4000E-02	AU
13-000042 (121474 (1046867)) 2754	4 O - PROCESS TO BE DETERMINED E	0.2124 7.5000	48.38 103.00	< 5.0000E-03 < 5.0000E-01	< 1.8700E-06 < 1.0000E+02	< 1.8700E-06 < 1.0000E-03	59(LEAD) 59(DAW) 37 26	0.2124 7.5000	100	SOLID METAL OXIDES / NP	NP	C-14 CE-144 CO-58 CO-60 CS-137 FE-55 MN-54 NB-95 NI-63 ZN-65 Sub Total	2.4050E-01 1.1581E-02 1.1951E-01 3.8850E-01 2.6345E-02 1.5429E+00 1.2247E-01 3.5113E-02 2.0794E-01 3.4484E-02 2.7283E+00	6.5000E-03 3.1300E-04 3.2300E-03 1.0500E-02 6.8500E-04 4.1700E-02 3.3100E-03 9.4900E-04 5.6200E-03 9.3200E-04 7.3739E-02	AU
												Package Total	2.7283E+00	7.3739E-02	

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (1-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollection@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRCB-10202, (2150 G160), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST													Energy Solutions / Bear Creek Operations		2. MANIFEST NUMBER 2764-01	
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)													3. PAGE 5 OF 6 PAGE(S)			
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 NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) SURRENDER POSITION (See Note 2A)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		11. WASTE DESCRIPTOR (See Note 2)	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. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	15. RADIOLOGICAL DESCRIPTION RADIONUCLIDES	15. RADIOLOGICAL DESCRIPTION MBq	15. RADIOLOGICAL DESCRIPTION mCi		
					ALPHA	BETA-GAMMA										
13-000043 (07-0030 (1046082)) 2764	4 O - PROCESS TO BE DETERMINED E	0.2124 7.5000	88.18 190.00	< 5.0000E-03 < 6.0000E-01	< 1.6700E-06 < 1.0000E-02	< 1.6700E-06 < 1.0000E-03	59(LEAD) 59(DAW) 37 28	0.2124 7.5000	100	SOLID METAL OXIDES / NP	NP	CE-144 CO-67 CO-58 CO-60 CR-51 CS-137 FE-55 FE-59 MN-54 NB-95 NI-63 ZN-65 ZR-95	1.4874E-02 6.3840E-03 7.3260E-01 3.7740E-03 6.7710E-01 6.8080E-03 4.3200E-01 3.0340E-01 3.9960E-00 9.0650E-02 1.7945E-00 1.2913E+00 8.9660E-02	4.0200E-04 1.7200E-04 1.9800E-02 1.0200E-01 1.8300E-02 1.8400E-04 1.1700E-00 8.2000E-03 1.0800E-01 2.4500E-03 4.6500E-02 3.4900E-02 2.1800E-03	AU	
Sub Total												5.6058E-01	1.5151E-00			
Package Total												5.6058E-01	1.5151E-00			
13-000044 (121222 (1046885)) 2764	4 O - PROCESS TO BE DETERMINED E	0.2124 7.5000	88.04 190.00	< 5.0000E-03 < 5.0000E-01	< 1.6700E-06 < 1.0000E-02	< 1.6700E-06 < 1.0000E-03	59(LEAD) 59(DAW) 37 28	0.2124 7.5000	100	SOLID METAL OXIDES / NP	NP	C-14 CE-144 CO-58 CO-60 CS-137 FE-55 FE-59 MN-54 NB-95 NI-63 ZN-65	2.4864E-01 1.1988E-02 1.2350E-01 4.0330E-01 2.6233E-02 1.6947E-00 1.2654E-01 3.6344E-02 2.1497E-01 3.5706E-02	6.7200E-03 3.2400E-04 3.3400E-03 1.0900E-02 7.0800E-04 4.3100E-02 3.4200E-03 9.8200E-04 5.8100E-03 9.8500E-04	AU	
Sub Total												2.5220E-00	7.8270E-02			
Package Total												2.5220E-00	7.8270E-02			

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 P52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0168), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 541A

Energy Solutions / Bear Creek Operations

2. MANIFEST NUMBER

2754-01

3.

PAGE 6 OF 6 PAGE(S)

UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

DISPOSAL CONTAINER DESCRIPTION						WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								15. WASTE CLASSIFICATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C	
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) SPECIAL POSITION (See Note 2A)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION NBq/100 cm ² dpm/100 cm ²		11. WASTE DESCRIPTOR (See Note 2)	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	WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION			
					ALPHA	BETA-GAMMA						INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
												RADIONUCLIDES	MBq		mCi
# Innerpack Container 13-000045 (121018 (1048963)) 2764	4 O - PROCESS TO BE DETERMINED E	0.2124 7.6000	90.72 200.00	< 5.0000E-03 < 5.0000E-01	< 1.6700E-06 < 1.0000E-02	< 1.6700E-06 < 1.0000E-03	68(LEAD) 69(DAW) 37 28	0.2124 7.6000	100	SOLID METAL OXIDES / NP	NP	C-14 CE-144 CO-58 CO-60 CS-137 FE-55 MN-54 NB-96 NI-63 ZN-65	2.5937E-01 1.2506E-02 1.2675E-01 4.2190E-01 2.7343E-02 1.6650E-00 1.3209E-01 3.7740E-02 2.2422E-01 3.7370E-02	7.0100E-03 3.3800E-04 3.4800E-03 1.1400E-02 7.3900E-04 4.5000E-02 3.5700E-03 1.0200E-03 6.0600E-03 1.0100E-03	AU
												Sub Total	2.9452E-00	7.9527E-02	
												Package Total	2.9452E-00	7.9527E-02	
Shipment Total		2.3384 82.5000	611.94 1790.00										8.7491E-01	2.3648E-00	

7541A (10-96)

* - Indicates Cross Contamination

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (7-5 P&Z), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-10202, (3150-0169), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 542 (7-2001)			Energy Solutions / Bear Creek Operations		1. WASTE COLLECTOR/PROCESSOR			2. MANIFEST NUMBER		
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST			NAME TVA Power Service Center/CO Energy Solutions		SHIPPER USE ONLY			2764-01		
MANIFEST INDEX AND REGIONAL COMPACT TABULATION			IDENTIFICATION NUMBER 2764					3. PAGE 1 OF 1 PAGE(S)		
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators			SHIPPING DATE 06/12/2013							
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME m ³	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			
							A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY MBq	D. VOLUME m ³
2764	TVA Power Service Center EPA #: AL2 640 090 005 (256) 314-7872	283 Materials Drive, PO Box 1010 Muscle Shoals, AL 35662	2.3384	Onsite Generation 02/28/2013	C	AL	NP	NP	8.7491E+01	2.3384
TOTALS OF ALL PAGES (FORMS 542 AND 542A)							NP	NP	8.7491E+01	2.3384

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

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number AL2640090005	2. Page 1 of 1	3. Emergency Response Phone 865-220-1555	4. Manifest Tracking Number 002226727 JJK		
5. Generator's Name and Mailing Address TVA Power Services Center PO #1010, PSC IE-M Muscle Shoals, AL 35662		Generator's Site Address (if different than mailing address) 283 Materials Drive Muscle Shoals, AL 35661					
Generator's Phone: 256-314-7872							
6. Transporter 1 Company Name HITMAN Transport Services		U.S. EPA ID Number TNR000024686					
7. Transporter 2 Company Name		U.S. EPA ID Number					
8. Designated Facility Name and Site Address Energy Solutions 1560 Bear Creek Road Oak Ridge TN 37830		U.S. EPA ID Number TND982157570					
Facility's Phone: 865-220-1526							
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
			No.	Type			
	1. UN2910, Waste Radioactive Material, excepted package - limited quantity of material, 7, RQ (D008)		11	DM	1240	P	D008
	2.						
	3.						
4.							
14. Special Handling Instructions and Additional Information ERG#141 * See attached NRC manifest for additional information. TVA RLS#2005997 PO#550903 Contract#69885							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name Stacey S. McCluskey		Signature 				Month Day Year 16 12 13	
INTL	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: Date leaving U.S.:				
	Transporter signature (for exports only):						
	17. Transporter Acknowledgment of Receipt of Materials						
TRANSPORTER	Transporter 1 Printed/Typed Name Chris Dutton		Signature 				Month Day Year 06 12 13
	Transporter 2 Printed/Typed Name		Signature				Month Day Year
DESIGNATED FACILITY	18. Discrepancy						
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
	Manifest Reference Number:						
	18b. Alternate Facility (or Generator) U.S. EPA ID Number						
	Facility's Phone:						
18c. Signature of Alternate Facility (or Generator)							
Month Day Year							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1. H141		2.		3.		4.	
20. Designated Facility Owner or Operator. Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a							
Printed/Typed Name Ron Mitchell		Signature 				Month Day Year 06 13 13	

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST ISOTOPIC SUMMARY

For Manifest # 2764-01

Energy Solutions / Bear Creek Operations

Isotope	Total Activity			Total SNM	Total Source
	(MBq)	(mCi)	(Ci)	(gm)	(lb)
C-14	2.7702E+00	7.4870E-02	7.4870E-05	.0000E+00	.0000E+00
CE-144	1.4833E-01	4.0090E-03	4.0090E-06	.0000E+00	.0000E+00
CO-57	6.3640E-03	1.7200E-04	1.7200E-07	.0000E+00	.0000E+00
CO-58	2.1079E+00	5.6970E-02	5.6970E-05	.0000E+00	.0000E+00
CO-60	8.2658E+00	2.2340E-01	2.2340E-04	.0000E+00	.0000E+00
CR-51	6.7710E-01	1.8300E-02	1.8300E-05	.0000E+00	.0000E+00
CS-137	2.9870E-01	8.0730E-03	8.0730E-06	.0000E+00	.0000E+00
FE-55	6.1054E+01	1.6501E+00	1.6501E-03	.0000E+00	.0000E+00
FE-59	3.0340E-01	8.2000E-03	8.2000E-06	.0000E+00	.0000E+00
MN-54	5.4053E+00	1.4609E-01	1.4609E-04	.0000E+00	.0000E+00
NB-95	4.9488E-01	1.3375E-02	1.3375E-05	.0000E+00	.0000E+00
NI-63	4.1892E+00	1.1322E-01	1.1322E-04	.0000E+00	.0000E+00
ZN-65	1.6891E+00	4.5651E-02	4.5651E-05	.0000E+00	.0000E+00
ZR-95	8.0660E-02	2.1800E-03	2.1800E-06	.0000E+00	.0000E+00
Totals:	8.7491E+01	2.3646E+00	2.3646E-03	.0000E+00	.0000E+00



Thursday, June 13, 2013

Jim Colagross
TVA Environmental Research Center/AL
P.O. Box 1010 Research Reactor
Western Area Radiological Lab
Muscle Shoals, AL 35662-1010

Dear Mr. Colagross:

The attached signed shipping manifest copies are your notice of receipt of the radioactive waste materials shipment specified on the manifest number below.

Manifest Number

2764-2764-01

Date Received

06/13/2013

Thank you for your business.

Sincerely,

Tamm P. Hall

Shipping and Receiving

cc: Manifest File
Shipping and Receiving file



September 03, 2013

Mr. Jim Colagross
TVA Environmental Research Center/AL
Western Area Radiological Lab
P.O. Box 1010 Research Reactor
Muscle Shoals, AL 35662-1010

Dear Mr. Colagross:

Subject: Manifest Closure Letter

This letter certifies that EnergySolutions has completed processing and/or shipment of all the radioactive materials shipped to EnergySolutions on the following manifest(s) sent by TVA Environmental Research Center/AL.

Manifest Number
2764-01

Close Date
08/29/13

Should you have any questions concerning the processing of the waste, please refer to your monthly Customer Summary Report. Please contact your Account Executive if further data is required.

EnergySolutions Tracking Systems

To: Jim Colagross