Enclosure 13 to LTR-RAC-20-94

Date: December 18, 2020

Enclosure 13

Response to Request for Additional Information LTR-RAC-19-64, Manifests for HFSS#2 Soil Remediation



Westinghouse Electric Company Nuclear Fuel Columbia Fuel Fabrication Facility 5801 Bluff Road Hopkins, South Carolina 29061 USA

SCDHEC, BLWM Kim Kuhn 2600 Bull Street Columbia, SC 29201 Direct tel: 803.647.1920 Direct fax: 803.695.3964

e-mail: joynerdp@westinghouse.com

Your ref:

Our ref: LTR-RAC-19-64

August 8, 2019

Subject: Manifests for HF Spiking Station #2 Soil Remediation

Mrs. Kuhn:

In accordance with the Department's letter dated March 7, 2019, the following summary of manifests is provided as a record of the soil remediation performed on HF Spiking Station #2. All of the soil removed during the remediation of the spiking station was transported by Hittman Transport Services and received by Energy Solutions, LLC Disposal Site in Clive Utah.

Manifest/ Shipment Number	Description / # of drums (HF spiking station #2 unless otherwise noted)	Weight (lbs)	Shipping Date	Energy Solutions Received Date
0857-08-0223	16 soil drums-spiking station; 8 soil drums-bollard project	19,343	6/11/2019	7/2/2019
0857-08-0222	43 soil drums	28,427	4/23/2019	5/21/2019
0857-08-0221	44 soil drums	28,389	4/23/2019	5/21/2019
0857-08-0220	41 soil drums	26,783	4/23/2019	5/21/2019
0857-08-0219	44 soil drums	28,602	4/23/2019	05/21/2019
0857-08-0218	44 soil drums	28,603	2/19/2019	03/26/2019
0857-08-0217	38 soil drums	25,867	2/19/2019	03/26/2019
0857-08-0216	25 soil drums 18 concrete drums	27,586	2/19/2019	03/26/2019
0857-08-0214*	25 soil drums 11 concrete drums	23,717	12/28/2018	1/25/2019
0857-08-0213	36 soil drums	23,718	12/28/2018	1/25/2019
0857-08-0212	36 soil drums	23,760	12/28/2018	1/25/2019
0857-08-0211	21 soil drums 15 concrete drums	23,465	12/28/2018	1/25/2019

^{*}Manifest number 0857-08-0215 was used to ship other low level radioactive materials from the site that are unrelated to the HFSS remediation.

Please contact me with any questions regarding the submitted information.

Respectfully

Diana P. Joyner

Principal Environmental Engineer

Westinghouse Electric Company, CFFF

803.497.7062 (m)

cc: E. Wills, EH&S Manager

N. Parr, Environmental Manager

D. Cauley, URRS Engineering Technician

ENOVIA Records

FORM 540 UNIFORM LOW-LE WASTE N		EnergySolutions, LLC		NAME AND FACILITY no Electric Co., LLC RD C 29061		SHIPPER LL 0857-08-03 COLLEG	ZZ3 CTOR	7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORM	-	OF 1 PAGE(5) 1 PAGE(5) None PAGE(5) None PAGE(5)	8. MANIFEST NUMBE (Use this number on pages) 0857-0	all continuation
1. EMERGENCY TELEPHONE NUMBE	G PAPER (fundado Area C	Sorie)	Utah Genera 0207 001	tor Site Access Permit No. 1421	SHIPMENT NUMBER 0857-08-0223	GENER (Specify)	FC	9. CONSIGNEE - Name Energy Solutions, Clive Disposal Sit	LIC LIS	2457 its Facility)	CONTACT Transportation TELEPHONE	Compliance
1-800-424-9300 ORGANIZATION WESTINGHOUSE ELECTRIC CO., LLC			CONTACT E.W. CA			(Include Area (803) 647-36	a Code) 903	Interstate 80, Exit Clive, UT 84029 SIGNATURE Authoria	Jr	white waste constat	(Include Area Code) (435)884-0155	
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? YES	3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST	1	6. CARRIES HITTMAN 1560 Bear C Oak Ridge,			EPA LD. NU THROCCOSA SHIPPING C	888	quel	Rica	A CEBYEICAVIAU	7/2/10	sect, and labeled and
4. DOES EPA REGULATED VASTE REGUIRING A MANIFEST ACCOMPANY	EPA MANIFEST NUMBER		CONTACT Jeff Packet	at		06/11/2019 TELEPHON (Include Area 1(865) 220-5	a Code)	This is to certify that the her are in proper condition for in This also certifies that the transportation and displace state regulations.	prisportation profinding the described in account	to the applicable regions to the applicable processed, and the rectured the rectured to the re	ulations of the Department and labeled and are in proper ments of 10 CFR Parts 20	of Transportation. or condition for and 61, or equivalent
THIS SHIPMENT? If "Yos," provide Menifest Number ************************************	a, 11 a		SIGNATURE		dedging wasta receipt	G-11-	15	AUTHORIZED SIGNATUI E.W. Caulay JR See consignes block be	NE.	UKRS Engineering		DATE 5/16/2019
11. U.S. DEPARTMENT OF TRANSPORTA (Including proper shipping name, hazard cla and any additional informati	res, UN ID number,	DOT LABEL "RADIOACTIVE"	TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM		INDIVID RADIONU	DUAL	TOTAL PACK	AGE ACTIVITY mCl	LSA/SCO CLASS	18. YOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low speci Fissle Excepted LLW soil (24 drums)	fic activity (LSA-I), 7,	NA	NA ,	SOLID URANIUM OX	ODE U-234	U-236	U-236 U-23	8 4.3432E+02	(1.1738E+01)	LSA-I	19343 LBS; 1300 FT3	ESUU300492- 0223
				X.								2OFT SEAVAN/ESU U300492
								4				
h = 2	*	1.0		- 0	*							
					A							
FOR CONGIGNEE USE ONLY The original planed mentions resides with; E.W. Cauley ir 5001 Bluff Rd Hopkins, 60 29001 (803) 847-3803		Record Waste Descripti Contamination or Leaka Unexpected Exposure F Lebels, Markings, etc. In Container Integrity Inade Other No Violations Detected	ga Detected Rates Detect nadequate equate	te A. ed n. c. p.	hezardous waste, this certification as require TITLE: Upon accopta representations herein VIASTE MATERIAL: respects and in accord INDEMNIFICATION: results from the failure.	shipment is also d by 40 CFR 281 nos at the dispor- shall thereupon Penerator repre- lance with all ap Senerator agree of the Worte M	o accompanied by 8.1. sat site by Energy a transfer from Ger sents and warrant opticable governme as to indemnify En- laterial to conform	eranis that Whate hisserial a separais and completed ha couldna, LLC, and all approperation and be vested in Ener that all dais set forth in this rotal flews, rules, regulations a regy/southlons, LLC, its officer in all material respects to the opartment of Transportation	zardouz waste manife gySokutions, LLC (UNIFORM LOW-LEV ind EnergySokutions Li a, employees and aged deta supplied on the (*)	st, stong with the apprinter, title to the Waste EL RADIOACTIVE WA LC's facility stoems. Unit against all losses a UNIFORM LOWLEVE	opriale fand-disposal real/in Material which conforms (ISTE MANIFEST) are inve and Rabilly whatsoover if su IL RADIOACTIVE WASTE	chion notice and/or Generator's and correct in all

SEA/LAND CONTAINER INVENTORY LISTING

FORM NO.:

CF-83-154

REVISION: PAGE:

1

EFFECTIVE DATE:

1 OF 1 02-05-04

CONTAINER BEING FILLED:

Esuu 300492

DATE BEGAN FILLING:

4-16-19

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

- Forward to Engineering when input is complete.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		6640		6640	1190	MR 4-16-19
Drums added per pick list # 16 Soil drums	7523			14,163	172.0	MR 4.16.19
Hoppers & bollard soildrans	5180		200	19,343	1.0	MR 4.16.19
			1816	11.19		
Total Weight for Shipment	19,343	6640	12,703		1220	

170.0

WASTE	EVEL RADIOACTIVI MANIFEST	EnergySolutions, LLC E		- NAME AND FACILITY ISO Electric Co., LLC RD IC 29061			0857-08	LECTOR		FC FC	ORM 540 AND 540A ORM 541 AND 541A ORM 542 AND 542A ODITIONAL INFORM	MATION	OF 1 PAGE(S) 1 PAGE(S) None PAGE(S) None PAGE(S)	8. MANIFEST NUMBE (Use this number on pages) 0857-0	all continuation
1. EMERGENCY TELEPHONE NUMBI 1-800-424-9300	NG PAPER ER (Include Area C	Code)	Ulah Genera 0207 001 CONTACT	for Site Access Permit No. 421	SHIPMENT NUI 0857-08-0222	ABER	TELEPHO	ERATOR TO (y) FC ONE NUMBE (rea Code)		Ene	rgySolutions, o Disposal Site estate 80, Exit	LLC Bulk-Wa	ste Facility)	Transportation TELEPHONE (Include Area Code)	Compliance
ORGANIZATION WESTINGHOUSE ELECTRIC CO., LLC			E.W. CAI	ULEY JR			(803) 847				e, UT 84029	L 13 2		(435)884-0155 DATE	
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? YES NO	3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST	1	6. CARRIER HITTMAN 1560 Bear C Oak Ridge,				SHIPPING	34686 3 DATE		=	-W-		10. CERTIFICATION	5/21/1	-
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?	EPA MANIFEST NUMBER	I muse acc	CONTACT Jaff Packe				TELEPHO (Include A 1(865) 22	ONE ves Code)		This als transport state re	oper condition for tro o certifies that the manual condition and disposal guiations.	ansportation according the state of the stat	g to the applicable reg i, packaged, malked, a dance with the require	described, paskaged, mari ulations of the Department and labeted and are in prop ments of 10 CFR Parts 20	
if "Yes," provide Manifest Number =====>			SIGNATURE	- Authorized cerrier acknow	wledging waste rec	aipt	DATE			EW.	ORIZED SIGNATUR Cauley JR onsignee block bei		URRS Engineerin	9	DATE 3/27/2019
11. U.S. DEPARTMENT OF TRANSPORTA (Including proper shipping name, hazard o and any additional informa	fass, UN ID number,	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM			INDI	15. VIDUAL VUCLIDES			TOTAL PACK MBq	AGE ACTIVITY	LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low spec Fissle Excepted LLW soil (43 soil drums)		NA	NA	SOLID URANIUM O	XIDE U-234		U-235	U-236	U-238	8	7.3326E+02	(1.9818E+01)	LSA-I	28427 LBS; 1300 FT3	ESUU300001- 0222
															2OFT SEAVAN/ESU U300001
						1			-4.4						
						- 1		-	-	-					1,
						,	_								
FOR CONSIGNEE USE ONLY The original signed manifest resides with: E.W. Cauley ir 560's Bluff Ad Hopkins, 502 29051 (803) 647-3503		Record Waste Description Contamination or Leakes Unexpected Exposure R Labels, Markings, etc. In Container Integrity Inade Other No Violations Detected of	ge Detected ates Detecte adequate equate	te A. ad B. c. D.	hazardous waste certification as re TITLE: Upon ac representations to WASTE MATER respects and in a INDEMNIFICAT! results from the	ATERI a, this s equired ceptan herein IAL: G accord ON: G	hipment is a by 40 CFR: ce at the disp shall thereup enerator rep ance with all enerator agr of the Waste	iso accompa 268.1. posal site by ion transfer resents and applicable g rees to inder Material to	EnergyS from Geru warrants overnmer mnify Ene conform is	separat Solutions, serator and that all contal laws, argySolution all material	e and completed ha LLC, and all approp data vested in Energian fates of forth in this if rules, regulations a cons, LLC, its officer orial respects to the	riste regulatory authory Southors, LLC UNIFORM LOW-LEV nd EnergySolutions L s, employees and age data supplied on the	est, along with the appoint is a control of the Waste VI.C's facility license. Into against all losses a UNIFORM LOW-LEVE	led in 40 CFR 281. Where reprinte land-disposal restrict and disposal restrict and Malerial which conforms to the same statement of the same statement of the same statement of the same same same same same same same sam	ction notice and/or to Generator's and correct in all

0857-08-0222

FORM NO .:

REVISION:

PAGE: **EFFECTIVE DATE:**

1 OF 1 02-05-04

CONTAINER BEING FILLED:

ESUU 300001

DATE BEGAN FILLING:

1.22-19

ALL WEIGHTS IN POUNDS

Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000	Gms U235	Operators initial and date each entry
				gross lbs. exceeded		
Container Tare Weight		7540		7540		NR 1-22-19
Drums added per pick list # 15 soildrums	7381			14,921	135.0	me 1.23:19
Hoppers 13 Soil drums	6267		-	21,188	65.0	ma 1.23.19
15 soil drums	7239		-	28,427	97.0	MZ 1.23.19
Total Weight for			04	23.		
Total Weight for Shipment		7540	20,887	28,427	287	

^{*} Example: hoppers, drums, loose material, etc.

FORM 540	EVEL RADIOACTIV	EnergySolutions, LLC		- NAME AND FACILITY			0857-08	I.D. NUMBER 0-0221 LECTOR		7. FORM 540 AND 540A FORM 541 AND 541A	PAGE 1	OF 1 PAGE(S) 1 PAGE(S)	8. MANIFEST NUMBE (Use this number on pages)	
	MANIFEST		HOPKINS, S				=	CESSOR	-	FORM 542 AND 542A ADDITIONAL INFORM		None PAGE(S) None PAGE(S)	0857-0	8-0221
	NG PAPER	ode)	Utah Genera 0207 001	lor Sile Access Permit No. 421	SHIPMENT N 0867-08-022		☑ GEN	ERATOR TYP	E	9. CONSIGNEE - Name a EnergySolutions,	and Facility LLC		CONTACT Transportation	Compliance
1-800-424-9300 ORGANIZATION			CONTACT E.W. CAI	NTACT E.W. CAULEY JR				TELEPHONE NUMBER (Include Area Code) (803) 647-3903		Clive Disposal Site Interstate 80, Exit Clive, UT 84029		te Facility)	(Include Area Code) (435)884-0155	
WESTINGHOUSE ELECTRIC CO., LLC 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?	3. TOTAL NUMBER OF PACKAGES IDENTIFIED		6. CARRIER HITTMAN 1560 Bear C	- Name and Address			EPA I.D. I			SIGNATURE - Authorize	ed consignee acknowle	ndging waste receipt	5/21/19	7
YES NO	ON THIS MANIFEST	,	Oak Ridge,				SHIPPING 04/23/201			This is to certify that the her	ein-named materials	re properly classified,	described, packaged, man	ed, and labeled and
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?	EPA MANIFEST NUMBER		CONTACT Jeff Packet				(Include A 1(885) 22	IVE (rea Code)		This is to certify that the her are in proper condition for tr This also certifies that the transportation and dispeted atoto regulations.		packaged, marked, a	nd labeled and are in proper ments of 10 CFR Parts 20	or transportation. Ir condition for and 61, or equivalent
If "Yes," provide Manifest Number ******>				 Authorized camer ackno 	wiedging waste	receipt	DATE		_	AUTHORIZED SIGNATUR E.W. Cauley JR Sea consignee block bel		URRS Engineerin	1	3/27/2019
11. U.S. DEPARTMENT OF TRANSPORT. (Including proper shipping name, hazard of and any additional informa-	class, UN ID number,	12. DOT LABEL "RADIOACTIVE"	TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	4		INDI	15. VIDUAL NUCLIDES		TOTAL PACK MBq	6. AGE ACTIVITY	LSA/SCO	OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low spec Fissle Excepted LLW soil (44 soil drums		NA	NA	SOLID URANIUM O	XIDE U-	234	U-235	U-236	U-238	1.6148E+03	4.3641E+01	LSA-I	28389 LBS; 1300 FT3	ESUU300502- 0221
														2OFT SEAVAN/ESU U300502
			1			1								
FOR CONSIGNEE USE ONLY The original signed manifest resides with: E.W. Cauley if 5001 Bloff Rd Hopkins, SC 29081 (893) 647-5903		Record Waste Description Contamination or Leakage Unexpected Exposure R Labels, Markings, etc. In Container Integrity Inade Other No Violations Detected of	ge Detected ates Detecte adequate equate	te A. ed B. C. D.	hazardous wa certification as TITLE: Upon representation WASTE MATI respects and i INDEMNIFICA results from the	MATER aste, this is required acceptant as herein ERIAL: (in accord ATION:	shipment is a 1 by 40 CFR : 1 by 40 CFR : 1 be at the disp shall thereup Generator rep ance with all Generator age of the Waste	Iso accompani 268,1. posal site by Eleon transfer from tresents and we applicable governess to Indemn Material to con	inergySo im Gene errants t remment nify Energ nform in	ents that Waste Material separate and completed habitutions, LLC, and all appropriator and be vested in Einer that all date set forth in this (let leve, rules, regulations a gySolutions, LLC, its officer all material respects to the partment of Transportation of	zardous waste manife priate regulatory suther gySolutions, LLC UNIFORM LOW-LEVI UNIFORM LOW-LEVI UNIFORM LOW-LEVI S, employees and ege date supplied on the (in date supplied on the (in	at, along with the appr likes, title to the Weste EL RADIOACTIVE W LC's facility (icense) Interesting to the second JUNIFORM LOW-LEVE	opriate land-dispusal restrict Material which conforms to ASTE MANIFEST) are true and liability whateover if as EL RADIOACTIVE WASTE	ction notice and/or o Generator's and correct in all ch losses or liability

SEA/LAND CONTAINER INVENTORY LISTING

FORM NO.: REVISION: CF-83-154

PAGE:

1 1 OF 1

EFFECTIVE DATE:

02-05-04

CONTAINER BEING FILLED:

ESUU300502

DATE BEGAN FILLING:

1-16-19

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		7100		7100		MR 1-16-19
Drums added per pick list # 15 soilarums	7320			14,420	309.0	The state of the s
Hoppers 14 soil drums	6636	-	÷	21,056	165.0	WR 1.17-19
15 soildrums	7333	-	_	28,389	158.0	MR 1-17-19
		Shif	DEN JO	23.19		
Total Weight for Shipment		7/00	21,289	28,389	632.0	

^{*} Example: hoppers, drums, loose material, etc.

WASTE	EVEL RADIOACTIV MANIFEST NG PAPER		Westinghous 5801 BLUFF HOPKINS, S Ulah Genera 0207 001 CONTACT E.W. CAI 5. CARRIEF HITTMAN 1560 Bear C	E.W. CAULEY JR 5. CARRIER Name and Address			0857-00 COLI PRO GEN (Speci	LECTOR CESSOR ERATOR TYPE (by) FC DONE NUMBER uea Code) -3903 NUMBER 34886		7. FORM 540 AND 840A FORM 541 AND 541A FORM 542 AND 541A FORM 542 AND 542A ADDITIONAL INFORM 9. CONSIGNEE - Name : Energy Solutions, Clive Disposal Sit Clive, UT 84029 SIGNATURE - Authorize Monis is to certify that the her	MATION and Facility LLC B (Bulk Wat 49 LLS) and consigned acknowle	1 PAGE(S) None PAGE(S) None PAGE(S) None PAGE(S) ste Facility) 2 0 4 adging waste receipt 10. CERTIFICATIO	5/21/19	alt continuation 8-0220 Compliance
DOES EPA REGULATED WASTE REGULRING A MANIFEST ACCOMPANY THIS ALIEMANTY ET "CS," provide Manifest Number ====> 11. U.S. DEPARTMENT OF TRANSPORT.		12.	13,	- Authorized corner ackno		asia receipt	TELEPHO (Include A 1(865) 22 DATE	DNE vrea Code) 0-5817	The street	his also certifies that the mensponalion and disposal ansponation and disposal are regulations. AUTHORIZED SIGNATUF E.W. Cauley JR See constance block be	naterials are classified as described in accor RE Iow 6.	packaged, marked, dance with the requirement of the control of the	and labaled and are in propiements of 10 CFR Parts 20 in parts 20	DATE 3/27/2019 19. IDENTIFICATION
(Including proper shipping name, hazard and any additional informion of the control of the contr	etion) cific activity (LSA-I), 7,	DOT LABEL "RADIOACTIVE" NA	TRANSPORT INDEX NA	PHYSICAL AND CHEMICAL FORM SOLID URANIUM O	И	U-234		VIDUAL NUCLIDES U-236	U-238	TOTAL PACK MBq 6.6173E+02	1.7884E+01	LSA-I	OR VOLUME (Use appropriate units) 26783 LBS; 1300 FT3	NUMBER OF PACKAGE ESUU300602- 0220
														2OFT SEAVAN/ESU U300602
FORM 540 (03-05)		Record Waste Descriptic Contarmination or Leakar Unexpected Exposure R Labels, Markings, etc. In Container Integrity Inade Other No Violations Detected of	e Detected ates Detecti adequate quate	ed B. C. D.	HAZARDI hazardou certificatio TITLE: U represent WASTE N respects : INDEMNI results fro	OUS MATERIA is weste, this is on as required from acceptami tations herein a MATERIAL: G and in accorda aFICATION: G om the failure	hipment is a by 40 CFR: the at the dis- theil thereup enerator rep noe with all enerator ag of the Waste	iso accompanie 268.1. posal site by En you transfer from resents and wa applicable gove rees to indemnif Material to con	ed by a se ergySolul or General errants that erromental by Energy form in all	eparate and completed hat stions, LLC, and all approp- stor and be vested in Energated at all date set forth in this (I laws, rules, regulations a Solutions, LLC, its officers	zardous waste manife griste regulatory author grysolutions, LLC (UNIFORM LOW-LEV and Energysolutions L s, employees and age data supplied on the	est, along with the ap rilles, title to the Wac EL RADIOACTIVE V LC's facility license, ants against all losses UNIFORM LOW-LE	ined in 40 CFR 261. Where propriate land-disposal restricts the Meterial which conforms to WASTE MANIFEST) are true. And liability whatsoever if street, RADIOACTIVE WASTE Ellon over such metters.	o Generator's and correct in all

SEA/LAND CONTAINER INVENTORY LISTING

FORM NO.: REVISION: CF-83-154

PAGE: EFFECTIVE DATE: 1 OF 1 02-05-04

CONTAINER BEING FILLED:

ES44 30060Z

DATE BEGAN FILLING:

01.08-19

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		7200		7200		MR 1.9.19
Drums added per pick list # 15 Soil drums	7140			14,340	22.0	me 1.9.19
Hoppers 11 soil drums	5243		-	19,583	81.0	MR 1-9-19
15 Soil drums	7200		-	26,183	156,0	me 1.9.19
			11.23.19			
Total Weight for Shipment	A	7200	19,583	26,783	259.0	

^{*} Example: hoppers, drums, loose material, etc.'

41RX2

WASTE	EVEL RADIOACTIV MANIFEST NG PAPER		Westinghou S801 BLUFF HOPKINS, S Utah Genera 0207 001 CONTACT E.W. CAI 5. CARRIER HITTMAN 1500 Bear G Oak Ridge, CONTACT Jeff Packe	IC 29051 tor Site Access Permit No. 421 JLEY JR Name and Address reek Rd TN 37830	SHIPMENT Nt 0857-08-0219		SHIPPER 0857-06 COLI PRO GENI (Special (Include A (803) 547 EPA LD. I TNR0000 SHIPPIN 04/23/20 TELEPHC	LECTOR CESSOR ERATOR TYPE W/) FC NNE NUMBER Vaa Code) -3993 NUMBER 34666 3 DATE 19 NVE	TII aa	7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A FORM 542 AND 542A ADDITIONAL INFORM 9. CONSIGNEE - Name a Energy Solutions, Citive Disposal Site Interestate 80, Exit Citive, UT 84029 SIGNATURE - Authorize This is to certify that the her re in proper condition for tr its also certifies that the her re in proper condition for tr its also certifies that the her ideal responsibility in the certifies and disposal ideal regulations.	d Facility LC 49 49 L 132 d consignee acknowle ein-named materials ansportation according ansportation according ansportation according ansportation according ansportation according ansportation according	1 PAGE(S) None PAGE(S) None PAGE(S) ste Facility) 202 edging waste receipt 10. CERTIFICATION	MANIFEST NUMBE (Use this number on pages) 0857-0 CONTACT Transportation TELEPHONE (Include Area Code) (435)884-0155 DATE STATE A Controlled, pockaged, main guissions of the Department and labeled and are in propages	eti conlinuation 8-0219 Compliance eted, and labeled and of Transportation, or condition for and 01, or equivalenti
II "Yes," provide Manifest Number ************************************	clase, UN IO number,	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT	Authorized carrier acknow 14. PHYSICAL AND CHEMICAL FORM		ecerpt	INDI	15. VIDUAL NUCLIDES	- 1	E.W. Cauley JR See consigned block bet		LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	3/27/2019 10. IDENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low spec Fissle Excepted LLW soil (44 soil drums		NA NA	NA	SOLID URANIUM O	OXIDE U-2:	14	U-236	U-236	U-236	1.4691E+03	(3.9706E+01)	LSA-I	28602 LBS; 1300 FT3	20FT SEAVAN/ESU U300311
FOR CONSIGNEE USE ONLY The original sinned manifest resides with; E.W. Cautoy Jr. 6801 Bluff and Hopkins, SC 29061 (802) 847-3903	. =	Record Waste Descriptic Contamination or Leaka Unexpected Exposure F Labels, Markings, etc. In Container Integrity Inade Other No Violations Detected	ge Detected tates Detect adequate equate	te A. ed B. c. o.	hazardous was certification as TITLE: Upon a representation WASTE MATE respects and is INDEMNIFICA results from the	MATERI ile, this s required scceptan s herein! RIAL: G a sccord TION: G a failure	hipment is a by 40 CFR ce at the dis shall thereup enerator rep ince with all tenerator ag of the Waste	also accompanion 258, 1, aposal site by Er por transfer from transfer from precents and we applicable governess to indemnion Material to cor	ed by a s nergySolom General erranes the erranesta ify Energy oform in a	reparate and completed ha lutions, LLC, and all approp alor and be vested in Enem nat all data set forth in this al laws, rules, regulations a hySolutions, LLC, its officer	riele regulatory autho gySolutions, LLC UNIFORM LOW-LEV not EnergySolutions L s, employees and age data supplied on the	ist, along with the ap- cities, title to the Was EL RADIOACTIVE V LC's facility license, the against all losses UNIFORM LOW-LEY	ined in 40 CFR 251. Where propriete land-disposel restri te Material which conforms i WASTE MANIFEST) are true and liability whatsoever if su JEL RADIOACTIVE WASTE Lion over such malters.	clion notice end/or or Generator's and correct in at

SEA/LAND CONTAINER INVENTORY LISTING

FORM NO.:

CF-83-154

REVISION: PAGE:

1

EFFECTIVE DATE:

1 OF 1 02-05-04

CONTAINER BEING FILLED: F544 300311

DATE BEGAN FILLING:

1-14-19

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight	# 2 to 1 to	7/20		7120		KD1-14-19
Drums added per pick list		170			010	X0, 1411
# 15 soil droms	7522			14.642	194.0	
Hoppers 15 Soil drus	7194			21,836	190,0	KD1-14-19
1 Soil drum	491			22,327		KD1-14-19
13 soil drums	6275			28,602	191.0	MR 1.14.19
		4,23,19	to the si			
Total Weight for Shipment		7120	21,482	28,602	675,0	

	Manager B. of the property		HIEX	<u>Z3</u>		enibbed	I.D. NUMBER	,			*	
FORM 540 UNIFORM LOW-LEVEL RADIOAC	Ener /Solutions, LLC VE				٠	0867-08	0218 ECTOR	7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A		1 PAGE(S) None PAGE(S)	MANIFEST NUMBER (Use this number on pages) 0857-08	noileunilnoo lis
WASTE MANIFEST SHIPPING PAPER		The state of		Lauren	T NUMBER		ERATOR TYPE	9. CONSIGNEE - Name		None PAGE(S)	CONTACT	
1. EMERGENCY TELEPHONE NUMBER (Party to A)	a Code)	0207 001	nor Site Access Permit No. 421	0857-08-0		(Specili	W FC	EnergySolutions, Clive Disposal Sit		to Facility)	Transportation	Compliance
1-800-424-9300 ORGANIZATION	Market III	CONTACT E.W. CAI	ULEY JR			(Include A (803) 647-		Interstate 80, Exit Clive, UT 84029	19 2/3/8/7		(Iriclude Area Code) (435)884-0155	
WESTINGHOUSE ELECTRIC CO., LLC			R - Name and Address		-	EPA I.D. N		SIGNATURE - Authoriz	od consignes agknowle	edging waste receipt	DATE 2/21	12019
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?. S. TOTAL NUMBER OF PACKAGES IDENTIFIES NO NO	4 4	HITTMAN 1860 Bear C Oak Ridge,				SHIPPING 02/19/201	DATE	This is to certify that the he	rein-named materials	IN CERTIFICATION		
4. DOES EPA REQUIATED YES EPANGAISEST NUMBER MARIFEST ACCOMPANY THIS SHEPMENT?	The state of the s	CONTACT . Jeff Packe	att			TELEPHO (Include A 1(865) 22	rea Code)	This is to certify that the he are in proper condition for t This also certifies that the it transportation and disclosed state regulations.	nate fait fay classified	plotegod, plated, a	and labeled and are in prop ments of 10 CFR Parts 20:	r condition for and 61, or equivalent
If "Yes," provide Idanifest Number		SIGNATURE	Introduced carrier actor	ncyledging was	ste receipt	DATE	19-19	AUTHORIZED SIGNATU E.W. Cauley JR See consigned block be	RE	URRS Engineerin	ig .	1/28/2019
 U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any eddlignel information) 	.12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	PHYSICAL ANI CHEMICAL FOR			INDI	15. VIDUAL NUCLIDES		AGE ACTIVITY	17. LSA/SGO CLASS	18. TOTAL WEIGHT OR VOI,UME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low specific activity (LSA-I), 'Fissle Excepted LLW soil	, NA	NA	SOLID URANIUM	OXIDE	U-234	U-235	U-236 U-2	38 1.8540E+03	5.0109E+01	LSA-I	28603 LBS; 1300 FT3	0857-08-0218
												2OFT SEAVAN/ESU U300004
						-						
* Andrew Transfer				,					2		1	
						+						
FOR CONSIGNEE USE ONLY The original planed manifest resides with; E.W. Couley Jr SSO1 Bluff Rd Hopkins, SC 28061 (803) 647-3903	Record Waste Descripti Contamination or Leake Unexpected Exposure F Labels, Markings, etc. II Container Integrity Inad Other No Violations Detected	ge Detected Rates Detect nadequate equate	ate A. di B. C. D.	hazardous cartification TITLE: Up represente WASTE M respects of INDEMNIII results fro	OUS MATER s waste, this on as require ipon accepta ations herein MATERIAL: and in accom iFICATION: om the failure	shipment is a diby 40 CFR not at the dis shall thereu, Generator refance with at Generator age of the Waste	also accompanied be 268.1. Appearail site by Energipen transfer from Goresents and warrest applicable governments to indumnify Each Malerial to confern	varranti that Weste Material, y a separate and completed h ySolutions, LLC, and all appri enerator and be vested in End into the thing that the thing into the thing the thing into the into the thing into the into the into the into the into the into the into the into the into the into int	ezardous waste manif opriste regulatory author pySolutions, LLC : (UNIFORM LOW-LE and EnergySolutions) ins, employees and ag a data supplied on the	est, along with the epi orities, title to the Was VEL RADIOACTIVE Y LLC's facility license, ante against all losses (UNIFORM LOW-LE'	propriate land-disposal rest ste Material which conforma WASTE MANIFEST) are tru a and liability whatsoever if : VEL RADIOACTIVE WAST	to Generalor's and correct in all

FORM 540 (03-06)

SEA/LAND CONTAINER INVENTORY LISTING

FORM NO.: REVISION:

CF-83-154

PAGE:

1 OF 1

EFFECTIVE DATE:

02-05-04

CONTAINER BEING FILLED:

ESUU300004

DATE BEGAN FILLING:

01.09-18

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		7320		7320		NE 01-09-18
Drums added per pick list # 15 50il drums	7188			14,508	162.0	KD 1-14-18
Hoppers 15 501 drums	7321	_	_	21,829	268.0	KD1-14-18
14 soil drums	6774			28,603	292.0	£11-14-18
		19	A C			
Total Weight for Shipment		1320	21,283	28,603	122	

^{*} Example: hoppers, drums, loose material, etc.

FORM 540		Energy Solutions, LLC	Westinghou	- NAME AND FACILITY	HIRX		LD, NUMBER I-0217	7. FORM 540 AND 540A	PAGE 1		8. MANIFEST NUMBER (Use this number on	
UNIFORM LOW-LE		E	HOPKINS, S	RD		COL		FORM 541 AND 541A FORM 542 AND 542A		1 PAGE(S) None PAGE(S)	pages) 0857-0	0.0217
	MANIFEST G PAPER						CESSOR	9, CONSIGNEE - Name a		None PAGE(S)	CONTACT	0-0211
1. EMERGENCY TELEPHONE NUMBI		Code)	0207 801	tor Site Access Permit No. 421	SHIPMENT NUMBER 0857-08-0217	(Speci	ERATOR TYPE (y) FC	EnergySolutions, I Clive Disposal Site	LLC (Bulle Mee	to Facility)	Transportation	Compliance
1-800-424-9300 ORGANIZATION		J	CONTACT E.W. CA	ULEY JR			ONE NUMBER Irea Code) '-3903	Interstate 80, Exit	19	SIG (435)884-01		
WESTINGHOUSE ELECTRIC CO., LLC	- 1			R - Name and Address		EPA LD. NUMBER		SIGNATURE - Authoring	d consigned ecknowl	dedging waste receipt DATE	DATE /	12019
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? YES NO	3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST	1	HITTMAN 1560 Bear C Oak Ridge,	Creek Rd TN 37830		SHIPPING		This is to certify that the herein-named materials		CEPTIEICATION		**
4. DOES EPA REGULATED YES WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?	EPA MANIFEST NUMBER		GONTAGT Jolf Packs			1(866) 22	ONE Area Code) 10-5817	This is to certify that the here are in proper condition for the This also certifies that the warsportation and distoral state regulations.	eneportation according steriels are classified as described in according to the control of th	to the applicable reg packaged, marked, a pands with the require	julations of the Department and labeled and ere in prope ments of 10 GFR Parts 20 a	of Transportation. of contilion for and 61, or equivalent
If "Yes," provide Manifest Number =====>			SIGNATURE	Apthorized carrier action		DATE I	9-19	AUTHORIZED SIGNATUR E.W. Cauley JR See consignee block bel		URBS Engineerin		DATE 1/28/2019
 U.S. DEPARTMENT OF TRANSPORTA (Including proper shipping name, hazard of and any additional informal 	ass, UN ID number,	12. DOT LABEL "RADIOACTIVE"	13, TRANSPORT INDEX	PHYSICAL AND CHEMICAL FOR			15. VIDUAL NUCLIDES	TOTAL PACK MBq	6. AGE ACTIVITY	LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units) 25867 LBS; 1300 FT3	19. IDENTIFICATIO NUMBER OF PACKAGE
UN 2912, Radioactive material, low spec Fissle Excepted LLW soil	2912, Radioactive material, low specific activity (LSA-I), 7, RA		NA	SOLID URANIUM C	DXIDE U-234	U-236	U-236 U-238	4.8533E+02	1.3117E+0	3117E+01 LSA-I		0857-08-0217
												2OFT SEAVAN/ESU U300505
											ľ	
									+			
			1							7		
FOR CONSIGNE USE ONLY The ordinal region manifest recides with; E.W. Cauley Jr 5807 Bluff Rd Unpkine, Sc 29081 (803) 847-3803		Record Waste Descript Contamination or Leak Unexpected Exposure Labels, Markings, etc. I Container Integrity Inac Other No Violations Detected	age Detected Rates Detect nadequate equate	tte A. I Ged B. C. D.	cartification as requin TITLE: Upon accept representations here! WASTE MATERIAL: respects and in according INDEMNIFICATION: results from the failur	d by 40 CFR nce at the dis n shall thereu Generator re dance with al Generator ag e of the Wast	268.1. sposal site by EnergySpon transfer from Gen presents and warrants applicable governme grees to Indennify Ene Material to conform is	rents that Waste Material a separate and completed he lolutions, LLC, and all approparation and the second in the factor and be vested in Energial two, rules, regulations or spySolutions, LLC, its officer in all material respects to the speakment of transportation or sparations.	wiate regulatory authory gySolutions, LLC (UNIFORM LOW-LEV and EnergySolutions to s, employees and ago data supplied on the	whiles, title to the Was TEL RADIOACTIVE W LC's facility license. Intel egainst all losses (UNIFORM LOW-LEV	te Material which conforms ASTE MANIFEST) are true and liability whatsoever if a FEL RADIOACTIVE WASTE	to Generalor's and correct in all such losses or liability

0857-08-6217

FORM NO.:

CF-83-1:

REVISION:

1

PAGE: EFFECTIVE DATE: 1 OF 1 02-05-04

CONTAINER BEING FILLED:

ES44300505

DATE BEGAN FILLING:

12-11-18

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		7560		7560		NR 12-11-18
Drums added per pick list # 38 soil drums	18307			25,867	189.0	me 12:11:18
Hoppers						
1	100	301				
	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	5/10	100			
	1		Telli			
Total Weight for Shipment		1560	18,301	25,867		

^{*} Example: hoppers, drums, loose material, etc.

					4,6	2 X 2	3					
FORM 540 .		Energy olution, LLC		- NAME AND FACILITY			I.D. NUMBER	7. FORM 540 AND 540A	PAGE 1	OF 1 PAGE(S)	B. MANIFEST NUMBE (Use this number on	
UNIFORM LOW-LE	VEL RADIOACTIV	E / /	5801 BLUFF				ECTOR	FORM 541 AND 541A		1 PAGE(S)	(Use this number on pages)	all continuation
WASTE	MANIFEST		HCPKINS, S	C 28067	35 10 58	PROC	ESSOR	FORM 542 AND 542A ADDITIONAL INFORM		None PAGE(S) None PAGE(S)	0857-0	8-0216
SHIPPIN 1. EMERGENCY TELEPHONE NUMBE 1-800-424-9300	G PAPER (Include Area C	(o) /	0207 001	lor Site Access Permit No. 421	SHIPMENT NÚMBER 0857-08-0216	(Specify	RATOR TYPE y) FC NE NUMBER	9. CONSIGNEE - Name of EnergySolutions, Clive Disposal Site	LLC Bulk Wa	Waste Facility) CONTACT Transportati TELEPHONE		Compliance
ORGANIZATION WESTINGHOUSE ELECTRIC CO., LLC			E.W. CAI	ULEY JR		(Include An (803) 847-	rea Code)	Interstate 80, Exit Clive, UT 84029 SIGNATURE - Authorize	L/3/8	15 Isdging waste receipt	(Include Area Code) (435)884-0155 DATE	1
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?	3. TOTAL NUMBER OF		6. CARRIER HITTMAN	t Name and Address		EPA I.D. N TNR00003		SIGNATURE AUTORIZA	go consigned acknow	anifinit wasia tersihi	3/26	12019
YES NO	3, YOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST	1	1640 Bear C Oak Ridgo,			SHIPPING 02/19/2019	DATE	This is to certify that the her		10. CERTIFICATION are properly classified		
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY	EPA MANIFEST NUMBER		CONTACT Jaff Packe	att		(Include Ar	rea Code)	This is to certify that the her are in proper condition for to This also certifies that the transportation and tisposal state regulations.	paterials are classified as discreted to occur	packaged, marked, o	ind labeled and are in prope ments of 10 CFR Parts 20	r condition for and 61, or equivalent
THIS SHIPMENT? If "Yes," provide Manifest Number =====>		A	SIGNATURE	- Authorized carrier activity	pwledging waste receipt	DATE	19-10(AUTHORIZEO SIGNATUI E.W. Cauley JR See consignee block ba	RE (URRS Ungineerin		DATE 1/28/2019
 U.S. DEPARTMENT OF TRANSPORTA (Including proper shipping name, hazard of end any additional informal 	ess, UN ID number,	DOT LABEL "RADIOACTIVE"	TRANSPORT	PHYSICAL AND CHEMICAL FORM		. 1 INDIV	5. //DUAL /UCLIDES		AGE ACTIVITY	LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. (DENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low spec Fissle Excepted LLW soil	ific activity (LSA-I), 7,	NA	NA	SOLID URANIUM O	XIDE U-234	U-235	U-236 U-23	7.8572E+02	2.1236E+01	LSA-I	27586 LBS; 1300 FT3	ESUU300222
								4				20FT SEAVAN
							1					
			,	1	-							
		4				41 12		11-				
FOR CONSIGNEE USE ONLY The original signed manifest resides with; EW, Cauley 15 5901 Bluff Rd Hopkins, SC 29061 (803) 647-3903		Record Waste Descripti Contamination of Leake Unexpected Exposure F Labels, Markings, etc. li Container Integrity Inad Other No Violations Detected	age Detected Rates Detect nadecuate equate	te A. led B. C. D.	hazardous waste, this cartification as require TITLE: Upon acceptar representations harelin WASTE MATERIAL: respects and in accord INDEMNIFICATION: results from the fallier.	shipment is all d by 40 CFR 2 nee at the disp is shell thereup Generator reprience with all it Generator agricult the Waste of the Waste	iso eccompanied by 259.1. cost is site by Energy con transfer from Ge resents and warrant applicable germanity En Material to conform	arrans that Weste Material	priete regulatory sub grySolutions, LLC (UNIFORM LOW-LE gund EnergySolutions re, employees end es es data aupolied on the	lest, stong with the applications, title to the Was VEL RADIOACTIVE V LLC's facility license, and sents against all losses and lower or the lower of	ropriate land-disposal restr te Material which conforms (ASTE MANIFEST) era trus and ljability whatsover if s (FEL RADIOACTIVE WASTE	letion notice and/or to Generator's and correct in all uch losses or liability

SEA/LAND CONTAINER INVENTORY LISTING

FORM NO.:

CF-83-154

REVISION:

1

PAGE: EFFECTIVE DATE: 1 OF 1 02-05-04

CONTAINER BEING FILLED:

ESUU 300222

DATE BEGAN FILLING:

01-04-19

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		7460		7460		NR 1.4.19
Drums added per pick list # 18 coursete drums	8142			15,602	45.99	me 1.4.19
Hoppers 25 soildrums	11,984	_	-	27,586	360 io	MR 1.4.19
				A		
Total Weight for Shipment		7410	28,126	27,586	305.99	

^{*} Example: hoppers, drums, loose material, etc.

	VEL RADIOACTIVE	nergySol (tiens, LLC)		NAME AND FACILITY so Electric Co., L.C. RD. C 29081	THE RILL CONTROL OF		COLLE	ECTOR ESSOR	-	FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORM		DF 1 PAGE(S) 1 PAGE(S) None PAGE(S) None PAGE(S)	8 MANIFEST NUMBE (Use this number on pages) 0857-0	noi sontinustion
1. EMERGENCY TELEPHONE NUMBE 1-800-424-9300	G PAPER R Include Area C	ode)	Utah General 0207 001 CONTACT	or Ste Access Permit No. 421	SHIPMENT NUI 0857-08-0214	MBER	(Specify TELEPHO)	RATOR TYPE // FC NE NUMBER	를 통	CONSIGNEE - Name as nergySolutions, L live Disposal Site nterstate 80. Exit	LC (Bulk Was	te Facility)	Transportation TELEPHONE	Compliance
ORGANIZATION WESTINGHOUSE ELECTRIC CO., LLC			E.W. CAL	ing page 1			(R03) 647-		CI	live, UT 84029 GNATURE - Authorized	L13	1467	(Include Area Code) (435)884-0155	
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? YES NO	3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST	+	6: CARRIER HITTMAN 1560 Boar C Oak Ridge,	- Nemb and Address rock Rd TN 37830			EPA I.D. N TNR00003 SHIPPING	4688 DATE	1	(a)un	ble	O: CERTIFICATION	DATE //25/19	sed, and labeled and
4. DOES EPA REQUIATED YES WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?	EPA MANIFEST NUMBER		CONTACT Jeff Packs			visetalas waste receial		12/28/2018 TELEPHONE (Include Area Code) 1(855) 220-6817		in oraper condition for tre salso certifies that the mi sportation and disposal e regulations,	rein-named materials are properly car granaportation according to the applica materials are classified, parkaged, ma i ha discribed in according with the		ulations of the Department and labeled and sie in propi ments of 10 CFR Parts 20	of Transportation. Ir condition for and 61, or equivalent
If "Yes," provide Manifest Number ======					ized eanlar ecknowledging waste receipt		DATE		6.5	AUTHORIZED SIGNATURE E.W. Gestey JR See consigned block below.		URICO Engineering	9	DATE 12/12/2010
11. U.S. DEPARTMENT OF TRANSPORTA (Including proper shipping name, hazard of and any additional informat	așa, UN IO number.	DOT LABEL "RADIOACTIVE"	TRANSPORT INDEX	PHYSICAL AND CHEMICAL FORM	A		15. INDIVIDUAL RADIONUCLIDES		2021	TOTAL PACKA MBq	IGE ACTIVITY	LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low spec Fissle Excepted, LLW soil	ific activity (LSA-I), 7,	NA	NA	SOLID URANIUM O	XIDE U-23	•	U-236	U-236 U-2	238	4.1533E+02	1.1225E+01	LSA-I	28436 LBS; 1300 FT3	0857-08-0214
- 11							- 11		- No.					2OFT SEAVAN/ESU U300129
	-744													
FOR CONSIGNEE USE ONLY The <u>original slaped manifest resides with:</u> E.W. Cauley of Sent Builf Rd. Hopkins, SC 28964 (603) 647,3903		Record Waste Descriptic Contamination or Leaka Unexpected Exposure F Labels, Markings, etc. Ir Container Integrity Inado Other No Violations Detected	ge Detected tates Detecte nadequate equate	te A. ed B. C. D.	hezardous west certification as r TITLE: Upon as representations WASTE MATER respects and in INDEMNIFICAT results from the	LATERI. a, this a equired exceptant herein tIAL: G accorde ION: G failure	hipment is all by 40 CFR 2 ce at the disp shall thereup entrator reprince with all stenerator age of the Waste	so accompanied b 68.1. cosal site by Energ on fransfer from G resents and warra applicable governy eas to indamnify E Material to confor	y a sepa y Solution renerates into that in montal to inergy So m in all re	serale and completed has ons, LLC, and all approp or and be vested in Energ all data set forth in this (inve, rules, regulations a bolutions, LLC, its officers	ratious waste menife riste regulatory author nySolutions, LLC UNIFORM LOW-LEVI not Energy Solutions Li employees and age fate supplied on the f	st, along with the appr files, title to the Wast EL RADIOACTIVE W LC's tacifity license. LNIFORM LOW-LEV UNIFORM LOW-LEV	and in 40 GFR 251. Where repetite land-disposal restrict a Material which conforms in ASTE MANIFEST) are frue and liability whatsoever if a ELRADIOACTIVE WASTE CLRADIOACTIVE WASTE.	olion notice and/or o Generator's and correct in all

FORM NO.: REVISION:

CF-83-154

PAGE:

1 OF 1

EFFECTIVE DATE:

02-05-04

CONTAINER BEING FILLED:

ESUU 300129

DATE BEGAN FILLING:

12.4.18

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.
- Forward to Engineering when input is complete.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		6680		6680		NE 12:4-18
Drums added per pick list # 11 DSU 40Z	5142			11,822	13.97	me 12.4.18
Hoppers 25 dist drums	11,895	-		23,717	141.77	me 12.4.18
			DOED,			
			C D			
		U	52	8/18		
		/		1		
Total Weight for Shipment		6680	17,037	23,717	161.74	

^{*} Example: hoppers, drums, loose material, etc.

WASTE	EVEL RADIOACTIV	Energy Soil Hons, LLC	Wastinghou	S. SHIPPER - NAME AND FACELTY Washinghouse Steetie Co., LLC 6801 SELIFERD HOPKINS, SC 29061				I.D. NUMBER -9213 ECTOR :ESSOR.	7. FORM \$40 AND \$40A FORM \$41 AND \$41A FORM \$42 AND \$42A ADDITIONAL INFORM		OF 1 PAGE(S) 1 PAGE(S) None PAGE(S) None PAGE(S)	8. MANIFEST NUMBE (Use this number on pages) 0857-0	all continuation
1. EMERGENCY TELEPHONE NUMB 1-800-424-9300	NG PAPER	(ode)	CONTACT E.W. CAI	125	SHIPMEN 0857-08-	NT NUMBER 0213	(Specif TELEPHO (Include A		9. CONSIGNEE - Name Energy Solutions, Clive Disposal Situates at the Soliton State Sol	LLC e (Bulk Was 49	ste Facility) .	Transportation TELEPHONE (Include Area Code)	Compliance
ORGANIZATION WESTINGHOUSE ELECTRIC CO., LLC				Namu and Address			(803) 647-		SIGNATURE - Authorize	L 1314		(435)884-0155 DATE /	
2. 15 THIS AN "EXCLUSIVE USE" SHIPMENT? YEB NO	3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST	1	HITTMAN 1580 Bear C Oak Ridge,	rook Rd			TNR000034686 SHIPPING DATE 12/28/2018		V/	ein-named makerials	10. CERTIFICATION	1/25/19 described, packaged, med	
DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? YES NO.	EPA MANIFEST NUMBER		CONTACT Jeff Packet		ised comer acknowledging waste re		TELEPHONE (Include Area Code) 1(885) 228-8817		This is to ceitify that the heare in proper condition for in This also certifies that from transportation and discogni- state regulations.	nathrial are classified and described in account	psckaped/marked, a dire-with the require	nd labeled and are in prope ments of 10 CFR Parts 20	r condition for and 61, or equivalent
# "Yes," provide Manifest Humber none			BIGNATURE	- Authorized corner activ	sowieodniń ws	взия иссоря	Unie		AUTHORIZED SIGNATULE.W. Cauley JR. See consigned block be	(WILE URRS Engineerin	g	DATE 12/12/2018
U.S. DEPARTMENT OF TRANSPORT, (Including proper shipping neme, hazard of end any additional information).	dasa, UN ID number.	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FOR			INDIV	IS. ADUAL IUCLIDES		AGE ACTIVITY	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low spec Fissle Excepted, LLW soil	cific activity (LSA-I), 7,	NA	NA	SOLID URANIUM C	DXIDE	U-234	U-236	U-236 U-2	38 2,8761E+02	(7.7731E+00)	LSA-I	28436 LBS; 1300 FT3	0857-08-0213
		14.											20FT SEAVAN/ESU U300466
						_		-					
in .						7							
												10.00	
FOR CONSIGNEE USE ONLY The original signed manifest resides with: E.W. Cautery if 5501 Biuff Rd Hopkins, Sc 20051 (803) 647-3803+	\equiv	Record Waste Descripti Contamination or Leaks Unexpected Exposure F Labels, Markings, etc. li Container Integrity Ined Other No Violations Detected	te A. ed B. C. D.	hazerdou certification TITLE: U represent WASTE A respects INDEAINI results from	OUS MATER to waste, this on as require pon accepta totions harel MATERIAL: and in accord IFICATION: om the failure	shipment is all diby 40 CFR 2 nee at the disp of their thereup Generator repidance with all a Generator ago of the Waste of the Waste	iso accompanied by 268.1. posal sile by Energy on transfer from Ge resents and warran applicable governa- pes to indemnify Ex Material to conform	regrants that Waste Material a separate and completed he ySolutions, LLC, and all epong negator and by easted in Einer as that all date set forth in this cental lows, rules, regulations a nergy Solutions, LLC, its officer in all material respects to the Department of Transportation	zardous waste manife griste regulatory sutho gySolutions, LLC (UNIFORM LOW-LEV und Energy set and age data supplied on the i	est, along with the app witins, title to the West FEL RADIOACTIVE W LC's facility licenses unter against ell losses (UNIFORM LOWLEY (UNIFORM LOWLEY)	ropriete lend-disposal restri to Makerial which conforms I ASTE MANIPEST) are true and liability wholsoever if a EL RADIOACTIVE WASTE	o Generator's and correct in all	

FORM 540 (03-06)

SEA/LAND CONTAINER INVENTORY LISTING

FORM NO.: REVISION: CF-83-154

PAGE:

1

1 OF 1

EFFECTIVE DATE:

02-05-04

CONTAINER BEING FILLED: ESUU 300 466

DATE BEGAN FILLING:

11-28-18

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		6600		6600		RD 11-28-18
Drums added per pick list # 17, 118 36 Hoppers F011-28-18	17,118			23,718	56.60	KD11-28-18
Hoppers FULLARIA						
- W						
		0.	1			
		Pripl	60			
			131	12/28/8		
Total Weight for Shipment		6600	17118	23,718		

^{*} Example: hoppers, drums, loose material, etc.

WASTE	EVEL RADIOACTIVI MANIFEST	EnergySol tion , LLC E		NAME AND FACILITY SO Executio Co., LLC RD C 29061		0857- C0	R I.D. NUMBER 08-0212 LLECTOR OCESSOR	-	7. FORM 640 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORM		OF 1 PAGE(S) 1 PAGE(S) None PAGE(S) None PAGE(S)	8. MANIFEST NUMBE (Use this number on pages) 0857-0			
SHIPPII 1. EMERGENCY TELEPHONE NUMB 1-800-424-9300	IG PAPER (Include Area C	o(a)	CONTACT		SHIPMENT NUME 0987-08-0212	(Spe	GENERATOR TYPE (Specify) FC TELEPHONE NUMBER (Include Area Code)		e. CONSIGNEE - Name a EnergySolutions, I Clive Disposal Site Interstate 80, Exit	LLC Bulk Was	ste Facility)	Transportation TELEPHONE (Include Aires Code)	Compliance		
ORGANIZATION WESTINGHOUSE ELECTRIC CO., LLC		1.0	EW. CAL	LEY JR:		(865) 6		_	CIIVO, UT 84029		465	(435)884-0155 DATE			
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? YES NO	3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST	4	8. CARRIER HITTMAN 1800 Bear C Oak Ridge, T	- Namo and Address reak Rd N 37830		TNROO	NUMBER 1034666 NG DATE 1018	1	Colunta	and the same of th	10 CERTIFICATION	1/25/19			
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?	EPA MÄNIFEST NUMBER	*	CONTACT Jölf Packet	t - Authorized carrier ackn	awiedajna waste risco	(Include 1(885)	DATE		This is tolednity that the here are in proper condition for in this size certifies that the microsportation and hispositistate regulations.	ultrials and theselflot als disserted in efficient	packaged, marked, a dance with the require	and labeled and are in properties of 10 CFR Parts 20	ar condition for and 61, or equivalent		
fi "And", buryige waniger wantet				71313131313131313	amorging mosts rout				E.W. Cauley JR See consigned block bol		URRS Engineer	1B. TOTAL WEIGHT OR VOLUME (Use appropriate units)	12/12/2018		
11. U.S. DEPARTMENT OF TRANSPORT, (Including proper shipping name, hazard of and any additional informa	lase, UN ID number,	12. DOT LABEL "RADIDACTIVE"	13. TRANSPORT INDEX	PHYSICAL AND CHEMICAL FOR					TOTAL PACK MBq	6.	17. LSA/SCO CLASS		19. IDENTIFICATION NUMBER OF PACKAGE		
UN 2912, Radioactive material, low spec Fissle Excepted, LLW soil	2912, Radioactive material, low specific activity (LSA-I), 7, NA	NA	NA	NA	NA	SOLID URANIUM C	DXIDE U-234	U-235	U-236 L	J-238	2.8761E+02	(7.7731E+00)	LSA-I	28436 LBS; 1300 FT3	0857-08-0212
													2OFT SEAVAN/ESU U300542		
	-														
FOR CONSIGNEE USE ONLY				1 20											
FOR CONSIGNED ONLY The original slanes manifest resides with: E,W. Cauley dr 5801 Bluff Rd HOPMan, SC 28081 (803) 647-3903	E.W. Cauloy Jr 8801 Bluff Rd Contamination or Leakage Detected Hopkins, 80 29881			te A. ed B C. D.	centification as req TITLE: Upon accorrepresentations he WASTE MATERIA respects and in ac INDEMNIFICATIO results from the fe	fred by 40 CF stance at the ce ein shall there : Generator a ordance with the Generators are of the Wal	R 268.1. fisposal site by Ensupon transfer from optosents and war applicable government applicable to confide Material to confidence.	ergySol Gener mants the moment y Energy form in	ands that Waste Material separate and completed has separate and completed has shittens, LLC, and all appropriate and be vasted in Ener that all data so if forth in this tall laws, nulsa, regulations appropriate of the property of the partners of Transportation of partners of Transportation of partners of Transportation of the partners of the partne	wiate regulatory authory gySolutions, LLC (UNIFORM LOW-LEV and EnergySolutions to s, employees and ego data supplied on the	xities, title to the Was /EL RADIOACTIVE W LC's locitiy floense. onts ageinst all losses (UNIFORM LOW-LEV	te Material which conforms VASTE MANIFEST) are true and liability whatsouver if a EL RADIOACTIVE WASTE	to Generator's and correct in all uch losses or liability		

FORM NO.:

CF-83-154

REVISION:

PAGE: EFFECTIVE DATE:

1 OF 1 02-05-04

CONTAINER BEING FILLED:

ESUN 300542

DATE BEGAN FILLING:

11-50-18

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.
- Forward to Engineering when input is complete.

A STATE OF THE PARTY OF THE PAR						
Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		6600		6600		NR 11-20-18
Drums added per pick list # 36 Soil drums	17,160			23,760	112.0	NR-11-20 18
Hoppers	7.970		A Control of the Cont			
			1.10			
	Z-,V		2/28	18		
		1	0 12	0		
Total Weight for Shipment		6600	17,160	23, 760		

^{*} Example: hoppers, drums, loose material, etc.

WASTE	EVEL RADIOACTIVI MANIFEST NG PAPER	Energy of Vions, LLC	Westinghou 8301 BLUFF HOPKINS, S	S. SHIPPER - MANE AND FACILITY Weisenghouse Building Co., LLG 880 (SLUPP RD HOPKINS, SQ 20081			COLL	LO. NUMBER 1-0211 LEGTOR CESSOR ERATOR TYPE		7. FORM 540 AND 540A FORM 541 AND 541A FORM 642 AND 542A ADDITIONAL INFORM 9. CONSIGNEE - Name 8	NATION	1 PAGE(S) (Use init number of pages)		n ell continuetion 08-0211
1. EMERGENCY TELEPHONE NUMB 1-800-424-9300		990)	OZOT GOT CONTACY EW. CAI	421 -	0657-08-0211		(Speci TELEPHO (Include A	NE NUMBER (rea Code)		EnergySolutions, I Clive Disposal Site Interstate 80, Exit Clive, UT 84029	e (Bulk Was	Transportation (TELEPHONE [Include Area Code)		Compliance
ORGANIZATION		1		I - Name and Address				-3993 NUMBER	\dashv	SIGNATURE Authorize		1 € /	(435)884-0155 DATE /	
2. 18 THIS AN "EXCLUSIVE USE" SHIPMENT? YES. NO.	3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST	1	HITTMAN 1580 Bear C Oak Ridge,	rook Ad	k Rd 37830		TNRG00034686 SHIPPING DATE 12/22/2018 TELEPHONE (Include Area Code) 1(805) 220-5817			This is to defitity that the ner	A CONTRACTOR OF THE PARTY OF TH	10. CERTIFICATION	1/25/19 described, packaged, mark	ad, and labeled and
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?	-EPÁ MANIFEST NUMBER		CONTACT Jeff Packe						1	This is to definy that the herein-nemed majests are in proper condition for large-portation score. This also cartiles that the majerials are closed irransportation and displaced as described in a descr		focusped, referred, i	and labeled and are in proper illents of 10 CFR Parts 20 a	r condition for and 61, or equivalent
If "Yes," provide Marifest Number =====>			SIGNATURE	 Authorized earrier ackno 	owledging waste i	nonipl			AUTHORIZED SIGNATUR E.W. Cauley JR Sea consignee block ba		WICE URRS Engineers	o .	DATE 12/12/2018	
11. U.S. DEPARTMENT OF TRANSPORT (Including proper shipping name, hazard o and any additional inform	class, UN ID number,	12. DOT LABEL "RADIOACTIVE"	13, TRANSPORT INDEX	14. PHYSICAL AND GHEMICAL FORM		ı				1	G. AGE ACTIVITY	17. LSA/SCO CLASS	OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE
UN 2912, Radioactive material, low spec Fissle Excepted, LLW soil	cific activity (LSA-I), 7,	NA	NA	SOLID URANIUM O	XIDE U-2	E U-234	U-235	236 U-236	U-238	7.7216E+01	2.0869E+00	LSA-I	28436 LBS; 1300 FT3	0857-08-0211
														20FT SEAVAN/ESU U300101
					-									
FOR CONSIGNEE USE ONLY The original aloned manifest resides with: E.W. Gastey Jr 5501 Bluff Rd Hopkins, SC 28001 (903) 647-3803	Ē	Record Waste Descriptil Contamination or Leaka Unexpected Exposure R Labels, Márkings, etc. Ir Container Integrity Inado Other No Violations Detected	ge Detected tates Detect adequate equate	ed B.	hazardous vaste, tibs contification as require B. TITLE: Upon accepta representations herein C. WASTE MATERIAL: respects end in accord D. WIDENNIFICATION: results from the failure			DITIONS OUS MATERIALS: Generator represents & will a waite, the stripment is also economically no as required by 40 CFR 2001, ipon asceptance at the disposal site by Energy stations have in shall thereupon thareful from 60 MATERIAL: Generator represents and warrant end in accordence with all applicable governments in the control of the Waterial Research of the Control of the Waterial Research			priate regulatory authory orgySolutions, LLC (UNIFORM LOW-LEV end EnergySolutions I or, employees and age of data supplied on the orate supplied on the	est, stong with the app sities, title to the Wes EL RADIOACTIVE W LC's facilly license. LC spaint all losses (UNIFORM LOW-LE)	ropriste fund-disposal restri te Majeriel which conforms i (ASTE MANIFEST) are true and liability whatsoever if a FEL RADIOACTIVE WASTE	otion notice and/or io Generator's and correct in all uch losses or fisbility

FORM NO.:

CF-83-154

REVISION:

1

PAGE: EFFECTIVE DATE: 1 OF 1 02-05-04

CONTAINER BEING FILLED:

ES44300/01

DATE BEGAN FILLING:

11-15-18

ALL WEIGHTS IN POUNDS

- Keep this record sheet in the desk in LLWB while this container is being filled.

Items Added *	Gross Weight	Tare Weight	Net Weight	Total Accumulated Gross Weight REMINDER: move container to flatbed before 29,000 gross lbs. exceeded	Gms U235	Operators initial and date each entry
Container Tare Weight		6260		6260		me 11.15:18
Drums added per pick list # 15 DSH 402 (werete)	6761			13,021	25.47	me 11:15:18
Hoppers 21 Soil drums	10,444	_		23,465	9.0	MR 11-15-18
					4.6	
	-					
		,				
	Sh. P		他			
		100	8/18			
		101	X			
			10			
			14.4			
Total Weight for Shipment	137 SH	6260	17,2%	23,465	30,07	

^{*} Example: hoppers, drums, loose material, etc.