

DEPARTMENT OF THE ARMY U.S. ARMY RESEARCH DEVELOPMENT AND ENGINEERING COMMAND 5183 BLACKHAWK ROAD ABERDEEN PROVING GROUND, MARYLAND 21010-5424

REPLY TO ATTENTION OF:

6 January 2005

Dr. Tom McLaughlin, Decommissioning Branch Division of Waste Management Office of Nuclear Material Safety and Safeguards U.S. Nuclear Regulatory Commission Washington, DC 20555

Dear Dr. McLaughlin,

Reference Nuclear Regulatory Commission License No. 19-10306-02, Docket No. 030-36574 for the authorization of Building 7304 located at Fort Belvoir, Virginia.

Provided as enclosure is NRC Form 314, Certificate of Disposition of Materials and the disposal records for the radioactive materials authorized by the reference NRC license. These records are identified by the date of the disposal and include the records used in the historical search for the closeout of Building 363, a facility previously authorized for the use of radioactive materials,

I am forwarding a copy of this letter to the Safety Office (AMCPE-SF), US Army Materiel Command, 9301 Chapek Road, Fort Belvoir, Virginia 22060-5527.

Questions regarding this action should be addressed to Ms. Joyce Kuykendall, RDECOM Radiation Program Manager, at telephone (410) 436-7118, by email at joyce.kuykendall@us.army.mil, or by facsimile at (410) 612-5377.

Sincerely,

JOYOE E. KUYKENDALL RDECOM Radiation Program Manager

Enclosures

NRC FORM 314 U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 3150-0028	EXPIRES: 06/30/2007		
(6-2004) 10 CFR 30.36()(1): 40.42()(1): 70.38()(1): and 72:54()(1) CERTIFICATE OF DISPOSITION OF MATERIALS	Estimated burden per response to comply with the This submittal is used by NRC as part of the basis for unrestricted use. Send comments regarding bu Services Branch (T-5 F52), U.S. Nuclear Regulation Services Branch (T-5 F52), U.S. Nuclear Branch (T-5 F52	this mandatory collection request: 30 minutes. for its determination that the facility is released refer estimate to the Records and FOLMPrivacy ory Commission, Washington, DC 20555-0001,		
CERTIFICATE OF DISPOSITION OF MATERIALS	or by internet e-mail to Infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0028), 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 by the information collection.			
LICENSEE NAME AND ADDRESS	LICENSE NUMBER	DOCKET NUMBER		
Department of the Army, US Army Research, Development and	19-10306-02	030-36574		
Engineering Command, ATTN: AMSRD-MSF, 5183 Blackhawk Road, Abedeen Proving Ground, MD 21010-5424	LICENSE EXPIRATION DATE	<u></u>		
Abedeen Frowing Ground, Nib 21010-0424	09/30/2010			
A. LICENSE STATUS (Check the This license has expired.				
B. DISPOSAL OF RADIOACT				
(Check the appropriate boxes and complete as necessary. If additional space is no The licensee, or any individual executing this certificate on behalf of the licens	ee, certifies that:			
1. No radioactive materials have ever been procured or possessed by	the licensee u nder this license.			
 2. All activities authorized by this license have ceased, and all radioact under this license number cited above have been disposed of in the a. Transfer of radioactive materials to the licensee listed below: 		ssessed by the licensee		
b. Disposal of radioactive materials:				
1. Directly by the licensee:				
2. By licensed disposal site:				
✓ 3. By waste contractor:				
US Army radioactive materials are disposed of through coordination with t Command, Safety/Rad Waste Team, ATTN: AMSOS-SF, 1 Rock Island A Manager contracts with several disposal site and radioactive waste broker.	vsenal, Rock Island, IL 61299-6000. The	DOD Radioactive Waste		
c. All radioactive materials have been removed such that any remain Part 20, Subpart E, and is ALARA.	ning residua I radioactivity is with	in the limits of 10 CFR		
C. SURVEYS PERFORMED A	ND REPORTED			
✓ 1. A radiation survey was conducted by the licensee. The survey confirmed and the survey c	ns:			
\checkmark a. the absence of licensed radioactive materials				
b. that any remaining residual radioactivity is within the limits of 10 0	CFR 20, Subpart E, and is ALAR	A.		
2. A copy of the radiation survey results:				
a. is attached; or b. is not attached (Provide explanation); or	c. was forwarded to NRC on	05/29/2002		
3. A radiation survey is not required as only sealed sources were ever p	·	Date		
✓ a. The results of the latest leak test are attached; and/or	b. No leaking sources have eve	er been identified.		
The person to be contacted regarding the information provided on this form:	······································			
NAME TITLE Joyce E. Kuykendall Health Physicist, RDECOM Radiation Program	TELEPHONE (Include Ar Manager (410) 436-7118	ea Code) E-MAIL ADDRESS joyce.kuykendall@		
Mail all future correspondence regarding this license to:				
US Army Research, Development and Engineering Command, ATTN: AMSRD-MS, 5183 Blackhav	<u> </u>	1010		
C. CERTIFYING OFF		ECT		
PRINTED NAME AND TITLE SIGNA ORE JUNE OF A SIGNA OR A SIGNA O	DM)	DATE 01/06/2005		
	AND/OR CRIMINAL PENALTIES NRG			
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL A SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY	. 68 U.S.C. SECTION 1001 MAKES IT A OF THE UNITED STATES AS TO ANY M	A CRIMINAL OFFENSE TO MAKE A ATTER WITHIN ITS JURISDICTION.		

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NRC Form 314 CERTIFICATE OF DISPOSITION OF MATERIALS

C. Surveys Performed and Reported.

Radioactive materials were stored in Building 329, the Laboratory facility, and in Building 7304, the storage vault. A Final Status Survey of Building 329 was provided to the NRC on 29 May 2002 and was accepted by the NRC Region II by letter dated July 2, 2002. Building 7304 decommissioning is currently being coordinated with NRC HQ.

Other facilities authorized to operate under this NRC license have previously been surveyed and released for unrestricted used after coordination with the NRC Region II.

Documentation of disposal and the required leak testing is provided as an attachment.

2004

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Original – N	ot Ne	gotiable	ROADWAY I	TYPRESS	410-633	-4900			ier No 5/02/	
			KONDARI I		of Carrier)	4900		Date		
TO:					FROM:					
Consignee	NU	CLEAR SOURCES	& SERVICES	S, INC	Shipper J.L		HERD & ETTS PO			C/0
Street	57	ll ETHERIDGE S	т.	<u></u>			PROVING			BCCOM)
Destination	H	OUSTON, TX	Zip Code	77087	Origin				Zip Cod	
Deuter	7	13-641-0391, R	EF SBCCOM		Vehicle					
Route: No.	+	Kind o	Packaging, Des	scription of	Articles.		Weight		· · · · · · · · · · · · · · · · · · ·	CHARGES
Shipping Units	НМ		Special Marks ar				Weight (Subject to Correction)	}	Rate	(for Carrier use only)
1	x	(RQ) RADIOACT	IVE MATERI	LAL, N.	o.s.		(1030 1	bs	70-NMFC	
		CLASS 7, UN2				1 2 2	467.1	KG	164900	-1
		NAME_OF_EACH			M -241, CS M-241/BE	=13/				
		CHEMICAL_FOR		CIUM_O	XIDE					
	1	ACTIVITY_IN_		JM CHLO		TC: 1	<u>3</u>			
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		TRANSPORT IN		т т						
		PLACARDS REQ						OR SH	IPMENT STATU 1-800-ROADWA	IS .
<u> </u>		SECUTIRY SEA	-					CALL	-009650-7	·
		U.S. DOT 2R, TYPE OF OUTE					5	i 100		
		U.S. DOT USA	/5800/B 20	WC5 OV	ERPACK, S					
		PACKAGED IN	ACCORDANCE	E_WITE_	DOT_49CFR	173_4	16(d)			
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		BILL THIRD F	ARTY TO:	J.L. S	HEPHERD &	ASSOC	IATES			
		1010 ARROYO	AVE, SAN I	FERNAND	0, CA 91	340				
REMIT C.O.D. TO:				C	$\overline{\Omega}$		1		. FEE:	·
ADDRESS	oves be		ים מעניינים אלי מאורים אל אורים אליים אורים. גער איז אראי איז איז איז איז איז איז איז איז איז א		Amit S 1x Subject to Section 7 of 2	cristions of this ship	ment is to be delivered		ECT C	
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		of stand: not a part or bill of lading te Commerce Commission.			Sourcent of height and an	i Caler Hwing Klassins	f.		FREIGHT Check Appropria	CHARGES te Box:
RECEIVED	aupiec	i lo in- classifications and jextu	illy filed rants in attest			anature of Consideration		v desc:	Freight prepartition of the Orice	
aroberty descri- said carrier (if	nced ai ne wor	odve in apparent good order. At di cartier beind understonic thro any it kard destruction of on its	ceor as noted content activations contract as	ts and conditor s' meanna arv	of contents of nacka	ages unknown an ar possess	in, marked, consilion of the prope	gnea, : m; unc	ina destined as ter the contracti	adrees to carry to its
said property shall be subje	uve: a ct to a	i is any conten of said toute a If the terms and conditions of t	ne Uniform Comestia S	s each party at Straight Sili of I	any time interested a abing bet form (1) in	n als or any d s Uniform Frei	at said property. ght Classification:	that ev s in ef	ery service to b lect on the date	hereot, if this is a 131
Shipper her shipment and	eoy ce the sar	nt, or (2) in the applicable motor (rtifies that he is familiar with a d terms and conditions are hered	it the terms and cond y agreed to by the smort	wions of the se per and accente	ac bit of lading, set if for ninself and his a	forth in the ssigns			-	
this is to toplicable regu	centry lations	that the upove named materials of the Depart pent of Transportat	s are properly classifie ion	d. Jeschbed j	ackaged, marked an		are in proper		ion for transport.	ation, according to the
	J.	L. SHEPHERD &	ASSOCIATES	5		nau	TY		,	
	cl	whit to	de		PER Ky	Konje	<u>154</u>	<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>	<u> </u>	6-2-04
Permanent po	ost effi	ce address of slupper	For fur	rther details or	SHIPPING HAZAP	RDOUS	. AS DEFINED I	N TITL	2 49 OF FEDE	AL REGULATIONS.
		· •	MATE: Part 17		ieral Regulations 19	9 CFR.				
			· .							

IEPHERD & ASSOCIATES 1010 Arroyo ane, San Fernando, California 91340-1822 818-898-2361 FAX 818-361-8095

SHIPPING DOCUMENT

TO: Nuclear Sources & Services, Inc (from NWT/Aberdeen Proving Grounds) 984929

LICENSE: TX: L0181, Amendment 43, under timely renewal

SOURCE: (RQ) 141.5 GBg (3,824 mCi.) Am-241, chemical form: Americium Oxide 0.746 GBq (20 mCi.) Cs-137, chemical form: Cesium Chloride (RQ) 2.22 GBq (60 mCi.) Am-Be-241, chemical form: Americium Oxide

PACKAGING: U.S. Department of Transportation specification 2R container, S.N. 22381, Inside a U.S. Department of Transportation specification 20WC5 Overpack. S.N. 22481 UN # 2982, Radioactive Material, n.o.s.

RADIATION LEVEL AT SURFACE: $Q \circ 4$ mR/hr

RADIATION LEVEL AT 1 METER: BKg mR/hr INSTRUMENT: Eberline E-520, S.N. 759

SURFACE CONTAMINATION: \leq 300 dpm/300 cm²

LEAK TEST: $5 \times 10^{-3} \mu \text{Ci}$.

TRANSPORTATION INDEX: MA

RADIOACTIVE LABEL REQUIRED: <u>1NT</u>

TRUCK PLACARDS REQUIRED: $\underline{\lambda}$ / \mathcal{O}

WEIGHT: 467.1 Kg / 1030 Lbs. SECURITY SEAL #: <u>23302</u>

24 HOUR EMERGENCY - CALL 1-800-424-9300

DATE: <u>(0/2/04</u>

J.L. SHEPHERD AND ASOCIATES PERFORMED BY: Relphi Jecal APPROVED BY:

J.L. Shepherd & Associates 1010 Arroyo Ave. San Fernando, CA 91340

DOT 2R Shipment - Quality Assurance Checkl	ist QUALIT	Y RECORD
S/N: 22381 Date: 6/2/04	Job No. <u> 98 4</u>	1929
TO From J2STA AT ABERDEEN	Empty: 🔨 L	.oaded:
Visual Inspection Results	<u>Accept</u>	<u>Reject</u>
External Body:	. /	i de la companya de la
1. Dents that have not penetrated the body.	<u> </u>	•
2. Welds (if applicable) are intact.	<u></u>	•
3. Primer &/or paint (if applicable),		
Closure/containment System.		•
1. Tight fit at closure interface.	\checkmark	•
2. Dents that have not penetrated materials.		*
FOR OUTGOING SHIPMENTS, ATTACH HEALTH PHYSICS FINDETERMINATIONS (QAM/QP 13.4)	JAL SURVEY, ROUTINE	3
Markings		
USA-DOT-2R, RADIOACTIVE MATERIAL. Serial Number	4	
Security Seal Number: 3230 2 33024		
Outer Smear Result $\underline{M}) \subset \underline{\mathbb{R}}$ List smears as $\leq 300 \text{ dpm/}300 \text{ cm}^2 \text{ or MDCR}$. Smear should be a results within 72 hrs, conditional if it has not been in a contaminate		se outgoing smear
*Any reject is an indication that the package is not in compliance.	Repair may be required	1.
Notify Quality Assurance immediately.	· ·	

If all "accept" lines are checked, the 2R may be kept in service. Place original copy in appropriate 2R shipping file.

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FIELD SHIPMENTS: FAX TO QA FOR APPROVAL BEFORE SHIPMENT.

INSPECTED BY: JAN	Цате: 6/2/04
REVIEWED BY:	DATE:

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Form 13-1-3 Rev: 1, 5-0-03

J.L. Shepherd & Associates 1010 Arrovo Ave.	QUALITY RECORD
San Fernando, CA 91340 To /Fr	TOT JISHA AT ABERDEE()
Quality Assurance Checklist for Overpack Shipment, 20WC 3 through 5	DOT 20WC 5
S/N: Empty: <u>}</u> Loaded:	Job No. <u>984929</u>
 Date:	Accept Reject
4. Lag Bolts. Installed and undamaged.	<u> </u>
Break Line/Lid Joint. These may not be co-planar with the end of the inner container.	
6. Nuts. Must be steel, locking type.	<u> </u>
7. Washers:	<u> </u>
8. Paint. Minor chipping acceptable. Large gouges, breaks, or Dings in excess of ½" deep require repair and are not acceptable.	/
9. Skid/Pallet. Skid/Pallet is functional. Fittings are secure. No fork holes through base plate.	· <u>/</u> , <u> </u>
10. Markings. Trefoil engraved plate. (USA-DOT-20-WC, TYPE B, RADIOACTIVE MATERIAL.	
11. Tare Weight Flate: 740 bs.	
12. Maximum Gross Weight (See Stenciled information on Overpack).	
13. Serial Number Plate Attached.	<u> </u>
14. JLS&A Address Stencil	<u> </u>
15. RQ, Radioactive Material Special Form N.O.S. or Radioactive Material N.O.S. (Normal Form) Stencil	
16. Security Seal (If Loaded). Number: 1/14	<u></u>
17. Health Physics: Outer Smear Result: MDCK(List as ≤300dpm/3	00cm ² or MDCR. Smear should be

17. Health Physics: Outer Smear Result: ANDCH___ (List as ≤300dpm/300cm² or MDCR. Smear should be 300cm² wipe).

18. For any outgoing shipment, the Health Physics Final Survey Routine Determinations Form must be completed and included. (See QAM/QP 13.4)

*Any reject indication results in cuarantine of the package. RED TAG. DO NOT SHIP. Repair may be required. Notify Cuaility Assurance. If all eighteen "accept" lines are checked, the overpack may be kept in service. Send original copy to JLS&A Quaity Assurance for filing in appropriate overpack shipping file.

INSPECTED BY: DATE: QA APPROVED:

NOTE: The Quality Assurance Department maintains records of annual conformance inspections relative to the maintenance and use of this package.

Form 13-1-4, Rev: 1. 5-9-03

QUALITY RECORD

J.L. Shepherd & Associates 1010 Arroyo Ave. San Fernando, CA 91340

SHIPPING CHECKLIST 984929 ABERDEEN -> NSS/

Address Labels attached to package?
 Shipping Document attached?
 Radioactive Materials Stenciling visible? (Covered with paper if empty)
 Radioactive Materials Label with Transport Index attached? (N/A if Empty)
 Completed Health Physics Survey Form included?
 Completed Overpack Outgoing Inspection Form included?
 Final QA paperwork and Operational check paperwork for item included?
 Are Certifications included for inner package (DOT 7A)? (N/A if empty). 2D
 Overpack documentation included? (See Paragraph 5.4, QAM/QP 13.4) (Not required of a Type A Quantity).
 Other documentation required for Air or International Shipments included? (See Paragraph 5.3, QAM/QP 13.4).
 Carrier: Report

NOTE: Direct questions concerning any of the above requirements to the Quality Assurance Department.

Jocab Prepared E

Reviewed and Released By:

Date:	

Form 13-4-1 Rev: 1, 5-9403 J.L. Shepherd & Associates 1010 Arroyo Ave. San Fernando, CA 91340

DOMESTIC MOTOR FREIGHT HEALTH PHYSICS FINAL SURVEY, ROUTINE DETERMINATIONS, CHECK LIST FOR CLASS 7, RADIOACTIVE MATERIAL SHIPMENTS

This Survey Check List is to be used to generate Shipping Document & Bill of Lading information & should be attached to all copies of the Shipping Document for record keeping distribution.

Customer: NSST (DWT (ABERDEEN) Job #:	984929
License #: <u>LOISI</u> Expiration Date	under Derin
EMPTY: (If empty, affix UN2910 label TO EACH SIDE and proceed to page 2.	YES / O
Does this shipment contain DU? (Check drawing) If yes, list on Shipping Document and Bill of Lading:	YES / YO
Does this shipment contain any other hazardous material? If yes, list on Shipping Document and Bill of Lading as:	YES / NO
Is this shipment made in another type of Class 7 DOT approved packaging as Excepted Packages, LSA or SCO: If yes, list on Shipping Document as:	g, such YES / XO
License Review, check customer license against SS&D sheet for source &/or device correct & JLS&A paperwork, as applicable.	e info to determine if license is
Ship to info is on license: (Circle appropriate response) Isotope is correct: Capsule type is correct: Curie amount is correct: Device type is correct:	YES NO / NA ØES / NO / NA ØES / NO / NA YES / NO / NA YES / NO / NA
Source information	
CS-137 RQ = 1 Ci., CO-60 RQ = 10 Ci. (See 49CFR172.101 Table 2 for other isotope	
Capsule type(s): $\underline{WP}_{S_{1}}$ CS-137 20 MCi (0.02 P1.54	(43.7086Bq) (3) = 0.746Bq
Special Form info on file? YES NO Froper shipping name: Radioactive material special form, n.o.s. ERG # 164 should be attached to driver's copy of Bill of Lading or in Hazi	UN2974: YES / NO mat pouch
If NO, the shipment must be made as normal form: Proper shipping name: Radioactive material. n.o.s. ERG # 163 should be attached to driver's copy of Bill of Lading or in Haza	UN2982: YES NO mat pouch. - bis My completed who stauloy

Form 13-4-2. Rev: 1, 5-9-03 Page 1 of 2

J.L. Shepherd & Associates 1010 Arroyo Ave. San Fernando, CA 91340	QUALITY RECORD
Packaging Information	
ったいい DOT 7A INCLUDED? (Circle Correct Response) DOT 7A S.N.? <u>2235</u>) DOT 7A check list complete? (Attach copy). Weight in label displayed as: "kg/lbs" on 7A? って ったNote: per 49.172.310 - gross wt. over 100 lbs. must be on package DOT 7A Cert on file:	(YES / NO who s/2010y (YES / NO YES / NO under 100 lbs (YES / NO who s/2010y (YES / NO who s/2010y YES (NO) who s/2010y
TYPE "A" QUANTITY? (A ₁ Cesium-137 = 54.1 Curies / A ₁ Cobalt-60 = 10.8 Curies) For of Bill of Lading, Type A shipment: 7A's are packaged per 49CFR	173.415
TYPE "B" QUANTITY? 20WC Series to be used (for shipment over A_1 quantities): if YES, is the 20WC Outgoing Inspection Check List complete: 20WC must be inspected before 7A is loaded into it, attach copy. SEI Shipping must have a completed copy before truck can be called.	(12) / NO/ mfs s/20/64 (12) / NO (12) / NO (12) / NO (12) / NO RIAL NO: 2248/ mfs
Total Curies: <u>3,884 mC</u> AM-241 JO MG Co-137 The maximum allowable is 100 watts for a 20WC. Do not ship in this package if Curie total is over 100 w. Cesium-137 = 21,500 Ci. = 100 watts / Cobalt-60 = 6,50 For Bill of Lading, Type B shipment: special form is packaged per 49C (2R) is packaged per 49CFR173.416(d).	atts. 00 Ci. = 100 watts
SURVEY DATA Radiation survey for shipment on loaded and complete package: JLS&A Instrument used: A Radiation Level at Surface: Radiation Level at 1 meter from Surface: Radiation Level at 1 meter from Surface: Radioactive (Diamond) Label required? Type: 2 each Diamond Labels on shipment? Truck placards required? Security Seal # assigned: 233075	, .
Surface Contamination on any empty or loaded package shipped: JLS&A Scaler or Survey Instrument Used: <u>520</u> S. QA Cal. Due date: <u>7/5/04</u> Surface contamination: <u>AADC</u> (Use ≤300dpm/300cm ² removable contamination (maximum allowable))	.N.: 7.58
Package Shipment Weight: 467.1 kg (1630 lbs) webs $5/2$ 20WC maximum gross weights: $= -1 = 500$ lbs, $-3 = 1,000$ lbs, $-4 = 2,000$ lbs, $-5 = 4,000$ lbs, Note: If different HP personnel perform individual surveys or verifications date that section. Survey performed by: Date: b/ Reviewed & Approved by: Date:	

Form 13-4-2. Rev: 1, 5-9-03

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J.L. Shepherd & Associates 1010 Arroyo Ave. San Fernando, CA 91340

DOT 2R Shipment - Quality Assurance Check	dist QI	UALITY REC	ORD
S/N:Bate: 6/2/04	Job No.	984929	
To/From: NSST FROM ABERDEEN	Empty: _	Loade	d: <u>×</u>
Visual Inspection Results	<u>Ac</u>	cept	<u>Reject</u>
External Body:		<u>_</u>	
1. Dents that have not penetrated the body.		\checkmark	•
2. Welds (if applicable) are intact.		$ _$	•
3. Primer &/or paint (if applicable).			
Closure/containment System.		_	
1. Tight fit at closure interface.		\checkmark	•
2. Dents that have not penetrated materials.		<u> </u>	*
FOR OUTGOING SHIPMENTS, ATTACH HEALTH PHYSICS F DETERMINATIONS (QAM/QP 13.4)	INAL SURVEY.	ROUTINE	
Markings			-
USA-DOT-2R, RADIOACTIVE MATERIAL. Serial Number			
Security Seal Number 233024			
Outer Smear Result: <u>MDCP</u> List smears as ≤ 300 dpm/300 cm ² or MDCR. Smear should be results within 72 hrs, conditional if it has not been in a contamin	e a 300 cm ² wipe ated area.	. OK to use outg	oing smear
*Any reject is an indication that the package is not in compliance	e. Repair may b	e required.	
Notify Quality Assurance immediately.			
If all "accept" lines are checked, the 2R may be kept in service. shipping file.	Place original co	py in appropriate	2R
FIELD SHIPMENTS: FAX TO QA FOR APPROVAL BEFORE	SHIPMENT.		
INSPECTED BY: COM I AUADATE: 6/2/6	<u>U</u>	·	

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REVIEWED BY:_

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DATE:

Form 13-1-3 Rev: 1, 5-9-03

J.L. Shepherd & Associates	QUALITY RECORD
1010 Arroyo Ave.	
San Fernando, CA 91340	
Quality Assurance Checklist for Overpack Shipment, 20WC 3 through 5	TO From: <u>NSSI FROM ABERDEED</u> DOT 20WC <u>5</u>
S/N: <u>22481</u> Empty: Loade	d: X Job No. 984929
 Date:	
5. Break Line/Lid Joint. These may not be co-planar with the en the inner container.	d of
6. Nuts. Must be steel, locking type.	
7. Washers:	
8. Paint. Minor chipping acceptable. Large gouges, breaks, or Dings in excess of ½ deep require repair and are not acceptable.	
 Skid/Pallet, Skid/Pallet is functional. Fittings are secure. No fork holes through base plate. 	
10. Markings. Trefoil engraved plate. (USA-DOT-20-WC, TYPE B, RADIOACTIVE MATERIAL	<u> </u>
11. Tare Weight Flate: <u>TU()</u> bs.	
12. Maximum Gross Weight (See Stenciled Information on Over	pack).
13. Serial Number Plate Attached.	
14. JLS&A Address Stencil	
15. RQ, Radioactive Material Special Form N.O.S. or Radioactive Material N.O.S. (Normal Form) Stencil	· <u>·</u>
16. Security Seal (If Loaded). Number: <u>133025</u>	
	as ≤300dpm/300cm² or MDCR. Smear should be
18. For any outgoing shipment, the Health Physics Fin be completed and included. (See QAM/QP 13.4)	al Survey Routine Determinations Form must

*Any reject indication results in quarantine of the package. RED TAG. DO NOT SHIP. Repair may be required. Notify Quality Assurance. If all eighteen *accept* lines are checked, the overpack may be kept in service. Send original copy to JLS&A Quality Assurance for filing in appropriate overpack shipping file.

	MI Jun	1 DATE: 6/2/04	
	····//		-
QA APPROVED:		DATE:	

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NOTE: The Quality Assurance Department maintains records of annual conformance inspections relative to the maintenance and use of this package.

Form 13-1-4, Rev: 1, 5-9-03

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RECEIVED JUL 2 3 2004



NSSI/SOURCES & SERVICES, INC.

P.O. BOX 34042 HOUSTON, TEXAS 77234 PH: (713) 641-0391 www.nssihouston.com FAX: (713) 641-6153

July 16, 2004

Attn: Victoria Croll New World Technology 448 Commerce Way Livermore, CA 94550

TEL 925 443-7967 FAX 925 443-0119

Dear Victoria:

Per your request, I have attached copies of the acceptance documents for the Ft. Belvoir Sr-90 source.

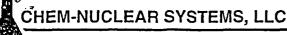
If you need additional information or clarification, please contact me.

Sincerely, ery, bert D. Hallaghupila D. Gallagher

Robert D. Gallagher President

RDG/vla Ref. #0716401.let Rdg 07164A1

Subsidiary of Duratek



740 Osborn Road • Barnwell, South Carolina 29812

27 June, 2004

Robert Gallagher NSSI 5711 Etheridge Street Houston, TX 77087

Reference: Radioactive Waste Shipment – Shipment ID Number: 12377

Dear Mr .Gallagher,

As required by 10 CFR, Part 20 (Appendix F), South Carolina Title A (3.55.3.4.1), and Barnwell Waste Management Facility Disposal Criteria (S20-AD-010), this letter is notification that the shipment referenced above has been received at the Barnwell Waste Management Facility. A signed copy of this shipment's Form 540 is enclosed.

JUL - 1 2004

When this shipment is inspected and disposed of, a letter noting the shipment's compliance with the site's license and waste acceptance criteria will be sent to you.

If you have any questions regarding this letter, please contact the Prior Notification Plan Department at (803) 541-5017.

Sincerely,

James W. Latham Vice President, Barnwell Operations

enclosure

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Subsidiary of Duratek

HEM-NUCLEAR SYSTEMS, LLC

740 Osborn Road • Barnwell, South Carolina 29812

7 July, 2004

JUL 1 2 2004

Robert Gallagher NSSI 5711 Etheridge Street Houston, TX 77087

Reference: Radioactive Waste Shipment - Shipment ID Number: 12377

Dear Mr. Gallagher,

As required by 10 CFR, Part 20 (Appendix F), South Carolina Title A (3.55.3.4.1), and Barnwell Waste Management Facility Disposal Criteria (S20-AD-010), this letter is notification that the shipment referenced above has been disposed of at the Barnwell Waste Management Facility. This waste meets all the Barnwell Waste Management Facility acceptance requirements and was disposed of in accordance with the Barnwell Site's License.

If you have any questions regarding this letter, please contact the Prior Notification Plan Department at (803) 541-5017.

Sincerely,

James W. Latham Vice President, Barnwell Operations

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Style F15 LABEL ASTER (800) 621-5808 www.labelmaster.com

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ORIGINAL-RETURN TO GENERATOR

U.S. NUCLEAR REGULATORY COMMISSION ADDITIONAL NOTES Manifest Number USA 2002-041-01 PAGE 1

2

The waste was loaded during light rain and may contain trace moisture/condensation.

Truck was loaded in Snow storm

EMERGENCY RESPONSE INFORMATION

EMERGENCY RESPONSE GUIDE 162

EMERGENCY CONTACT: CHEMTREC (800) 424-9300

Shipping Date: 1/30/0,3	Manifest No.: <u>Í</u>	154-2002-02/1
Proper Shipping Name	Hazard Class	ID Number
Radioactive Material, LSA, n.o.s., Radioactive Material, SCO,	7 7	UN2912 UN2913

POTENTIAL HAZARDS

HEALTH

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability is related to potential hazards of material.
- Undamaged packages are safe; contents of damaged packages may cause external and/or internal radiation exposure.
- Low radiation hazard when material is inside container. If material is released from package or bulk container, hazard will vary from low to moderate. Level of hazard will depend on the type and amount of radioactivity, the kind of material it is in, and/or the surfaces it is on.
- Some material may be released from packages during accidents of moderate severity. This poses little risk to people.
- Released radioactive materials or contaminated objects usually will be visible if packaging fails.
- Some exclusive use shipments of bulk and packaged materials will not have "RADIOACTIVE" labels.
- Placards, markings, and shipping papers provide identification.
- Some packages may have a "RADIOACTIVE" label and a second hazard label. The second hazard is usually greater than the radiation hazard: so follow this guide as well as the response guide for the second hazard class label.
- Some radioactive materials cannot be detected by commonly available instruments. Runoff from control of cargo fire may cause low-level pollution.

FIRE OR EXPLOSION

- •Nitrates are oxidizers and may ignite other combustibles (see guide Some of these materials may burn, but none of them ignites readily. 141).
- Uranium and Thorium metal cutting or granules may ignite spontaneously if exposed to air (see Guide 136).

PUBLIC SAFETY

- Call Thom Dias at (925) 443-7967
- Priorities for rescue, life saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.
- Radiation authority must be notified of accident conditions, and is usually responsible for radiological decisions.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

PROTECTIVE CLOTHING

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

EVACUATION Large Spill

- Consider initial downwind evacuation for at least 100 meters (330 feet).
- When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions. • EMERGENCY RESPONSE

FIRE

Fire

- Presence of radioactive material will not change effectiveness of fire control techniques.
- Move containers from fire area you can do it without risk.
- Do not move damaged packages; move undamaged containers out of fire zone.

Small Fires

Dry chemicals, CO2, Water spray or regular foam.

Large Fires

- Water spray, fog (flooding amounts).
- Dike fire-control water for later disposal.

SPILL OR LEAK

Do not touch damaged packages or spilled material.

Liquid Spills

- Cover with sand, earth or other non-combustible absorbent material.
- Cover powder spill with plastic sheet or tarp to minimize spreading.
- Dike to collect large liquid spills.

FIRST AID

- Medical problems take priority over radiological concerns.
- Do not delay care and transport of a seriously injured person.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons who contacted released material may be a minor contamination problem to contacted persons, equipment and facilities.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

The above information is intended to satisfy the requirements of 49 CFR parts 172.600, 172.602 & 172.604.

•Apply artificial respiration if victim is not breathing.

•Use first aid treatment according to the degree of the injury.

INSTRUCTIONS FOR EXCLUSIVE USE OF VEHICLES

Shipment No. 1(5,4 2.002 - 04/-1

Date 1/30/03

CFR 49, sections 173.403 and 173.441(b) and (c), require that specific instructions for maintenance of exclusive-use shipments controls be provided by the shipper to the carrier. These instructions must be included with the shipment documents.

The following instructions shall be complied with for all exclusive-use shipments.⁴

The shipper must be notified prior to changing of the tractor or making fifth wheel adjustments.

- Do not move or transfer packages on the transport vehicle from the original configuration.
- The shipment must be loaded by the consignor and unloaded by the consignee from the transport vehicle on which it was originally loaded.
- The shipment must be blocked and braced so as to prevent leakage or shifting of load under incidents normal to transportation.
- If placards are required, the vehicle must be placarded on four (4) sides of the transport yehicle in a clearly visible position with the appropriate placards.
- Notify shipper immediately if the vehicle is involved in an accident or is required to apply emergency breaking which could shift the load and change radiation levels.

In case of accident, vehicle malfunction or deviation from the above instructions, immediately contact one of the following CABRERA employees:

Todd Eastman	Office	(803) 356-3717
	Home	(803) 808-6966
	Cell	(860) 508-0455

Deviations from these instructions are violations of federal laws and could result in carrier penalties.

I have read and understand the above statements concerning the maintenance of exclusive use vehicles.

- 30-0 -

-29-

TRUCK INSPECTION CHECKLIST		
CARRIER: ROR Trucking		
TRACTOR NO.: 5885		
TRAILER NO.: 3830085RR TYPE: Flutbed		
ITEM	SAT	UNSAT
INCOMING SURVEYS COMPLETE, WITHIN LIMITS AND DOCUMENTED		
VEHICLE IS FREE OF DIRT AND DEBRIS	68.	
INTERIOR SURFACES ARE FREE OF PROTRUSIONS	41	
TIRES - MINIMUM 3/32" OF TREAD	1.4	
WHEELS AND RIMS - LESS THAN 20% BROKEN OR MISSING BOLTS	it -	T
ALL LIGHTS ARE OPERATIONAL		L
ENSURE BRAKES (NORMAL AND EMERGENCY) AND LOW AIR WARNING ALARMS OPERATIONAL	62-2	
FRAME IS FREE OF CRACKS OR BREAKS	HC-	I
HORN IS OPERATIONAL	U:	I
WINDSHIELD WIPERS ARE OPERATIONAL	115	I
DRIVER HAS COMPLETED HIS DAILY SAFETY INSPECTION	112-	1
VEHICLE IS LICENSED AND PERMITTED FOR THE STATES IT MUST TRAVEL THROUGH	(E.	
REMARKS:		
SIGNATURES: Tedel Control State		
INSPECTOR: DATE DATE		í
DRIVER: John 9. Bolling h DATE 1-30-03		

VEHICLE SURVEY REPORT

SHIPMENT SURVEY FORM

Date: $1/3c/c_3$	Time: 13:42	Surveyor (printed name): E	ASTIMA
Surveyor (signature):	Johne	Reviewed by: NA	Date: NA
Purpose of Survey: ,.	C. I Gorns Same	1. 1. 1 . S. + Let 2.	-:/(
Location:	16/7 19110		3
	INSTRUM	ENTS USED	2
MODEL NO.	SERIAL NO.	CAL. DUE DATE	BKGRD
1. Dicron U.Rem	B8374	6/18/03	12 UR for
2. Madel 3/1/4-9	79511 137499	12/3/03	60 can
3.			

ITEM OR LOCATION	.(Dose Rate		nination	Distance
* Smear locations are circled	\$	mR.hr- LiR/.		/minute	or smear
	L'Mkr.	per 10)0 cm2	location	
			Alpha	B-G	
1. Max D/R on the sides of the vehicle		12 icr/no	NA	NA	• 1"
2. Max D/R 2- M from the sides of the vehicle		12	1		2-Meter
3. Max D/R in the occupied portion of the cab		12			Field
4. Max D/R on the underside of the vehicle		15			1"
5. Max D/R on the top of the vehicle		23			1"
6. Max D/R on the containers' surface		85	X	*	1"
7 Smears of the vehicle prior to loading		NA	ND	ND	smear
8 Smears of containers prior to loading		¥	Y	Y	smear
9.					
10.				1	
11.					
2 Meters <u>12</u> Surface <u>12</u>	-12 -12		<u>12</u> <u>]2</u>	Su	rface 2 M 2_ 1Z

Surface		1.5			12 12
	Cab 12	Top 23	- Bottom <u>84</u>		12 12
Surface 2 Meters		17	12	12 12	
Remarks:					

SHIPMENT ACKNOWLEDGMENT

Consignee:

Please sign below after receiving and accepting this shipment. If a NRC^{*} form 540 is included with this shipment, please sign block 9, "Authorized consignee acknowledging waste receipt."

Please fax both to:

CABRERA Services, Inc. FAX: (803) 356-3717

Shipment No. :	USA 2002-041
Manifest No. :	USA 2002-041
Consignee:	Perma-Fix of Florida, 1940 N.W. Place, Gainesville, FL 32606
Date of Shipment:	Thursday, January 30, 2003

Signature of Consignee:	
Date of Receipt:	

This above information is intended to satisfy the requirements of 10 CFR 20, appendix F.

(7-2001) UNIFORM LOW-LE WASTE I	EVEL RADIOACT MANIFEST	ULATORY COMMISSION	US Army, SBCCOM Radiation Lab.				TIMATION # 01211 DLLECTOR ROCESSOR	7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) 8. MANIFEST NUM NRC FORM 541 AND 541A 1 PAGE(S) (Use this number pages) NRC FORM 542 AND 542A None PAGE(S) USA 2002-041-01 ADDITIONAL INFORMATION None PAGE(S) USA 2002-041-01				1	
1. EMERGENCY TELEPHONE NUMBER (Inc.	G PAPER		USER PERMIT NUMBER SHIPMENT NUMBER Profile # RS 3146 USA 2002-041			41 (Sp	GENERATOR TYPE 9. CONSIGNEE - Name and Facility (Specify) G Perma-Fix of Florida				CONTACT Mr. Raymond Whittle		
(800) 424-9300 ORGANIZATION			CONTACT Mr. Todd Eastman, CABRERA				HONE NUMBER e Area Code) 158-3717	Gainesville, FL 3	I940 N.W. 67th Place Jainesville, FL 32606			TELEPHONE (Include Area Code) (352-373-6066	
Chemtrek 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?	3. TOTAL NUMBER OF PACKAGES IDENTIFIEL		6. CARRIEF R & R Truch PO Box 545	R – Name and Address ling, Inc.			D. NUMBER 000501973	SIGNATURE - Autho	ized consignee acknowle		DATE .		
YES NO	ON THIS MANIFEST	· ·	Duenweg, h			01/30/		are in proper condition fo	erein-named materials and transportation according	to the applicable regul	lescribed, packaged, marking the lations of the Department of the	Transportation.	
4. DOES EPA REGULATED YES WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHEPKENT? 02041			CONTACT Don Ritchie				HONE e Area Code) 125-6885	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 equivalent state regulations.					
If "Yes," provide Manifest Number ====>	If "Yes," provide Manifest Number =====>		SIGNATURE - Autorized carrier acknowledging wester receiption of the Helling Dely.		neceipt DATE	30-03	AUTHORIZED SIGNAT	URE TUCICI EASTINIA	USAMY	ttor , 0.50	DATE 1/30/03		
11. U.S. DÉPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)		12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. 7 PHYSICAL AND CHEMICAL FORM	e		15. INDIVIDUAL RADIONUCLIDES		16. TOTAL PACKAGE ACTIVITY (MBq)	17. LSA/SCO CLASS	718. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE	
Waste, Radioactive Material, LSA, n.o.s. (RQ D008), 7, NA UN2912 (radioactively contaminated lead)		NA	NA	Solid Metal Alloy	An	n-241 Cs-137	NI-63 Tc-99	U-nat	5.4995E-01	LSA-II	5040 LBS; 92 FT3	B-1	
•													
FOR CONSIGNEE USE ONLY				<u></u>			·						
	2 9												

NRC FORM 540 (7-2001)

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managements and sources are sources, and a person is not required to respond to, the 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													2	. MANIFEST NUI	MBER				
(7-2001)	ODM I	OW-LEV					PACKAGES	NET WASTE VOLUME	NET WASTE WEIGHT				ICLEAR MATE		1		USA 200	02-041-01	
		ASTE M			VL.		CONTAINER	s (m3)	(kg)	0.	233	U-235		Pu	Total	3	. PAGE 1 C	F 1	PAGE(S)
CONTAINER AND WASTE DESCRIPTION							1	0.45	1987	N	P	NP		NP	NP	Ľ			
										ACTIMITY		·			SOURCE		. SHIPPER NAM		
Additional Nuclea				•	r Control, T	ransfer and	ALI	LNUCLIDES	TRITIUM	c	-14	Tc-99		1-129	(kg)		US Army, SBCC	JM Kadiat	ion Lab.
		Disposal of R	adioactive \	Naste			5.4	4995E-01	NP	N	P	2.7528E-01	r	NP	1.5300E-0	7	Confirmation # 01211 SHIPPER ID NUMBER		
		DISPOSAL CONT	NINER DESCR	PTION				<u></u>				RIPTION FOR EAC		E IN CONTAINE			-	NUMBER	16. WASTE CLASSIFI-
D. CONTAINER	CONTAINER	/ .	o. WASTE	SURFACE	SURF		11.	PHYSICAL DESCRIP	13. SORBENT	14.	CHEMI	CAL DESCRIPTION	WEIGHT	15.	RAD	OLOGICAL	DESCRIPTION		CATION AS-Class A
IDENTIFICATION NUMBER/	DESCRIP- TION	VOLUME	AND CONTAINER		CONTAMI (MBq/10		WASTE DESCRIP-	APPROXIMATE WASTE	SOUDIFICATION STABILIZATION	•	HEMICAL F		*		INDIVIDUAL RADION	VUCLIDES A	ND ACTIVITY (mbQ) A	ND	Stable AU-Class A
GENERATOR ID NUMBER(S)	(See Note 1)	(m3)	WEIGHT			BETA-	TOR	VOLUME(S) IN CONTAINER	MEDIA		2211107		CHELATING AGENT				TAINER TOTAL ACTIVIT	Y	Unstable B-Class B
	(See Note 1)	(113)	(ka)	✓ (µSv/hr) (mSv/hr)	ALPHA	BETA- GAMMA	(See Note 2)	(Em)	(See Note 3)				IF > 0.1%						C-Class C
B-1/Belvoir	2	2.61	, 2286	1.0000E+00	<3.6740E-08	<3.6740E-05	28,59-Rad oactively	0.45	100	Metal A	loy/None Pre	sent	0	Am-241 Cs-137	1.9869				AU
	1						ed contaminat							Ni-63	1.0804	E-04			
							Leed,59-P ROFILE/C							Tc-99 U-nat	2.7528 6.8450		5300E-07 kg]	•	
														Total	5.4995E-01	MBq			1
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	Note 1: Container Description Codes. For containers/ waste requiring disposal in approved 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.								wed by "-S."										
the numerical code mus	t be followed b	y -OP."	20.	Charcoal Incinerator Ash		Demolition Rubb		38. Evaporator Bo 39. Compactible 7	ttoms/Sludges/Conce	ntrates	Porall	sononicadon medi	e, une venuor (manu acturer) a	na prana name mu		enuneu in item 13, CO		E REQUIRED.
1. Wooden Box or Crate 2. Metal Box	9. Demin 10. Gas C	ylinder	22.	Soli	31.	Cation Ion-exche Anion Ion-exche	nge Media	40. Noncompaction	le Trash		Sorptic	n					Solidification		
3. Plastic Drum or Pail 4. Metal Drum or Pail	12, Unpec	Inpackaged Wasti kaged Component	. 24.		33.	Mixed Bed Ion-e	quipment	42. Biological Mat	erial (except animal c	arcass)	60. Sp 61. Ce			. Chemsil 30 . Chemsil 50	74. Petroset 75. Petroset II	89, Other Describe i			Ester Styrene . Describe
5. Metal Tank or Liner 6. Concrete Tank or Liner		ntegrity Container Describe in Item	6, 26.	Aqueous Liquid Filter Media	35.	Organic Liquid (e Glassware or La	bware	43. Activated Mat 59. Other, Descri	be in Rom 11,		62. Flo		vico 71	. Chemsil 3030 . Dicapert HP20	75, Aquaset	Item 13, or additional	r (encepsulation)) în ter	m 13, or ional page
7. Polyethiene Tank or 8. Fiberglass Tank of Line	07 20	dditional page	27.	Mechanical Filter EPA or State Ha		Sealed Source/D Paint or Plating	Device	or additiona	l page		63. HI			. Dicapert HP50		page.	93. Vinyl Chloride		e Required.

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8. Fiberglass Tank of Liner NRC FORM 541 (7-2001)

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2001

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July 11, 2001

US Army SBCCOM Attn: Joyce Kuykendall AMSSB-RCB-RS 5183 Black Hawk Rd. Aberdeen Proving Grounds, MD 21010

Ms. Kuykendall,

This is to acknowledge receipt of the below-referenced nuclear gauge for disposal under North Carolina Radioactive Materials License #032-0182-1. You should retain this letter in your files to document transfer of the gauge.

Model: 3411

S/N: 8856

RECEIVED: June 27, 2001

Any questions may be directed to me at (919) 485-2244

Sincerely, tarrel

Linda Farrell Service Department Clerk

Troxler Electronic Laboratories, Inc. • Troxler International, Ltd.

3008 Cornwallis Road, P.O. Box 12057, Research Triangle Park, North Carolina 27709, U.S.A. Telephone 919/549-8661 • FAX 919/549-0761



DEPARTMENT OF THE ARMY U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND 5183 BLACKHAWK ROAD ABERDEEN PROVING GROUND, MARYLAND 21010–5424

REPLY TO ATTENTION OF

AMSSB-RCB-RS

MEMORANDUM FOR RECORD

SUBJECT:

BILL OF LADING

for Troxler Moisture Density Gauge

Name of Shipper:

Lindsey Bender, SBCCOM AMSSB-RCB-RSR 5905 Putnam Road, Suite 1 Fort Belvoir, VA 22060-5847

NOS, 7, UN 2974

RQ, Radioactive Materials, Special Form,

Special Form Cs-137 0.3 GBq (7.8 mCi) Special Form Am-241:Be 1.48 GBq (40.0 mCi)

POC: Joyce Kuykendall SBCCOM AMSSB-CB-RS 5183 Black Hawk Rd APG, MD 21010-5424 Phone: 410-436-7118

Description of Contents:

TYPE A Package

Isotope & Activity:

Package:

Labeling: Radioactive Yellow II Label

Transport Index:

*****EMERGENCY CONTACT(919)839-2676*****

TROXLER, Research Triangle Park, NC

Ft. Belvoir (703) 704-2807/1988/1979, Pager (703) 826-5051 Home #s (703) 360-3259

TI = 0.6

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulation of the Department of Transportation.

Shipper

2001

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Pie	ase p	rint or	type. (Form designed	d for use on elite (1	12-pitch) typewriter.)				•	Form Approved.	OMB No.	2050-0039.			
			NFORM HAZA WASTE MANI		1. Generator's U			nifest cument No.				n the shaded areas ed by Federal law.			
	3. Generator's Name and Mailing Address Directorate of Installation Support; Environmental/Natural Resource Division, 9430 Jackson Loop, Swite 107 Fort Belvoir, VA 22060-5/30 B. State Generator's ID														
	4. Generators Filine (7DS) BUG-ODZD (Ann Engel Barger)														
	5. Transporter 1 Company Name 6. US EPA ID Number C. State Trans										sporter's ID # 360 - 23 - 6885				
											e Transporter's ID				
	9.	Desic	nated Facility Name	and Site Addre	255	10. US	EPA ID Numb	er		F. Transporter's Phone G. State Facility's ID					
	Pe	sm	NW 67+4	orida.			2		1						
			iesville, Fl		6	FLD9	8071	1.07.1		acility's Phone 52-373					
G	11.	USE	OT Description (Inc	luding Proper S				12. Conta No.		13. Total Quantity	14. Unit Wt/Vo	Waste No.			
E N E R	a.	X	Waste, Urai	yl Nitrat	re, solid, 7	,5.1,41	12981					D001			
A	b.		Waste, fla	mmable	iquid nos	Costai	is to lugar	0.0.1	D.M	0.0.0.1.	5 7	:F005,			
O R		X	Waste, fla Dool), 3,41 radidacti	V1993, PG Ve. Mate	II, Limit	red qua	ntity of	0.0.1	DM	0.01.6.	OP	DOOI			
	c.				••	· • ·· ·		•	-						
	d.				· · · · · · · · · · · · · · · · · · ·		• -			· ·	: .				
	J. Additional Descriptions for Materials Listed Above 11 a - Profile # RS 1657 11 b Profile # RS 1658 15. Special Hangling Instructions and Additional Information														
			<110#162 116#128 Argency Zª	the Cond	hat: Ch	entre c	(800)4	174-0	2 20	`					
	[16.	GENE prope	ERATOR'S CERTIFICAT r shipping name and are ding to applicable intern	ION: I hereby decla classified, packed	re that the contents of marked, and labeled,	this consignment and are in all re	it are fully and ac	curately descri	ibed abo	ive by		<u></u>			
		econo future	omically practicable and	t that I have sele h and the environ	cted the practicable i ment; OR, if I am a	nethod of treatr small quantity g	nent, storage. or	disposal curi	rently av	vailable to me w	hich minii	have determined to be mizes the present and generation and select			
┢			ted/Typed Name	Ela	7 4		hature	sa.4	6	14.40	, ,	Month Day Year			
F	17.		nsporter 1 Acknowle				Jana	<u>54, 2</u> 2		non	\sim	10827101/			
RANSP			ted/Typed Name				latere	$\overline{\Omega}$				Month Day Year			
	<u>ر</u> 18.	<u>J 0</u> Trar	hin Duxb Isporter 2 Acknowle	dgement of Re	ceipt of Materials		ptu f	Yus.	1.0	uj		DISPINOT			
ORTER			ted/Typed Name				nature	<u> </u>		/		Month Day Year			
F	19.	Disc	crepancy Indication	Space						······		<u> </u>			
FACI															
ት	20.		ility Owner or Opera	tor: Certification	n of receipt of haz			y this manife	stexc	ept as noted in	Item 19				
Ÿ		Prin	ted/Typed Name			Sigr	nature					Month Day Year			

مادما منها المبيد الدمين فالمتحاصين والمحص المراجا الماد

Style F15 LABEL ASTER (800) 621-5808 www.labelmaster.com

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ORIGINAL-RETURN TO GENERATOR

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

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LAB PACK-	DRUM IN\	JENTORY
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Generator Name: <u>Forf Belvoir</u> CCC Profile No: <u>RS 1658</u> DOT Shipping Name: <u>Woste, Flammable Ligain</u> Generator Drum No: <u>RS 1658</u> Hazard Class <u>S</u> <u>UNINA ID No. 1993</u> PG <u>TE</u> Outer Container Type/Size: <u>IID/IA2/V - 30gal</u> NOTE: Line Item numbers on this sheet must be entered on lables affixed to inner containers holding the materials/chemicals identified on the corresponding line. Chemicals/Materials that appear in the "U" or "P" hazardous waste list must have the EPA hazardous waste code; otherwise, enter'used', 'spent' or 'more than one active ingredient", if it applies to explain why the code is not assigned.										
Line Item No.	Quantity and Unit		EPA Haz Waste Code	Phys- ical State	tainer	Comments				
1	668	Liquid scintillation Vials	Foos	4	Gt					
			10001		P					
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CERTIFIC	ATION: The list	sting above is an accurate and complete description of the	contents of th	iş drum, a	apý they a	re packed in accordance to 49 CFR 173.12. /				
SENERATOR NAME: TO SEASTMAN Ser and SIGNATURE LOUC PACKED BY EASTMAN										

GENERATOR NAME: TO SCEAS MAN Ser and SIGNATURE KONC Forf Belvoir *Physical State: S=Solid; L=Liquid; R=Residue (sludge), A=Aerosol; G=Gas

**Container Type: G=Glass; M=Metal; P=Plastic; F=Fiber, A≈Aerosol Can; C=Gas Cylinder

LAB PACK- DRUM INVENTORY

Genera	ator Name:	Fort Belvoir	CCC Pro	file No:		RS	1657	
DOT S	hipping Na	me: Waste Uranyl Nitrate	Generato	or Drum	No:	RS	16,57	A
Hazaro	I Class 7	UNINA ID No. 2981 PG NA					N/IAZ/X	10sel
NOTE: Lin	ne item number	s on this sheet must be entered on lables affixed to inner co	ntainers holdi	ng the ma	terials/che	micals Ide	ntified on the corre	
		appear in the "U" or "P" hazardous waste list must have the It applies to explain why the code is not assigned.	EPA hazardo	us waste .	code; othe	erwise, entr	er'used', 'spent' or '	more than
Line	Quantity	Material/Chemical Name	EPA Haz	Phys-	Con-			
Item	and Unit	or Description	Waste	ical	tainer		Comm	ents
No.		· · · · · · · · · · · · · · · · · · ·	Code	State	Туре			
	.25l	Labreagent Bottle with 2119 of Urany 1 Nitrate	D001	S	G		ziolock	whemiculit
	(211g)	DUL- RUSA INICA.					<u>e-p-10-0</u>	
		ZIIG OF WANY NITCHE		<u> </u>			·	· · · · · · · · · · · · · · · · · · ·
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		······································					······································	

CERTIFICATION: The listing above is an accurate and complete description of the contents of this drum, and they are packed in accordance to 49 CFR 173.12.

GENERATOR NAME: 10 Fer and SIGNATURE_ PACKED BY: EASTUAN K * Physical State: S=Solid; L=Liquid; R=Residue (sludge), A=Aerosol; G=Gas

LAB PACK- DRUM INVENTORY

(1062) KS 165

PACKED BY: EASTMAN

Generator Name: Fort Belvoir, VA DOT Shipping Name: RAM

CCC Profile No: Generator Drum No: 25

Hazard Class UNINA ID No. 79.12 PG NA

Outer Container Type/Size: Metal OH 5540 NOTE: Line item numbers on this sheet must be entered on lables affixed to inner containers holding the materials/chemicals identified on the corresponding line. Chemicals/Materials that appear in the "U" or "P" hazardous waste list must have the EPA hazardous waste code; otherwise, enter'used', 'spent' or 'more than one active ingredient", if it applies to explain why the code is not assigned.

Line Item No.	Quantity and Unit			A Ha aste ode	Phys- ical State	tainer	Comments
1	4L	Aqueaus Non-RCRA Liquid	r)Ą	L	P	1449A
2	3L				(1	1687-3-1
ઝ	12					1	1687-3-1 1687-3-2
4	1 l					1	1700
5	4 <i>l</i>						1729
4	5l						1711
7	12						1620
8	1l						1618
9	41						1663
10	Il)414
[]	1Ì				/		1475
12	D.SI						1635
1.3	,5l				$\left[\right]$	/	1647B
14	.5l				$[\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$		1662
15	.sl						1647A
16	.5l .5l					$\mathbf{\Lambda}$	1647A-2 (150ml)
17	15l						1647B-2 (150mg)
18	.5l					/	1428-2 (150mg)
19	-Sl					/	1662-2 (200ml)
20	.5Q			.	X		1667 (200ml)
21	.5l			4	$\left \right $		1650 (250ml
22	.5l	V		V	V	\mathbb{V}	1427 (300ml)
CERTIFIC	ATION: The li	isting above is an accurate and complete description of the	conte	nts of t	his drum, a	and they a	are packed in accordance to 49 CFR 173.12.

and SIGNATURE GENERATOR NAME: Fort Belvo, c

* Physical State: S=Solid; L=Liquid; R=Residue (sludge), A=Aerosol; G=Gas

LAB PACK- DRUM INVEN

1- 1-1

PACKED BY EASTMA

						0				(2062)
Generator Name: Fort Belvor, VA				4	CCC Profile Not 1659					
DOT S	hipping Na	me: RAZA	LSA		Generator Drum No: <u>/659(1)</u>					
Hazard	Class_7	UN/NA ID No	2912	PG_NA_	Oute	er Co	ntair	ner	Туре/S	size: metal OH 55gul
Chemical	s/Materials that	appear in the "U" or "P" i	hazardous wast	a list must have the						micals identified on the corresponding line. rwise, enter'used', 'spent' or 'more than
Line	e Ingredient", If Quantity	It applies to explain why t Material	the code is not a Chemical N		FPA	Haz	Phy	/S-	Con-	
Item	and Unit		Description		Wa	aste	ica	al	tainer	Comments
No.	= 0		- 4		<u>}</u>	de	Sta	te	Type	
23	.5l	Aqueous No	m-RCRA	Liquids	N	A-	L	\mathbf{i}	P	1618-2 (150ml)
24	لرك ه						_1		_1	1603 (150ml)
25	·5l	•		<u> </u>						1958 .
2(,	.52		<u> </u>							1679
27.	.51									1559 (350ml)
28	.5.l									1537 `.
29	r5l	·			:					1640
30	.51									1675
	.5l		•							1566
	.5J				ľ					1622 (200ml)
	.5l									1529 (300ml)
	.58									1558
	.52									1637 (300me)
	.58									1483 (400ml)
	158									1644 (150ml)
	.5l									1672
	.5l									1673-1 (300ml)
	.5l	\sim	/		J	J	$\mathbf{\Lambda}$		\mathbf{V}	1673-2 (250ml)
	15						ľ		· ·	1492 (250ml)
					1		\backslash		$\mathbf{\hat{\mathbf{A}}}$	$X \sqrt{1}$
					X		X		\square	\bigwedge \bigwedge \bigwedge
					V	\mathbf{n}	V	$\overline{\mathbf{V}}$		XXX

CERTIFICATION: The listing above is an accurate and complete description of the contents of this drum, and they are packed in accordance to 49 CFR 173.12.

Cer____ and SIGNATURE_ GENERATOR NAME: TOde EASTMAN FortBelvoir

* Physical State: S=Solid; L=Liquid; R=Residue (sludge), A=Aerosol; G=Gas

LAB PACK- DRUM INVENTORY

(1062) RS 16.59

PACKED BY: EAST MAN

Generator Name:	Fort	be	voir,	VA
DOT Shipping Na				

CCC Profile No: Generator Drum No: RS

(UNINA ID No.: 2912 PG_ Hazard Class NA Outer Container Type/Size: UN NOTE: Line item numbers on this sheet must be entered on lables affixed to inner containers holding the materials/chemicals identified on the corresponding line Chemicals/Materials that appear in the "U" or "P" hazardous waste list must have the EPA hazardous waste code; otherwise, enterbused', 'spent' or 'more than one active ingredient", if it applies to explain why the code is not assigned.

Line Item No.	Quantity and Unit	Material/Chemical Name or Description		Phys- ical State	tainer	Comments
1	12	Aqueous Non-RCRA liquid	NA	L	P	1512
2	1 L •5 L				1	1644-2
3	.5 J					1639A (400me) 1667-2 (400me) 1622-1 (400me)
4	·5l					1667-2 (400mg)
5	:5)					1622-1 (400ml)
4	45.5	P				1657-2
7	.5l					1637-2-
8	.51					1699-1
9	.5l					1650-2
10	.5J					1697-1
17	3l					1639
12	4l					1678
13	.5l					1574 (350ml).
14.	.5l					1574 (350ml). 1594 (400ml)
15	.50					1512-2 (
16	16.5l	·				1681
17	0.50					1692
18	0.5l					1699+2 (250me)
19	.5l					1707
20	,5l					1683
21	.5l					1702
22	I.		V	\forall	V	151001
CERTIFIC	CATION: The li	isting above is an accurate and complete description of the	contents of the	ois drum,	apo they a	are packed in accordance to 49 CFR 173.12.

and SIGNATURE

Tod EA GENERATOR NAME: Fort Delvoir

* Physical State: S=Solid; L=Liquid; R=Residue (sludge), A=Aerosol; G=Gas

			LAB PACK- DRUM INV	'ENT	ORY				(2q2)
Genera	Generator Name: Fort Beludir, VA DOT Shipping Name: RAM LSA				CCC Profile No: <u>RS 1659</u>				
DOTS	hipping Na	me: RAM LS	SA SA	Ger	nerato	n Dru	um l	No: k	25 1659/2
Hazard	Class	(UN/NA ID No	2912 PG NA	Out	er Co	ntain	er T	Type/S	Size: UN/142/X (55 cel)
				ntainer	s holdir	ig the i	mate	rials/che	micals identified on the corresponding line. rwise, enter used', 'spent' or 'more than
		It applies to explain why i	the code is not assigned.						
Line	Quantity and Unit		Chemical Name		A Haz aste	Phy ica		Con- tainer	Comments
Item No.		UI	Description		ode	Stat		Type	Commenta
23	1l	Aqueous Nr.	-RCRA Liquids	ん	A	L		P	1510cz
24	L	0	U	•		1		{	151003
25	12	•							151064
ZÇ	.5l								17104
27	.5P								1691,4
28	12	-							1611
Z9	.5l								1411-2
30	.51								17103
3/	05l					·]		·	1697-2 (250ml)a
32	i 51			$\left \right $					1700
33	~5l								1720
34	051					·			1711
35	.5l			Ц		1			1691B
36	•5							J.	H& 1462C
37	-5							G	1531 (400ml)
38	.5							<u>P</u>	1694B
39	Il								1694A-
40	1l_								1483
41	.51								1483-2
42	.5l		<u>.</u>						170/
43	·51		/	N	1	N		\checkmark	1697-2
	\times	X	XX		\langle	Ý		X	XXX
CERTIFIC	ATION: The li	sting above is an accurat	e and complete description of the	conter	ts of the	is drur	n. e	nd they a	are packed in accordance to 49 CFR 173.12.
GENERA	TOR NAME:	Toddeostnu	In fer and SIGNAT		K	L	U		PACKED BY: EASTUR
* Physical	* Physical State: S=Solid; L=Liquid; R=Residue (sludge), A=Aerosol; G=Gas								

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TRUCK INSPECTION CHECKLIST

CARRIER: D+R_Trucking		· .
TRACTOR NO.: 5925 TRAILER NO.: 78101/6 TYPE: Close-Van		
ITEM	SAT	UNSAT
INCOMING SURVEYS COMPLETE, WITHIN LIMITS AND DOCUMENTED	\checkmark	
VEHICLE IS FREE OF DIRT AND DEBRIS		
INTERIOR SURFACES ARE FREE OF PROTRUSIONS	V	·
TIRES - MINIMUM 3/32" OF TREAD	\checkmark	
WHEELS AND RIMS - LESS THAN 20% BROKEN OR MISSING BOLTS	V	
ALL LIGHTS ARE OPERATIONAL		
ENSURE BRAKES (NORMAL AND EMERGENCY) AND LOW AIR WARNING ALARMS OPERATIONAL	. ✓	
FRAME IS FREE OF CRACKS OR BREAKS		
HORN IS OPERATIONAL		
WINDSHIELD WIPERS ARE OPERATIONAL		
DRIVER HAS COMPLETED HIS DAILY SAFETY INSPECTION		
VEHICLE IS LICENSED AND PERMITTED FOR THE STATES IT MUST TRAVEL THROUGH	~	
REMARKS:		
,		
· · · · · · · · · · · · · · · · · · ·		
SIGNATURES:		
INSPECTOR: ToddeASTMAN DATE 8/27/2001		
DRIVER: John June ling DATE 8/27/01		

CERTIFICATION FOR EXCEPTED RADIOACTIVE MATERIALS

Consigned By:	Consigned To:
Fort Belvoir	Perma-Tin of Florida
Directurate of Installation Sapport	- 1940 NW 67th Place
9430 Jackson Loop, Ste 107	Guinesville, FL 32606
Fort Beludir, VA 22060-513D	
Attention:	Attention: Ann Raymond
TodaEASTMAN	& whittle

CHECK APPLICABLE NOTICE



"This package conforms to the conditions and limitations specified in 49 CFR 173.421 for radioactive material, excepted package limited quantity of material, UN2910."



"This package conforms to the conditions and limitations specified in 49 CFR 173.424 for radioactive material, excepted packageinstruments or articles, UN 2910."



"This package conforms to the conditions and limitations specified in 49 CFR 173.428 for radioactive material, excepted package-empty package, UN2910."



"This package conforms to the conditions and limitations specified in 49 CFR 173.426 for radioactive material, excepted package-articles manufactured from natural or depleted uranium, or natural thorium, UN2910."

Shipment Date: 8 27 2001	Shipment Number: USA 2001-0444			
Signature: 200	Manifest Number: (
Title: Agent for as Army	· · · · · · · · · · · · · · · · · · ·			
Package numbers applicable to this certification:				
251658				

INSTRUCTIONS FOR EXCLUSIVE USE OF VEHICLES

Shipment No. USA 2001-0-14-1

8/27/01 Date

CFR 49, sections 173.403 and 173.441(b) and (c), require that specific instructions for maintenance of exclusive-use shipments controls be provided by the shipper to the carrier. These instructions must be included with the shipment documents.

The following instructions shall be complied with for all exclusive-use shipments.

The shipper must be notified prior to changing of the tractor or making fifth wheel adjustments.

Do not move or transfer packages on the transport vehicle from the original configuration.

The shipment must be loaded by the consignor and unloaded by the consignee from the transport vehicle on which it was originally loaded.

The shipment must be blocked and braced so as to prevent leakage or shifting of load under incidents normal to transportation.

If placards are required, the vehicle must be placarded on four (4) sides of the transport vehicle in a clearly visible position with the appropriate placards.

Notify shipper immediately if the vehicle is involved in an accident or is required to apply emergency breaking which could shift the load and change radiation levels.

In case of accident, vehicle malfunction or deviation from the above instructions, immediately contact one of the following CABRERA employees:

Todd Eastman	Office	(803) 356-3717
	Home	(803) 808-6966
	Cell	(860) 508-0455

Deviations from these instructions are violations of federal laws and could result in carrier penalties.

I have read and understand the above statements concerning the maintenance of exclusive use vehicles.

8/27/01

-29-

SHIPMENT ACKNOWLEDGMENT

Consignee:

Please sign below after receiving and accepting this shipment. If a NRC form 540 is included with this shipment, please sign block 9, "Authorized consignee acknowledging waste receipt."

Please fax both to:

CABRERA Services, Inc. FAX: (860) 289-2261

Shipment No. :	USA 2001-0441 @ Ff. Belvoir
Manifest No. :	11
Consignee:	Perma-Fix of Flor. Ja
Date of Shipment:	8/27/2001

Signature of Consignee:	×		
Date of Receipt:			

This above information is intended to satisfy the requirements of 10 CFR 20, appendix F.

LAND DISPOSAL RESTRICTION & CERTIFICATION FORM



Please check the facility you are shipping to:

Perma-Fix of Florida, Inc.	Perma-Fix of Dayton, Inc.	Perma-Fix of Memphis, Inc.	Perma-Fix Treatment Services, Inc.
Hazardous and Mixed Waste	Hazardous Waste/ Wastewater	Hazardous Waste	Hazardous Waste/Wastewater
1940 NW 67* Place	300 South West End Ave.	901 East Bodley	2700 South 25th West Ave.
Gainesville, FL 32653	Dayton, OH 45427	Memphis, TN 38106	Tulsa, OK 74107
(352) 373-6066	(937) 268-6501	(901) 774-2050	(918) 582-9595
EPA ID # FLD 980 711 071	EPA ID # OHD 004 274 031	EPA ID # TND 991 279 480	EPA ID # OKD 000 402 396
Dire cter	ate of Installation Sup	port,	A 7213720082
Environd	ntal/Natural Resources	Div. Generator USEPA ID No.	
Generator Address 9430	Tuckson Loop: ste 107,	FortBeluoir, VA 2200	60-5130
State Manifest NoO//		Manifest Doc. No. <u>U.S.A</u>	

INSTRUCTIONS

- In Column 1 identify all USEPA hazardous waste codes that apply to this waste shipment.
- In Column 2, choose the appropriate treatability group: Non-Wastewater (NWW) or Wastewater (WW).
- In Column 3, enter the appropriate Subcategory, if applicable, and also enter "Contaminated Soil" or "Debris" if the waste will be treated using one of the alternative treatment technologies provided by 268.49(c) (soil) or 268.45 (debris).
- In Column 4, circle the letter of the appropriate LDR management categories on the back of this form.
- In Column 5, for F001-F005, D001-D043, Debris & Contaminated Soil wastes, enter the Reference Number(s) from the attached LDR/UHC Constituent Table for any constituents subject to treatment in your waste stream.

Manifest Line Item #	1. USEPA HAZARDOUS WASTE CODE(S)	2. NWW or WW	3. SUBCATEGORY	4. HOW MUST THE WASTE BE MANAGED (Circle one)	5. REFERENCE NUMBER(s) of Hazardous Constituents contained in the waste. Complete for F001-F005, D001 - D043, Soil & Debris wastes
11.A	ጋወው ነ	X NWW D WW		A B C D E F G H S	(Nitrates)
11.B	Foos, Daddj	F NWW 0 WW		(A) BCDEF GHS	184
11.C		0 NWW 0 WW		A B C D E F G H S	
11.D		0 NWW 0 WW		A B C D E F G H S	

I hereby certify that all information submitted on this and all associated documents is complete and accurate to the best of my knowledge and information.

ali 1 Generator Signatur Title_9 ENG BERGEN Date **Printed Name**

Rev 2/99



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LDR MANAGEMENT CATEGORIES

- A. <u>THIS RESTRICTED WASTE REQUIRES TREATMENT TO THE APPLICABLE STANDARD</u>. This waste must be treated to the applicable performance based treatment standard set forth in 40CFR Part 268 Subpart C, 268.32, Subpart D, 268.40 or RCRA Section 3004(d) prior to land disposal.
- B. THIS HAZARDOUS DEBRIS IS SUBJECT TO THE DEBRIS ALTERNATIVE TREATMENT STANDARDS OF 40 CFR 268.45. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that thiswaste meets the definition of debris and can be treated using the alternate methods specified in 40 CFR 268.45. I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- C. THIS RESTRICTED WASTE, FOR WHICH THE TREATMENT STANDARD IS EXPRESSED AS A SPECIFIED TECHNOLOGY, HAS BEEN TREATED BY THE SPECIFIED TECHNOLOGY. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.
- D. THIS RESTRICTED DEBRIS HAS BEEN TREATED IN ACCORDANCE WITH 40 CFR 268.45. I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making false certification, including the possibility of a fine and imprisonment.
- E. <u>THIS LAB PACK DOES NOT CONTAIN ANY WASTES IDENTIFIED AT APPENDIX IV TO PART 268</u>. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at 40 CFR 268.42(c). I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- F. <u>THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC</u>. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.
- G. THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC AND BEEN TREATED FOR UNDERLYING HAZARDOUS CONSTITUENTS. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic, and that underlying hazardous constituents, as defined in 268.48 Universal Treatment Standards. I am aware that there are significant, penalties for submitting false certification, including the possibility of fine and imprisonment.
- H. THIS RESTRICTED WASTE IS SUBJECT TO AN EXEMPTION FROM LAND DISPOSAL. (Please include the date the waste is subject to the prohibitions in Column 5) This waste is subject to an exemption from a prohibition on the type of land disposal method utilized for the waste (such as, but not limited to, a case-by-case extension under 40 CFR Part 268.5, or an exemption under 40 CFR 268.6.

For S, circle the appropriate response for the 3 *italicized* options:

S. THIS CONTAMINATED SOIL DOES DOES NOT CONTAIN LISTED HAZARDOUS WASTE AND DOES DOES NOT EXHIBIT A CHARACTERISTIC OF HAZARDOUS WASTE AND LS SUBJECT TO COMPLIES WITH THE SOIL TREATMENT STANDARDS AS PROVIDED BY 268.49(c) OR THE UNIVERSAL TREATMENT STANDARDS. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process Used to support this certification and believe that it his been maintained and operated properly so as to comply with treatment standards specified in 40 CFR 268.49 without impermissible dilution of the prohibited wastes. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

Ref.#		CAS	NWW	WW	
Rel. #	Hazardous Constituent	NO.	:mg/Kg		Concentration
1	Acenaphthene	83-32-9	3.4	0.059	·
2	Acenaphthylene	208-96-8	3.4	0.059	
3	Acetone	67-64-1	160	0.28	
4	Acetonitrile	75-05-8	38	5.6	
5	Acetophenone	96-86-2	9.7	0.010	
6	2-Acetylaminofluorene	53-96-3	140	0.059	
7	Acrolein	107-02-8	NA	0.29	
8	Acrylonitrile	107-13-1	84	0.24	
9.	Acrylamide	79-06-1	23	19	
10	Aldrin	309-00-2	0.066	0.021	
11	4-Aminobiphenyl	92-67-1	NA	0.13	•
12	Aniline	62-53-3	14	0.81	
13	Anthracene	120-12-7	3.4	0.059	
14	Aramite	140-57-8	NA	0.36	
15	alpha-BHC	319-84-6	0.066	0.00014	
16	beta-BHC	319-85-7	0.066	0.00014	
17	delta-BHC	319-86-8	0.066	0.023	· · · · · · · · · · · · · · · · · · ·
18	gamma-BHC (Lindane)	58-89-9	0.066	0.0017	
19	Benz(a)anthracene	56-55-3	3.4	0.059	
20	Benzal chloride	98-87-3	6	0.055	
21	Benzene	71-43-2	10	0.14	
22	Benzo(a)pyrene	50-32-8	3.4	0.061	· · · · · · · · · · · · · · · · · · ·
23	Benzo(b)fluoranthene	205-99-2	6.8	0.11	
24	Benzo(k)fluoranthene	207-08-9	6.8	0.11	
25	Benzo(g,h,i)perylene	191-24-2	1.8	0.0055	
26	bis(2-Chloroethoxy)methane	111-91-1	7.2	0.036	
27 ·	bis(2-Chloroethyl)ether	111-44-4	6	0.033	
28	bis(2-Chloroisopropyl) ether	39638-32-9	7.2	0,055	
29	bis(2-Ethylhexyl) phthalate	117-81-7	28	0.28	i
30	Bromodichloromethane	75-27-4	15	0.35	i
31	Bromomethane (Methyl bromide)	74-83-9	15	0.11	1
32	4-Bromophenyl phenyl ether	101-55-3	15	0.055	
33	n-Butyl alcohol	71-36-3	2.6	5.6	l
34	Butyl benzyl phthalate	85-68-7	28	0.017	
35	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	2.5	0.066	
36	Carbon disulfide	75-15-0	4.8*	3.8	
37	Carbon tetrachloride	56-23-5	6	0.057	
38	Chlordane (alpha and gamma isomers)	57-74-9	0.26	0.0033	
39	p-Chloroaniline	106-47-8	· 16	0.46	
40	Chlorobenzene	108-90-7	6	0.057	
41	Chlorobenzilate	510-15-6	NA	0.10	
42	2-Chloro-1, 3-butadiene (Chloroprene)	126-99-8	0.28	0.057	
43	Chlorodibromomethane	124-48-1	15	0.057	
44	Chloroethane	75-00-3	6	0.27	
45	Chloroform	67-66-3	6	0.046	
46	p-Chloro-m-cresol	59-50-7	14	0.018	
47	2-Chloroethyl vinyl ether	110-75-8	NA	0.062	
48	Chloromethane (Methyl chloride)	74-87-3	30	0.19	
49	2-Chloronaphthalene	91-58-7	5.6	0.055	

		CAS	NWW	ww	
Ref.#	Hazardous Constituent	NO.	mg/Kg	mg/Kg	Concentration
50	2-Chlorophenol	95-57-8	5.7	0.044	
51	3-Chloropropylene (Allyl Chloride)	107-05-1	30	0.036	
52	Chrysene	218-01-9	3.4	0.059	
53	o-Cresol (2-Methyl phenol)	95-48-7	5.6	0.11	
54	m-Cresol (3-Methyl phenol)	108-39-4	5.6	0.77	
55	p-Cresol (4-Methyl phenol)	106-44-5	5.6	0.77	
56	Cyclohexanone	108-94-1	0.75*	0.36	
57	o,p'-DDD	53-19-0	0.087	0.023	
58	p,p'-DDD	72-54-8	0.087	0.023	
59	o,p'-DDE	3424-82-6	0.087	0.031	
60	p,p'-DDE	72-55-9	0.087	0.031	
61	o,p'-DDT	789-02-6	0.087	0.0039	
62	p,p'-DDT	50-29-3	0.087	0.0039	
63	Dibenz(a,h)anthracene	53-70-3	8.2	0.055	
64	Dibenz(a,e)pyrene	192-65-4	NA	0.061	
65	1,2-Dibromo-3-chloropropane	96-12-8	15	0.11	
66	1,2-Dibromoethane (Ethylene dibromide)	106-93-4	15	0.028	······
67	Dibromomethane	74-95-3	15	0.11	
68	m-Dichlorobenzene (1,3-Dichlorobenzene)	541-73-1	6	0.036	
69	o-Dichlorobenzene (1,2-Dichlorobenzene)	95-50-1	6	0.088	
70	p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	6	0.090	
71	Dichlorodifluoromethane	75-71-8	7.2	0.23	· ·
72	1,1-Dichloroethane	75-34-3	6	0.059	
73	1,2-Dichloroethane	107-06-2	6	0.21	
74	1,1-Dichloroethylene	75-35-4	6	0.025	
75	trans-1,2-Dichloroethylene	156-60-5	30	0.054	
76	2,4-Dichlorophenol	120-83-2	14	0.044	
77	2,6-Dichlorophenol	87-65-0	14	0.044	
78	2,4-Dichlorophenoxyacetic acid (2.4-D)	94-75-7	10	0.72	
79	1,2-Dichloropropane	78-87-5	18	0.85	· · · · · · · · · · · · · · · · · · ·
80	cis-1,3-Dichloropropylene	10061-01-5	18	0.036	
81	trans-1,3-Dic6loropropylene	10061-02-6	18	0.036	
82	Dieldrin	60-57-1	0.13	0.017	
83	Diethyl phthalate	84-66-2	28	0.2	
84	p-Dimethylaminoazobenzene	60-11-7	NA	0.13	
85	2,4-Dimethyl phenol	105-67-9	14	0.036	· · · · · · · · · · · · · · · · · · ·
86	Dimethyl phthalate	131-11-3	28	0.047	·
87	Di-n-butyl phthalate	84-74-2	28	0.057	,
88	1,4-Dinitrobenzene	100-25-4	2.3	0.32	
89	4,6-Dinitro-o-cresol	534-52-1	160	0.28	
90	2,4-Dinitrophenol	51-28-5	160	0.12	
91	12,4-Dinitrotoluene	121-14-2	140	0.32	
92 ·	2,6-Dinitrotoluene	606-20-2	28	0.55	
93	Di-n-octyl phthalate	117-84-0	28	0.017	
94	Di-n-propylnitrosamine	621-64-7	14	0.40	
95	1,4-Dioxane	123-91-1	170	12	
95	Diphenylamine	123-31-1	13	0.92	
90	Diphenylnitrosamine	86-30-6	13	0.92	
	1,2-Diphenyihuosanine	122-66-7	NA	0.087	
98		122-00-1		0.007	I

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Def -		CAS	NWW		
Ref.#	Hazardous Constituent	NO.	mg/Kg	mg/Kg	Concentration
99	Disulfoton	298-04-3	6.2	0.017	
100	Endosulfan 1	959-98-9	0.066	0.023	
101	jEndosulfan 11	33213-65-9	0.13	0.029	
102	Endosulfan sulfate	1031-07-8	0.13	0.029	
103	Endrin	72-20-8	0.13	0.0028	
104	Endrin aldehyde	7421-93-4	0.13	0.025	· · ·
105	2-Ethoxyethanol (FO05)+		INCIN	INCIN	
106	Ethyl acetate	141-78-6	33	0.34	
107	Ethyl benzene	100-41-4	10	0.057	,
108	Ethyl ether	60-29-7	160	0.12	
109	Ethyl methacrylate	97-63-2	160	0.14	
110	Ethylene oxide	75-21-8	NA	0.12	
111	Famphur	52-85-7	15	0.017	
112	Fluoranthene	206-44-0	3.4	0.068	
113	Fluorene	86-73-7	3.4	0.059	
114	Heptachlor	76-44-8	0.066	0.0012	
115	Heptachlor epoxide	1024-57-3	0.066	0.016	
116	Hexachlorobenzene	118-74-1	10	0.055	
117	Hexachlorobutadiene	87-68-3	5.6	0.055	
118	Hexachlorocyclopentadiene	77-47-4	2.4	0.057	
119	HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.001	0.000063	
120	HxCDFs (All Hexachlorodibenzofurans)	NA	0.001	0.000063	
121	Hexachloroethane	67-72-1	30	0.055	
122	Hexachloropropylene	1888-71-7	30	0.035	
123	Indeno (1,2,3-c,d) pyrene	193-39-5	3.4	0.0055	
124	lodomethane	74-88-4	65	0.19	
125	Isobutyl alcohol (Isobutanol)	78-83-1	170	5.6	
126	Isodrin	465-73-6	0.066	0.021	
127	Isosafrole	120-58-1	2.6	0.081	
128	Kepone	143-50-0	0.13	0.0011	
129	Methacrylonitrile	126-98-7	84	0.24	
130	Methanol	67-56-1	0.75*	5.6	
131	Methapyrilene	91-80-5	1.5	0.081	
132	Methoxychlor	72-43-5	0.18	0.25	
133	3-Methylchloroanthrene	56-49-5	15	0.0055	
134	4,4-Methylene bis (2-chloroaniline)	101-14-4		0.5	
135	Methylene chloride	75-09-2	30	0.089	
136	Methyl ethyl ketone	78-93-3	36	0.28	
137	Methyl isobutyl ketone	108-10-1	33	0.14	
138	Methyl methacrylate	80-62-6	160	0.14	
139	Methyl methansulfonate	66-27-3	NA	0.018	
140	Methyl parathion	298-00-0	4.6	0.014	
141	Naphthalene	91-20-3	5.6	0.059	
142	2-Naphthylamine	91-59-8	N/A	0.52	
143	o-Nitroaniline	88-74-4	14	0.27	
144	p-Nitroaniline	100-01-6	28	0.028	
145	Nitrobenzene	98-95-3	14	0.068	
146	5-Nitro-o-toluidine	99-55-8	28	0.32	
147	o-Nitrophenol	88-75-5	13	0.028	

Ref.#		CAS	NWW /	WW	
Kei.#	Hazardous Constituent	NO.	mg/Kg	mg/Kg	Concentration
148	p-Nitrophenol	100-02-7	29	0.12	
149	2-Nitropropane (FO05)+		INCIN	INCIN	
150	N-Nitrosodiethylamine	55-18-5	28	0.4	
151	N-Nitrosodimethylamine	62-75-9	2.3	0.4	
152	N-Nitroso-di-n-butylamine	924-16-3	17	0.4	
153	N-Nitrosomethylethylamine	10595-95-6	2.3	0.4	
154	N-Nitrosomorpholine	59-89-2	2.3	0.4	
155	N-Nitrosopiperidine	100-75-4	35	0.013	
156	N-Nitrosopyrrolidine	930-55-2	35	0.013	,
157	Parathion	56-38-2	4.6	0.014	
158	Total PCBs	1336-36-3	10	0.1	
159	Pentachlorobenzene	608-93-5	10	0.055	
160	PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.001	0.000063	
161	PeCDFs (All Pentachlorodibenzofurans)	NA	0.001	0.000035	
162	Pentachloroethane	76-01-7	6	0.055	
163	Pentachloronitrobenzene	82-68-8	4.8	0.055	
164	Pentachlorophenol	87-86-5	7.4	0.089	
165	Phenacetin	62-44-2	16	0.081	
166	Phenanthrene	85-01-8	5.6	0.059	
167	Phenol	108-95-2	6.2	0.039	
168	Phorate	298-02-2	4.6	0.021	
169	Phthalic acid	100-21-0	28	0.055	· · · · · · · · · · · · · · · · · · ·
170	Phthalic anhydride	85-44-9	28	0.055	
171	Pronamide	23950-58-5	1.5	0.093	
172	Propanenitrile (Ethyl cyanide)	107-12-0	360	0.24	
173	Pyrene	129-00-0	8.2	0.067	
174	Pyridine	110-86-1	16	0.014	
175	Safrole	94-59-7	22	0.081	
176	Silvex (2,4,5-TP)	93-72-1	7.9	0.72	
177	1,2,4,5-Tetrachlorobenzene	95-94-3	14	0.055	
178	TCDDs (All Tetachlorodibenzo-p-dioxins)	NA	0.001	0.000063	
179	TCDFs (All Tetrachlorodibenzofurans)	NA	0.001	0.000063	
180	1,1,1,2-Tetrachloroethane	630-20-6	6	0.057	· · · ·
181	1, 1,2,2-Tetrachloroethane	79-34-5	6	0.057	
182	Tetrachloroethylene	127-18-4	6	0.056	
183	2,3,4,6-Tetrachlorphenol	58-90-2	7.4	0.03	
184	Toluene	108-88-3	10	0.080	
185	Toxaphene	8001-35-2	2.6	0.0095	
186	Tribromomethane (Bromoform)	75-25-2	15	0.63	· · · ·
187	1,2,4-Trichlorobenzene	120-82-1	19	0.055	· · · · · · · · · · · · · · · · · · ·
188	1, 1, 1 -Trichloroethane	71-55-6	6	0.054	
189	1, 1,2-Trichloroethane	79-00-5	6	0.054	
190	Trichloroethylene	79-01-6	6	0.054	
191	Trichloromonofluoromethane	75-69-4	30	0.02	
192	2,4,5-Trichlorophenol	95-95-4	7.4	0.18	· · · · · · · · · · · · · · · · · · ·
193	2,4,6-Trichlorophenol	88-06-2	7.4	0.035	
194	2,4,5-Trichlorophenoxyacetic acid/2,4,5-T	93-76-5	7.9	0.72	
195	1,2,3-Trichloropropane	96-18-4	30	0.85	
196	1,1,2-Trichloro- 2,2,2-trifluoroethane	76-13-1	30	0.057	

		CAS	NWW	WW ·	
Ref.#	Hazardous Constituent	NO.	ma/Ka	'ma/Ka	Concentration
197	tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.1	0.011	
198	Vinyl chloride	75-01-4	6	0.27	
199	Xylenes	1330-20-7	- 30	0.32	·
200	Antimony	7440-36-0	1.15*,‡	1.9	
201	Arsenic	7440-38-2	5.0*	1.4	
202	Barium	7440-39-3	21°,‡	1.2	
203	Beryllium	7440-41-7	1.22*,‡	0.82	
204	Cadmium	7440-43-9	0.11*,‡	0.69	
205	Chromium (Total)	7440-47-3	0.60*,‡	2.77	,
206	Cyanides (Total)	57-12-5	590	1.2	
207	Cyanides (Amenable)	57-12-5	30	0.86	
208	Fluoride	16984-48-8	NA	35	
209	Lead	7439-92-1	0.75*,‡	0.69	
210	Mercury (retort residues)	7439-97-6	0.20*	NA	· ·
211	Mercury (all others)	7439-97-6	0.025*	0.15	
212	Nickel	7440-02-0	11*,‡	3.98	
213	Selenium	7782-49-2	5.7*,**	0.82	
214	Silver	7440-22-4	0.14,‡	0.43	
215	Sulfide	18496-25-8	NA	14	
216	Thallium	7440-28-0	0.20*,±	1.4	
217	Vanadium	7440-62-2	1.6*,**,‡	4.3	
218	Zinc	7440-66-6	4.3*,**,‡	2.61	
219	A2213	30558-43-1	1.4	0.042***	·
220	Aldicarb sulfone	1646-88-4	0.28	0.056	
221	Barban	101-27-9	1.4	0.056	
222	Bendiocarb	22781-23-3	1.4	0.056	
223	Bendiocarb phenol	22961-82-6	1.4	0.056	
224	Benomyl	17804-35-2	1.4	0.056	· · · · · · · · · · · · · · · · · · ·
225	Butylate	2008-41-5	1.4	0.042***	
226	Carbaryl	63-25-2	0.14	0.006	
227	Carbenzadim	10605-21-7	1.4	0.056	
228	Carbofuran	1563-66-2	0.14	0.006	
229	Carbofuran phenol	1563-38-8	1.4	0.056	
230	Carbosulfan	55285-14-8	1.4	0.028	
231	m-Cumenyl methylcarbamate	64-00-6	1.4	0.056	<u> </u>
232	Cycloate**	1134-23-2	1.4	0.042***	
232	Diethylene glycol, dicarbamate	5952-26-1	1.4	0.056	···-
233	Dimetilan	644-64-4	1.4	0.056	
234	Dithiocarbamates (total)	137-30-4	28	0.038	
235	EPTC	759-94-4	1.4	0.020	
237	Formetanate hydrochloride	23422-53-9	1.4	0.042	
238	Formparanate	17702-57-7	1.4	0.056	
239	3-lodo-2-propynyl n-butylcarbamate**	55406-53-6	1.4	0.056	· · · · · · · · · · · · · · · · · · ·
239	Isolan	119-38-0	1.4	0.056	
240	Methiocarb	2032-65-7	1.4	0.056	ł
		16752-77-5	0.14	0.038	}
242	Methomyi	1129-41-5	1.4	0.028	
243	Metolcarb	315-18-4	1.4	0.056	
244	Mexacarbate			0.038	
245	Molinate	2212-67-1	1.4	0.042	I

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Ref.#		CAS	NWW	ww	
Kel.#	Hazardous Constituent	NO.	mg/Kg	mg/Kg	Concentration
246	Oxamyl	23135-22-0	0.28	0.056	
247	Pebulate	1114-71-2	1.4	0.042	
248	o-Phenylenediamine	95-54-5	5.6	0.056	
249	Physostigmine	57-47-6	1.4	0.056	
250	Physostigmine salicylate	57-64-7	1.4	0.056	
251	Promecarb	2631-37-0	1.4	0.056	
252	Propharn	122-42-9	1.4	0.056	
253	Propoxur	114-26-1	1.4	0.056	
254	Prosulfocarb	52888-80-9	1.4	0.042	,
255	Thiodicarb	59669-26-0	1.4	0.019	
256	Thiophanate-methyl	23564-05-8	1.4	0.056	
257	Tirpate	26419-73-8	0.28	0.056	
258	Triallate	2303-17-5	1.4	0.042	
259	Triethylarnine-	101-44-8	1.5	0.081	
260	Vernolate	1929-77-7	1.4	0.042	
•	"Concentration in mg/I TCLP"				
**	Not Underlying Hazardous Constituents. (See	e 60 FR, Jan. 3	,1995)		
***	The preamble to the final rule (61 FIR 15584) dearly indicates to revised to 0.042 mg/l. However, the §268.48 m				
‡	These UTS levels are effective on August 24 restrictions (LDR) rule.	, 1998 as estat	lished in 63	3 FIR 28556	-28753) the finalized

GUIDE RADIOACTIVE MATERIALS

POTENTIAL HAZARDS

HEALTH · Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases. Undamaged packages are safe. Contents of damaged packages may cause higher external radiation exposure, or both external and internal radiation exposure if contents are released. Low radiation hazard when material is inside container. If material is released from package or bulk container, hazard will vary from low to moderate. Level of hazard will depend on the type and amount of radioactivity, the kind of material it is in, and/or the surfaces it is on. Some material may be released from packages during accidents of moderate severity but risks to people are not great. · Released radioactive materials or contaminated objects usually will be visible if packaging fails. Some exclusive use shipments of bulk and packaged materials will not have "RADIOACTIVE" labels. • Placards, markings, and shipping papers provide identification. Some packages may have a "RADIOACTIVE" label and a second hazard label. The second hazard is usually greater than the radiation hazard; so follow this Guide as well as the response Guide for the second hazard class label. Some radioactive materials cannot be detected by commonly available instruments. Runoff from control of cargo fire may cause low-level pollution. FIRE OR EXPLOSION Some of these materials may burn, but most do not ignite readily. Uranium and Thorium metal cuttings may ignite spontaneously if exposed to air (see Guide 136). Nitrates are oxidizers and may ignite other combustibles (see Guide 141). PUBLIC SAFETY CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover. Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels. Radiation Authority must be notified of accident conditions. Radiation Authority is usually responsible for decisions about radiological consequences and closure of emergencies. Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. • Stay upwind. • Keep unauthorized personnel away. Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority. **PROTECTIVE CLOTHING** Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection. EVACUATION Large Spill Consider initial downwind evacuation for at least 100 meters (330 feet). Fire When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) In all directions. 809 288

RADIOACTIVE MATERIALS GL

EMERGENCY RESPONSE

FIRE

- Presence of radioactive material will not influence the fire control processes and should not influence selection of techniques.
- Move containers from fire area if you can do it without risk.
- Do not move damaged packages; move undamaged packages out of fire zone.

Small Fires

• Dry chemical, CO₂, water spray or regular foam.

Large Fires

- Water spray, fog (flooding amounts).
- · Dike fire-control water for later disposal.

SPILL OR LEAK

- Do not touch damaged packages or spilled material.
- · Cover liquid spill with sand, earth or other noncombustible absorbent material.
- Dike to collect large liquid spills.
- · Cover powder spill with plastic sheet or tarp to minimize spreading.

FIRSTAID

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the nature of the injury.
- Do not delay care and transport of a seriously injured person.
- · Apply artificial respiration If victim is not breathing.
- · Administer oxygen if breathing is difficult.
- In case of contact with substance, wipe from skin immediately; flush skin or eyes with running water for at least 20 minutes.
- Injured persons contaminated by contact with released material are not a serious hazard to health care personnel, equipment or facilities.
- Ensure that medical personnel are aware of the material(s) involved, take precautions to
 protect themselves and prevent spread of contamination.

	TO A CONTRACTOR OF THE TIME HAZARDS TO A CONTRACTOR	•
	FIRE OR EXPLOSION	
	HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.	
	 Vapors may form explosive mixtures with air. 	
1	 Vapors may travel to source of ignition and flash back. 	
	 Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). 	
1000	 Vapor explosion hazard indoors, outdoors or in sewers. 	
	 Those substances designated with a "P" may polymerize explosively when heated or involved in a fire. 	
	Runoff to sewer may create fire or explosion hazard.	
	Containers may explode when heated.	
	Many liquids are lighter than water.	
	Substance may be transported hot.	
	HEALTH	
	 Inhalation or contact with material may irritate or burn skin and eyes. 	
258	 Fire may produce irritating, corrosive and/or toxic gases. 	
	Vapors may cause dizziness or suffocation.	
	Runoff from fire control or dilution water may cause pollution.	
	(c) States and States Dell'PUBLIC SAFETY of the end of the dealers of the states of	•
	 CALL Emergency Response Telephone Number on Shipping Paper first. If Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover. 	
E Set	 Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all 	
	directions.	
11.4.25	 Keep unauthorized personnel away. 	
	Stay upwind.	
E .	 Keep out of low areas. 	
62	 Ventilate closed spaces before entering. 	
	PROTECTIVE CLOTHING	
	Wear positive pressure self-contained breathing apparatus (SCBA).	
	 Structural firefighters' protective clothing will only provide limited protection. 	
	EVACUATION	
	Large Spill	
E U 1	Consider initial downwind evacuation for at least 300 meters (1000 feet).	
	Fire	
E-11-21	 If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all 	
	directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.	
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ERG2000 (NON-POLAR/WATER-IMMISCIBLE)

EMERGENCY RESPONSE

FIRE

CAUTION: All these products have a very low flash point: Use of water spray when fighting fire may be inefficient.

Small Fires

• Dry chemical, CO₂, water spray or regular foam.

Large Fires

- Water spray, fog or regular foam.
- · Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.

Fire Involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- · Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or
- discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
- · All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material.
- Stop leak if you can do it without risk.
- · Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- · Use clean non-sparking tools to collect absorbed material.

Large Spills

- Dike far ahead of liquid spill for later disposal.
- · Water spray may reduce vapor; but may not prevent ignition in closed spaces.

FIRST AID

- Move victim to fresh air.
 Call 911 or emergency medical service.
- · Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- · Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, Immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- · Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

EMERGENCY RESPONSE GUIDE 162

Hazard Class

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EMERGENCY CONTACT: CHEMTREC (800) 424-9300

27/2001 Shipping Date:

Manifest No.: USA 2	001-044-1
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UN2912

UN2913

ID Number

Proper Shipping Name

Radioactive Material, LSA, n.o.s., Radioactive Material, SCO,

POTENTIAL HAZARDS

HEALTH

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging
 durability is related to potential hazards of material.
- Undamaged packages are safe; contents of damaged packages may cause external and/or internal radiation exposure.
- Low radiation hazard when material is inside container. If material is released from package or bulk container, hazard will vary from low to moderate.
- Level of hazard will depend on the type and amount of radioactivity, the kind of material it is in, and/or the surfaces it is on.
- Some material may be released from packages during accidents of moderate severity. This poses little risk to people.
- Released radioactive materials or contaminated objects usually will be visible if packaging fails.
- Some exclusive use shipments of bulk and packaged materials will not have "RADIOACTIVE" labels.
- Placards, markings, and shipping papers provide identification.
- Some packages may have a "RADIOACTIVE" label and a second hazard label. The second hazard is usually greater than the radiation hazard: so follow this guide as well as the response guide for the second hazard class label.
- Some radioactive materials cannot be detected by commonly available instruments.
 Runoff from control of cargo fire may cause low-level pollution.

FIRE OR EXPLOSION

- Some of these materials may burn, but none of them ignites readily. 141). •Nitrates are oxidizers and may ignite other combustibles (see guide
- Uranium and Thorium metal cutting or granules may ignite spontaneously if exposed to air (see Guide 136).

PUBLIC SAFETY

• Call Thom Dias at (925) 443-7967

- Priorities for rescue, life saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.
- Radiation authority must be notified of accident conditions, and is usually responsible for radiological decisions.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

PROTECTIVE CLOTHING

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

EVACUATION

Large Spill

Consider initial downwind evacuation for at least 100 meters (330 feet).

Fire

When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.
 <u>EMERGENCY RESPONSE</u>

FIRE

- Presence of radioactive material will not change effectiveness of fire control techniques.
- Move containers from fire area you can do it without risk.
- Do not move damaged packages; move undamaged containers out of fire zone.
- Small Fires

Dry chemicals, CO2, Water spray or regular foam.

Large Fires

- Water spray, fog (flooding amounts).
- Dike fire-control water for later disposal.

SPILL OR LEAK

Do not touch damaged packages or spilled material.

Liquid Spills

- Cover with sand, earth or other non-combustible absorbent material.
- Cover powder spill with plastic sheet or tarp to minimize spreading.
- Dike to collect large liquid spills.

FIRST AID

- Medical problems take priority over radiological concerns.
- •Use first aid treatment according to the degree of the injury. •Apply artificial respiration if victim is not breathing.
- Do not delay care and transport of a seriously injured person.
 Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
 - Injured persons who contacted released material may be a minor contamination problem to contacted persons, equipment and facilities.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

The above information is intended to satisfy the requirements of 49 CFR parts 172.600, 172.602 & 172.604.

APPROVED BY OMB: NO. 3150-0164 EXPIRES: 05/31/2001

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Estimated burden per response to comply with this information collection request: 1.17 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. Forward comments reparding burden estimate to the Records Management Branch (7-5 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3160-0164), Office of Management and Budget, Washington, DC 20503. If 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.

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NRC FORM 540 (5-1998) UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				5. SHIPPER - NAME AND FACILITY Directorate of Installation Support Environmental/Natural Resource 9430 Jackson Loop, Suite: 107 Fort Betvolr VA 22080-5130			PERID NUMBER SA 2001-044-1 COLLECTOR PROCESSOR	7. NRC FORM 540 A NRC FORM 541 A NRC FORM 542 A ADDITIONAL INFO	ND 541A ND 542A	F 2 PAGE(S) 3 PAGE(S) 1 PAGE(S) None PAGE(S)	8. MANSFEST NUMBER (Use this number on all continuation pages) USA 2001-044-1	
Shippin	IG PAPER		USER PERM	TNUMBER	SHIPMENT NUMBER	X	GENERATOR TYPE	9. CONSIGNEE - Na	me and Facility Address		CONTACT	
1. EMERGENCY TELEPHONE NUMBER (Include, (800) 424-8300	Area Code)		CONTACT Mr. Kelly C		USA 2001-044-1	TELE (Inclu	(Specify) G EPHONE NUMBER Ide Area Code)	Perma-Fix of Florida 1940 N.W. 87th Place			Mr. Raymond Whittle TELEPHONE NUMBER (Include Area Cade)	
ORGANIZATION Chemtrec				·		ં (ગ	09) 782-0338	Gainesville	FL 52606		352-373-8066	•
	3. TOTAL NUMBER OF PACKAGES IDENTIFIED		6. CARRIE R&R Trucking PO Box 545	R — Name and Address 1, Inc.			LD. NUMBER 000501973	SIGNATURE - Alith	orized consignee acknowled	iging waste receipt	DATE	
X YES	ON THIS MANIFEST	4	Duenweg	MO 64841			PING DATE 08/27/01			CERTIFICATION		
WASTE REQUIRING A	EPA MANIFEST NUMBER		CONTACT	on Ritchie		TELE	PHONE NUMBER Ide Area Code) 800-825-6885	regulations.	herein-named materials an ansportation according to the is are classified, packaged, a accordance with the applic	e property classified, d he applicable regulatio marked, and labeled : cablerequirements of 1	escribed, packaged, market ns of the Department of Trn and are in proper condition 0 CFR Parts 20 and 61, or	id, and tabeled and are insportation. This also for transportation and equivalent state
MARREST ACCOMPANY THIS SHIPMENT7 If "Yes," provide Manifest Number	01183 (DIS-ENRD)		SIGNATURE	- puttorized carter acknowled	ring waste receipt	DATE	3/27/01	AUTHORGED SKIN	EASTMAN	THE Ayen OSC	+ fer USMNY	8/27/0
11. U.S. DEPARTMENT OF TRANSPORTATION D (Including proper shipping name, hazard class, Uh and any additional information	DESCRIPTION 1 D number	12. DOT LABEL "RADIOACTIVE"	43. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	1		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, Uranyl Nitrate, solid, 7, 5.1, UN29 Uranyl Nitrate reagent)	81	White - I	N/A	Liquid/Uranyl Nitrate	U-nat				2.6607E+00	NA	15. LBS; 1.3 FT3	RS 1657
Waste, Flammable liquid, nos (contains to UN1993, PGH, limited quantity of radioact (Liquid scintillation fluids)		NA	N/A	Liquid/Toluene	Am-241Ba- Co-60 Cs-		C-14 Cd-109 Cs-137 Eu-152		1.6013E+01	NA	160. LBS; 4.01 FT3	RS 1658
					Ni-63 Pa- Sr-85 Sr-9		Pm-147Ra-226 Th-234 U-234	Ra-228 Sn-113 U-235 U-238				
· · · · · · · · · · · · · · · · · · ·					U-nat Y-8	3	Zn-65					
Radioactive material, low specific activity (aqueous Non-RCRA liquids)	y, n.o.s., 7, UN2912	NA	N/A	Solid /Oxides	Am-241Ba- Cr-51 Cs-			Co-57 Co-60 Hg-203 K-40	2.5050E-01	LSAH	240. LBS; 7.01 FT3	RS 1659 (1)
					Ra-226 Ra- Sr-90 Th-		Ru-106 Sn-113 U-238 U-nat	Sr-85 Sr-89 Zn-65				
FOR CONSIGNEE USE ONLY			Ld				L		l	L		<u>I</u>
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NRC FORM 540 (5-1996)

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APPROVED BY OMB: NO. 3150-0164 EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 1.17 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposel of low-level wasta. Forward comments regarding burden estimate to the Records Management Branch (7-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If 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.

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NRC FORM 540A (3-95) UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST											
SHIPPING PAPER (CONTINUATION)											
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			15. INDVIDUAL RADIONUCLIDES	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	NUMBER OF PACKAGE			
Radioactive material, low specific activity, n.o.s., 7, UN2912 (aqueous Non-RCRA liquids)	NA	N/A	Solid /Oxides	Am-241Ba-133 Cs-134 Cs-137	Cd-109 Ce-139 Co-57 Co-60 H-3 Hg-203 I-131 Ni-63	9,4392E+00	LSA-II	230. LBS; 7.01 FT3	RS-1659 (2)		
· · ·				Pa-234 Pb-210 Sn-113 Sr-85	Pm-147Ra-226 Ra-228 Ru-106 Sr-89 Sr-90 Th-230 Th-232						
			· · · · · · · · · · · · · · · · · · ·	Th-234 U-234	U-235 U-238 Y-88 Zn-65						
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NRC FORM 540 (5-1998)

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APPROVED BY OMB: NO. 3150-0166 EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 5.43 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. Forward comments regarding burden estimate to the Records Management Branch (T-8 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20556-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If 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 (5-1998)			U.S. NUCL	EAR REGU	LATORY CO	MMISSION	NUMBER	NUMBER OF NET WASTE NET WASTE SPECIAL NUCLEAR MATERIAL (grams)							2. MANIFEST NUMBER	2	
							NUMBER C PACKAGE DISPOSA CONTAINE	RS (m3)	WEIGHT (kg)	U-2	233	U-235		Υ υ ,	TOTAL	USA 2001-044-1	
UNIF		OW-LEV ASTE M					4	0.2062	105.6	1	NP	1.2800E-03 2 Container		1P	1.2800E-03	3. PAGE 1 OF	3 PAGE(S)
									A	CTIVITY (MBq)			<u> </u>		- 4. SHIPPER NAME	offert Current	
					- · · -		A1	L NUCLIDES	TRITIUM	C-1	4	Tc-99	ŀ	129	SOURCE (kg)	Directorate of Instal	auon Suppon
Additional Nuclear	r Regulatory	Commission Disposal of R	adioactive W	aste	Control, Ira	nster and	2.	8363E+01	7.5103E-01	8.140	0E-02	· NP	1	1P	2,1652E-01	USA 2001-044-1 SHIPPER ID NUME	ER
	Dis	POSAL CONTA	NER DESCRIPT	ION				<u></u>				NFOR EACH WAS					16.WASTE
5. 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 (µSvihr) (mSvihr)	CONTAL	FACE MINATION 00 cm2 BETA- GAMMA	11. WASTE DESCRIP- TOR (See Note 2	PHYSICAL DESCRIPT 12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3)	ION 13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	1	CHEMICAL CHEMICAL		WEIGHT % CHELATING AGENT IF>0,1%	15.	CONTAINER TOTAL; O	TION CLIDES AND ACTIVITY (MBq) AND R CONTAINER TOTAL ACTIVITY ONUCLIDE PERCENT	CLASSIFI- CATION AS-Chase A Stable AU-Class A Unstable B-Clase B C-Class C
RS 1657/Ft Bolvoir Haz	4	0.0368	6.8	<8.0000E-01	<1.6700E-06	<1.6700E-05	5 28,59- REAGEN TS	0.0001	100 100	Uranyi N	itrets/None F	Present	0.00	U-nat	2.6607E+00 [1.0100E-01 kg J	AU
														Total	2.6607E+00 MBq		
RS 1658/Ft Betvolr Haz	4	0.1136	72.5	<8.0000E-01	<1.6700E-06	<1.6700E-05	5 28,59- LIQUID SCINTILL ATION FLUIDS	0.0079	89- VERMACULITE 100	Toluene/	None Preser	nt .	0.00	Am-241 Ba-133 C-14 Cd-109 Ce-139	1.6687E-03 2.8120E-05 8.1400E-02 9.6200E-02 4.8100E-03		AU
														Co-57 Co-60 Cs-134 Cs-137 Eu-152	3.7000E-03 5.9200E-02 7.4000E-07 1.8130E-02 7.4000E-01		
									_					H-3 Hg-203 Ni-63 Pa-234 Pm-147	7.0300E-01 1.3320E-02 1.0360E+01 8.1400E-04 3.8110E+00		
													•	Ra-226 Ra-228 Sn-113 Sr-85 Sr-90	2.4050E-07 2.9970E-07 1.7760E-02 2.2570E-02 9.6940E-04		
NOTE 1: Container Desc waste requiring disposa the numerical code mus 1, Wooden Box or Crate 2, Metal Box 3, Plastic Drum or Pall 4, Metal Drum or Pall 5, Motal Tank or Liner 6, Concreta Tank or Liner 7, Polyethlene Tank or Line 8, Fiberglass Tank or Line	I in approved a t be followed b 9. Demin 10. Gas (11. Buik, 12. Unpa 13. High 19. Other wer or a	tructural overpa y "-OP," veralizer	icks 20 21 22 23 23 24 24 25 24 25 27 25 26 27 27 25 27 27 27 27 27 27 27 27 27 27 27 27 27	DTE 2: Waste D). Charcoel , Incinerator Ash 1. Soli 1. Gas 1. Oti , Aquecus Liquic , Filter Media 'Mechanical Filto , EPA or State H	29. D 30. C 31. A 32. M 33. C 4 34. O 35. G ar 35. S	emolition Rubbl ation Ion-exchan food Bod Ion-exchan food Bod Ion-ex ontaminated End manic Liquid (e lassware or Lab sealed Source/Do	e nge Media ge Media change Media utpment xcept oll) ware	39. Compactible Tra 40. Noncompactible 41. Animal Carcass	oms/Studges/Concent ish Trash ial (except animal can al in item 11,		For a Sorp 60. S 61. C 62. F	all solidification med rition ipsedi Dri 64. Sa Seletom 65. Sa loor Dryf 68. Flo Superfine 67. Flo	dia, the vendor (fe T Sorb 69, (fe N Drl 70, (xco 71, 0	manufacturer Chemsil 30 Chemsil 50 Chemsil 3030 Dicaperi HP200	and brand name must als 74. Petroset 89. Ot 75. Petroset 11 1 76. Aquaset 11 1 77. Aquaset 11 1	Describe In 91, Concrete 95 tem 13, or (encapsulation) additional 92, Bitumen	

NRC FORM 541 (5-1998)

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APPROVED BY OMB: NO. 3150-0155 EXPIRES: 05/31/2001

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Estimated burden per response to comply with this information collection request: 5.43 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. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (\$150-0164), Office of Management and Budget, Washington, DC 20503. If 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 541A (5-1998)	UNIFORM LOW-LEVEL RADIOACTIVE U.S. NUCLEAR REGULATORY COMM WASTE MANIFEST							R REGULATORY COMMISSION	2. MANIFEST NUMBER USA 2001-044-1					
				•		CONTAINE	RANDV	VASTE DESCRIPTIO	N	·			3. PAGE 2 OF	3 PAGE(S)
	T	POSAL CONTAL						PHYSICAL DESCRIPT	10N	WASTE DESCRIPTION FOR EACH WA		TAINER 15. RADIOLOGICAL DESCRIPTIC		16. WASTE CLASSIFI-
5. CONTAINER IDENTIFICATION NUMBER/ 	6. CONTAINER DESCRIP- TION (See Note 1)	VOLUME	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (µ Sv/hr) (mSv/hr)	CONTA	FACE MINATION 00 cm2 BETA- GAMMA	11. WASTE DESCRIP- TOR (See Note 2	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM	WEIGHT % CHELATING AGENT IF>0.1%	INDIVIDUAL RADIONUCLIE CONTAINER TOTAL; OR C AND RADION	YES AND ACTIVITY (MBq) AND ONTAINER TOTAL ACTIVITY UCLIDE PERCENT	CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
		•										Th-234 8.1400E-04 4.6 U-234 8.1400E-04 7.7 U-235 9.2500E-05 1.1 U-238 8.1400E-04 6.5 U-nat 1.6280E-03 3.1	000E-15 k, 1 000E-09 k, 1 000E-03 g 1 000E-05 k, 1 000E-04 k, 1	
•												Y-88 7.4000E-02 Zn-65 2.3310E-06		
												Total 1.6013E+01 MBq		
RS 1859 (1)/Fort Belvoir	NA .	0.1985	108.9	1.0000E+00	<1.6700E-06	<1.5700E-05	25,59- NON- RCRA LIQUID	0.0991	100 100	Oxides/None	0.00	Am-241 1.6952E-03 Ba-133 5.1800E-05 Cd-109 9.5090E-02 Ce-139 4.9950E-03 Co-57 4.2125E-02		HU HU
												Co-60 1.8870E-05 Cr-51 4.3716E-04 Cs-134 1.9481E-05 Cs-137 1.4497E-02 H-3 3.9409E-02		
												Hg-203 1.2567E-02 K-40 4.0700E-06 Ra-226 5.3280E-06 Ra-228 8.3250E-06 Ru-106 3.1672E-05		
												Sn-113 1.7554E-02 Sr-85 2.1719E-02 Sr-89 3.1080E-06 Sr-90 1.7760E-06 Th-230 1.1100E-06	J =	
									•			U-238 1.3727E-04 [1.6 U-nat 7.4000E-05 [2.8 Zn-65 5.2873E-05	900E-03 kg] 200E-06 kg]	
												Total 2.5050E-01 MBq	'	

NRC FORM 541A (5-1998)

APPROVED BY OMB: NO. 3150-0168 EXPIRES: 05/31/2001

Estimated burden per response to comply with this information collection request: 6.43 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. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 2055-2001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If 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 541A (5-1998)					UNIFC	ORM LO WA	W-LE	VEL RADIOA	CTIVE	ι	J.S. NUCLEAF	REGULATORY COMMISSION	2. MANIFEST NUMBER USA 2001-044-1	
						CONTAINE	R AND W	ASTE DESCRIPTIO	N				3. PAGE 3 OF	3 PAGE(S)
	DIS	POSAL CONTA	NER DESCRIPT	NON						WASTE DESCRIPTION FOR EACH WA	STE TYPE IN CON			16. WASTE CLASSIFI-
5.	6.	7.	8,	9.	10.			PHYSICAL DESCRIPTI		14. CHEMICAL DESCRIPT	ION	15. RADIOLOGICAL DESCRIPTIC	N	CLASSIFT
CONTAINER IDENTFICATION NUMBER/ GENERATOR ID NUMBER(S)	CONTAINER DESCRIP- TION (See Note 1)	VOLUME (m3)	WASTE AND CONTAINER WEIGHT (kg)	SURFACE RADIATION LEVEL (µSv/hr) (mSv/hr)	CONTAX	FACE AINATION 00 cm2 BETA- GAMMA	11. WASTE DESCRIP- TOR (See Note 2	12. APPROXMATE WASTE VOLUME(S) IN CONTAINER (m3)	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	CHEMICAL FORM/ CHELATING AGENT	ELATING AGENT CHELATING CONTAINER TOTAL; OF		DES AND ACTIVITY (MBq) AND CONTAINER TOTAL ACTIVITY UCLIDE PERCENT	CATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
RS-1859 (2)/Fort Belvoir	NA	0.1985	104.3	1.0000E+00	<1.5700E-06	<1.6700E-05	25,58- NON- RCRA LIQUID	0.0991	100 100	Oxides/None .	0.00	Am-241 6.4417E-03 Ba-133 1.3320E-05 Cd-109 7.0300E-02 Ce-139 3.5187E-03 Co-57 2.8009E-03		AU
												Co-60 1.8211E-02 Cs-134 8.5100E-06 Cs-137 1.4615E-02 H-3 8.6210E-03 Hg-203 9.9900E-03		
			-									I-131 2.8120E-05 Ni-63 3.8554E+00 Pa-234 4.0700E-04 Pb-210 1.6354E-05 Pm-147 5.3613E+00		
												Ra-226 2.2200E-03 Ra-228 5.9200E-04 Ru-106 6.4750E-06 Sn-113 1.3320E-02 Sr-85 1.6872E-02		
													0000E-13 kg 7 5500E-04 kg 7 3000E-16 kg 7	
												U-234 4.5140E-04 [2.0 U-235 1.4800E-05 [1.1 U-238 9.2500E-03 [1. Y-88 2.7306E-02 Zn-65 1.4907E-03	0000E-09 k57 3000E-04 g 7 1300E-01 k57	
												Total 9.4392E+00 MBq		

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NRC FORM 541A (5-1998)

APPROVED BY OMB: NO. 3150-0165 EXPIRES: 5/31/2001

Estimated burden per response to comply with this information collection request: 28 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. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0164), Office of Management and Budget, Washington, DC 20503. If 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 (5-1998)	U.S. NUCLEAR REGULATORY COMMISSION 1. WASTE COLLECTOR/PROCESSOR								2. MANIFEST NUMBER			
UNIFORM L	LOW-LEVEL RADIOACTIV	E		NAME SHIPPER USE ONLY Directorate of Installation Support IDENTIFICATION NUMBER				USA 2001-044-1				
MANIFESTIN	DEX AND REGIONAL COMPACT TABULATION				•			3.				
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.			SHIPPING DATE 08/27/01		······································					PAGE 1 OF 1 PAGE(S)		
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	8. GENERATO 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	A SOURCE MATERIAL (hg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME	
Fort Belvoir	SBCCOM Radiation Lab. (309) 782-0338	5005 Putnam Road (Atm: AMSSB-RCB-RSR Fort Belvoir, VA 22303		0,1962	N/A(//)	С	VA	1.1515E-01	1.8000E-04	9.6896E+00	0.1982	
Ft Belvoir Haz	Directorate of Installation Support (703) 808-0020	Environmental/Natural Resourc 9430 Jackson Loop, Suite: 107 Fort Belvok, VA 22060-5130		0.0080	N/A (/ /)	С	VA	1.0138E-01	1.1000E-03	1.8674E+01	0.000.0	
				•	-							
TOTALS OF ALL PAGES (FORMS 542 AND 542A)								2.1653E-01	1.2800E-03	2.8384E+01	0.2062	

NRC FORM 542 (5-1998)

STRAIGHT BILL OF LADING

Shipper No. USA 2001-044

	ORIGINAL - NOT NEGOTIABLE								
DOT SHIPPING I	APE	KS	R & R Trucking				Carrier No.	.	
Page (1)	of (2)		(Nam	e of Carrier)	(SCAC)	- Date:	8/27/01	
On Collect on Delivery Sh	pments,	the latters "COD" must appear before consignee's r	whe or as otherwise provided in Earn 430, Sec. 1.	From	n:				
TO:	Con	nmander, US Army Soldier & Biolog	gical Chemical Command	Shipp	SBCCON	M, Radiation Lab.	<u></u>		
Consignee	Rad	lation Protection Office, Attn: AMS	SB-RCD-RS (Mrs. Joyce Kuykendall)	Stree	t Bidg329,	5905 Putnam Road			
Street	Bidg	3330		City	Ft. Belvoir	State	VA	Zip Code	2060
City	APC	S State MD	Zip Code 21010	24 H	r. Emergency Conta	ict Tel. No.	(800) 424-9300, C	hemTrec	
Route							Vehicle Number		
No. of Units & Container Type	нм		C DESCRIPTION Shipping Name, Hazard Class, N or NA), Packing Group, per 172.101, 177	2.202, 1	172.203	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carner Use Oniv)
20WC-4	RC	Radioactive Material, n	.o.s., 7, UN2982				340 kg		
		·	2R container of sealed sources and de	vices)			(750 1b.)	•	
	Γ	Radionuclide: Am-241				:			1
<u> </u>								1	
		Total Activity: 140,600 MBq (3800							
	\vdash	Physical Form: Solid					•		
<u> </u>		Chemical Form: Oxides							
·····	Container Spec: US DOT 20WC-4 with Inner US DOT 2R								
	Label: Radioactive Yellow-II								
<u></u>		Transport Index: 0.1							
<u> </u>									ļ
		· · · ·							
			<u> </u>		<u></u>				· ·
<u> </u>									1.
<u> </u>			······································						1
PLACARDS TEN		D: YES NO X	·		REMIT C.O.D. to:	I	<u> </u>	l	<u> </u>
Note-Where the rate	r is deç	endent on value, shippers are	I hereby declare that the contents of this consign			Amt:S] /		C.O.D. FEE:	
required to state soe value of the property		r in writing the agreed or declared	fully and accurately described above by proper st name and are classified, packaged, marked	ipping	l	NA_		Prepaid Collect	s
		lue of the property is hereby ipper not to be exceeding	and labeled/placarded, and are in all respects in proper condition for transport according to applica	bie		e conditions, if this shipir ise on the consignor, the	ent is to be delivered to the consignor shall sign the	Total Charges:	\$
		-	international and national governmental regulatio		following statement	ike delivery of this shipm		Freight Charge	\$
			the MIX -		freight and all other lawfu		ant wat had payment of	Freight Propud	Check box if charges
<\$0.40 per	Pour	d	fint s	ignatun	e	NA (Signature of Consegnor)		except when box at right is checked	ste la be colect
			mile in effect on the date of the issue of			on and as to each part	ly at any time interested in subject to all the bill of in-		
and condition of c	Inetno		signed, and destined as indicated above		governing classificatio	on on the date of shipn		-	
		rord carrier being understood through sion of property under the contract) as	ut this contract as meaning any person				with all the bill of lading to conditions are hereby agr		
delivery at said de	stinati	on, if on its route, otherwise to deliver			accepted for himself a				
SHIPPER Cabrera Services, Inc.						ZR TR	Tucking		
PER	Toda	Eastman, Agent for XIS Army, OS	ic		PER St	a Die	silent	· · · · · ·	
Moll					DATE SI	27/01			
-									

STRAIGHT BILL OF LADING

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Shipper No. USA 2001-044

DOT SHIPPING I	PAPE	RS				ORIGIN	al - No	OT NEGOTIABLE		Carrier No.	·	`	
						R&R1				-			
	_	2)					<u> </u>	e of Carrier)	(SCAC)	Date:	8/27/01		
On Collect on Delivery Shi TC:						erre or as otherwise provided in tern 430, Sec. 1. gical Chernical Command	Fron Shipp		DM, Radiation Lab.				
Consignee	Rad	liation Protectio	n Offic	æ, Att	n: AMS	SB-RCD-RS (Mrs. Joyce Kuykendall)	Stree	t Bidg32	9, 5905 Putnam Road	۱ <u></u>			
Street	Bide	1 3330					City	Ft. Belvair	State	VA	VA Zip Code 22060		
City	APO	G Sta	ita N	ИD		Zip Code 21010	24 H	r. Emergency Con	tact Tel. No.	(800) 424-9300, 0	hemTrec		
Route										Vehicle Number			
No. of Units	Τ				BASI				TOTAL QUANTITY	WEIGHT	RATE	CHARGES	
& Container Type	НМ	1	ntificati			ihipping Name, Hazard Class, N or NA), Packing Group, per 172.101, 17.	2.202.1	172.203	(Weight, Volume, Gallons. etc.)	(Subject to Correction)		(For Carrier Use OnM	
1 Drum	x					.o.s., 7, UN2982				4.5 kg			
		(one drum of s	sealed	chec	k source	s)				(10 16.)	•	ļ	
		Radionuclides	<u>:: Am-2</u>	<u>241, C</u>	s-137,	Pu-239, Ra-226, Sr-90, Th-232, U-238		<u></u>				<u> </u>	
<u></u>	<u> </u>	Total Activity:	2.703	MBq.	(0 0730	46 mCi)		_				ļ	
<u> </u>	<u> </u>	Physical Form	<u>ı: Solid</u>	!	<u> </u>			<u></u>					
	 	Chemical For	n: Oxic	des a	nd Chior	ides	<u> </u>	<u> </u>					
		Container Spe	<u>c: US</u>	DOT	7 <u>A Typ</u>	<u>e A</u>	<u> </u>						
<u></u>		Label: Radioad	ctive Yı	ellow-	41	· · · · · · · · · · · · · · · · · · ·							
<u> </u>	_	Transport Inde	ex: 0.1					···					
	<u> </u>	Grams Specia	I Nucle	ear M	aterial (I	Pu-239) 2.41E-9	<u> </u>			· .		<u> </u>	
<u> </u>	-											<u></u>	
	-	 				·		<u> </u>		<u> </u>		<u> </u>	
				-									
<u> </u>						·						<u> </u>	
	-		<u></u>										
		[ĺ	<u> </u>				<u> </u>	I	[<u></u>	I	
PLACARDS TEN			<u> </u>		x	I hereby daclare that the contents of this consign	ment	REMIT C.O.D. to:	Amt:\$		C.O.D. FEE:	- <u></u>	
required to state spe	cifical					fully and accurately described above by proper al		1	,) (Prepaid Collect	1	
	iared vi	alue of the property		Y		name and are classified, peckaged, marked and labeled/placarded, and are in all respects in				whit is to be delivered to the	Total	<u> </u>	
specifically stated by	y the si	hipper not to be exci	seding			proper condition for transport according to applic internetional and national governmental regulation		consignee without reco following statement:	xurse on the consignor, the	consignor shall sign the	Charges: Freight Charges	<u>s</u>	
						A IIV		The carrier shall not r freight and all other law	nake delivery of this shipm dui charges: 7 A	ent without payment of	Freight Prepaid	Check box if charges	
<\$ 0.40 per	Pour	nd				And	lignatum		A A	<u></u>	except when box at ngit is checked	are to be colect	
RECEIVED, sut	ject k	the classificatio	ms and	law fu	ily filed to	mills in effect on the date of the issue of		said route to destina		ly at any time interested in	sil or any said pr	operty, that every	
						od order, except as noted (contents signed, and destined as indicated above			ned hereunder shall be tion on the date of shipr	subject to all the bill of lac	ling terms and co	nditions in the	
which said carries	(the v	vord carrier being	g under	stood	through	out this contract as meening any person		Shipper hereby ce	rtifies that he is familiar	with all the bill of lading t			
						rees to carry to its usual piece of to another carrier on the route to said		 governing classificat accepted for himself 		conditions are hereby ag	reed to by the ship	per and	
destination. It is n	nutusii	y agreed as to ea	ас <u>ћ с</u> ап	rier of	eli or am	of, said property over all or portion of			000-	· / ·			
SHIPPER		rera Services, li	/	,		<u></u>		CARRIER & PRINCKING					
PER Todd Edsman, Agent of US Army, OSC					PER Stille May ling								
- Martin				DATE O	12/101								
		Υ.											

8/27/01

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dr315D	pu-239	0.001495
dr796	u-238	0.01665
1626	ra-226	0.026
1450A	am-241	0.0109
dr604A	am-241	0.001
1532A	am-241	1.90E-08
	sr-90	3.80E-08
	cs-137	9.00E-09
1562A	am-241	1.90E-08
	sr-90	3.80E-08
	cs-137	9.00E-09
1562C	am-241	1.90E-08
	sr-90	3.80E-08
	cs-137	9.00E-09
1562B	am-241	1.90E-08
	sr-90	3.80E-08
· ·	cs-137	9.00E-09
1598A	am-241	1.90E-08
	sr-90	3.80E-08
	cs-137	9.00E-09
1598B	am-241	1.90E-08
	sr-90	3.80E-08
	cs-13 7	9.00E-09
1598C	am-241	1.90E-08
	sr-90	3.80E-08
	cs-137	9.00E-09
1698	am-241	1.90E-08
	sr-90	3.80E-08
	cs-137	9.00E-09
1717	am-241	1.00E-03
am-241-1-A-A-A #0000174	am-241	1.00E-03
am241/sr90 #0000176	am-241	1.00E-03
	sr-90	1.00E-03
Cs/Am #0000178	Cs-137	1.00E-03
•	am-241	1.00E-03
th-232-1-A	th-232	1.00E-03
dr298A	<u>am-241</u>	1.00E-02
		0.073046
TOTALS	0	0.0250
	am-241 Cs-137	0.0259 0.001
	pu-239	0.001 0.001495 SNM(g)
	pu-239 ra-226	0.026
	sr-90	0.028
	th-232	0.001 SM (kg)
	u-238	0.01665 SM (kg)
	<u> </u>	0.072046

0.073046

2.41E-09

9.09E-03 7.57E+00

20WC-4 to APG

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Fort Belvoir

8/27/01

dr 261a	am-241	100
dr 261b	am-241	100
dr 303	am-241	300
dr 343	am-241	899.31
dr 343	am-241	899.31
dr 365	am-241	999.365
dr 371d	am-241	112
dr 371e	am-241	112
dr 648	cs-137	7.8
dr 648	am-241	40
rw 072	am-241	200
		3769.785

EMERGENCY RESPONSE INFORMATION

EMERGENCY RESPONSE GUIDE 163

7

EMERGENCY CONTACT: CHEMTREC (800) 424-9300

27/01

Shipping Date:

Proper Shipping Name

 \mathbb{N} Radioactive Material, n.o.s., Hazard Class

UN2982

Manifest No.: 12 SA 2001-044

ID Number

POTENTIAL HAZARDS

HEALTH

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability is related to potential hazards of material.
- Undamaged packages are safe; contents of damaged packages may cause external and/or internal radiation exposure.
- Type A packages (cartons, boxes, drums, etc.) Identified as "Type A" by marking on packages or by shipping papers contain non-life endangering amounts. Partial releases might be expected if "Type A" packages are damaged in moderately serve accidents.
- Type B packages (large and small, usually metal) identified as "Type B" by marking on packages or by shipping papers contain potentially life endangering amounts. Because of design, evaluation, and testing of packages, life endangering releases are not expected in accidents involving "Type B" packages except those of utmost severity.
- Radioactive White-I labels Indicate radiation levels outside undamaged packages are very low (less than 0.005mS/h (0.5 mRem/h)).
- Radioactive Yellow-II and Yellow-III labeled packages have higher radiation levels. The transport index (TI) on the label identifies the maximum radiation level in mRem/h one-meter from package.
- Commonly available instruments cannot detect some radioactive materials.
- Runoff from control of cargo fire may cause low-level pollution.
- Water from cargo fire control may cause pollution.

FIRE OR EXPLOSION

- Some of these materials may burn, but none of them Ignites readily.
- Radioactivity does not change flammability or other properties of materials.
- Type B packages are designed and evaluated to withstand total engulfment in flames at temperature of 800°C (1475°F) of a period of 30 minutes.

PUBLIC SAFETY

- Call Thom Dias (925) 443-7967
- Priorities for rescue, life saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.
- Radiation authority must be notified of accident conditions, and is usually responsible for radiological decisions.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. •Keep unauthorized personnel away.
- Stay upwind.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

PROTECTIVE CLOTHING

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection against internal radiation exposure, but not external radiation exposure.

EVACUATION

Large Spill

Consider initial downwind evacuation for at least 100 meters (330 feet).

Fire

When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

EMERGENCY RESPONSE

FIRE

- Presence of radioactive material will not change effectiveness of fire control techniques.
- Move containers from fire area you can do it without risk.
- Do not move damaged packages; move undamaged containers out of fire zone.
- Small Fires

Dry chemicals, CO2, Water spray or regular foam.

- Large Fires
- Water spray, fog (flooding amounts).
- Dike fire-control water for later disposal.

SPILL OR LEAK

- Do not touch damaged packages or spilled material.
- Slightly damaged or damp outer surfaces seldom indicate failure of packages since most have an inner container.

Liquid Spills

Cover with sand, earth or other non-combustible absorbent material.

FIRST AID

- Medical problems take priority over radiological concerns.
- Use first aid treatment according to the degree of the injury.
- Do not delay care and transport of a seriously injured person.
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons who contacted released material may be a minor contamination problem to contacted persons, equipment and facilities.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

The above information is intended to satisfy the requirements of 49 CFR parts 172.600, 172.602 & 172.604.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL Radioactive Waste Shipment Prior Notification and Manifest Form

(Failure to Complete ALL Entries Will Result in Return of Form and Constitute Noncompliance.)

	See Reverse Si	de for Ir	etactions	· · · · · · · · · · · · · · · · · · ·			
1. Name and Address of Shipper/Generation				ble for Waste Shipment :			
H.Q. U.S. Army, Operations Support Cor			lame:	Mr. Kelly Crooks			
(ATTN: AMSOS-SF/Crooks)		b) Title: Health Physicist					
Rock Island, IL 61299-6000		c) Telephone: (309) 782-0338					
3. Radioactive Waste Transport Permit No.	0.						
0137-00-01-E		4. Shipment Identification No.: $O(26 - O)$ USA 2001-044 / $S_{1} = O(26 - O)$					
5. Location from which waste will be shi	ipped :	6. Nam	e and Addr	ess of Consignee:			
SBCCOM Radiation Lab.		{ I	Duratek Co	nsolidation & Suport Facility			
Fort Belvior, MD			Barnwell, S	C 29812			
7. Scheduled Date of Departure of Shipn	ient:	8. Estin	nated Date	of Arrival of Shipment:			
62. 27-24 Aug-01				31-Aug-01			
9. Carrier:	10. Trailer No. & Owner:		11. Type Transport Vehicle:				
R & R Trucking	(if avail.) R&R Trucking			Closed Van			
12. Routes shipment will follow in State I-95, US-301, SC -70, SC-64	of South Carolina (Be Specific	c):					
13. Type Package Metal Box &	14. Type Container in Cask:	: 15. Package or Cask Spe Strong Tight &					
Model No.: Metal Drum	N/A			US DOT 7A Type A			
16. Complete Waste Description (Be Specific): Sealed Sources, Lab Trash (paper, plastic, metal, glass), solidified aqueous lab reagents							
17. Physical & Chemical Form:	18. Total No.	19. Pı	rominent Rad	dionuclides: C14, Cd107, Ce139, Co57 241, Ba1331 Cr 57 Cs137, H3			
Solid Metal & Oxides	of Packages :	ALPY	CO-60 AM	24, Ba133, Cr 57, CS137, H3			
	3	HGZC	<u>13 K185</u>	5, Mr. 54, NO22, NEC. 3; 411, 417, PC210			
20. Total Curies:	21. Waste Class & Stability:	5	l'	22. Total Cubic Feet:			
2.0005 7.6	<u> </u>			37.5.57%			
23. DOT Sub Type: 24. DOT Class. & Hazard							
UN No.: UN 2982, Radi							
<a2 7<="" material,="" n.o.s.,="" td=""><td></td><td>[]Yes [X]No</td></a2>				[]Yes [X]No			

CERTIFICATION

I hereby certify on behalf of the above-named shipper/generator to the South Carolina Department of Health and Environmental Control that the information provided herein is complete and correct to the best of my knowledge; and that the shipper/generator has complied with all the provisions as required by Act No. 429 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, and Department Regulation 61-83.

Date 8/19/2001

Todd W. ⊯astman, Agent for U.S. Army, OSC

Typed Name

Signature of Consignee's Authorized Representative

CONSIGNEE ACKNOWLEDGMENT

This acknowledges to the South Carolina Department of Health and Environmental Control that the above-described radioactive waste shipment was received.

Date of Delivery

Signature of Consignee's Authorized Representative

•••

Typed or Printed Name and Title

DHEC 802 (Rev. 10/84)

(Copies of this form may be reproduced locally as needed)

Form RHA-CT SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (5/80) Radioactive Waste Shipment Certification Form

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

the Department.						
Part I: Shipper's Certi	ificate of Compliance					
1. Name of Shipper and Address:	2. Shipment Identification No.					
H.Q. U.S. Army, Operations Support Command (OSC)	USA 2001-044/91-0126-01					
(ATTN: AMSOS-SF/Crooks)	3. Transport Permit No.					
Rock Island, IL 61299-6000	0137-00-01-E					
Telephone No. (309) 782-0338						
In compliance with Act No. 499 of 1980, the South Carc	lina Radioactive Waste Transportation and					
Disposal Act, I hereby certify on behalf of the above-nan	ned shipper to the South Carolina Depart-					
ment of Health and Environmental Control that the above-	named shipper has complied with all pro-					
visions of Act No. 499 of 1980, and all applicable laws						
both State and Federal, regarding the packaging, transpor						
of such wastes. I further certify that this shipment of rad						
within 48 hours of the time of departure and that no item	s of non-compliance with applicable					
laws, rules or regulations were found.	$, \Lambda \land \Lambda / $					
$\rho(2\pi/\alpha)$						
Date 8/2//0/						
Todd W. Eastman, Agent for U.S. Army, OSC						
Typed Name and Title of Agent of Shipper	Signature					
Part II: Carrier's Co	ertification					
1. Name of Carrier and Address:	2. Shipment Identification No.					
R&R Trucking	USA 2001-044 / SCN-C/26-C/					
P.O. Box 545	3. Transport Trailer No.					
Duenweg, MO 64841	7010111					
Telephone_No. (800) 625-6885	10/0/10					
4. Scheduled Date of Departure of Shipment:	5. Estimated Date of Arrival of Shipment:					
·08/24/01 ~127/01	08/31/01					

Certification is hereby made to the South Carolina Department of Health and Environmental Control that: (a) the shipper has provided the carrier with a copy of the shipment manifest, the certificate of compliance, and the routing instructions; (b) the shipment of radioactive waste has been properly placarded for transport according to applicable U.S. Department of Transportation Regulations; (c) all shipping papers originated or reproduced by the carrier have been properly executed; (d) the transport vehicle has been inspected according to applicable State and Federal regulations within the prescribed intervals and that all safety and operational components are in good working order and meet the requirements of regulations; (e) all drivers who will operate the vehicle within the State of South Carolina are qualified to transport hazardous materials as specified by applicable U.S. Department of Transportation regulations; (f) the Department shall be immediately notified of any variance, occuring after departure, from the shipper's notification of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and administrative rules and regulations, both State and Federal, regarding the transportation of radioactive wastes will be complied with.

Date

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DHEC 803 (5/80)

(Copies of this form may be reproduced locally as needed)

EMERGENCY RESPONSE INFORMATION

EMERGENCY RESPONSE GUIDE 162

EMERGENCY CONTACT: CHEMTREC (800) 424-9300

Shipping Date: 8/27/200	Manifest No.: USA 2001-044				
Proper Shipping Name	Hazard Class	ID Number			
Radioactive Material, LSA, n.o.s.,	7	UN2912			
Radioactive Material, SCO,	7	UN2913			

POTENTIAL HAZARDS

HEALTH

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability is related to potential hazards of material.
- Undamaged packages are safe; contents of damaged packages may cause external and/or internal radiation exposure.
- Low radiation hazard when material is inside container. If material is released from package or bulk container, hazard will vary from low to moderate.
- Level of hazard will depend on the type and amount of radioactivity, the kind of material it is in, and/or the surfaces it is on.
- Some material may be released from packages during accidents of moderate severity. This poses little risk to people.
- Released radioactive materials or contaminated objects usually will be visible if packaging fails.
- Some exclusive use shipments of bulk and packaged materials will not have "RADIOACTIVE" labels.
- Placards, markings, and shipping papers provide identification.
- Some packages may have a "RADIOACTIVE" label and a second hazard label. The second hazard is usually greater than the radiation hazard: so
 follow this guide as well as the response guide for the second hazard class label.
- Some radioactive materials cannot be detected by commonly available instruments.
 Runoff from control of cargo fire may cause low-level pollution.

FIRE OR EXPLOSION

- Some of these materials may burn, but none of them ignites readily.
 Nitrates are oxidizers and may ignite other combustibles (see guide 141).
- Uranium and Thorium metal cutting or granules may ignite spontaneously if exposed to air (see Guide 136).

PUBLIC SAFETY

Call Thom Dias at (925) 443-7967

- Priorities for rescue, life saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.
- Radiation authority must be notified of accident conditions, and is usually responsible for radiological decisions.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind.
- Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

PROTECTIVE CLOTHING

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection.

EVACUATION

Large Spill

Consider initial downwind evacuation for at least 100 meters (330 feet).

Fire

When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.
 <u>EMERGENCY RESPONSE</u>

FIRE

- Presence of radioactive material will not change effectiveness of fire control techniques.
- Move containers from fire area you can do it without risk.
- Do not move damaged packages; move undamaged containers out of fire zone.
- Small Fires

Dry chemicals, CO2, Water spray or regular foam.

- Large Fires
- Water spray, fog (flooding amounts).
- Dike fire-control water for later disposal.

SPILL OR LEAK

Do not touch damaged packages or spilled material.

Liquid Spills

- Cover with sand, earth or other non-combustible absorbent material.
- Cover powder spill with plastic sheet or tarp to minimize spreading.
- Dike to collect large liquid spills.

FIRST AID

- Medical problems take priority over radiological concerns.
- Do not delay care and transport of a seriously injured person.

•Use first aid treatment according to the degree of the injury. •Apply artificial respiration if victim is not breathing.

- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons who contacted released material may be a minor contamination problem to contacted persons, equipment and facilities.
 Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

The above information is intended to satisfy the requirements of 49 CFR parts 172.600, 172.602 & 172.604.

SHIPMENT ACKNOWLEDGMENT

Consignee:

Please sign below after receiving and accepting this shipment. If a NRC form 540 is included with this shipment, please sign block 9, "Authorized consignee acknowledging waste receipt."

Please fax both to:

CABRERA Services, Inc. FAX: (860) 289-2261

Shipment No. :	SCN-0126-01
Manifest No. :	USA 2001-044
Consignee:	Duratek Consolidation & Support Facility, Basnulell, SC
Date of Shipment:	8/27/01
Signature of	
Consignee:	

Signature of Consignee:	
Date of Receipt:	

This above information is intended to satisfy the requirements of 10 CFR 20, appendix F.

Lenses Fume Hood Parts Plkywood Lab Trash 1495	th-nat cs-137 cs-137 cs-137 cd-109 co-57 ce-139 hg-203	0.00857 0.00005 0.0000006 0.000006 0.00046 0.000017 0.00002 0.000029
1496	sn-113 sr-85 cs-137 y-88 co-60 cd-109 co-57 ce-139 hg-203 sn-113	0.000066 0.000061 0.000082 0.00013 0.000096 0.00044 0.000016 0.0000175 0.000028 0.000064
1503 1519A 1519B 1519C 1060	sr-85 cs-137 y-88 co-60 u-238 u-nat u-nat u-nat u-nat cd-109 co-57	0.000059 0.000802 0.00013 0.000093 0.000004 0.0000175 0.0000802 0.0000175 0.000044 0.000016
1567	ce-139 hg-203 sn-113 sr-85 cs-137 y-88 co-60 cd-109 co-57 ce-139	0.0000175 0.000028 0.000064 0.000059 0.0000802 0.00013 0.000093 0.000044 0.000016 0.0000175
1579	hg-203 sn-113 sr-85 cs-137 y-88 co-60 cd-109 co-57 ce-139 hg-203 sn-113 sr-85	0.000028 0.000064 0.000059 0.0000802 0.000093 0.000093 0.000048 0.000019 0.000022 0.000042 0.000079 0.000087

Fort Belvoir, VA

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1583	cs-137 y-88 co-60 cd-109 co-57 ce-139 hg-203 sn-113	0.000085 0.000165 0.000098 0.00048 0.00002 2.50E-05 0.000041 7.90E-05
1591A	sr-85 cs-137 y-88 co-60 cd-109 co-57 ce-139 hg-203 sn-113	8.40E-05 8.30E-05 1.60E-04 9.70E-05 4.80E-04 1.90E-05 2.40E-05 6.70E-05 9.00E-05
1591B	sr-85 cs-137 y-88 co-60 cd-109 co-57 ce-139 hg-203 sn-113	1.14E-04 8.00E-05 1.80E-04 9.00E-05 4.80E-04 1.90E-05 2.40E-05 7.00E-05 9.00E-05
1606 [·]	sr-85 cs-137 y-88 co-60 cd-109 co-57 ce-139 hg-203 sn-113	1.10E-04 8.00E-06 1.80E-04 9.30E-06 0.000418919 1.49E-05 1.55E-05 1.65E-05 5.22E-05
1498 1627 1628 1633 1634	sr-85 cs-137 y-88 co-60 ra-226 h-3 h-3 co-57 cd-109 co-57 ce-139 hg-203 sn-113 sr-85 cs-137	4.11E-05 8.22E-05 0.000102162 8.92E-05 7.27E-05 1.40E-04 1.40E-04 1.04E-03 0.000456757 1.59E-05 1.78E-05 2.86E-05 6.16E-05 5.59E-05 8.03E-05

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1630 1629 1695	y-88 co-60 pm-147 c-14 co-57 sn-113 te-123 cd-109	0.00012 8.76E-05 1.41E-04 1.31E-04 3.40E-05 1.60E-04 4.10E-05 8.70E-04
1696	cr-51 sr-85 cs-137 y-88 co-60 co-57 cd-109 te-123 cr-51	0.0011 2.10E-04 1.50E-04 3.80E-04 1.62E-04 3.30E-05 8.50E-04 4.00E-05 0.00104
1706 1722 1732	sn-113 sr-85 cs-137 y-88 co-60 ra-226 co-60 cs-137	0.000153 2.10E-04 1.40E-04 0.00014 0.00016 1.80E-05 1.46E-06 2.25E-05
1735	co-60	1.31E-05
1736	cs-137	1.35E-05
dr712-1	га-226	3.51E-07
	ra-228	2.56E-07
dr604	co-57	1.00E-03
	co-60	1.00E-03
	cs-137	1.00E-03
	mn-54	1.00E-03
	na-22	1.00E-03
1631	c-14	1.12E-04
1502	u-238	1.90E-07
dr600	u-238	1.70E+00
ra-226 lum. Device	ra-226	2.00E-06
1130	cd-109	2.40E-04
	co-57	9.40E-06
	ce-139	1.30E-05
	hg-203	0.0000323
	sn-113	4.50E-05
	sr-85	5.60E-05 4.00E-05
•	cs-137 y-88	4.00E-05 9.30E-05
	y-oo co-60	9.30E-05 4.50E-05
1626	c-14	4.50E-05 1.72E-03
1020	tl-204	6.17E-05
	li-204 sr-90	2.08E-06
	31-30	2.002-00

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	tl-204	0.001548649
dr450	co-57	1.04E-02
01400	ba-133	1.07E-02
fuel gage	ra-226	0.001
im-174 gage	ra-226	0.001
press gage	ra-226	0.001
1436	h-3	120 compass (6971)
1616-1	h-3	120 compass (6971)
1641-2	h-3	120 compass (6971)
1987	h-3	120 compass (6971)
dr270	h-3	25 Watch
dr270-1	h-3	25 Watch
1569	pm-147	1 aiming post
1532B	am-241	1.90E-08 see variance
15520	sr-90	3.80E-08
	cs-137	9.00E-09
1532C	am-241	1.90E-08 see variance
10020	sr-90	3.80E-08
	cs-137	9.00E-09
1508A	am-241	3.00E-09 see variance
15004	sr-90	5.00E-08
	cs-137	1.80E-07
1507A	am-241	3.00E-08 see variance
150/A	sr-90	5,00E-08
	cs-137	1.80E-07
1507B	am-241	3,00E-08 see variance
1507 6	sr-90	5.00E-08
•	cs-137	1.80E-07
1506A	am-241	3.00E-08 see variance
ISUDA	sr-90	5.00E-08
	cs-137	1.80E-07
1506B	am-241	3.00E-08 see variance
12000	sr-90	5.00E-08
	cs-137	1.80E-07
1506C	am-241	3.00E-08 see variance
12000	sr-90	5.00E-08
	cs-137	1.80E-07
1665	po-210	8.62E-05
dr315A	pu-239	1.23E-06 see variance
dr315B	pu-239 pu-239	1.24E-06 see variance
dr315C	pu-239 pu-239	1.23E-04 see variance
1753	pu-239 pu-239	3.00E-07 see variance
1429B	th-232	3.00E-04
1429C	kr-85	5.00E+00
14290 1429a-1	th-230	4.50E-05
1429a-1	pu-230	5.00E-05 see variance
Electron Tube	pu-239 kr-85	5.00E-03
rw029	ra-226	0.046 M-151 black out lights (luminous device)
dr795	ra-226 u-238	2.50E-02 Standards and sources made from soils and ores
dr794	u-238	1.70E-04 "

Fort Belvoir, VA

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dr803	u-238	1.70E-07	PT
dr790	u-238	2.82E-04	88
dr784	th-232	2.20E-06	00 ·
dr793	th-232	5.45E-05	
dr786	th-232	1.10E-04	11
dr800	u-238	1.60E-04	81
dr788 (4 each)	u-238	9.60E-03	88
dr806	u-238	9.60E-03	01
dr805	th-232	5.60E-06	
dr804	th-232	5.60E-06	84
dr808 .	u-238	9.60E-03	P1
dr792	u-238	1.55E-04	01
dr798	th-232	2.80E-06	н .
dr787 (7 each)	th-232	6.30E-09	91
dr712	ra-226	3.50E-07	
	ra-228	2.60E-09	**
dr785	u-238	3.33E-05	11
dr797	th-232	1.00E-07	υ .
dr718 (2 each)	ra-226	3.10E-07	U .
dr789	th-232	4.80E-03	0
dr801	u-238	8.30E-06	U
dr802	u-238	1.65E-06	U
dr807	u-238	9.60E-03	"
dr791	u-238	9.60E-03	17
dr799	th-232	5.00E-07	"
1435	h-3	3.50E+03 Lun	ninous device
1521A	h-3	2.10E+03	14
1521B	h-3	4.80E+02	11
1723A	h-3	5.00E+01	11
1723B	h-3	1.00E+02	11
1723C	h-3	4.00E+01	PT
rw079	h-3	2.16E+02 (24)	Aiming post lights
Electron tube	u-238	1.00E-06	
wave guide	pm-147	1.80E+02	
	h-3	3.00E+02	
wave guide	co-60	7.00E-04	
Bag of Planchetts	ni-63	3.50E-04	
	am-241	1.58E-06	
		7503.890658	

am-241	0.000001798
ba-133	0.0107
c-14	0.0019634
cd-109	0.006535676
ce-139	0.000213851
co-57	0.012689292
co-60	0.002927657
cr-51	0.00214

407	0 0004 5000		
cs-137	0.00215929		
h-3	7316.00028		
hg-203	0.000410489		
kr-85	5.005		
mn-54	0.001		
ni-63	0.000350035		
na-22	0.001	•	
pm-147	181.000141		
po-210	0.00008622		
pu-239	0.000130571	(2.11E-	69)
ra-226	0.049093714		17
ra-228	2.586E-07		
sn-113	0.001067784		
sr-85	0.001206027		
sr-90	2.45708E-06		
te-123	0.000081		
th-230	0.000045045	SM (kg)	2.15E-09
th-232	0.005281306	SM (kg)	4.80E-02
th-nat	0.00857	SM (kg)	3.90E-02
tl-204	0.001610378		
u-238	1.77381561	SM (kg)	8.06E+02
u-nat	0.0001152	SM (kg)	1.62E-04
y-88	0.002040162		
	7503.890658	-	

UNIFORM LOW-LE WASTE	HEM-NUCLEAR CONSO EVEL RADIOACTIVE MANIFEST		SBCCOM Ra 5905 Putnam (Attn: AMSS) Fort Belvoir,	n Road B-RCB-RSR VA 22308			SHIPM S(ENT I.D. NUMBER CN-0126-01 COLLECTOR PROCESSOR	- 7.1	FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION	!	F 2 3 None None
1. EMERGENCY TELEPHONE NUMBER (Inclu	de Aree Code)		0137-00-0	PORT PERMIT NUMBER 1-E	SHIPMENT NU USA 2001-044			GENERATOR TY (Specify) G		CONSIGNEE - Name and Facility / Chern-Nuclear Systems,	LLC	••••
(800) 424-9300 ORGANIZATION		<u></u>	CONTACT Mr. Kelly (Crooks	-		Include	HONE NUMBER a Area Code)) 782-0338		Chem-Nuclear Consolida Hwy 64 (1 mile west of S Barnwell, SC 29812	nelling)	lity
ChemTrec 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?	3. TOTAL NUMBER OF PACKAGES IDENTIFIED	1	6. CARRIE R&R Truckin PO Box 545	R - Name and Address Ig, Inc.				0. NUMBER 10501973	. SKG	SNATURE - Authorized consigned	e acknowied	dging w
· YES · NO	ON THIS MANIFEST	3	Duenweg, M	0 64841		5	5HIPPI 8/27/	NG DATE	This i	is to certify that the herein-named n	naterials are	CERTI
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY X NO	EPA MANIFEST NUMBER		CONTACT Mr. D	on Ritchie		1	Include	HONE NUMBER Area Code) 625-6885	certifi dispo	oper condition for transportation acc ies that the materials are classified, seal as described in accordance with	peckaged,	marked,
THIS SHIPWENT? []'''' #"Yes," provide Manifest Number =====>	, N/A		for	- Autorized cargier ecknowled	ging waste receipt		DATE	127/01	AU	THORIZED SIGNATURE TE	clo runn	TITLE A
11. U.S. DEPARTMENT OF TRANSPORTATIO (Including proper shipping name, hazard class, and any additional information		12. DOT LABEL "RADIOACTIVE"	15. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM			INI RADK	15. DIVIDUAL DIVIDUAL DIVIDUAL		18. TOTAL PACKAGE AC MBq m		Lt C
Radioactive material, n.o.s., 7, UN2982 standards, luminous devices, Lab Tras	• • •	Yellow It	D.1	Solid Oxides	Am-2 Ce-1			1	d-109 r-51	2.7773E+05 7.5063E	+03	NA
					Cs-1 Mn-5			1	r-85 m-147			
					Po-2 Sn-1				a-228 e-123			
					Th-2 U-23			Th-nat T Y-88	-204			
Radioactive material, n.o.s., 7, UN2982 (lab trash-paper,plastic,glass,metal)		Yellow II	D.1	Solid Oxides	Am-2 H-3	41 Ba-1 Ni-6	• - •		s-137 o-210	4.7483E+01 1.2833E	+00	NA
					Ra-2 Th-2				h-230 -nat			
FOR CONSIGNEE USE ONLY	, i	· •	۰	as a is m Date Title	mended, and ade that the in 2</td <td>the effect spection i</td> <td>revea</td> <td>the South Card exted in accord onsolidation fa aled no items of lignature ULF + EV $SZ_{0} - 3^{-1}$</td> <td>f non-co</td> <td>partment of Health and En the requirements of So ceptance criteria, within 48 ompliance with all applicab MALLY, O.SC</td> <td>the laws, r</td> <td>ina Ra ior to s rules, a</td>	the effect spection i	revea	the South Card exted in accord onsolidation fa aled no items of lignature ULF + EV $SZ_{0} - 3^{-1}$	f non-co	partment of Health and En the requirements of So ceptance criteria, within 48 ompliance with all applicab MALLY, O.SC	the laws, r	ina Ra ior to s rules, a

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FORM 540 (10-95)

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FORM 540A

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CHEM-NUCLEAR CONSOLIDATIO

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

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		INDN RADION	15. ADUAL AUCLIDES		MBq	16. ICKAGE ACTIVITY MCI	
Radioactive material, n.o.s., 7, UN2982 (lab trash-paper,plastic,glass,metal)	Yellow II	0.3	Solid Oxides	Am-241 H-3	Ba-133 NI-63	Co-60 Pb-210	Cs-137 Po-210	5.5606E+01	1.5029E+00	NA
, <u>, , , , , , , , , , , , , , , , , , </u>				Ra-226 Th-232	Sr-90 Th-nat	Th-228 U-235	Th-230 U-238		· · _ /	
• .				U-nat						
·····										
	· · · · · · · · · · · · · · · · · · ·		·							- ·
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FORM 540A (10-96)

						<u> </u>		1 MAN	FEST TOTALS					
FORM 541	CHEM-NUCLE/	AR CONSOLIE	DATION FAC	LITY NUMB	JMBER OF SPECIAL NUCLEAR MATERIAL (grams)									
UNIFORM LOW-LEVEL RADIOACTIVE					DISPOSAL VC CONTAINERS		NET WASTE NET WASTE VOLUME WEIGHT		U-233 U-235				TOTAL	
WASTE MANIFEST					3 13	0.99		36 · NP	1.2700 2 Pac	⊏-03 kages	2.110 1 Pac		1.2	721E-03
CONTAINER AND V	ASTE DESCRIP	TION			<u>د</u> تتا	35,00	<u>110 9</u>	ACTIMITY						
			J Tong for		ALL NU	CLIDES	TRITIUM	C-14	To-8	9	14	29		SOURCE
Additional Nuclear Regulatory Commission Disposal of F	adioactive Waste	ients for Contro	oi, iranster a	nd MBq	2.7784	E+05	2.7076E+05	7.2645E-02	NP		NP		(kgs)	8.9246E-
	2			mCi	7.5091	E+03	7.3180E+03	1,9634E-03	NP		NP		(lbs)	1.9675E+
DISPOSAL CONTA	INER DESCRIPTION								PTION FOR EACH				<u>, , , , , , , , , , , , , , , , , , , </u>	
5. 6. CONTAINER IDENTIFICATION CONTAINER NUMBER / S.C. DESCRIPTION TRANSPORT (See Note 1 & PERMIT NUMBER Note 1 A)	7. VOLUME <u>(13)</u>	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL mSv/hr	dpm/1		DES (Se		HYSICAL DESCRIP 2. APPROXIMATE WASTE VOLUME(5) IN CONTAINER (m3) (FT3)		CHEM	HEMICAL DE	WEIGHT		15. RA INDIVID CONTA
		(ib)	mremyhy	ALPHA	GAMMA		<u> </u>			Oxides/	Vene		Am-24	RADION
B-120137-00-01-E 2	1.19	771	3.0000E-02	<1.6700E-06	<1.6700E-05	36,33,394	1	0.58	100 100	Oxidesi	NONE .	0.00	Ba-13: C-14	3
	42.00	1700	3.0000E+00	<1.000E+02	<1.000E+03			20.00					Cd-10 Ce-13	9
	·												Co-57 Co-60 Cr-51	
													Cs-13 H-3	r
													Hg-20 Kr-85 Mn-54 Na-22 Ni-63	3
													Pm-14 Po-21 Pu-23 Ra-22 Ra-22] 9 [2.11(
	· · · · · · · · · · · · · · · · · · ·												Sn-11: Sr-85 Sr-90 Te-12: Th-230	
													Th-23 Th-nat TI-204 U-238	13.9000E
	:									L		l	Ũ-nat	[1.6200]
waste requiring disposal in approved structural over- packs the numerical code must be followed by "-OP." Codes. (Choose one code as may be applicable.) 20 1. Wooden Box or Crate 9. Demineralizer 21 2. Metal Box 10. Gas Cylinder 8. High Integrity Container - Poly 21 3. Plastic Drum or Pail 11. Buik, Unpackaged Waste Chigh Integrity Container - Fibergless 22 5. Metal Tank or Liner 13. High Integrity Container 11. High Integrity Container - Fibergless 22 5. Metal Tank or Liner 19. Other, Describe in hem 6. F Liner - Steel 22		20, Charcoal 21, Incinerat 22, Soit 23, Gas 24, Oil 25, Aqueous 26, Filter Me	ncinerator Ash 30, Cation ion-exchange Media 30 Soil 31, Anion ion-exchange Media 32 Sas 32, Mixed Bed Ion-exchange Media 40 Al 33, Contaminated Equipment 41 Augusous Liquid 34, Organic Liquid (except oil) 42 Tither Media 35, Giassware or Labware 45 Achanical Filter 36, Sasaked Source/Device 43			 Evaporator Bo Concentrata: Compactible I Compactible I Noncompactib Animal Carcas Roingical Mat animal carca Activated Mate 	ich predominate by volume.) 38. Evaporator Bottoms/Sludges/ Concentrates 39. Compactible Trash 40. Noncompactible Trash 41. Animal Carcass 42. Biological Material (except animal carcass) 43. Activated Material 59. Other. Describe in fism 11.		Note 2A: Barmwell Specific Waste Descriptor Codes (Choose all applicable codes.) G Dewatered H Solid I Combustible J Non-combustible K Air Filtration Filters L Asbestos		Solidif 90. Ce 91. Co 92. Bit	ncrets f spsutation)		

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FORM 541 (10-96)

FORM 541A			UNIFO				OACTIVE			CHEM-NUCLE	AR CONS	OLIDATION FAC
					STE MA							
	DISPOSAL CONTAINE	RDESCRIPTION	CONTA	INER AND	WASTE DES	CRIPTION	(CONTINUATION)	WASTE DESC	RIPTION FOR FACH	VASTE TYPE IN CONT.	AINER	
		T	1		1			PHYSICAL DESCRIP	TION	14.CHEMICAL DE		15R/
5. CONTAINER IDENTIFICATION NUMBER / S.C. TRANSPORT PERMIT NUMBER	6. CONTAINER DESCRIPTION (See Note 1 & Note 1 A)	7. VOLUME	8. WASTE AND CONTAINER WEIGHT	9. SURFACE RADIATION LEVEL	MBg/1 dpm/1	AINATION 00 cm2 00 cm2	11. WASTE DESCRIPTOR (See Note 2 & Note 2A)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3) (FT3)	13. SOLIDIFICATION OF STABILIZATION MEDIA (See Note 3 & Note 3A)	CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0,1%	INDIVIDUAL CONTAINER
PERMIT NOMBER			(kg) (LB)	membr	ALPHA	BETA- GAMMA		((15)	a NOTE SA)		1-20,13	RADIO
		1	1	1								Y-88
•	1			I	l				1			Subtotal
				ŀ								Total
												SNM: [2.11 Source: [1.6776
•			······								}	
DAW-1/0137-00-01-E	4	0.21	82	8.0000E-03	<1.8700E-08	<1.6700E-05	35,39,59-BROKEN GLASS HAZARD-H	0.21	100 100	Oxides/None	0.00	Am-241 Ba-133 Co-60
		7.50	180	6.0000E-01	<1.000E+02	<1.000E+03		7.50				Cs-137 H-3
												NI-63 Pb-210 Po-210 Ra-226 Sr-90
			ļ					·				1
•												Th-228 2.0600 Th-230 6.1600 Th-232 2.1500
												U-235 [6.34 U-238 [1.3600
												U-nat [7.9100
·												Subtotal Total
												SNM: [6.34 Source: [9.2915
			<u> </u>									
DAW-2/0137-00-01-E	4	0.21	91	3.0000E-02	<1.6700E-06	<1.6700E-05	35,39,59-BROKEN GLASS HAZARD-H	0.21	100 100	Oxides/None	0.00	Am-241 Ba-133 Co-60
		7.60	200	3.0000E+00	<1.000E+02	<1.000E+03		7.50				Cs-137 H-3
												Ni-63 Pb-210 Po-210
												Ra-226 Sr-90

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FORM 541A (10-96)

FORM 541A			UNIFC	ORM LO	W-LEVE	L RADI	OACTIVE			CHEM-NUCLE/	AR CONS	OLIDATIC	N FACIL
				WA	STE MA	NIFEST	•						
	DISPOSAL CONTAINE	•	CONTA	INER AND	NASTE DES	CRIPTION	CONTINUATION)			ASTE TYPE IN CONTA	41615		
								PHYSICAL DESCRIP	TION	14. CHEMICAL DE		1	5. RAL
5. CONTAINER IDENTIFICATION NUMBER / S.C. TRANSPORT	6. CONTAINER DESCRIPTION (See Note 1 &	7. VOLUME	8. WASTE AND CONTAINER WEIGHT	9, SURFACE RADIATION LEVEL	MBq/1	FACE AINATION <u>60 cm2</u> 00 cm2	11. WASTE DESCRIPTOR (See Note 2 & Note 2A)	WASTE VOLUME(S) IN CONTAINER	VOLUME(S) IN STABILIZATION CHEMICAL FORM/ CONTAINER MEDIA CHELATING AGENT		AGENT	6	IDIVIDUAL F
PERMIT NUMBER	Note 1A)	(m3) (f3)	(kg) (LB)	<u>mSy/hr</u> mrem/hr	ALPHA	BETA- GAMMA	1	(FT3)	& Note 3A)	IF>0.1%			RADION
											•	Th-228 Th-230 Th-232 Th-nat U-235	[1.9500] [6.1800] [1.8200] [2.7300] [6.36(
												U-238 U-nat Subtotal	[1.3600] [3.4500]
						· · ·						Total SNM: Source:	[6.36([6.3178]
Shipment Totals		- c 1.51	844									SNM: Source:	[1.272 [8.9246]
		57.00	2080.00										
													,
										•			

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FORM 541A (10-96)

FORM 542	M 542 CHEM-NUCLEAR CONSOLIDATION FACILITY				Y 1. WASTE COLLECTOR/PROCESSOR								
	UNIFORM LOW-LI	EVEL RADIOAC	CTIVE	-	NAME SHIPPER USE ONL								
		MANIFEST				adiation Lab.							
	MANIFEST INDEX AND RE	GIONAL COMPACT TABULAT	110N		IDENTIFICA 0137-00-01-	TION NUMBER	•						
	List all original "PROCES before "COLLECT	SED WASTE" generat ED WASTE" generato	ors (if any)		SHIPPING 0 8/27/01	DATE	<u></u>						
4.	5.	6.	6A.		POCESSED 8. MANIFEST 9. 10.					11	· · · · · · · · · · · · · · · · · · ·	ASP	ROCESSED
SC TRANSPORT PERMIT NUMBER		GENERATOR FACILITY ADDRESS	WASTE DESCRIPTION (NOMENCLATURE)	(OR) VC	VASTE MATERIAL) XLUME	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL)	WASTE CODE P = PROCESSED C = COLLECTED	ORIGINATING COMPACT REGION	A, SC MAT	URCE ERIAL	B. SNM	C. AC	יזזעזז
		ADDRESS	(NOMENCERIORE)	(m3)	(123)	RECEIVED AND DATE OF RECEIPT	C=COLLECTED	OR STATE	(kg)	(ħ)	(0)	(MBq)	(mCi)
0137-00-01-E 13	SBCCOM Radiation Lab. (309) 782-0338	5905 Putnam Road (Attn: AMSSB-RCB-RSR Fort Belvoir, VA 22308	CONTAMINATED EQUIPMENT	0.9900	34.9611	5 NA(11)	c	VA	8.9248E-01	1.9675E+00	1.2721E-03	2.7784E+05	7.5091E+03
16			GLASSWARE OR LABWARE		·								
6 ·	· .		SEALED SOURCE/DEVICE										
9			COMPACTIBLE TRASH				-						
8	<u></u>		BROKEN GLASS HAZARD							_			
							·			-			
						· .							
	·								· · · ·				
			TOTALS	OF ALL P	AGES (I	FORMS 542 AN	D 542A)		8.9246E-01	1.9675E+00	1.2721E-03	2.7784E+05	7.5091E+03

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HQ, Industrial Operations Command

AMSIO- DMW ROCK ISLAND, ILLINIOS 61299-6000 309 782-1886 DSN 793-1886 Fax: 309 782-2988 DSN 793-2988

FAX TRANSMISSION COVER SHEET

Date: December 10, 1998

To: Tim Mikulskit

Fax: 703 704-2796

Subject: Waste Receipt

Sender: JUDY T. WOODSON

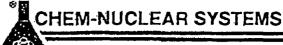
YOU SHOULD RECEIVE 2 PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL 309 782-1886 DSN 793-1886.

Tim,

Enclosed is the Chem-Nuclear Consolidation Facility waste receipt notification stating they have received the waste we shipped from your installation on the August 98 ECR. Please maintain this copy in your records. If you have any questions just give me a call.

Thanks,

Judy



CONSOLIDATION FACILITY

16043 Dunbarton Boulevard • Barnwell, South Carolina 29812

August 28,1998

Department Of The Army HQ, US Army Industrial Operations Command AMSIO-DMW(Kelly Crooks) Rock Island, Illinois 61299-6000

Attention: Kelly Crooks

Reference:

Radioactive Waste Shipment:

USA 98-070 SCN-0210-98 Fort Belvoir Fort Belvoir, Virginia 22060

Dear Mr. Crooks,

As required by 10CFR Part 20, South Carolina Title A, and Chem Nuclear Consolidation Facility Radioactive Material Inventory and Control Procedure (DF-AD-010), you are hereby notified that the shipment referenced above has been received at the Chem Nuclear Consolidation Facility.

A signed copy of the Form 540 for this shipment is attached as acknowledgment of the acceptance of the waste shipment. This waste meets all the requirements of Chem Nuclear Consolidation Facility acceptance criteria at the point of receipt inspection. You will be notified by our facility if the waste is found to be in noncompliance during processing.

If you have any questions regarding this letter, please contact me at (803) 541-5064.

Sincerely

N. Reynolds Black Chem Nuclear Consolidation Facility · Facility Broker

8 4 SEP 1998

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER T. ENLISENCY TELEPHONE NUMER (INCLUS AND CONT (925) 443-7967 CONTACT RUNNER (INCLUS AND CONT (925) 443-7967 CONTACT RUNNER (INCLUS AND CONT NEW WORLD IN CONTACT RUNNER OF PACKACES DENTIFIED ON THIS NANFEST HO CONTACT AN EQULATED WASTE RECURRING A MULTER ANCOMENT IN AN FEST NUMBER CONTACT AND CONTACT AND CONTACT IN AN FEST NUMBER CONTACT AND CONTACT AND CONTACT IN AN FEST NUMBER CONTACT AND CONTACT AND			1. SIMPLE - NAME AND PACIFIC NEW YOR WITH ANT AND PACIFIC DATE, AND AND PACIFIC DATE, AND AND PACIFIC DATE, AND			FORM 541 A320 54 FORM 542 A320 54 ACCI TIONAL INFO 8. CONS GNIE - Num CHIDARUCLEAN HWY 54 6 LITLL BUTWE 54 6 LITLL DIF & W CORTAN BUT 50 HIS DIFF W CORTAN BUT 50 HIS DIF W CORTAN BUT 50 HIS DIFF W CORTAN BUT 50 HIS DIF W CORTAN BUT 50 HIS DIFF W CORTAN BUT 50 HIS DIFF W CORTAN B	FORME SEO AND SEOA FORME SEO AND SEOA FORME SET AND SEOA ADDITIONAL INFORMATION CONSIGNE - Nume and Factory Address CONSIGNE - Nume and Address CONSIGNE - Nume and Pactory Constants CONSIGNE - Nume and Pactory Constants CONSIGNE - Nume and Pactory Constants CONSIGNE - Num			210-98 210-98 14 CONTROL BIT Wolder And Court 19 4-95 Unsequences and States Unsequences and States Unsequences and States Unsequences and States 19 19 19 19 19 19 10 10 10 10 10 10 10 10 10 10
THIS GHIN/DOT2		SGAATURE	house can't appointing the	ne soceișt	0/21/98	H. L.		тт. Нежлн	PAISILIST	DATE 21/98
11. U.S. DEPARTMENT OF TRANSPORTATION DESDIPTION Including proper shipping name, buzerd case, UN ID number, and any additional informational	12. DOT LABEL "VJOIDACTME"	13. TRANSPORT INDEX	IL PHYSICAL AND CHEMICAL FORM		15. MOVIDUAL DICNUCLIDES	H A LATOT HTDA FEM	CRAGE	17. LSA/SCO CLASS	18. TOTAL NEIGHT OR VOLUME (ULE Expreprise unit)	19. IDENTIFICATION MUMASER OF PACKAGE
Radioactive Material, nos, 7, UNZ982	YellowI	0.1	Solid and Oxides	Th-Naf	185 Pm-147	8,367.07	226,137	NA	150 kg (330 16)	FB-1
Radioactive Material, nos, 7, UN 2982	yellow I	0.2	solid and oxides lakes	Rozce, SI Th-232	90, C-14, Th-Net,	400.4432	1232	NA	118 Kg (260 16)	FB-2
Radioactive material, nos, 7, UN 2982	YellowI	0.3	solid and Oxides/Glass	Th-Na.	F Du	110.15	2.977	NA	(245 16)	FB-3
Radioactive Material, nos, 7, UN2982	Ye 16WI	0.2	solid und glass	Th-Na-	F	\$4.03	1.19	NA	159 kg (350 lb)	FB-4
Radioactive Material, nos, 7, UNZ982	VellowI	0.5	solid and glass	Th-Na		35.19	.951	NA	145 kg (320 16)	FB-5
Radioactive Material, NOS, 7, UN 2987	YellowI	0,3	Solid and Oxides/Glass	Re 226,Co Th-Nat;	10, H-3, 74-232	1,420, 817,61	38,400.48	NA	181 kg ·(400 16)	FB-6
									ļ	
OR CONSIGNEE USE ONLY 20. "Certification is hereby made to the South Carolina Department of Health and Environmental Control that this shipment of low-level redioactive waste has been happeted in accordance with the requirements of South Carolina altertais License No. 287-06 as amended, and the effective consolidation facility ecceptance criteria, within 48 hours prior to shipment, and further certification is made that the inspection revealed no items of non-compliance with all applicable laws, rules end regulations." Data <u>8/24/98</u> signature <u>Joseff for U. S. Army, IOC</u> Trife and Organization <u>Agent For U. S. Army, IOC</u> Telephone No. 6031 356-3717 or (925) 4413-7967										

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P. 03

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL Radioactive Waste Shipment Prior Notification and Manifest Form

(Failure to Complete ALL Entries Will Result in Return of Form and Constitute Noncompliance.)

	See Reverse Side							
1. Name and Address of Shipper/Generator:			-	for Waste Shipment :				
H.Q. U.S. Army, Industrial Operations Com	mand (IUC)	1 1	ame:	Mr. Kelly Crooks				
(ATTN: AMSIO-DMW/Crooks)		b) Т		Health Physicist				
Rock Island, IL 61299-6000		c) Telephone: (309) 782-0338 4. Shipment Identification No.:						
3. Radioactive Waste Transport Permit No. 0137-00-98-E		USA 98-070 /SCN 0210-98						
5. Location from which waste will be shipped		6. Nam		of Consignee :				
US Amry TMDE Activity, 10115 Duportail				ar Consolidation Facility				
Attn: AMSAM-TMD-SB, Fort Belvoir, MD	22060-5847	Snelling, SC 29812						
7. Scheduled Date of Departure of Shipment:		8. Estimated Date of Arrival of Shipment:						
21-Aug-98		1	·	24-Aug-98				
9. Carrier :	10. Trailer No. & Owner:		11. Type Tran	nsport Vehicle:				
Tri-State Motor Transit Co.	(if avail.) 448876 TSMT		L	Closed Van				
12. Routes shipment will follow in State of Sc	outh Carolina (Be Specific):							
I-95, US-301, SC -70, SC-64				,				
13. Type Package or Cask	14. Type Container in Cask:		15. Package c	or Cask Spec.: US DOT 7A Type A				
Model No.: Metal Drum	N/A		, · ·					
16. Complete Waste Description (Be Specific)):							
Luminous dials and devices, Instrum		es, Thori	ated glass ler	nses, Germanium Windows 9				
				<u> </u>				
17. Physical & Chemical Form ;	18. Total No.		rominent Radio					
Solid Oxides Glass	of Packages :	as	-AM-241, Ra	-226, Co-60, Cs-137 , Kr-85, Pm-147, Th-232				
	1		Sr-90, H-3,	Th-232, C-14.				
20. Total Curies: 2.00-35-7 38-63 2664	21. Waste Class & Stability:			22. Total Cubic Feet:				
a 200-38.7 38.65 269	S BYAU			32.8 45				
23. DOT Sub Type:	24. DOT Class. & Hazard Class			25. Hwy. Route Controlled:				
	UN No.: UN 2982, Radio	active	,	(Large Quantity)				
<a2< td=""><td>Material, n.o.s., 7</td><td></td><td>1</td><td>[]Yes [X]No</td></a2<>	Material, n.o.s., 7		1	[]Yes [X]No				
	CERTIFICATI	ON						
I hereby certify on behalf of the abo								
ment of Health and Environmental Con								
correct to the best of my knowledge;								
provisions as required by Act No. 429		Radioa	ctive Waste	Transporta-				
tion and Disposal Act, and Departmen	t Regulation 61-83.							
				•				
Date 8/16/1998	_	Todd V		Agent for U.S. Army, IOC				
				Typed Name				
		1	lhi					
		40	m					
		Signatur	e of Consigned	e's Authorized Representative				
• · · · · · · · · · · · · · · · · · · ·	CONSIGNEE ACKNOWLEDGM	ENT		······································				
		. .						
This acknowledges to the South Caroli		Enviror	imental Conti	rol that				
the above-described radioactive waste sh	lipment was received.							
D . C D !'	-							
Date of Delivery		Signatur	e of Consigne	e's Authorized Representative				
		<u> </u>	med on Dalast-	d Name and Title				
	-	1	ypen or Printer	a taque qua tine				
DHEC 802 (Per 10/24)								
DHEC 802 (Rev. 10/84)	ies of this form may be reproduced	d locality	or needed)					
(Cop	es or uns form may be reproduced	u iocaity	as needed J					

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Form RHA-CT SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (5/80) Radioactive Waste Shipment Certification Form

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

the Department.					
Part I: Shipper's Certificate	of Compliance				
1. Name of Shipper and Address:	2. Shipment Identification No.				
H.Q. U.S. Army, Industrial Operations Command (IOC)	USA 98-070 /SCA/0210-98				
(ATTN: AMSIO-DMW/Crooks) (formerly US Army, AMCCOM,	3. Transport Permit No.				
Rock Island, IL 61299-6000 AMSMC-RW)	0137-00-98-E				
Telephone No. (309) 782-0338					
In compliance with Act No. 499 of 1980, the South Carolina Radi	-				
Disposal Act, I hereby certify on behalf of the above-named shipp	per to the South Carolina Depart-				
ment of Health and Environmental Control that the above-named sh	ipper has complied with all pro-				
visions of Act No. 499 of 1980, and all applicable laws and adm	inistrative rules and regulations,				
both State and Federal, regarding the packaging, transportation, st					
of such wastes. I further certify that this shipment of radioactive					
within 48 hours of the time of departure and that no items of non	-				
laws, rules or regulations were found.					
	\sim				
Date 8/21/98					
Tack Eastman, Agent for U.S. AMY, JOC	Jack C				
Typed Name and Title of Ageni of Shipper	Signature				
Part II: Carrier's Certific					
1. Name of Carrier and Address:	2. Shipment Identification No.				
Tri-State Motor Transit Co.	USA 98-070/SCN-0210-98				
East 7th, P.O. Box 113	3. Transport Trailer No.				
Joplin, Mo 64802	448876				
Telephone No. (800) 846-8768					
4. Scheduled Date of Departure of Shipment :	5. Estimated Date of Arrival of Shipment : 08/24/98				
O8/21/98 Certification is hereby made to the South Carolina Department of I					
that: (a) the shipper has provided the carrier with a copy of the					
cate of compliance, and the routing instructions; (b) the shipmer					
properly placarded for transport according to applicable U.S. Depart					
lations; (c) all shipping papers originated or reproduced by the c					
executed; (d) the transport vehicle has been inspected according	to applicable State and Federal				
regulations within the prescribed intervals and that all safety and o	perational components are in				
good working order and meet the requirements of regulations; (e) all drivers who will operate the				
vehicle within the State of South Carolina are qualified to transpor	t hazardous materials as				
specified by applicable U.S. Department of Transportation regulation					
be immediately notified of any variance, occuring after departure,	· · · ·				
of primary routes in South Carolina and estimated date of arrival;					
administrative rules and regulations, both State and Federal, regarding the					
	- uansportation of				
radioactive wastes will be complied with.					
Date 8/21/98					

Date <u>X/Q/198</u> <u>(WilliAM Kyle TPK DRIVER</u> Typed or Printed Name and Title

Williams Kyly

DHEC 803 (5/80)

EMERGENCY RESPONSE INFORMA	FION EMERGENCY RESPONSE GUIDE 163
New World Technology. 1236 Concannon Blvd. 94550	••24 Hour Emergency Contact Tom Dias (925) 443-7967
Shipping Date: <u>8/21/98</u>	Manifest No.: SCN -0210 - 98
Proper Shipping Name	Hazard Class ID Number
Radioactive Material, n.o.s.,	7 UN2982

POTENTIAL HAZARDS

HEALTH

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability is related to potential hazards of material.
- Undamaged packages are safe; contents of damaged packages may cause external and/or internal radiation exposure.
- Type A packages (cartons, boxes, drums, etc.) identified as "Type A" by marking on packages or by shipping papers contain non-life endangering amounts. Partial releases might be expected if "Type A" packages are damaged in moderately serve accidents.
- Type B packages (large and small, usually metal) identified as "Type B" by marking on packages or by shipping papers contain potentially life endangering amounts. Because of design, evaluation, and testing of packages, life endangering releases are not expected in accidents involving "Type B" packages except those of utmost severity.
- Radioactive White-I labels indicate radiation levels outside undamaged packages are very low (less than 0.005mS/h (0.5 mrem/h)).
- Radioactive Yellow-III and Yellow-III labeled packages have higher radiation levels. The transport index (TI) on the label identifies the maximum radiation level in mrem/h one meter from package.
- •Runoff from control of cargo fire may cause low-level pollution. Some radioactive materials cannot be detected by commonly available instruments.
- Water from cargo fire control may cause pollution.

FIRE OR EXPLOSION

- Some of these materials may burn, but none of them ignites readily. •Radioactivity does not change flammability or other properties of materials.
- Type B packages are designed and evaluated to withstand total engulfment in flames at temperature of 800°C (1475°F) of a period of 30 minutes.

PUBLIC SAFETY

- Call Tom Dias at (925) 443-7967. IF NO ANSWER, THEN CALL CHEMTREC AT 1-800-424-9300 FOR EMERGENCY INSTRUCTIONS.
- Priorities for rescue, life-saving, first-aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.
- Radiation authority must be notified of accident conditions, and is usually responsible for radiological decisions.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.
- Stay upwind. •Keep unauthorized personnel away.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

PROTECTIVE CLOTHING

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection against internal radiation exposure, but not external radiation exposure.

EVACUATION

Large Spill

Consider initial downwind evacuation for at least 100 meters (330 feet).

Fire

When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

EMERGENCY RESPONSE

FIRE

Presence of radioactive material will not change effectiveness of fire control techniques. • Move containers from fire area you can do it without risk.

Do not move damaged packages; move undamaged containers out of fire zone. Small fires

Dry chemicals, CO2, Water spray or regular foam.

Large fires

Water spray, fog (flooding amounts).

•Dike fire-control water for later disposal.

SPILL OR LEAK

- Do not touch damaged packages or spilled material.
- Slightly damaged or damp outer surfaces seldom indicate failure of packages since most have an inner container.

Liquid Spills

Cover with sand, earth or other non-combustible absorbent material.

FIRST AID

- •Use first aid treatment according to the degree of the injury. Medical problems take priority over radiological concerns. •Apply artificial respiration if victim is not breathing.
- Do not delay care and transport of a seriously injured person.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons who contacted released material may be a minor contamination problem to contacted persons, equipment and facilities.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

The above information is intended to satisfy the requirements of 49 CFR part 172.600, 172.602 & 172.604.

NWT EMERGENCY PROCEDURES

New World Technology 1236 Concannon Blvd. Livermore CA 94550 (925)443-7967 ** 24 Hour Emergency Contact Thomas J. Dias (925) 443-7967

EMERGENCY PROCEDURE TO BE FOLLOWED BY VEHICLE DRIVER IN THE EVENT OF AN ACCIDENT:

- 1. Perform lifesaving rescue and emergency first aid. Delay other first aid care until victims can be removed from the vicinity of any potentially hazardous material. Notify receiving medical facilities of possible contamination or radiation exposure of the injured.
- 2. Establish a control zone. The perimeter of this zone will be determined by the accident scene conditions. If there is no release of radioactive material, a distance of 20 feet is required. If the containers are breached and dispersal is a potential increase the control zone as large as possible.
 - A. Limit time near radioactive shipping packages as much as possible.
 - B. Cover spilled radioactive material with plastic sheeting or tarps to prevent or limit dispersal.
 - C. Avoid direct contact with radioactive material. Utilize protective clothing and utilize anything available for remote handling.
- 3. Detain personnel in the immediate area and items with possible contamination until they can be monitored for radioactive contamination
- 4. If there is a fire, advise individuals and emergency responders that everyone should move upwind, Use respirators if you need to enter the area. Inform the Fire Department that the truck is carrying radioactive materials.
- 5. The following persons are to be notified in the sequence shown below:
 - A. Thomas J. Dias, Director of Brokerage Operations, Livermore, CA
 - Day: (925) 443-7967
 - Night: (510) 581-3244
 - Pager: (510) 277-6452
 - B. Additional 24 Hour Emergency Contact: Don Wadsworth, Livermore, CA Day: (925) 443-7967
 - Night: (510) 443-7982
 - Pager: (888) 771-9710
 - C. Notify the state and local emergency responders by dialing **911** in the event the emergency contacts above can not be reached or if there is a serious threat to life or property.
 - D. For general information on the chemicals identified in the accident call CHEMTREC at (800) 424-9300.

NWT **INSTRUCTIONS FOR EXCLUSIVE USE OF VEHICLES**

Shipment No. SCN-0210-98

Date 8/21/98

CFR 49 sections 173.403(i) and 173.441(c) and (e) require that specific instructions for maintenance of exclusive use shipments controls be provided by the shipper to the carrier. These instructions must be included with the shipment documents.

The following instructions shall be complied with for all exclusive use shipments.

The shipper must be notified prior to changing of the tractor or making fifth wheel adjustments.

- Do not move or transfer packages on the transport vehicle from the original configuration.
- The shipment must be loaded by the consignor and unloaded by the consignee from the transport vehicle on which it was originally loaded.
- The shipment must be blocked and braced so as to prevent leakage or shifting of load under incidents normal to transportation.
- If placards are required, The vehicle must be placarded on four (4) sides of the transport vehicle in a clearly visible position with the appropriate placards.
- Notify shipper immediately if the vehicle is involved in an accident or is required to apply emergency breaking which could shift the load and change radiation levels.

In case of accident, vehicle malfunction or deviation from the above instructions immediately contact one of the following NWT employees:

Thomas J. Dias	Home	(925) 443-7967 (510) 581-3244 (510) 277-6452
Don Wadsworth	Home	(925) 443-7967 (510) 443-7982 (888) 771-9710

Deviations from these instructions are violations of federal laws and could result in carrier penalties.

I have read and understand the above statements concerning the maintenance of exclusive use

vehicles. William

Signature of Driver

SHIPMENT NO. USA 98-070
DRUM/PACKAGE NO. FB-1
CONTAINER WEIGHT 330
CONTAMINATIONOO/21000

PAGE NO_ SURFACE DR 1 METER DR Mellou LABELS T

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ION		LABELS _	y ellou	سلال	
/	·····		_ /		mCi
ITEM/NOMEN	FSN	<u> </u>	ISOTOPE	ACT/ITEM	TOTAL ACT.
Radiac Meter	various	81	Razz6	.0017	.137
Mx-7338 Source	various	7.	Kr85	5	Z5 .
Annuccator - Intrusion	6350-00-179-	2	Pm147	30	60
JAW SIGHTS	UNK	47			141
Dewar Defectives	cenk	12			2.42-5
· · · · · · · · · · · · · · · · · · ·					
Total					· · · ·
1/18 = 25					
$P_{M147} = 201$		·			
T(1)(x)(x+1) = 2 + 4 = -5	=2.45-416				
	= 1.9 = -4 lc	· · _			·
276 (27)	t an i			· · · · · · · · · · · · · · · · · · ·	
200,10702	1 41(2/				
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	Radiac Meter Mx-7338 Source Annuciator - Intrusión JAW Sights Dewar Detectors Totals Razzlo = 0.137 Kr85 = 25 PM147 = 201 TM(Nat) = 2.4E-5	ITEMINOMEN FSN Radiac Meter Various Mx-7338 Saurce Various Annuciator - Intrusion 6350-00-179- 1854 JAW Sights UNK Dewar Defectors UNK Totals Razzlo = 00137 Kr85 = 25	ITEM/NOMENFSNQTYRadiac MeterVarious81 M_{x} -7338 SaurceVarious7Annuciator - Intrusión $63-50-00-175-2$ IAW SightsUNK47Dewar DetectorsUNK12Totals1Razzlo = Oo1371ICN 85 = 259PM147 = 2011T1(Naf) = 2.4E-5=2.4E-4/b	ITEM/NOMENFSNQTYISOTOPERadiac MeterVarious 81 RazzoMx-7338SaurceVarious7Kr85Annucator - Intruston $c3.50.00-179$ -2Pm147IAW SightsUNK47Pu147Dewar DetectuscuNK12ThwatTotalsaaaRazzo = Co137aaIntrusto = 2.4E-5=2.4E-4/ba	ITEM/NOMENFSNQTYISOTOPEACT/ITEMPadiac MeterVarious81Pazzb.0017MK-7338SaurceVarious7Kr855Annuator - Intruston $c_{3.50-00-175}$ 2Pm14730IAW SightsUNK47Pm1473Dewar DetectorsUNK12Thwat)22-6Totals </td

As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

Ale

8/21/98

Date

DRUM/PACKAG	. <u>U.SA-98-070</u> GE NO. <u>F-B - Z.</u> EIGHT <u>ZGO</u> ON <u>~100/~1000</u>		SURFACE	DR <u>5-0</u> DR <u>0-7</u> Vell	>	- -
r	/	501		/		mCi
ID NO.		FSN		ISOTOPE		TOTAL ACT.
1	Theriate Oglass	202 lbs	NA	Th(Nat)	0807	- 807
	(8.08 165 = 3,67 1cg)	UNK				
2.	Check Source	UNK	1	Razzlo	.001	- 00/
3	Ice Defector	UNK	(5190	.025	.025
4	Cleck Sources	UNK	$2 \chi^{4}$	Th-232	.00037	.0006
5	chock Iuminous	UNK	à	Culi	0.05	40 0.1
	markers					
-	Totals					
	$R_{0221} = .001$					
	$S_{-90} = .025$					
	C - 14 = 10.0	•				
	Th(Nat) = . 807=	8.08 Hb/ 3.6	7kg			
	TH-232=.0006=	· OIZ 16/· 005	4STer			
	10:8336		9-			
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As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such/as Lead) are present.

71

3/21/98 Date

	<u>USA98-070</u>	PAGE NO of SURFACE DR 3, 2						
	SE NO. <u>FB-3</u> EIGHT_ <u>245</u>					-		
	ON _ <u>~100/21000</u>		LABELS	1/P./	3. IOWT	_		
		· · ·				mC.		
ID NO.	ITEM/NOMEN	FSN	Ω ΤΥ	ISOTOPE	ACT/ITEM	TOTAL ACT.		
1	Thoriaded glass	177 16s	NA	Th(Nat)	.707	.707		
2	DU contaminated	10 16s			2,27	227		
	DU contaminated - Scrap							
	0							
		· · · · · · · · · · · · · · · · · · ·						
	Ditals							
	Th(Nef) = .707 = DU = 2.27 = 1016/	7.0716/3,2	-1 leg					
	DU = 2.27 = 1016/	4,54 kg						
	2.977		· ··· = · · · ·					
	<u></u>							
	· · · · · · · · · · · · · · · · · · ·		<u>-</u>					
		· ·						

As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

M

21/98

Date

CONTAINER W	<u>USA 98-070</u> SE NO. <u>FB-4</u> EIGHT <u>RAD 350</u> ON <u>~100/4000</u>	PAGE NO SURFACE 1 METER I LABELS	- 			
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
1	Thoria ted glass	298165	NA	Th(Nat)		1.19
Œ.	That tester					•
	Thot tester Th (Not)= 11.9216/5.41	kg				
			· .			

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As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

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8/21/9.8 Date

CONTAINER W	$\frac{USH 98-070}{\text{SE NO.} FB-25}$ $\frac{FB-25}{\text{VEIGHT} 320}$ $\frac{100}{1000}$		PAGE NO SURFACE 1 METER I LABELS _	 DRξ DRζ	of_/ 5.0 D.5 1/0wII	- -
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
7	Thoriated glass	(238 lbs)	NA	TG(Nat)	• 951	. 951
	Thoriated glass (9.52165/ 4.32kg)	<u> </u>				
		•				
	· · · · · · · · · · · · · · · · · · ·					
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As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

AL PL

8/2/98 Date

SHIPMENT NO.	USA 98-070		PAGE NO		of/	
	GENO. FB-6		SURFACE	DR	510	_
	EIGHT <u>400</u>		1 METER	DR).3	_
CONTAMINATIO	0N <u>2100/21000</u>		LABELS	<u> </u>	lowth	mCi
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
	Theriated glass	110 /45	NA	(Thrait)	-439	. 439
1 2	Sand (5 lbs)	UNK	NA	(ThNet)		.02
3	RadiacMeters	Lenk	4	Razz6		- 0068
A	Check Source	UNK	1	74232	.0003	. 0003
5	Telescopemant	UNK	4	H3	5,810	23,240
6	Wavequides	LENK	14	C060	· ·	:009B
<u></u>	Com Watches	unk	40	H-3	25	1,000
8	Gun Sights	UNK	\mathcal{Q}	H-3	160	960
9	Compassies	-ttpk-	_110_	H-3	120_	13,200
	1	- ttNK- 6605-01-196- 6971				•
-						
	Totals					
1	H-3=38,400					
/	Pa226= .0068					<u></u>
	$C_{060} = 0098$					
	Th(Nuf)= = 4.59 = 4.6	165/2.09kg				
	Th 232 = , 0003 = .0	0616/027	Blug			
	-38,400,476.as					
	38,400,4759					
		•				
				<u> </u>		

As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

gnature

 $\frac{5/21/98}{Date}$

NWT RADIOLOGICAL SURVEY REPORT

SHIPMENT SURVEY FORM

Date: 8/2//98	Time: 18=25	Surveyor (printed name): T-	Eastinan
Surveyor (Signature):	Blut	Reviewed by: $\mathcal{N}\mathcal{A}$	Date: NA
Purpose of Survey:	OUT Going St	ionent USA 98	-070
Location:	Fort Beluoi	C, VA	
	INSTRUMENTS	ÚSED	
MODEL NO.	SERIAL NO.	CAL. DUE DATE	BKGRD
1. Model 19	133178	12 NOV 98	· 01 %
-2. Model 3 w/44-38-	-32397/pr069310	- 1 JUL 99	
3. Model 3 w/HP-260	32397/NWT#102	1 JUL 99	50cpm

ITEM OR LOCATION	Dose Rate		nination	Distance
* Smear locations are circled	mR/hr	counts	/minute	or smear
				location
		Alpha		
1. Max D/R on the sides of the vehicle	1.0	NA	NA	1"
2. Max D/R 2- M from the sides of the vehicle	0-1			2-Meter
3. Max D/R in the occupied portion of the cab	002			Field
4. Max D/R on the underside of the vehicle	1.020105	· .		1"
5. Max D/R on the top of the vehicle	001			1"
6. Max D/R on the containers surface	3.0	4	V	1"
7 Smears of the vehicle prior to loading	NA	ЛИ	ND	
8 Smears of containers prior to loading	4	DA	ND	
9.				
10.				
11.				
-/ -0(0	0/		
2 Meters -1 00		<u>0</u> /	Surface 2	2 M
Surface <u></u>		. <u></u> (α	0/
Cab	ottom <u>leO</u>	*		
$\begin{bmatrix} Cab \\ -O2 \end{bmatrix} Top -O/B$	ottom		<u>0 0</u> .0 _	0/
Surface <u>1.0</u> .04	l o	0(
2 Meters Qel	~	<u>0 (</u> 01		
Remarks: $\pm a 200269/a 20015$	· · · · · · · · · · · · · · · · · · ·	<u> </u>		
	<u></u>			
(DOOR Seals)				
-				

FORM 540 CHEM-NUCLEAR CONSOL UNIFORM LOW-LEVEL RADIOACT WASTE MANIFEST SHIPPING PAPER 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (925) 443-7967 ORGANIZATION NEW World Techn 2. ISTHIS AN "EXCLUSIVE USE SHIPMENT? YES NO	IVE	USArma Atta: Au 10115 E S.C. TRANSF 0137- CONTACT 6. CARRIER Tri-ST ELST	-NAME AND FACILITY NUTE X, TMDE XSAM-TMD-SB PUPOITA: 1 Rel, Stell PUPOIT, VA 22060- NORT PERMIT NUMBER SHIPMENT 00-98E US49 , Kelly Grooks Name and Address Fate Motor Transit 7th, P.O. Box 113 MO 64802	36 5 <u>84-7</u> NUMBER 8-070	SHIPMENT ID NUMBER USA 98-070 COLLECTOR PROCESSOR GENERATOR TYPE (Specify) TELEPHONE NUMBER (Include Area Code) 309 782-0338 EPA 1.0. NUMBER DA SHIPPING DATE 8(21 198	HWY 64 (I MIL Barnwell, SC 2: SIGNATURE - Author	41A 42A IRMATION Re and Facility Address IR CONSOLIDATION Fac E WEST OF SNELLING) 9812 ized cosignee acknowled	Iging was
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? It "Yes," provide Manifest Number	12.		Mitch Luns-fo Authorized carrier acknowledging was a nom the		TELEPHONE NUMBER 600 (Include Area Code) 600 568-1898 DATE 8/21 198	certifies that the mater	hth	jed, marke
(Including proper shipping name, hazard class, UN ID number, and any additional information) Radioactive Material, NOS, 7, UN 2982	DOT LABEL "RADIOACTIVE"	TRANSPORT	PHYSICAL AND CHEMICAL FORM Solid and		INDIVIDUAL RADIONUCLIDES	MBq ACTI	1	
Radioactive Material, NOS, 7, UN 2982	Yellow IL	0.1	oxides solid and oxides /glass	<u>Th-Na+</u> Razzc,S Th-232	190, C-14, Th-Nat,	8,367.07 34.5 \$ 32 \$ 4 20:8432		Nt
Radioactive Material, nos, 7, UN 2982	YellowI	0.3	Solid and Oxides/Glass	Th-Na		110.15	2.977	NI
Radioactive Material, nos, 7, UN2982	Ye llow Th	0.2	solid and glass	Th-Na	£ —	44.03	1.19	NI
Radioactive Material, 105, 7, UNZ982 Radioactive Material, 105, 7, UNZ982	Verioni	0.5	Solid and glass Solid and	Th-No	et — 2060, H-3,	35.19	0951	N:
14410221102102121103, 1, 4N 2782	VellowI	0,3	oxides/Glass	Th-Nat		1,420,817.61	38,400.48	\mathcal{N}_{f}
FOR CONSIGNEE USE ONLY	I	<u>1</u>	radioactive w No. 287-04 certification i	aste has be as amended s made that t	ade to the South Carol en inspected in accorda t, and the effective cor- the inspection revealed no Signature $\frac{1}{10000000000000000000000000000000000$	nce with the requision facility a terms of non-comp	irements of South cceptance criteria, pliance with all appl	Carclin within 4 icable lav
. •			Title and Orga	nization <u>Ag</u>	<u>unt fer U.S.</u> 56-3717 p.	<u>Army, IC</u> - (925)	<u>9C</u> 443-790	-7
FORM 540 (10-96)						<u> </u>		· ·

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	ILOKW 241	(HEM-NUCL	EAR CONSOL	LIDATION F	ACILITY				1. MANIF	EST TOTALS				MANIFEST NUMBER			
						NUN	ABER OF XAGESU POSAL TAINERS	ET WASTE	NET WASTE WEIGHT			NUCLEAR MATERIAL (grams			SCN-0	210-99	3	
	LINIE	ORM LOW-LE								U-233 ·	U-235	Pu			3.			
					v Li			1.278		0	0	0		\mathcal{O}	PAGE0		GE(S)	
		WASTE N											[4. SHIPPER NAME NWTO				
		CONTAINER AND V	ASTE DESC	RIPTION			ALLINUC	LIDES	TRITIUM	C-14	To-99	I-129	- ×	DURCE	F.F. BO	luoir.	VA	
	Additional Nuclear R	egulatory Commission	(NRC) Requir	rements for Cor	ntrol, Transfer	rand MBq	1,429,7	08 966	\$ 1,420,800		10	0	10 23	228				
		Disposal of R	adioactive Wa	iste		mCi			38,400	0.10	0	6	b 5/.	208	USA 9	<u>8 - 070</u>	>	
		DISPOS	AL CONTAIN	ER DESCRIPT	ION					WAST	TE DESCRIPTION	FOR EACH WASTE	TYPE IN CO	NTAINER			10. WASTE	
	5.	0. 7. 8. 9. 10. WASTE					FACE	_	PHYSICAL DESCRIP	TION	14. CHEMICI	L DESCRIPTION	15.	RADIOLOGI	CAL DESCRIPTION		CLASSIFI-	
	CONTAINER IDENTIFICATION NUMBER/	CONTAINER DESCRIPTION	VOLUME	AND CONTAINER	SURFACE RADIATION		100 cm²	11. WASTE	12. APPROXIMATE WASTE	13. SOLIDIFICATION OR STABILIZATION		WEIGHT			CLIDES AND ACTIVITY		AS-Class A Stable AU-Class A	
	S.C. TRANSPORT	(See Note 1 &	m ³	WEIGHT	LEVEL		BETA-	DESCRIP- TOR	VOLUME(S) IN CONTAINER	MEDIA	CHEMICAL FORM	CHELATING	a a		CONTAINER TUTAL ACT	INER TOTAL ACTIVITY		
	PERMIT NUMBER	Note 1A)		b	mSwhr mrenvtr	Alpha	GAMMA	See Note 2 & Note 2A)	CONTAINER	(See Note 3 & Note 3A)		AGENT IF > 0.1%	RADIONUCLIDES	MBg			B-Class B C-Class C	
	FB-1						<u> </u>	120 11			avid an		Razzo	+			<u> </u>	
	10-1	13	.21	150	. 068	×1.67E-6	11-675-5	36H	.21	160	oxides,		Turke	5.07		.137	AL	
•						1		1			ho .	0%	1.0-	1				
	0137-00-98E	•	7.5	330	•B	2100	<1000	1	7.5		no Chelate	2S	Kr85	925		25		
					1			1					Pm147	7,43	7 7	.01		
	}					<u> </u>											1	
	[1															
								I					Th(Nat)	. 000		45-5		
			1]										(1.9E-	4 kg)(2	AE-4 16		
								-					1				<u> </u>	
				ļ		1	{					1	Hotel	8,36	7.07 22	6.137		
														<u>├</u>				
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	L	<u></u>	<u></u>	<u> </u>	<u> </u>		<u> </u>	<u> </u>	L				<u></u>	<u> </u>				
NOTE	1: Container Description Codes.	For containers/	NOTE 1A: Barm	wellSpecific Containe	r Description	Note 2: Waste De	scriptor Codes. (C	choose up to	three which predominal	te by volume.)		ote 2A: Barnwell Specific		s: Spiidification and		Note SA: Barrie		
waste	requiring disposal in approved si imerical code must be followed by	tructural overpacks,		one code as may be	applicable.)	20. Charcoal	29, De	molition Rubb		porator Bottoms/Skudg		escriptor Codes (Choose oplicable codes.)	all trai:	les. For media meeting stability requirements,	the numerical code	tion and Stabiliz (Choose this co	ation media Code de if applicable.}	
		y -or. Demineralizer	A High Integrity	Container - Poly		21. Incinerator Ash 22. Soil		tion lon-excha	inge Media 39. Con	npactible Trash compactible Trash		micable Cours.j	med	it be followed by "-S", its, the vendor and bra dentified in Item 13. C	nd name must also		.	
2, Me	tal Box 10.	Gas Cvlinder	B High Integrity	Container - Poly with	Steel Shell	23. Gas	32. Mb	xed Bed lon-e:	xchange Media 41. Anir	nal Carcass	ĮĮ	G Dewatered H Solid		dentified in Rem 13. C. Juired		M W	ax Binder	
4. Pt	istic Drum or Pail 12.	Bulk, Unbackaged Waste Unbackaged Components	D High Integrity	Drum Overpack - Po Container - Stainless	Steel	24. Ol 25. Aqueous Liqui		intaminated Ed ganic Liquid		ogical Material (except vated Material	t animal carcass)	I Combustible	Sole		94. Vinyl Ester Styrene 99. Other, Describe			
6. Co	ncrete Tank or Liner 19.	High Integrity Container Other, Describe in item 6,	E High Integrity F Liner - Steel	Container - Fiberglas i	* [[26. Filter Media	35. Gt	assware or Lat	bware 59. Oth	er. Describe in item 1	1.	J Non-combustible K Air Filtration Filters		Cement	in tem 13, or additional	i kem 13, or .		
	vethviene Tank or Liner erolass Tank or Liner	or additional page				27. Mechanical Fill 28. EPA or State H		aled Source/D int or Plating	evice or a	dditional page	[]	K Air Fitration Fitters 91. Concrete L Asbestos (encaosuation) 92. Bitumen			100, None Required			
								-			. []		93.	Vinyl Chioride				

FORM 541 (10-96)

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CHEM-NUCLEAR CONSOLIDATION FACILITY 2. MANIFEST NUMBER

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SCN-02	.10	-98
PAGE 2 POF	З	PAGE(S)

UNIFORM LOW-LEVEL RADIOACTIVE

WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

k	DISPOS	AL CONTAIN	ER DESCRIPTI			FACE	 	WASTE DESCRIPTION FOR EACH WAST					15. RADIOLOGICAL DESCRIPTION			
CONTAINER IDENTIFICATION NUMBER/ S.C. TRANSPORT PERMIT NUMBER	CONTAINER DESCRIP- TION (See Note 1 &	VOLUME m ³ tt ³	WASTE AND CONTAINER WEIGHT	SURFACE RADIATION LEVEL mSwfr	MBq/	FACE MINATION 100 cm ² BETA-	11, WASTE DESCRIP- TOR (See Note	PHYSICAL DESCRII 12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3	14. CHEMICAL DESCRIPTION WEIGHT CHEMICAL FORW CHELATING AGENT AGENT		INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			WASTE CLASSIFI- CATION AS-Class A Stable AU-Class A Unstable B-Class B	
	Noie 1A3		Ð	nvenvhr		GAMMA	2 and Note 7A1	CONTAINER 	and Note 3A)		HF > 0.1%	RADIONUCLIDES	MBq	mCl	C-Class C	
FB-2	3	.21	118		41.67E-6	41.672-5	36H	.21	100	oxides+gloss ho	6%	Ra226	- 037	•001		
0137-00-98E		7.5	260	5.0	×100	21000		7.5		chelates	~ /6	5090	.925	.025	B	
												C-14	3.7 3.7 12/10/12	0.1 12/1978		
												Th-Nut	29.86 (3.67 kg)	- 807 · (8.08 њ)		
										·		Th 232	·0222 (.00545kg)	00000 (d1 5100)		
						.		·· ·				total	40.8437	10,8336 0.9336		
FB-3	3	021	111 245	.03 3.0	11-17E-6 ~100	21.07E-5 21000	36H 39H		100	oyidesiglass no chelates	0%	Th-nat	26.16 (3.21 kg)	-707 (7,07 16)	AU	
<u>6137-00-98E</u>			210								. <u> </u>	Du	(4,54 kg)	2.27		
													110.15	2.977		

FORM 541A (10-96)

UNIFORM LOW-LEVEL RADIOACTIVE															
		•		UNIF		STE MAN							SCN	-0210-98	š
				CONT				CONTINUATION)					PAGE	3 OF 3 PA	GE(S)
	DISPOSA	L CONTAIN	ER DESCRIPTI	ON						TE DESCRIPTION FOR		TYPE IN CO			16. WASTE CLASSIFI
CONTAINER	CONTAINER DESCRIP-		WASTE AND	SURFACE	CONTAN ,MBq/	RFACE MINATION /100 cm ²		PHYSICAL DESCRIF	13.	14. CHEMICAL DESC			RADIOLOGICAL DESCRI		AS-Class A
NUMBER/ S.C. TRANSPORT PERMIT NUMBER	TION (See Note 1 & Note 1A)	VOLUME m³ π³	CONTAINER WEIGHT kg B	RADIATION LEVEL mSv/hr mren/hr	ALPHA	BETA- GAMMA	WASTE DESCRIP- TOR (See Note 2 and	APPROXIMATE WASTE VOLUME(S) IN CONTAINER	SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3 and Note 3A)	CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%		NDIVIDUAL RADIONUCLIDES AND NTAINER TOTAL: OR CONTAINER AND RADIONUCLIDE PER MBq	TOTAL ACTIVITY	Stable AU-Class A Unstable B-Class B C-Class C
FB-4	3	•21	159	.03	<1.67E-6	21,678.5	36H		100	glass, no	00.	Th-Net	44.03	1.19	AU.
0137-00-98E		7.5	350	3.0	2100	1000		7.5		Chelates	0%		(5.41 kg)	(11.92.16)	
	-			·					-			total	44.03	1019	
F.B-ASOE	3	.21	145	•05	21.675-6	1.678-5	36H	021	100	gluss,	£	Th-Nat	35.19	. 951 .	AU
0137-00-98E		7.5	320	5.0	<100	~1000		7.5		nochelates	0%		(4.32 kg)	(9.5216)	
				+								total	35.19	.957	
FB-6	3	•21	181	•05	×1.67E-6	×1.67E-5	36H	•21	100	oxides, no	0%	Razzb	• 2516	00068	
0137-00-982		7.5	400	5.0	~160	~1000		7.5		cheleres	0,0	C060	.3626	1.0098	
					-· ·							#-3	1,420,800	38,400	B
					· ·							Th-Nat	16.983 (2.09 kg)	• 459 (4.6 16)	
			-	· · · ·								Th-232	00111 (,00273 kg 1,420,817.61		
												total	1,420,817.61	38,400,48	3

FORM 541A (10-96)

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CONTAINER	CONTAINER	1	WASTE	[CONTA	MINATION /100 cm ²	L	PHYSICAL DESCRI	PTION	14. CHEMICAL DESC	RIPTION	15.	RADIOLOGICAL DESCRIP	TION	CLASSIFF
IDENTIFICATION NUMBER/ S.C. TRANSPORT PERMIT NUMBER	DESCRIP- TION (See Note 1 & Note 1A)	VOLUME 	AND CONTAINER WEIGHT b	SURFACE RADIATION LEVEL mSwite mremyte	dpm/	BETA- GAMMA	11. WASTE DESCRIP. TOR (See Note 2 and	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ a ³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3	CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT	u CO	NDMIDUAL RADIONUCLIDES AND A NTAINER TOTAL: OR CONTAINER T AND RADIONUCLIDE PERC	OTAL ACTIVITY	AS-Class A Stable AU-Class A Unstable B-Class B
		<u>}</u>	}				Note 2A1		and Note 3A)		iF > 0.1%	RADIONUCLIDES	MBq	mCl	C-Class C
FB-4	उ	•21	159	.03	<u><1.678-6</u>	21.67E-S	36H	.21	100	glass, no	<u> </u>	Th-Nect	44.03	1.19	AU
0137-00-98E		7.5	350	3.0	2100	~1000		7.5		Chelates	0%		(5.41 kg)	(11.92.16)	
				·								total	44.03	1019	
F.B-ASOE	Z	.21	145	.05	1 1754	<i>41.67E-</i> 5	36H	021	100	g 1005,		Th-Nut	35.19	• 95('	AU
0137-00-98E		7.5	320	5.0	<100	21000		7.5	100	nochelates	0%		(4.32 kg)	(9.5216)	
·										Cherans		Fotal	35.19	.951	
												TOTAL	52.77	0/51	
FB-6	उ	•21	181	•05	~1.6 <u>7</u> E-6	×1.67E-5	36H	•21	100	oxides,	0%	Razzb	= 2516	° 0068	
0137-00-98E		7.5	400	5.0	~100	11000		7.5		no chekoles	<u> </u>	C060	.3626	· co 98	·
					 .	•• •···		··· ··· ···				H-3	1,420,800	38,400	B
												Th-Nat	16.983	. 459	
													(2.09 kg)	(4,6 16)	
			·	···· . · · -	· .							Th-232	00111	· 0003	
· · · · · · · · · · · · · · · · · · ·													(,00273 kg)		
				, .								total	1,420,817.61	38,400,48	
FORM 541A (10-96)															

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL Radioactive Waste Shipment Prior Notification and Manifest Form

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(Failure to Complete ALL Entries Will Result in Return of Form and Constitute Noncompliance.)

		Can Davana Cid.	for Inch	votione						
1. Name and Address of Shipper/Generator:		See Reverse Side	2. Person Responsible for Waste Shipment :							
••				-	-					
H.Q. U.S. Army, Industrial Operations Com	mand (IUC)		1 1	ame:	Mr. Kelly Crooks					
(ATTN: AMSIO-DMW/Crooks)			b) T		Health Physicist					
Rock Island, IL 61299-6000			c) Telephone: (309) 782-0338 4. Shipment Identification No. :							
3. Radioactive Waste Transport Permit No.			4. Ship	nent Identifica	tion No. :					
0137-00-98-E			ļ		USA 98-070 /SCN 0210-98					
5. Location from which waste will be shipped :			6. Name and Address of Consignee:							
US Amry TMDE Activity, 10115 Duportail I	Road, Ste 136			Chem-Nucle	ar Consolidation Facility					
Attn: AMSAM-TMD-SB, Fort Belvoir, MD 2	2060-5847			Snelling, SC	29812					
7. Scheduled Date of Departure of Shipment:			8. Estimated Date of Arrival of Shipment:							
21-Aug-98			24-Aug-98							
9. Carrier :	10. Trailer No.	& Owner :	11. Type Transport Vehicle :							
Tri-State Motor Transit Co.	(if avail.) 44	18876 TSMT	•		Closed Van					
12. Routes shipment will follow in State of So										
I-95, US-301, SC -70, SC-64					,					
13. Type Package or Cask	14. Type Conta	iner in Cask:		15 Package	or Cask Spec.: US DOT 7A Type A					
Model No. : Metal Drum		N/A								
16. Complete Waste Description (Be Specific)					······································					
Luminous dials and devices, Instrum		an enaled course	. Theri	atad alass la	non Cormanium Mitadame Oc					
		es, sedieu source	s, mon	ateu giass iei						
17. Physical & Chemical Form ;		10 Total Ma	10 .D	minert Dadie						
17. Physical & Chemical Form:		18. Total No.		ominent Radio						
Solid Oxides Glass		of Packages :			-226, Co-60, Es-137 , Kr-85, Pm-147, Th-232					
	1	1		Sr-90, H-3,	Th-232, C-14,					
20. Total Curies: 2.00-35-7 38.642	21. Waste Clas				22. Total Cubic Feet :					
	<u> </u>				32.8 45					
23. DOT Sub Type:		. & Hazard Class			25. Hwy. Route Controlled:					
	UN No.:	UN 2982, Radio	active		(Large Quantity)					
<a2< td=""><td>Material,</td><td>n.o.s., 7</td><td></td><td></td><td>[]Yes [X]No</td></a2<>	Material,	n.o.s., 7			[]Yes [X]No					
· · · · · · · · · · · · · · · · · · ·		CERTIFICATI	ON							
I hereby certify on behalf of the above ment of Health and Environmental Cor- correct to the best of my knowledge; provisions as required by Act No. 429 tion and Disposal Act, and Department	ntrol that the and that the of 1980, the	information prov shipper/generator South Carolina	vided he r has c	rein is com omplied wit	plete and h all the					
Data 9/16/1009			Todd V	/ Faatmaa	Agent for U.S. Army IOC					
Date 8/16/1998	-		1000 V	V. Eastman, I	Agent for U.S. Army, IOC Typed Name					
			il		Typeu Name					
			Ko	ll t						
			200		- Authorized D					
	•		Signatui	e of Consigne	ce's Authorized Representative					
·	CONSIGNEE	CENOUR EDGM								
, <u></u> , <u></u> ,	CONSIGNEE /	ACKNOWLEDGM								
This acknowledges to the South Carolin the above-described radioactive waste sh			Enviror	imental Cont	trol that					
	-									
Date of Delivery			Signatu	e of Consigne	ce's Authorized Representative					
			Т	yped or Printe	ed Name and Title					
DHEC 802 (Rev. 10/84)										
	es of this form	may be reproduce	d locally	as needed)						
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Form RHA-CT SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (5/80) Radioactive Waste Shipment Certification Form

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

Part I: Shipper's Certificate of Compliance	
1. Name of Shipper and Address:	2. Shipment Identification No.
H.Q. U.S. Army, Industrial Operations Command (IOC)	USA 98-070 /SCN 0210-98
(ATTN: AMSIO-DMW/Crooks) (formerly US Army, AMCCOM,	3. Transport Permit No.
Rock Island, IL 61299-6000 AMSMC-RW)	0137-00-98-Е
Telephone No. (309) 782-0338	·
In compliance with Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and	
Disposal Act, I hereby certify on behalf of the above-named shipper to the South Carolina Depart-	
ment of Health and Environmental Control that the above-named shipper has complied with all pro-	
visions of Act No. 499 of 1980, and all applicable laws and administrative rules and regulations,	
both State and Federal, regarding the packaging, transportation, storage, disposal and delivery	
of such wastes. I further certify that this shipment of radioactive waste has been inspected	
within 48 hours of the time of departure and that no items of non-compliance with applicable	
laws, rules or regulations were found.	
	\cap
Date $8/2i/98$	
Tack Eastman, Agent for M.S. HMY, FOC	
Typed Name and Title of Agent of Shipper	Signature /
Part II: Carrier's Certification	
1. Name of Carrier and Address:	2. Shipment Identification No.
Tri-State Motor Transit Co.	USA 98-070/SCN-0210-98
East 7th, P.O. Box 113	3. Transport Trailer No.
Joplin, Mo 64802	448876
Telephone No. (800) 846-8768	
4. Scheduled Date of Departure of Shipment :	5. Estimated Date of Arrival of Shipment :
08/21/98	08/24/98
Certification is hereby made to the South Carolina Department of Health and Environmental Control	
that: (a) the shipper has provided the carrier with a copy of the shipment manifest, the certifi-	
cate of compliance, and the routing instructions; (b) the shipment of radioactive waste has been	
properly placarded for transport according to applicable U.S. Department of Transportation Regu-	
lations; (c) all shipping papers originated or reproduced by the carrier have been properly	
executed; (d) the transport vehicle has been inspected according to applicable State and Federal	
regulations within the prescribed intervals and that all safety and operational components are in	
good working order and meet the requirements of regulations; (e) all drivers who will operate the	
vehicle within the State of South Carolina are qualified to transport hazardous materials as	
specified by applicable U.S. Department of Transportation regulations; (f) the Department shall	
be immediately notified of any variance, occuring after departure, from the shipper's notification	
of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and	
administrative rules and regulations, both State and Federal, regarding the transportation of	
radioactive wastes will be complied with.	
0/0.100	
Date $8/2/98$	

WILLIAM Kyle TRK DRIVER Typed or Printed Name and Title

<u>Ulilliam Kyh</u> Signature

DHEC 803 (5/80)

EMERGENCY RESPONSE INFORMATION	EMERGENCY RESPON	SE GUIDE 163	
New World Technology. 1236 Concannon Blvd. 94550	**24 Hour Emerg Tom Dias (925)		
Shipping Date: 8/21/98	Manifest No.:	SCN-0210-9	8
Proper Shipping Name	Hazard Class	ID Number	

HEALTH

Radioactive Material, n.o.s.,

POTENTIAL HAZARDS

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UN2982

- Radiation presents minimal risk to transport workers, emergency response personnel, and the public during transportation accidents. Packaging durability is related to potential hazards of material.
- Undamaged packages are safe; contents of damaged packages may cause external and/or internal radiation exposure.
- Type A packages (cartons, boxes, drums, etc.) identified as "Type A" by marking on packages or by shipping papers contain non-life endangering amounts. Partial releases might be expected if "Type A" packages are damaged in moderately serve accidents.
- Type B packages (large and small, usually metal) identified as "Type B" by marking on packages or by shipping papers contain potentially life endangering amounts. Because of design, evaluation, and testing of packages, life endangering releases are not expected in accidents involving "Type B" packages except those of utmost severity.
- Radioactive White-I labels indicate radiation levels outside undamaged packages are very low (less than 0.005mS/h (0.5 mrem/h)).
- Radioactive Yellow-II and Yellow-III labeled packages have higher radiation levels. The transport index (TI) on the label identifies the maximum radiation level in mrem/h one meter from package.
- •Runoff from control of cargo fire may cause low-level pollution. Some radioactive materials cannot be detected by commonly available instruments.
- Water from cargo fire control may cause pollution.

FIRE OR EXPLOSION

- •Radioactivity does not change flammability or other properties of materials. Some of these materials may burn, but none of them ignites readily.
- Type B packages are designed and evaluated to withstand total enguliment in flames at temperature of 800°C (1475°F) of a period of 30 minutes.

PUBLIC SAFETY

- Call Tom Dias at (925) 443-7967. IF NO ANSWER, THEN CALL CHEMTREC AT 1-800-424-9300 FOR EMERGENCY INSTRUCTIONS.
- Priorities for rescue, life-saving, first-aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.
- Radiation authority must be notified of accident conditions, and is usually responsible for radiological decisions.
- Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions. •Keep unauthorized personnel away.
- Stay upwind.
- Detain or isolate uninjured persons or equipment suspected to be contaminated; delay decontamination and cleanup until instructions are received from Radiation Authority.

PROTECTIVE CLOTHING

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide adequate protection against internal radiation exposure, but not external radiation exposure.

EVACUATION

- Large Spill
- Consider initial downwind evacuation for at least 100 meters (330 feet).

Fire

When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

EMERGENCY RESPONSE

FIRE

- Presence of radioactive material will not change effectiveness of fire control techniques. Move containers from fire area you can do it without risk.
- Do not move damaged packages; move undamaged containers out of fire zone.

Small fires

Dry chemicals, CO2, Water spray or regular foam.

Large fires

Water spray, fog (flooding amounts).

•Dike fire-control water for later disposal.

SPILL OR LEAK

- Do not touch damaged packages or spilled material.
- Slightly damaged or damp outer surfaces seldom indicate failure of packages since most have an inner container.

Liquid Spills

Cover with sand, earth or other non-combustible absorbent material.

FIRST AID

- •Use first aid treatment according to the degree of the injury. Medical problems take priority over radiological concerns. •Apply artificial respiration if victim is not breathing.
- Do not delay care and transport of a seriously injured person.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons who contacted released material may be a minor contamination problem to contacted persons, equipment and facilities.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

The above information is intended to satisfy the requirements of 49 CFR part 172.600, 172.602 & 172.604.

NWT **EMERGENCY PROCEDURES**

New World Technology 1236 Concannon Blvd. Livermore CA 94550 (925)443-7967

**** 24 Hour Emergency Contact** Thomas J. Dias (925) 443-7967

EMERGENCY PROCEDURE TO BE FOLLOWED BY VEHICLE DRIVER IN THE **EVENT OF AN ACCIDENT:**

- 1. Perform lifesaving rescue and emergency first aid. Delay other first aid care until victims can be removed from the vicinity of any potentially hazardous material. Notify receiving medical facilities of possible contamination or radiation exposure of the injured.
- 2. Establish a control zone. The perimeter of this zone will be determined by the accident scene conditions. If there is no release of radioactive material, a distance of 20 feet is required. If the containers are breached and dispersal is a potential increase the control zone as large as possible.
 - A. Limit time near radioactive shipping packages as much as possible.
 - B. Cover spilled radioactive material with plastic sheeting or tarps to prevent or limit dispersal.
 - C. Avoid direct contact with radioactive material. Utilize protective clothing and utilize anything available for remote handling.
- 3. Detain personnel in the immediate area and items with possible contamination until they can be monitored for radioactive contamination
- 4. If there is a fire, advise individuals and emergency responders that everyone should move upwind, Use respirators if you need to enter the area. Inform the Fire Department that the truck is carrying radioactive materials.
- 5. The following persons are to be notified in the sequence shown below:
 - A. Thomas J. Dias, Director of Brokerage Operations, Livermore, CA

Day:	(925) 443-7967
Night:	(510) 581-3244

(510) 581-3244

Pager: (510) 277-6452

- B. Additional 24 Hour Emergency Contact: Don Wadsworth, Livermore, CA Day: (925) 443-7967
 - Night: (510) 443-7982
 - Pager: (888) 771-9710
- C. Notify the state and local emergency responders by dialing 911 in the event the emergency contacts above can not be reached or if there is a serious threat to life or property.
- D. For general information on the chemicals identified in the accident call CHEMTREC at (800) 424-9300.

NWT INSTRUCTIONS FOR EXCLUSIVE USE OF VEHICLES

Shipment No. <u>SCN -0210-98</u>

Date 8/21/98

CFR 49 sections 173.403(i) and 173.441(c) and (e) require that specific instructions for maintenance of exclusive use shipments controls be provided by the shipper to the carrier. These instructions must be included with the shipment documents.

The following instructions shall be complied with for all exclusive use shipments.

The shipper must be notified prior to changing of the tractor or making fifth wheel adjustments.

- Do not move or transfer packages on the transport vehicle from the original configuration.
- The shipment must be loaded by the consignor and unloaded by the consignee from the transport vehicle on which it was originally loaded.
- The shipment must be blocked and braced so as to prevent leakage or shifting of load under incidents normal to transportation.
- If placards are required, The vehicle must be placarded on four (4) sides of the transport vehicle in a clearly visible position with the appropriate placards.
- Notify shipper immediately if the vehicle is involved in an accident or is required to apply emergency breaking which could shift the load and change radiation levels.

In case of accident, vehicle malfunction or deviation from the above instructions immediately contact one of the following NWT employees:

Thomas J. Dias	Home	(925) 443-7967 (510) 581-3244 (510) 277-6452
Don Wadsworth	Home	(925) 443-7967 (510) 443-7982 (888) 771-9710

Deviations from these instructions are violations of federal laws and could result in carrier penalties.

I have read and understand the above statements concerning the maintenance of exclusive use

vehicles. 1X Jilliam Signature of Driver

SHIPMENT NO. USA 98-070
DRUM/PACKAGE NO
CONTAINER WEIGHT 330
CONTAMINATION

	1	[
PAGE NO	<u></u>	
SURFACE DR	0.8	
1 METER DR	404	•/
LABELS	ellow I	L
T = T		

CONTAMINA	10N_2100/21000			<u> 1 e 1100</u>		 MC;
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
1 2 3 4 5	Radiac Meter	Various	81	Razz6	.0017	. 137
2	My-7338 Source Annuciator - Intrusion	various	<u>7</u> .	KF85	5	Z5
3	Annuciator - Intrusion	6350-00-179- 1854	Z	Pm147		60
4	LAW Sights	UNK	47	Pr 147	3	
5	Dewar Defectus	cenk	12	TheNat)	22-6	2.45-5
						•
	Totals					
	Razzio = 0.137					
	1cr85=25					
ļ	$P_{M} 47 = 201$ $T_{1}(Nat) = 2.4E-5$					
· .	T1(Naf) = 2.4E-5	=2.4E-4/6				
		= 1.9 = -4 lcg				
	226.13702	+mci -				
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As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

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8/21/98

DRUM/PACKAG	<u>USA-98-070</u> SE NO. <u>F-B-2</u> EIGHT <u>260</u>		SURFACE	 DR_ <u>5-0</u> DR_ <u>0-7</u>	>	- -
	DN <u>~100/~1000</u>		LABELS	yeus	ou F	mCi
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
1	Thoristed glass	202 lbs	NA	Th(Naf)	<u>,807</u>	- 807
	(8.08 165= 3,67 14g)	UNK_				
<u> </u>	Check Source	UNK	1	Razzlo	.001	- 001
3	Ice Defector	UNK	(5-90	.025	. 025
4	Clieck Sources	UNK	ર ઝૂર્સ	Th-232	.025 .003z	.0006
5	chock Iuminous	UNK	a	Culi	5	.10
	markens					
		· · · · · · · · · · · · · · · · · · ·				
-	Totals					
	Razzic = .001					
	Sr90 = .025					
	C - 14 = 10.0					
	Th(Nar) = . 807=	8.08 Hb/ 3.6	7kg			
•	M-232=.0006=	01216/2005	4STec			
	10:8336					· · · · · · · · · · · · · · · · · · ·
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8/21/98 Date

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SHIPMENT NO. $USA 98-070$ DRUM/PACKAGE NO. $FB-3$ CONTAINER WEIGHT 245			PAGE NO of SURFACE DR 1 METER DR LABELS					
CONTAMINATI	ON <u> </u>		LABELS _	yel	10WT	mc.		
ID NO.	ITEM/NOMEN	FSN	QTY_	ISOTOPE	ACT/ITEM	TOTAL ACT.		
1	Thoriated glass	177 16s	NA	Th(Nat)	.707	.707		
2	DU contaning fed	10 16s			2,27	2.27		
	- Scrap							
						•		
	Dtals					-		
	Th(Nef) = .707=	7.0716/3,2	-1 kg					
	Th(Nef) = .707 = DU = 2.27 = 1016/	4.54kg	9					
	2.977	X						
	· · · · · · · · · · · · · · · · · · ·							
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M. ر

21/98 Date

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DRUM/PACKAG	. <u>USA-98-070</u> GENO. <u>FB-4</u> /EIGHT <u>-12(910350</u> ON <u>~100/41000</u>		1 METER	DR Ori	of > Uow	- - - mCi
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
<u>)</u>	Thoriated glass	298165	NA	Th(Nat)	1.19	1.19
	Thort tosterl Th (Nat)= 11.92.16/5.41	kg				
		L.				
-						
					·	

As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present. •

All

8/21/9.8 Date

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SHIPMENT NO. USA 98 -	070
DRUM/PACKAGE NOFB	-6
CONTAINER WEIGHT 320	
CONTAMINATION	(1000)

PAGE NO	1_	_ of _		<u>/</u>	
SURFACE DR		5.	0		
1 METER DR_		0.	5	-	
LABELS	VG	2 <u>[[c</u>	<u>و م</u>	工	<u> </u>
	_/				

m(i

ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
77	Thoriated glass (9.52165/ 4.32kg)	(238 lbs)	NA	TG(Nat)		.951
	(9.5216 4.32kg)					
			•			
						•
						, , , <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>

As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

gnature

8/2/45 Date

USA 98-070		PAGE NO		of/	
SENO. FR-6			DR	5.0	_
EIGHT			DR	0,3	_
DN ~~ NO		LABELS	-yol	low The	mCi
	ESN		ISOTOPE		TOTAL ACT.
	110 165				. 439
Sand (51bs)	UNK		(ThNet)	·02	-02
NacliacMeters	Lenk	4	Razzlo	.0017	- 0068
Check Source	UNK		74232	.0003	° 0003
Telescopemant	UNK	4	H3	5,810	23,240
Wavequides	LENK	14	C060	0.007	:0098
Com watches	UNK	40	H-3	25	1,000
Gunsights	UNK	Q	H-3	160	960
	-ttikk	_110_	H-3	12D	13,200
1 .	6605-01-196-				•
	•				
Totals .					
1					
	165/2.09kg				
Th 232 = , 0003 = ,0	NG16/1027	BKG			
-38,400,476.05	· ·	\			
38,400,4759	· · · · · · · · · · · · · · · · · · ·				
	•				
	SE NO. <u>FR-6</u> EIGHT <u>400</u> N <u>2100/21000</u> ITEM/NOMEN Theriatel glass Sand (5165) MediacMeters Check Source Telescope mount Wave quides Com Watches Com Sights Compassies H-3=38,400 Re226 = .0068 Co60 = .0098 Th(Nat) = .459 = 4.6	SE NO. <u>FB-6</u> EIGHT <u>400</u> N <u>200/21000</u> ITEM/NOMEN FSN Theriatel glass 110 145 Sard (51bs) UNK NodiacMeters UNK Check Source UNK Check Source UNK Check Source UNK Check Source UNK Check Source UNK Check Source UNK Com Watches UNK Com Watches UNK Com Watches UNK Compassies -ttNK Compassies -ttNK Comp	SE NO. FB-6 EIGHT 400 IN 400/4000 ITEMINOMEN FSN QTY Therialed glass 110 145 NA Sand (5 1bs) UNK NA Naliacmeters UNK 4 Check Source UNK 1 Telescopement UNK 4 Wave guides UNK 40 Gun Sights UNK	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

 $\frac{5/21/98}{Date}$

gnature

NWT RADIOLOGICAL SURVEY REPORT

SHIPMENT SURVEY FORM

Date: 8/2//98	Time: 18=25	Surveyor (printed name): T- (Eastman	
Surveyor (Signature):	tollet-	Reviewed by: \mathcal{NA}	Date: NA-	
Purpose of Survey:	OUT Going Sh	innent USA 98-	-070	
Location:	Fort Belubin	~, VA		
	INSTRUMENTS	ÚSED		
MODEL NO.	SERIAL NO.	CAL. DUE DATE	BKGRD	
1. Model 19	133178	12 NOV 98	·01 hc	
 -2. Model 3 w/44-38-	-32397/pr069310	1 JUL 99		Æ
3. Model 3 w/HP-260	32397/NWT#102	1 JUL 99	50cpm '	

ITEM OR LOCATION * Smear locations are circled	Dose Rate mR/hr		nination minute	Distance or smear location
		Alpha	B-G	loounon
1. Max D/R on the sides of the vehicle	. 1.0	NA	NA	1"
2. Max D/R 2- M from the sides of the vehicle	0.1			2-Meter
3. Max D/R in the occupied portion of the cab	0.02			Field
4. Max D/R on the underside of the vehicle	1.0,0105			1"
5. Max D/R on the top of the vehicle	<i>•</i> 01			1"
6. Max D/R on the containers surface	3.0	4	V	1"
7 Smears of the vehicle prior to loading	NA	N'D	ND	
8 Smears of containers prior to loading	*	ДЧ	ND	
9.				
10.				
11.				
2 Meters Surface $ \begin{array}{c} $	ottom <u>/e</u> O	0(Surface 2	

FORM 540 CHEM-NUCLEAR CONSOLI UNIFORM LOW-LEVEL RADIOACTIV WASTE MANIFEST		USAM Attn: Att 10115 C Ft. B	-NAME AND FACILITY NWT Y, TMDE NSAM-THD-SB Duportail Rel, Ste elwoir, VA 22060-	136	SHIPMENT ID NUMBER USA 98-070 COLLECTOR PROCESSOR	7. FORM 540 AND 5 FORM 541 AND 5 FORM 542 AND 5 ADDITIONAL INFO	41A 42A	PAGE(S) PAGE(S) PAGE(S) AGE(S)	8. MANIFEST NU (Use this numb pages) SCN-02	per on all continuatio
SHIPPING PAPER EMERGENCY TELEPHONE NUMBER (Include Area Code) (925) 443-7967 SEGANIZATION		0137-	ORT PERMIT NUMBER SHIPMEN 00-98E U.S.L. , Kelly Grooks	17 NUMBER 98-070	GENERATOR TYPE (Specify) TELEPHONE NUMBER (Include Area Code) 309 78 2 -0338	9. CONSIGNEE - Name and Facility Address CHEM-NUCLEAR CONSOLIDATION Facility HWY 64 (I MILE WEST OF SNELLING), P.O. BOX B28 Barnwell, SC 29812				
2. IS, THIS AN *EXCLUSIVE USE SHIPMENT? 3. TOTAL NUMBER OF PACKAGES IDENTIFIED	0/09	6. CARRIER - Tri-St	Nome and Address Hate Motor Transi 7th, P.O. Box 113	7,00	EPA I.D. NUMBER	SIGNATURE - Author	ized cosignee ecknowle	edging waste reciept	DATE	
YES PACKAGES IDENTIFIED ON THIS MANIFEST	6		n, MO 64802		SHIPPING DATE 8/21/98	This is to certify that th		10. CERTIFICATION are property classified,	described, packaged, ma	irked, and labeled an
N DOES EPA REGULATED YES EPA MANIFEST NUMBER WASTE REQUIRING A NO NA	······································	CONTACT	Mitch Lunsfe	r ·	TELEPHONE NUMBER 800 (Include Area Code) 568-1898	certifies that the mater disposal as described in a	rials are classified, packa accordance with the requir	ged, marked, and labeled	ons of the Department of d and are in proper condit 20 and 61, or equivalent :	ion for transportation
THIS SHIPMENT?		SIGNATURE	Authorized carrier acknowledging w	aste receipt	DATE 21/98	AUTHORIZED SIGNAT	the _	HEALTH A	ATSILIST	B/21/99
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	F	15. INDIVIDUAL ADIONUCLIDES	TOTAL P	6. PACKAGE IVITY mCl	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICA NUMBER OI PACKAGE
Radioactive Material, nos, 7, UNZ982	VellowI	0.1	solid and oxides	Razzlo, K Th-Nat	rBS Pm-147	8,367.07	226.137	NA	150 kg (330 16)	FB-1
Radioactive Material, nos, 7, UN 2982	Yellow II	0.2	solid and oxides lglass		r90, C-14, TH-Nat,	400.8432	10.8336	NA	118 Kg (260 16)	FB-Z
Radioactive Material, nos,7, UN2982	YellowI	0.3	Solid and Oxides/Glass	Th-Na	t Du	110.15	2.977	NA	111 kg (245 16)	FB-3
Radioactive Material, nos, 7, UN2982	Ye 10WIL	0.2		Th-Na	f —	44.03	1.19	NA	159 kg (350 lb)	FB-4
Radioactive Muterial, nos, 7, UNZ982	VellowII	0.5	solid and glass	Th-No		35.19	.951	NA	145 kg (320 16)	FB-
Radioactive Material, NOS, 7, UN 2982	YellowI	0,3	Suid and Oxides/Glass	RazzG,C Th-Nat	060, H-3, Th-232	1,420,817.61	38,400.49	NA	181 kg (400 16)	FB-6
<u> </u>										
FOR CONSIGNEE USE ONLY		<u> </u>	radioactive No. 287-0 certification Date <u>8/2</u> Title and Org	waste has be 4 as amended, is made that the $\frac{1}{98}$ anization A_{eq}	ede to the South Caro en inspected in accorda and the effective co- ne inspection revealed no Signature $\frac{2}{2}$ $\frac{2}{2}$ $\frac{2}{5}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$ $\frac{1}{5}$ $\frac{1}{6}$	ance with the requires a solidation facility a content of non-complete terms of non-comp	virements of South acceptance criteria, pliance with all app act Cash	h Carolina racio within 48 hours blicable laws, rules	active Materials prior to shipment, a	License

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FORM 541		CHEM-NUCL	EAR CONSOL	IDATION F	ACILITY				1. MANIF	EST TOTALS				2 MANIFEST NUMBER		
· • · · · · · · ·					PAC	IBER OF KAGES/ N POSAL TAINERS	ET WASTE	NET WASTE WEIGHT	U-233	SPECU U-235	AL NUCLEAR MATERIAL (2	2ms)	TOTAL	SCN-0	210-98	<u> </u>
UNIFO	RM LOW-LE	VEL RA	DIOACTI	VE	- <u></u> CÓH			1 728,02			P			3. PAGE <u>1</u>)F_ <u>3_</u> PA	GE(S)
	WASTE N	MANIFES	т				45	· 1405	0	0			0	4. SHIPPER NAME		
	ONTAINER AND W					··			TIVITY (MBq/mCi)				SOURCE	F4. B		1/A
Additional Nuclear Reg	ulaton Commission		emente for Cor	tml Transfer	and Man	1, 429, 7		1,420,800	370	To-99	- H129	- 2	3.22%	SHIPMENT ID NUMBER	1	
Auditorial Nuclear Ney	Disposal of R							138,400	10		6		1.208	USA 9	8-070	0
			ER DESCRIPT	ION			1			TE DESCRIPTIO	N FOR EACH WAS					16,
s.	6.	1.	8. WASTE	9.	10. SUR CONTAN	FACE		PHYSICAL DESCRIP	TION	14. CHEM	ICAL DESCRIPTION	15,	RADIOLO	GICAL DESCRIPTION		WASTE CLASSIFI- CATION
CONTAINER IDENTIFICATION NUMBER/ S.C. TRANSPORT PERMIT NUMBER	CONTAINER DESCRIPTION (See Note 1 & Note 1A)	VOLUME 	AND CONTAINER WEIGHT	SURFACE RADIATION LEVEL mSvfr	MBq/	100 cm ² 100 cm ² BETA-	11. WASTE DESCRIP. TOR See Note 2	12. APPROXIMATE WASTE VOLLME(S) IN CONTAINER	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3	CHEMICAL FOR CHELATING AGE			CONTAINER TOTAL: O	NCLIDES AND ACTIVITY R CONTAINER TOTAL AC MUCLIDE PERCENT		AS-Class A Stable AU-Class A Unstable B-Class B
PERMIT ROMDER			b	aventhr		GAMMA	& Note 2A)		& Note SA)		IF > 0.1%	RADIONUCU	DES MB	9	mQi	C-Class C
FB-1	3	.21	150	. 06B	1.672-6	21-676-5	36H	.21	160	oxides		Razz	6 5.0	7 0	. 137	AL
0137-00-98E		7.5	330	•8		<1000		7.5		n Chela	tes 0%	Fra		-	25	
									-			₽ <i>m</i> • •	47 7,4.	37 7	, 101	
												TheNe			42-5	
												[(1.92-	-4 kg)(2	,4E-4 1b	2
												tota	l 8,36	7.07 2	26.137	
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at Box 10. Ga at Drum or Pail 11. Bu stic Drum or Pail 12. Un at Tank or Liner 13. Hic korete Tank or Liner 19. Ott	ctural overpacks,	A High Integrity B High Integrity C High Integrity D High Integrity D High Integrity	vettSpectfic Contains one code as may be Container - Poly Container - Poly with Dum Overpack - Po Container - Stainless Container - Fiberplat	i Steel Shell Ay i Steel is	Note 2: Waste De: 20. Charcoal 21. Incinerator Ash 22. Sol 23. Gas 24. Oil 25. Aquéous Liquic 26. Fitter Media 27. Mechanical Fitt 28. EPA or State H	29. D 30. C 31. A 32. M 33. C 33. C 1 34. O 35. G er 36. Se	emolition Rubbl ation Ion-exchan ixed Bed Ion-ex ontaminated Eq rganic Liquid iassware or Lab ealed Source/Di	nge Media 39, Co nge Media 40, No cchange Media 41, An ruipment 42, Bio 43, Ac xware 59, Ott	aporator Bottoms/Slud mpactible Trash ncompactible Trash	ges/Concentrates nt animal carcass}	Note 2A: Barnweil Spe Descriptor Codes (Chc applicable codes.) G Dewatered H Sold I Combustible J Non-combusti K Air Fiftration Fil L Asbestos	vie ters	Note 3: Solidification as Codes, For media meeti tral stability requiremen must be followed by "3 media, the vendor and b be identified in item 13, Required Solidification 90, Cement 91, Concrete (encopsulation) 92, Bitumen	ng disposal site struc- ts, the numerical code ". For all solidification rand name must also	Note 3A: Barriv tion and Stabili (Choose this cu M V	ization medi

FORM 541A

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		2. MANIFEST NUMBE

SCN-0210-98

UNIFORM LOW-LEVEL RADIOACTIVE

WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

	DISPOS	AL CONTAIN	ER DESCRIPTI	ION			WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								16. WASTE
5.	6.	1.	8. WASTE	9.	10. SUR CONTAI	FACE	1	PHYSICAL DESCRIP	TION	14. CHEMICAL DESC	RIPTION	15.	RADIOLOGICAL DESCRIP	TION	CLASSIFI
CONTAINER IDENTIFICATION NUMBERV S.C. TRANSPORT PERMIT NUMBER	CONTAINER DESCRIP- TION (See Note 1 &	VOLUME m ³ t ³	AND CONTAINER WEIGHT	SURFACE RADIATION LEVEL mSvity	MBo	100 cm ² BETA- GAMMA	11. WASTE DESCRIP- TOR (See Note	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER 	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3	CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT		NDIVIDUAL RADIONUCLIDES AND A NTAINER TOTAL: OR CONTAINER T AND RADIONUCLIDE PERC	OTAL ACTIVITY	AS-Class / Stable AU-Class / Unstable B-Class E
	Note 1A3		b	menvhr		GAMMA	2 and Note 2A1		and Note 3A)		1F>0.1%	RADIONUCLIDES	MBq	mCl	C-Class (
FB-2	3	.21	118		<1.67E-6	4.678-5	36H	.21	100	oxides+gloss ho	6.	Ra226	- 037	.001	
0137-00-98E		7.5	260	5.0	2100	21000		7.5		chelates	0%	Srgo	.925	.025	B
												C-14	370	10.0	
		· · · · · · · · · · · · · · · · · · ·										Th-Nut	29,86	· 807 ·	
													(3-67 kg)	(8.08 15)	
		-										Th 232	·0222	.0006	
							<u> </u>						(.00545kg)	(=012 15)	
												total	400.8432	10,8336	
FB-3	3	150		.03	11.678-6	4.672-5	36H	.21	100	oundesniglass	69.	Th-nat	26.16	-707	AU
6137-00-9BE		7.5	z45	3.0	~100	21000	39H	7.5		no chelates	0%		(3.21 kg)	(7,07 16)	
												Du	83,99	2.27	
					ļ								(4,54 kg)	(10 16)	
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FORM 541A (10-96)

FORM 541A				UNIF		W-LEVE				CHEM-NI	JCLEAR CON	SOLIDATIO	SCN	-0210-98	
				CONT				ONTINUATION)					PAGE	The OF 3 PAG	GE(S)
	DISPOSA	L CONTAIN	ER DESCRIPT	ION					WAS	TE DESCRIPTION FOR	EACH WASTE				16. WASTE CLASSIFF
5. CONTAINER	6. CONTAINER	ν.	a. WASTE AND	9. SURFACE	10. SUR CONTAN MBg/	FACE AINATION 100 cm ³	11.	PHYSICAL DESCRIF	TION	14. CHEMICAL DESC	· - · · · · · · · · · · · · · · · · · ·	15.	RADIOLOGICAL DESCRIP	TION	CATION
IDENTIFICATION NUMBER/ S.C. TRANSPORT PERMIT NUMBER	DESCRIP- TION	volume m ³ t ³	CONTAINER WEIGHT	RADIATION LEVEL mSvfr	dpm/	100 cm ² BETA-	WASTE DESCRIP- TOR (See Note	APPROXIMATE WASTE VOLUME(S) IN CONTAINER m 1	SOLIDIFICATION OR STABILIZATION MEDIA	CHEMICAL FORM/ CHELATING AGENT	WEIGHT		NONIDUAL RADIONUCLIDES AND A VTAINER TOTAL: OR CONTAINER T AND RADIONUCLIDE PERC	OTAL ACTIVITY	AS-Class A Stable AU-Class A Unstable
	(See Note 1 & Note 1A)		b	membr	ALPHA	GAMMA	2 and Note 741		(See Note 3 and Note 3A)		AGENT IF > 0.1%	RADIONUCLIDES	MBq	mCl	B-Class B C-Class C
FB-4	3	•21	159	.03	<1.678-6	21,678.5	36H	.21	100	glass, no	00,	Th-Net	44.03	1.19	ALL
0137-00-98E		7.5	350	3.0	2100	~100D.		7.5		Chelates	0%		(5.41 leg)	(11.92 16)	
												total	44.03	1.19	
FB-#50E	3	.21	145	•05	21.675-6	1.678-5	36H	021	100	glass,	e	Th-Nat	35.19	• 951 .	AU
0137-00-98E		7.5	320	5.0	<100	~1000		7.5		no chelates	0%		(4.32 kg)	(9.5216)	ļ
		• •						•				Fotal	35.19	.957	
FB-6	उ	.21	181		41.672-6	×1.67E-5	3611	• 61	100	oxides,	0%	Razzb		00068	
0137-00-98E		7.5	400	5.0	~100	~1000		7.5		no chelodes	- 70	C060	.3626	.0098	ļ
			·- ·		-			- 				#-3	1,420,800	38,400	B
												Th-Nat	16.983 (2.09 kg)	• 459 (4.6 1b)	
									· ·			Th-232	0011		
		1	· ··· · ···										• 0111 (,00273 kg) 1,420,817.61	(.006 16)	
		!									_	total	1,420,817.61	38,400,48	
FORM 541A (10-96)				[1				I			I[······		

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DEPARTMENT OF THE ARMY US ARMY TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT ACTIVITY PROJECT DEVELOPMENT AND RADIATION RESEARCH OFFICE 10115 DUPORTAIL ROAD, SUITE 136 FORT BELVOIR, VIRGINIA 22060-5847



AMSAM-TMD-SB

S: 8 January 1999 28 December 1998

MEMORANDUM FOR HEADQUARTERS, INDUSTRIAL OPERATIONS COMMAND AMSIO-SF (K CROOKS), BUILDING 390 4TH FLOOR ROCK ISLAND ARSENAL, IL 61299-6000

SUBJECT: Historical Review of the Project Development and Radiation Research Office, Fort Belvoir, Virginia

1. The Project Development and Radiation Research Office (PDRRO) has been tasked to move their operation from Building 363 to Building 329 in the CECOM Research Development and Engineering Center at Fort Belvoir, Virginia.

2. The PDRRO is conducting a historical survey of Building 363 prior to the move. Radiological materials have been used in Building 363 since it was built in the early 1960's. The PDRRO requests that your organization please provide a copy of all paperwork on radioactive waste from Building 363 of the PDRRO that has been sent for burial covering the period of 1960 until the present.

3. Please send the materials by mail at the address given below no later than 8 January 1999.

DEPARTMENT OF THE ARMY US ARMY TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT ACTIVITY PROJECT DEVELOPMENT AND RADIATION RESEARCH OFFICE 10115 DUPORTAIL ROAD, SUITE 136 FORT BELVOIR, VIRGINIA 22060-5847

4. POC for this action is the undersigned at commercial (703) 704-1979, DSN 654-1979 or fax commercial (703) 704-2796 DSN 654-2796, or e-mail at rbhat@belvoir.army.mil.

FOR THE DIRECTOR:

RAMACHANDRA K. BHAT, Ph.D, CHP Supervisory Health Physicist USATA, AMCOM

CF: AMSAM-TMD-D (CHEN) AMCSF-P (MANFRE)

Date

ROUTING AND TRANSMITTAL SLIP

TO: //	lame, office symbol, room number, ilding, Agency/Post)		Initials	Date			
1.	Dr. Bhat DEPARTMENT OF THE ARM	<u>Y</u>					
2.	US ARMY TEST, MEASUREM PROJECT DEVELOPMENT A						
3.	10115 DUPORTAIL ROAD, SU FORT BELVOIR, VIRGINIA 2	JITE 136 2060-584	7				
4.							
5.		<u></u>					
	Action		File		Note and Retur	n	
	Approval		For Clearance		Per Conversatio	nc	•
X	As Requested		For Correction		Prepare Reply		
-	Circulate	X	For Your Information		See Me		
	Comment		Investigate		Signature		
	Coordination		Justify				

REMARKS

Dr. Bhat,

Enclosed are the manifests that you requested in your letter dated 28 December 1998.

These manifests are for all radioactive waste that we have records of being shipped from Ft. Belvoir. Our records do not show what particular building waste was generated in/shipped from.

Also note that it is our standard practice to leave copies of shipping manifests at the installation prior to the shipment leaving the installation.

Our office took over the Army Rad. waste mission in 1979. There may be records of waste shipped prior to 1979 that our office does not have copies of.

M

Dave Horton

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post) David R. Horton HQ, IOC	Room NoBldg. BLDG 390/ 4th Floor
ATTN: AMSIO-SF ROCK ISLAND, IL 61299-6000	Phone No. 309-782-1759 DSN 793-1759

OPTIONAL FORM 41 (Rev. 7-76) Prescribed by GSA FPMR (41 CFR) 101-11.206

This is an Accountable Form

					ROUTE ORDE		E NO.	,
	TOR 7	TRANSIT COMPANY	TSM		1NXX297			
STOP THIS CAR OR TRUCK AT		IMPORTANT	CAR-TRUC ORDERED	FURNISHED	MARKED CA		DATE FURNISHED'	DATE B/L ISSUED
		Regulations require Original Shipping Order, and Freight	Van	Van			7 Oct 8	8610
OR		Waybill Original and Carrier's Copy to be surrendered to	'Length/cut		Furnish this inform	nation in case	of carload/truckload	•
CAR, TRUCK OR CONTAINER INITIALS	KIND	carrier after signature SF 1103-B, Memorandum Copy, must be sent to consignee.		Adn	II extra service ninistrative Dire			
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CONSIGNEE (Name, address and ZIP code)		<u></u>	MADYS				VIRGINI	
HEM-NUCLEAR SYSTEMS, INC.	CON	SOLIDATION FACILI	MARKS	M/F: HQA	MCCOM Cor	trol 4	USA 71-	86
WO OSBORN ROAD								
NELLING, SOUTH CAROLINA								
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					INDIANAPOLIS			
IIA (Route shipment when advantageous to	the Gov	ernment)		RIATION CHAP				·
			1	20 688-4 2E0421:A	202 P0289	2-2200	544-009	
		RIER'S USE ONLY - WAYBILL REIGHT BILL NO.	. A0209	2E0421:A	421 			
APPLIED BY:				or will return u which receive	nused or cance d.	eled bills o	of lading to the	Governmen
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AND ARTICLES, UN								
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CARRIER FURNISHED SERVICE AT ORIGIN		Z- 00001T0			12-00			
CARRIER FURNISHED SERVICE AT ORIGIN PICKUP CAR Shipper's agent: NAME OF TSNIT		5-0303110	OFFICE F.O.B. POIL					
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Form RHA-CT (5/80)

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL Radicactive Waste Shipment Certification Porm

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

Part I:	Shipper's Certificate of Compliance	****
1. Name of Shipper and Address:	2. Shipment Identification No.	مرجور می وغد ان در ا م
HQS.,AMCCOM ROCK ISLAND ARSENAL *	USA 71-86 - 38	
ROCK ISLAND, IL 61299-6000 		

In compliance with Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, I hereby certify on behalf of the above-maned shipper to the South Carolina Depar mant of Realth and Environmental Control that the above-named shipper has complied with all provisions of Act No. 499 of 1980, and all applicable laws and administrative rules and regale ion: both State and Federal, regarding the packaging, transportation, storage, disposal and delivery of such wartes. I further certify that this shipment of radioactive waste has been inspected within 48 hours of the time of departure and that no items of non-compliance with applicable laws, rules or regulations were found.

Date X 7 October 86

X Shirley Carlson, Freight Rate SpecXStuck, CultonTyped Name and Title of Agent of ShipperSignature

Part II: Carrie	r's Certification
1. Name of Carrier and Address:	2. Shipment Identification No.
χ Tri-State Motor Transit Co. P. O. Box 113	USA 71-86
Joplin, MO 64901	3. Transport Trailer No.
Telephone No. ()	λ.
4. Scheduled Date of Departure of Shipment:	5. Estimated Date of Arrival of Shipment:
X 7 October 86	× 10 Oct 86

Certification is hereby made to the South Carolina Department of Health and Environmental Contra that: (a) the shipper has provided the carrier with a copy of the shippent manifest, the certif. cate of compliance, and the routing instructions; (b) the shipment of radioactive waste has bee: properly placarded for transport according to applicable U.S. Department of Transportation Fagulations; (c) all shipping papers originated or reproduced by the carrier have been properly executed; (d) the transport vehicle has been inspected according to applicable State and Federal regulations within the prescribed intervals and that all safety and operational components are : good working order and meet the requirements of regulations; (e) all drivers who will operate t vehicle within the State of South Carolina are qualified to transport hazardous materials as specified by applicable U.S. Department of Transportation regulations; (f) the Department thall be immediately notified of any variance, occuring after departure, from the shipper's notificat: of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and administrative rules and regulations, both State and Federal, regarding the transportation of radioactive wastes will be complied with.

7 October 86 Date X DOM FRISTO

Typed or Printed Name and Title

Kan da ti

DHEC 803 (5/80)

(Copies of this form may be reproduced locally as needed)

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ترين الرين	(Altn: SA-ALC	L 61299-6000 A FORCE, SA-AL(EMF; Vaughn) 78214-5000	2	Radiological A			Highway 64 (1 Snellin	ig, S.C. 2 3-259-111	st of 9 29812 19					ADDRESS_ TELEPHON SHIPPING (E (972)	5.12	- 674		<u>, wic.</u>
λ '	(512) 925-863				`								1	_			TAL ACTIV	TIES (10CFR	20311)
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(10) ITEM NG	(11) RADIOHUCLIDE EACH CONTAIMER	(12) ACTIVITY EACH RADIOHIJCLIDE (mCi)	(13) Physical Form	(14) CHEMICAL FORM AND NAME & 90 O CHELATING AGEN		(15) WASTE DESCRIPTION		MAS CLA (A, B (CLA	57 STE 5 SS N	. (17) SPECIAL IUCLEAR IUCLEAR IATERIAL (Grans)	(18) SOURCE MATERIAL	1	(20) CONTLINER VOLUME (Cu. FL)		RADIATIK Container Surface	22) DN LEVELS	CONTO CON SU	(23) MINATION ITAINER RFACE /100 cm ³) Beta Gamma	(24) LABELMARKINGS USED
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ORIGINAL - DCF; GREEN - CARRIER; GOLDENROD - U.S. MAIL D.O.T. SHIPPING PAPERS () of ()

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CONTINUATION SHEET

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PAGE 3_ OF 4

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CONTINUATION SHEET

PAGE 4 OF 14

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D.O.T. SHIPPING PAPERS () of ()

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D.U.47 St	HIPPING	PAPERS (1) OF ()			EMERGENCY CON		
		•			CNSI SECURITY: (303) 259-6	6069
							-
CH	EM-NUC	LEAR SYSTEMS INC.		•		-Tom - vi	
.0.	Box 726 • Ba	nwell, South Carolina 29812 • (803)-259-	1781				م ^م رم د. د.
							WORK OIL
RECIEVED, su	bject to the cla	ELADING - SHORT FOR	ne date of the	issue of this Bill of La	ıding	59156	
The property descr destined as indical	ibed below, in app ed below, which si	arent good order, except as noted (contents a Id carner (the word carrier being understood th rees to carry to its usual place of delivery at sale	nd condition of con iroughout this conti direction if on	tents of packages unknown act as meaning any person	i), Marked, consigned, and or corporation in possession or to applier, carrier on the route to		
said destination. It any time Interested	is mutually agree	i, as to each carrier of all or any of said propert d property, that every service to be performed i h (1) in official, Southern, Western and illinois	y over all or any por hereunder shall be	tion of said route to destina subject to all the terms and	tion. And as to each party at conditions of the uniform	Tractor No. 19	51
domestic straight t water shipment. O	of lading set for r (2) in the applical	h (1) in official, Southern, Western and Illinois ble motor carrier classification or tariff if this is a	Freight Classificatio motor carrier shipr	ns in effect on the date her nent.	eor, if this is a fail or a rail-	Trailer No. <u>-i</u> -	<u>19.10(:2</u>
tion or tartif which	nifies that he is far governs the transp	niliar with all the terms and conditions of the sa ortation of this shipment, and the said terms ar	ld bill of lading, Incl vd conditions are hr	uding those on the back th treby agreed to by the ship	ereof, set forth in the classifica- per and accepted for himself and	LENG	TH
his assigns.		(MAIL OR STREET ADD	DRESS OF CONS	SIGNEE - FOR PURPOS	ES OF NOTIFICATION ONLY.	LECTAL	-
FROM	FUET	BELVOIR	<u> </u>	Date	<u>11-19-93</u>		
At	FORT	BELVOIR	- VIR-	GINIA		HEIG	нт
CONSIGNED	1.					LEGAL	
DESTINATIO	<u>DENCA</u> N	WE LEISCHDATION	1 FACIL	STATE .	COUNTY		
	GrizLi	-inicy EL. Z	ABIZ		EAFNINEL	WIDT	
• •		Bill of La	iding Pag	e (1) of (Z)	· .	Lielyne	
NO. PKGS.	НМ	KIND OF PAC	KAGE, DESC SPECIAL N	RIPTION OF ARTIC	CLES, LINER NUMBERS, ONS	is is	WEIGHT
5	RQ		······································		•••••••••••••••••••••••••••••••••••••••		
		Provention - MATERIAN 1				·	875
	·		SILNS CO		ATCHES. DIPLEXER		
		Radionuclides: R4 226 (500 N1	43 H3 Pm	147 Am 241		
•		Total Activity: 170.89	CURIES	Container	Type: meral Decim		
		Physical Form: Scab, L	Lair, GA	ය Container	Specification: 74, TTPE	.×	
•		Chemical Form: CAUC		Non-Spec.			
		PADIC.	ACTIVE, WIN	ITSI,	Non-Exclusive Use Vehici		
			<u></u>				
	· · · · · ·	Transport Index: N	<u>Ą</u>	Placarded	: RADICALITIE		
		· · ·		· · · · ·	· .		
		•			54		
IMPOR	ITANT: This is to c	nify that the above named materials are proper	nty.	Received	the property described abov	e in good condi	ition,
		kaged, marked and labeled and are in proper c ing to the applicable regulations of the Departm		except a	s otherwise noted.	-	
Transp	ortation.	$\gamma M $ · · ·		Carrier_	/ Tomm-	MoGILL	
Signat	ure	fill / Jeff M:16r	· ·	Driver	Krill Lai.	1	
Compa	ωηy <u>(N</u> i	6.1. Date 11-14-0	13		Time_11-1(1-(13)	Ţ	
SCHEDULE	50	DATE TIME	1	DATE	TIME	SHIPPER'S SIG	SNATURE
TO ARRIVE			COMPLE LOADIN	TED		Id Jill	1.
ARRIVED		DATE TIME	LEFT	DATE	TIME	SHIPPER'S SIG	INATURE
AT SHIPPER	n-19	- 13 OFAC AM	E SHIPPE	R. 11-14-43	1300 P.M.	4/10	4
SHIPPE	R IMPORTA	NT NOTE: Your signature certifies	that the above	dates and times are	correct for record keeping a	nd billing purpo	ses.

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D.O.T. SHIPPING PAPERS (2) OF ()

EMERGENCY CONTACT: CNSI SECURITY: (803) 259-6069

TSINT W.C. #-591562

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CHEM-NUCLEAR SYSTEMS INC. P.O. Box 728 • Barnwell, South Carolina 29812 • (803)-259-1781

<u>Control Numb</u> 93-323-1

BILL OF LADING-CONTINUATION PAGE ' PAGE _ _ _ OF _ _ SHIPMENT NUMBER いろん - イラーハろルー

NO. PKGS.	НМ	KIND OF PACKAGE, DESCRIPTION OF ARTICLES, LINER NUMBERS, SPECIAL MARKS & EXCEPTIONS	*WEIGE (Subject T Correction						
<u> </u>	×	ENDICIVITIES WARMAN, LOUGHERFICHETICITY N.C.S., 7, UN 2912							
		METAL DRUMS CONTAINING SOIL SAMPLES NINTSCOPES DAW							
		Radionuciides: RA 226, CO60, TH 232, 4238, H3	•						
		Total Activity: 0.216 milli (units Container Type: mital/entropie His	• ·						
		Physical Form: SULID Container Specification: STREAG-TIGHT	•						
		Chemical Form: UNINES Non-Spec. Marking: RADICALT, JE-104							
		Specification Label: NIA Exclusive)Hon Exclusive Use Vehicle:							
		Transport Index: NIA Placarded: RADICACTIVE							
•····-									
•	<u> </u>	·							

NO. PKGS.	НМ	KIND OF PACKAGE, DESCRIPTION OF ARTICLES, LINER NUMBERS, SPECIAL MARKS & EXCEPTIONS	*WEIGHT (Subject To Correction)					
<u>Z6</u>	×	RADICILETICE MATERIAL ENERTED HERALIE - INSTRUMENTS OF ALTICLES	400					
		7, UNZAIC PACKAGES OF DETECTORS						
•		Radionucildes: RR 25, Ry 226						
<u> </u>		Total Activity: 0.776 mill: Creves Container Type: Corderard Brin						
		Physical Form: OC-10 Container Specification: STCILL - Tubit	·					
·		Chemical Form: CAIDES Non-Spec. Marking: N/A	,					
<u></u>		Specification Label: NIA Exclusive Vion Exclusive Use Vehicle:						
		Transport Index: N/A Placarded: N/A						
		THIS PLEINER CUNFORMIS TO THE STEELTHARDIS AND LIMITATIONS STEELFIED						
		IN 49 CER 173.422 FL RANCACTUS MATERIAL, ENCEPTED PARAAGE-						

Instruments .- Articles, 7, UN 2910.

RAD. SACTIVE MATERIAL, EXCEPTED PACKAGE - EMPTY PACKAGING, UNIZAIO, 1000 V THIS PACKAGE CONFORMS TO THE CONVITIONS AND LIMITATIONS SPECIFIED IN LATER TO THE DOLLAR MATERIAL FOR THE DOLLAR FOR THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIROMENTAL CONTROL Radioactive Waste Shipment Prior Notification and Manifest Form

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:

		T at a start						
1. Name and Address of Shipper/Generate		e for Instructions		Waste Shipment:				
HO. U.S. ARMY, AMOOM) & e	a) Name:	BYRON E.	MORRIS				
HO, U.S. ARMY, AMCCOM (ATTN: AMSMC-SFS) ROCK ISLAND, IL 61299-6				HYSICIST				
			n a (309) 7					
3. Radioactive Waste Transport Permit No	•	4. Shipment In						
0137-00-93-E				1-1280				
5. Location from which waste will be shipp FULT BILVOIC	•	6. Name and A DEFENSE		DATION FACILITY				
FT BELVEIR, VIRGININ		SC HWY. 64, SNELLING, SC 29812						
7. Scheduled Date of Departure of Shipme $11 - 19 - 93$		8.:Estimated I		al of Shipment: 2 - 93				
9. Carrier:	10. Trailer No. &	Owner: ·		Transport Vehicle:				
TEI - GEATE METCE TEANSIT	(if available)	448602	Que	GED VAN				
12. Routes shipment will follow in State of $\overline{2} - 95$, SC 70	South Carolina (B		•	•				
13. Type Package or Cask Model No.:	14. Type Container	r in Cask:	15. Packs	age or Cask Spec:				
METAL DELIN, WERE BB	••••••			3947, AT 7				
METTAL BER, LAEDERARD BEK	NIA			SING - TIGHT				
16. Complete Waste Description (be Specif				1 <u>1</u>				
LIQUID SELECE STAND	•	* ಕುಂಬಂತ	S; Lum	INCUS DEVILES				
DIALS, WATCHES, CO	NPASSES ,	INGTRUM	ENT, A	ARTICLES.				
17. Physical & Chemical Form:	· ·	18. Total No. of Packages:		inent Radionuclides:				
50.0, GAS, LIQU.D.		•	43,0	- wc, Zr. 224; Kr + 3				
CAIDES		30	•	·				
20. Total Curies 171 - 789	21. Waste Class &	Stability:	22. Total	Oubic Peet 2310				
23. DOT Sub Type 7A, TIPE	24. DO	T Class. & Hazar	rd Class	25. Hwy. Route Controlled:				
LSA		NNO: ZITEZ		• (Large Quantity)				
Excepted - Pack	AGE	2912						
		2410	, 	<u> </u>				
· · · · · · · · · · · · · · · · · · ·	CERTIF	ICATION		· · · · · · · · · · · · · · · · · · ·				
I hereby certify on behalf of ment of Health and Enviro correct to the best of my h provisions as required by A tion and Disposal Act, and	mental Control that mowledge; and that Act No. 429 of 1980,	the information p the shipper/gener the South Caroli	provided her ator has com	cin is complete and plied with all the				
Date 11-19-43	•	EARLON.	BRADLE	5-1				
Date	Tv	ped Name		•.				
				- The Article House				
· ·	· ·		ALEIN	t for us Afint/Auccom				
•	17 17	nnen Front	en ·					
•		Representative	LOUB FIGHON					
	<u> </u>	- •	·	· · · · · · · · · · · · · · · · · · ·				
<u>····</u> O	ONSIGNEE ACKNO	DWLEDGEMENI	<u> </u>	••••••••••••••••••••••••••••••••••••••				
This acknowledges to the S the above-described radioac	outh Carolina Depar tive waste shipment	tment of Health was recieved.	and Environ	ental Control that				
Date of Deliver		mature of Const	mee's Author	ized				
Date of Delivery		mature of Consig Representative	Succa Mumor	uns · ·				
	•			•				
•			·	· · · · · · · · · · · · · · · · · · ·				
	Ту	ped or Printed N	ame and 110	с ·				
DHEC 802 (Rev. 10/84)	_	•		•				
· •	. •							
•		• .						

{Failure to Complete ALL Entries Will Result in Return of Form and Constitute Noncompliance.}

(Copies of this form may be reproduced locally as needed)

FORM RHA-CT SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (5/80) Radioactive Waste Shipment Certification Form

•

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier s- part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

Part I: Shipper's Ce	rtificate of Compliance
1. Name of Shipper and Address: HQ, U.S.ARMY,AMCCOM	2. shipment Identification No. UGA-95-93A-12-Blo
(ATTN:AMSMC-SFR/Morris) Rock Island, IL 61299-6000	3. Transport Permit No.
Telephone No. (309) 782-2964	0137-00-93-E

In compliance with Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the above-named shipper has complied with all provisions of Act No. 499 of 1980, and all applicable laws and administrative rules and regulations, both State and Federal, regarding the packaging, transportation, storage, disposal and delivery of such wastes. I further certify that this shipment of radioactive waste has been inspected within 48 hours of the time of departure and that no items of non-compliance with applicable laws, rules or regulations were found.

Date tunKhouser .

Typed Name and Title of Agent of Shipper

. Part II: Carri	er's Certification
1. Name of Carrier and Address: TELESATE MOTOR TEANET INC	2. shipment Identification No. U = A = A = A = A = A = A = A = A = A =
ENST 7TH ST. JOPLIN, MD.	3. Transport Trailer No. 448602
Telephone No. (ECC) E12 E768	5. Estimated Date of Arrival of Shipment:
4. Scheduled Date of Departure of Shipment: (1 - 16 - 63)	il - 22 - 93

Certification is hereby made to the South Carolina Department of Health and Environmental Control that: (a) the shipper has provided the carrier with a copy of the shipment manifest, the certificate of compliance, and the routing instructions; (b) the shipment of radioactive waste has been properly placarded for transport according to applicable U.S. Department of Transportation Regulations; (c) all shipping papers originated or reproduced by the carrier have been properly executed; (d) the transport vehicle has been inspected according to applicable State and Federal regulations within the prescribed intervals and that all safety and operational components are in good working order and meet the requirements of regulations; (e) all drivers who will operate the vehicle within the State of South Carolina are qualified to transport hazardous materials as specified by applicable U.S. Department of Transportation regulations; (f) the Department shall be immediately notified of any variance, occuring after departure, from the shipper's notification of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and administrative rules and regulations, both State and Federal, regarding the transportation of radioactive wastes will be complied with.

Typed or Printed Name. and Title

DHEC 803

(Copies of this form may be reproduced locally as needed)

CNSI DRIVER'S INSTRUCTIONS FOR EXCLUSIVE USE VEHICLES U.S. GOVERNMENT

Code of Federal Regulations, 49 CFR 173.425 (b)(9) requires that specific instructions for maintenance of exclusive use shipments controls be provided to the carrier. These instructions must be included with the shipment documents. The following instructions shall be complied with by all vehicles designated exclusive use. Changes to the following instructions are not acceptable without the approval of consignee.

- 1. Do not change out tractor before arrival at the radioactive burial site.
- 2. Do not change the fifth wheel adjustment on the tractor.
- Do not move or transfer packages within the van or between vans.
 Shipments must be braced so as to prevent shifting of load under conditions normally incident to transportation.
- 5. The shipment must be loaded and unloaded from original transport vehicle by the consignor or the consignee only.

(Check the box(es) for additional instructions that are applicable)

[X] a) The vehicle must be placarded "RADIOACTIVE" on all four sides until shipment is unloaded.

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This shipment will have the following intermediate stops.	•
loaded initially at FORT BELVICIE, VIRGINIA.	
intermediate load at <u>NIA</u>	
intermediate load atN/A	
intermediate load at <u>N/A</u>	
unload vehicle at CNSZ/DCF SNELLING, SC	
all loading must be performed under broker's supervision.	

- [] c) Notify Washington Port of Entry four hours prior to arrival. I-90: (509) 226-3360, I-84: (509) 783-4014. Notify Richland, Washington (Hanford) burial site within 24 hours of arrival: (509) 377-2411.
- [] e) Notify the Nevada Highway patrol, (702) 885-5300, no later than four (4) hours and no earlier than 48 hours prior to entering the state.

If the Vehicle is involved in; 1) an accident, 2) emergency braking, 3) mechanical malfunction, 4) or any deviation from these instructions, contact any one of the following CNSI employees:

Barnwell Security	. (803) 259-6069	
Mark Lewis		(803) 256-0450
Richard Thatcher		(803) 259-1119

Any deviation from these instructions are violations of State and Federal laws and could result in carrier penalty.

ers Signature

<u>i1 - 19 - 93</u> Date

RADIOACTIVE MATERIAL, N.O.S.; 7, UN2982

RADIOACTIVE MATERIAL, SPECIAL FORM, N.O.S.; 7, UN2974

RADIOACTIVE MATERIAL, FISSILE, N.O.S.; 7, UN2918

POTENTIAL HAZARDS

HEALTH HAZARDS

External radiation from unshielded radioactive material Internal radiation from inhalation, ingestion, or skin absorption. Radioactive material; degree of hazard will vary greatly, depending on type and quality of radioactive material.

Runoff from fire control or dilution water may cause pollution.

FIRE OR EXPLOSION

Some of these materials may burn, but none of them ignites readily.

EMERGENCY_ACTION

Keep unnecessary people at least 150 feet upwind; greater distances may be necessary if advised by qualified Radiation Authority. Isolate hazard area and deny entry. Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection. Detain uninjured persons and equipment exposed to radioactive material

until arrival or instruction of qualified Radiation Authority.

Delay clean-up until arrival or instruction of qualified Radiation Authority.

CALL CHEM-NUCLEAR AT 1-803-259-6069 FOR EMERGENCY ASSISTANCE. If water pollution occurs, notify the appropriate authorities.

FIRE

Do not move damaged containers; move undamaged containers out of fire zone.

Small Fires: Dry chemical, CO2, Halon, water spray, or standard foam. Large Fires: Water spray, fog (flooding amounts).

For massive" fire in cargo area, use unmanned hose holder or monitor nozzles.

Fight fire from maximum distance. Stay away from ends of tanks.

SPILL OR LEAK

Do not touch damaged containers or spilled material.

Damage to outer container may not affect primary inner container.

Small Liquid Spills: Take up with sand, earth, or other noncombustible absorbent material.

Large Spills: Dike far ahead of liquid spill for later disposal.

FIRST AID

Call emergency medical care.

If not affecting injury, remove and isolate contaminated clothing and shoes; wrap victim in blanket before transporting.

If not injured, remove and isolate contaminated clothing and shoes;

shower victim with soap and water.

Except for the injured, detain persons and equipment exposed to radioactive material until arrival or instruction of Radiation Authority. Advise medical care personnel that injured persons may be contaminated with radioactive material.

EMERGENCY CONTACT

CNSI Security: 1-803-259-6069

RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, N.O.S.; 7, UN2912

POTENTIAL HAZARDS

HEALTH HAZARDS

Fire may produce irritating or poisonous gases. Radioactive material; degree of hazard will vary from little to moderate, depending on the type and quantity of radioactive material. Runoff from fire control or dilution of water may cause pollution.

FIRE OR EXPLOSION

Some of these materials may burn, but none of them ignites readily.

EMERGENCY ACTION

Keep unnecessary people at least 150 feet upwind of spill. Isolate hazard area and deny entry. Limit entry to shortest possible time. Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection. Delay clean-up until arrival or instruction of qualified Radiation Authority.

CALL CHEM-NUCLEAR AT 1-803-259-6069 FOR EMERGENCY ASSISTANCE. If water pollution occurs, notify the appropriate authorities.

FIRE

Do not move damaged containers; move undamaged containers out of fire zone.

Small Fires: Dry chemical, C02, Halon, water spray, or standard foam. Large Fires: Water spray, fog, or standard foam is recommended.

SPILL OR LEAK

Do not touch damaged containers or spilled material. Large Spills: Dike far ahead of liquid spill for later disposal. Cover powder spill with plastic sheet or tarp to minimize spreading.

FIRST AID

Use first aid treatment according to the nature of the injury. If not affecting injury, remove and isolate contaminated clothing and shoes; wrap victim in blanket before transporting.

If not injured, remove and isolate contaminated clothing and shoes; shower victim with soap and water.

Advise medical care personnel that injured persons may be contaminated with radioactive material.

EMERGENCY CONTACT

CNSI Security: 1-803-259-6069

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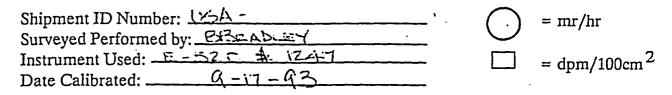
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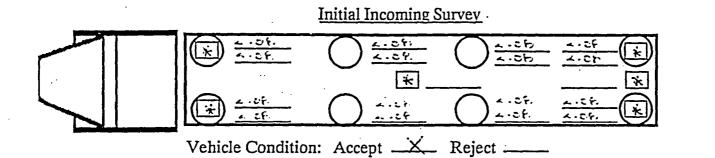
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DD, FORM 626

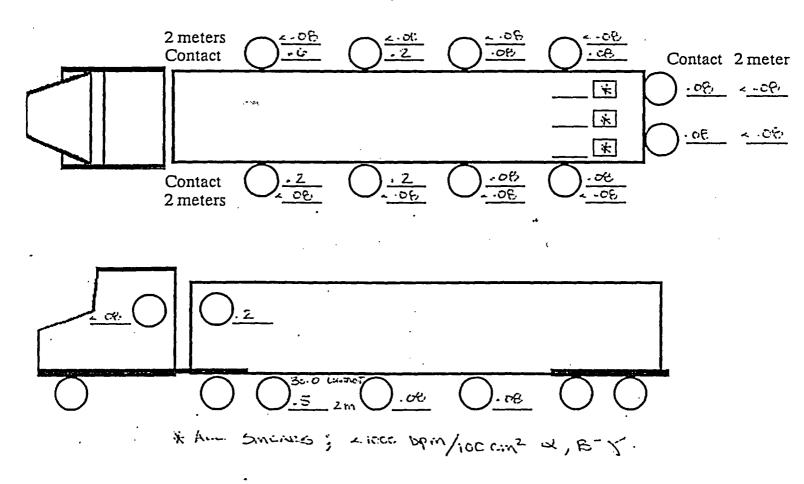
REPLACES EDITION OF 1 JUN 72, WHICH IS OBSOLETE.

BROKER'S TRAILER SURVEY





Outgoing Shipment Survey



— (/ K	Attn: SA-ALC elly AFB, TX 512) 925-4643	/MMIRÓB: Vaug 78214-5000	jhn)					(803)	259-11	19				SHIPPING D	ATE		,			
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			<u> </u>			:		· · ·		(9) °C	ertification	is hereby n	ade to the	South Caroli	na Departn	nent of H	lealth and	d Environm	ental Conti	rol that this
										Shipm Badio	ent of low- active Mate	level radioad	tive waste h 287-04 as an	as been insp nended, and t	ected in a he effective	e consolio	e with the	e requireme	ance criter	ith Carolina
(8) IN	PORTANT:	This is to certify	that the ab	ove-named materi	ials are properly clas	sified, described, package	ged, marke	d,	•	hours	prior to shi	pment, and fi	urther certific	ation is made	that the in	spection r	revealed n	o items of r	on-complia	ance with all
Trans	portation."	proper condition	on for trans	sportation accord	ing to the applicabl	e regulations of the De	epartment o	. 10		••		ules and reg	ulations."		1 i -	71.0	1			
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White-Consolidation Facility: Rive-Shinner: Green-Carrier: Canary-CNSI Management; Pink-Contracting Officer; Goldenrod-U.S. Mail

Emergency Contact: Barnwell Security : (803)259-1786 CHEM-NUCLEAR SYSTEMS INC. (CNSZ)

Control Number

-faram LENGTH

90-

Tractor No

Trailer No.

729

292037



P.O. Box 726 • Barnwell, South Carolina 29812 • (803) 259-1781

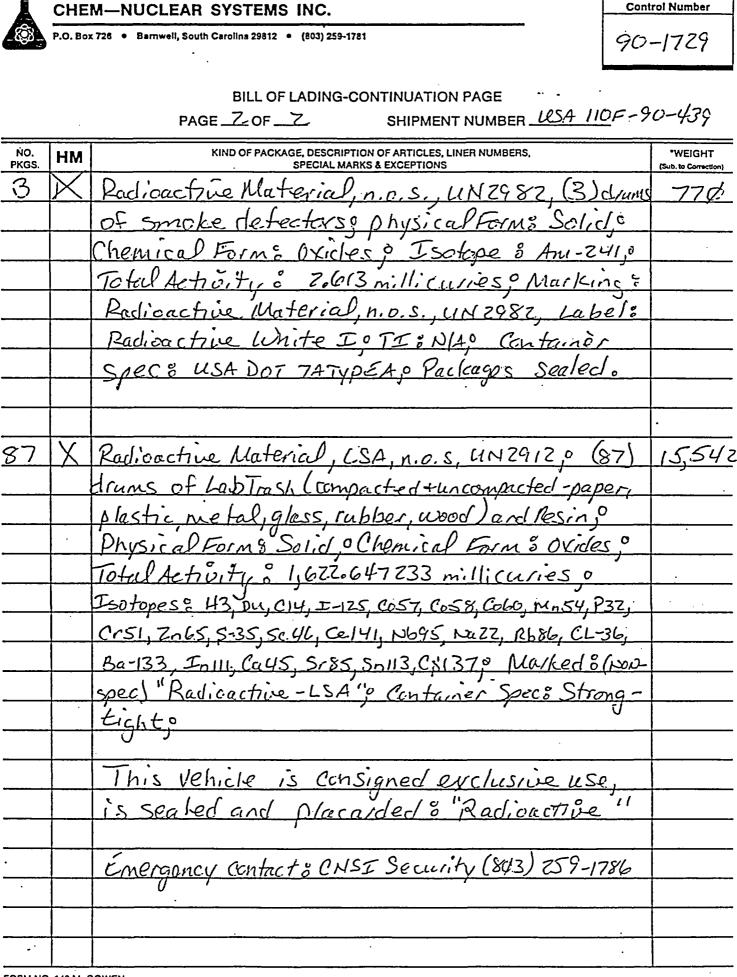
STRAIGHT BILL OF LADING — SHORT FORM — ORIGINAL — NOT NEGOTIABLE. RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

The property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown). Marked, consigned, and destined as indicated below, which sold carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at sold destination. If an its route, otherwise to deliver to another carrier on the route to sold destination. It is mutually agreed, as to each carrier of all or any of sold property over all or any portion of sold route to destination. And as to each party at any time interested in all or any of sold property, that every service to be performed hereunder shall be subject to all the terms and conditions of the uniform domestic- straight bill of lading set forth (1) in official, Southern, Western and Illinois Freight Classifications in effect on the date hereof, if this is a rail or a rollwater shipment. Or (2) in the applicable motor carrier classification or tarlif if this is a mator carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of loding, including those on the bock thereof, set forth in the classification or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns. (MAIL OR STREET ADDRESS OF CONSIGNEE --- FOR PURPOSES OF NOTIFICATION ONLY)

FROM.	Fr	ort Be	luoin			Date 9-14	-90	1.	egal
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cia	sified, des	cribed pockoged, ma	/ / t the above named mat- rked and labeled and are applicable regulations of	in proper condition		ved the property desi t as otherwise noted.	cribed above i	in good c	ondition,
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ARRIV AT SHIPPI	ED 9. ER	date -14-90	TIME 11 = 30 (A.M. 7.M.	left shipper 9-,	DATE	тіме 16-20 А.М.	SHIPPI	ER'S SIGN	ATURE

SHIPPER IMPORTANT NOTE: Your signature certifies that the above dates and times are correct for record keeping and billing purposes.



FORM NO. 149 McGOWEN

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIROMENTAL CONTROL Radioactive Waste Shipment Prior Notification and Manifest Form

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{Failure to Complete ALL Entries Will Result in Return of Form and Constitute Noncompliance.}

· · · · · · · · · · · · · · · · · · ·					_					
1. Name and Address of Shipper/Generato		Side for Instruction		sible for V	Vaste Shinment					
HQ, U.S. AITTY, AMCCOM		a) Name	2. Person Responsible for Waste Shipment: a) Name: Byron Morris							
Rock Island, IL 61299-600	0	b) Title: c) Teler	b) Title: Health Physicist (309) 782-2964							
3. Radioactive Waste Transport Permit No 0137-00-90-E	L		4. Shipment Indentification No.: USA 110F-90 - 439							
5. Location from which waste will be shipp Fort Belvior Na	bed;	6. Name an Consolid Snelling	6. Name and Address of Consigned: CNSI, Defense Consolidation Facility, (1 mile west of Snelling, SC 29812							
7. Scheduled Date of Departure of Shipme Sept. 14, 1990	ent:	8. Estimated Sept.			l of Shipment:					
9. Carrier:	10. Trailer No.	& Owner.			Transport Vehicle	:				
Chem-Nuclear Systems, Inc.	(if availab) 2920		SI	VAN	-	• *				
12. Routes shipment will follow in State of I-95, US-301, SC-70, SC		(Be Specific):								
13. Type Package or Cask Model No.:	14. Type Conta	iner in Cask:	<u> </u>		ge or Cask Spec.:					
USA DOT 20WC-4, TYPE B	N/A				20WC-4, TYPE	B and				
METAL DRUM 16. Complete Waste Description (be Specifi			<u>u</u>	St DOT	7ATYPEA					
Sealed Sources and Sh		ic.fors								
17. Physical & Chemical Form:		18. Total No. Packages:	of	19. Prominent Radionuclides:						
Solid & Oxide		95 # H		Am-241						
20. Total Curies: 1.459613 1-5	21. Waste Class	AU & CS	1	22. Total Cubic Feet 245 155						
23. DOT Sub Type:	24. 1	DOT Class. & Ha		·	25. Hwy. Route	Controlled:				
>A2, Type B and	Rac	UN No.:2982 lioactive Ma	ater	cial,	(Large Quar	ntity) · · · · · · · · · · · · · · · · · · ·				
LAZ, TYPEA	n.0	D.S.				~				
	CER	TIFICATION			I					
I hereby certify on behalf ment of Health and Enviro correct to the best of my I provisions as required by A tion and Disposal Act, and	mental Control t knowledge; and th Act No. 429 of 19	hat the information the shipper/ge 180, the South Car	n pro nerato	ovided her or has com	ein is complete and plied with all the					
Date 09/08/90		Todd W. Eas	stma	an/Agen	t for US An	my/CNSI				
		Typed Name								
		lotti		han						
		Signature of Consignee's Authorized Representative								
C	ONSIGNEE AC	NOWLEDGEME	NT	· · · · · · · · · · · · · · · · · · ·						
This acknowledges to the S the above-described radioac			lth an	d Envirom	eental Control that					
Date of Delivery		Signature of Consignee's Authorized Representative								
		Typed or Printed	l Nan	ne and Titl	c					
DHEC 802 (Rev. 10/84)										

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIROMENTAL CONTROL Radioactive Waste Shipment Certification Form

General Instruction and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon reciept, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

Part I: Shipper's Certificate of Compliance							
1. Name of Shipper and Address: HQ, U.S. ACMY, AMCCOM GFORT BELVOR, FORT BELVOIC, ULGINIA BOLK ISLAND, IU 61299 - 6880 Telephone No. 600) 782-2966	2. Shipment Identification No. USA $110F-90-4393. Transport Permit No.0137-00-90-E$						

In compliance with Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the above-named shipper has complied with all provisions of Act No. 499 of 1980, and all applicable laws and administrative rules and regulations, both State and Federal, regarding the packaging, transportation, storage, disposal and delivery of such wastes. I further certify that this shipment of radioactive waste has been inspected within 48 hours of the time of departure and that no items of non-compliance with applicable laws, rules or regulations were found.

Date <u>9-14-90</u> <u>TODD W. ENOTMAN' AGENT FOR US ACMY/CNSI / Konde Continue</u> Typed Name and Title of Agent of Shipper Signature

Part II: Carrier's Certification							
1. Name of Carrier And Address: CHEM- NUCLEAR SUGTENS, INC Burn well, SC 29512 Telephone No. (503) 259-1781	 Shipment Identification No. U-A. 110F-90-439 Transport Trailer No. 292,037 						
4. Scheduled Date of Departure of Shipment: SEPT 14, 1990	5. Estimated Date of Arrival of Shipment: SEPT 15, 1990						

Certification is hereby made to the South Carolina Department of Health and Environmental Control that: (a) the shipper has provided the carrier with a copy of the shipment manifest, the certificate of compliance, and the routing instructions; (b) the shipment of radioactive waste has been properly placarded for transport according to applicable U.S. Department of Transportation Regulations; (c) all shipping papers originated or reproduced by the carrier have been properly executed; (d) the transport vehicle has been inspected according to applicable State and Federal regulations within the prescribed intervals and that all safety and operational components are in good working order and meet the requirements of regulations; (e) all drivers who will operate the vehicle within the State of South Carolina are qualified to transport hazardous materials as specified by applicable U.S. Department of Transportation regulations; (f) the Department shall be immediately notified of any variance, occuring after departure, from the shipper's notification of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and administrative rules and regulations, both State and Federal, regarding the transportation of radioactive wastes will be complied with.

Date <u>4/14/90</u> <u>M. Morth Creatt Driver</u> Typed or Printed Name and Title Signature '

DHEC 803

(5/80)

RADIOACTIVE MATERIAL, N.O.S.; UN2982

- RADIOACTIVE MATERIAL, Special Form, N.O.S.; UN2974

- RADIOACTIVE MATERIAL, Fissile, N.O.S.; UN2918

POTENTIAL HAZARDS

HEALTH HAZARDS

External radiation from unshielded radioactive material Internal radiation from inhalation, ingestion, or skin absorption. Radioactive material; degree of hazard will vary greatly, depending on type and quality of radioactive material. Runoff from fire control or dilution water may cause pollution.

FIRE OR EXPLOSION

Some of these materials may burn, but none of them ignites readily.

EMERGENCY ACTION

Keep unnecessary people at least 150 feet upwind; greater distances may be necessary if advised by qualified Radiation Authority. Isolate hazard area and deny entry. Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection. Detain uninjured persons and equipment exposed to radioactive material until arrival or instruction of qualified Radiation Authority. Delay clean-up until arrival or instruction of qualified Radiation Authority. CALL CHEM-NUCLEAR AT 1-803-259-1786 FOR EMERGENCY ASSISTANCE. If water pollution occurs, notify the appropriate authorities.

FIRE

Do not move damaged containers; move undamaged containers out of fire zone.

Small Fires: Dry chemical, CO2, Halon, water spray, or standard foam. Large Fires: Water spray, fog (flooding amounts).

For massive fire in cargo area, use unmanned hose holder or monitor nozzles.

Fight fire from maximum distance. Stay away from ends of tanks.

SPILL OR LEAK

Do not touch damaged containers or spilled material. Damage to outer container may not affect primary inner container. Small Liquid Spills: Take up with sand, earth, or other noncombustible absorbent material.

Large Spills: Dike far ahead of liquid spill for later disposal.

FIRST AID

Call emergency medical care.

with radioactive material.

If not affecting injury, remove and isolate contaminated clothing and shoes; wrap victim in blanket before transporting. If not injured, remove and isolate contaminated clothing and shoes; shower victim with soap and water. Except for the injured, detain persons and equipment exposed to radioactive material until arrival or instruction of Radiation Authority. Advise medical care personnel that injured persons may be contaminated

EMERGENCY CONTACT

CNSI Security: 1-803-259-1786

RADIOACTIVE MATERIAL, LSA, N.O.S.; UN2912

POTENTIAL HAZARDS

•• . •

HEALTH HAZARDS

Fire may produce irritating or poisonous gases. Radioactive material; degree of hazard will vary from little to moderate, depending on the type and quantity of radioactive material. Runoff from fire control or dilution of water may cause pollution.

FIRE OR EXPLOSION

Some of these materials may burn, but none of them ignites readily.

EMERGENCY ACTION

Keep unnecessary people at least 150 feet upwind of spill. Isolate hazard area and deny entry. Limit entry to shortest possible time. Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection. Delay clean-up until arrival or instruction of qualified Radiation Authority. CALL CHEM-NUCLEAR AT 1-803-259-1786 FOR EMERGENCY ASSISTANCE. If water pollution occurs, notify the appropriate authorities.

FIRE

Do not move damaged containers; move undamaged containers out of fire zone.

Small Fires: Dry chemical, C02, Halon, water spray, or standard foam. Large Fires: Water spray, fog, or standard foam is recommended.

SPILL OR LEAK

Do not touch damaged containers or spilled material. Large Spills: Dike far ahead of liquid spill for later disposal. Cover powder spill with plastic sheet or tarp to minimize spreading.

FIRST AID

Use first aid treatment according to the nature of the injury. If not affecting injury, remove and isolate contaminated clothing and shoes; wrap victim in blanket before transporting.

If not injured, remove and isolate contaminated clothing and shoes; shower victim with soap and water.

Advise medical care personnel that injured persons may be contaminated with radioactive material.

EMERGENCY CONTACT

CNSI Security: 1-803-259-1786

CNSI DRIVER'S INSTRUCTIONS FOR EXCLUSIVE USE VEHICLES U.S. GOVERNMENT

he Code of Federal Regulations, 49 CFR 173.425 (b)(9) requires that specific instructions for maintenance of exclusive use shipments controls be provided to the carrier. <u>These instructions must be included with the shipment documents</u>. The following instructions shall be complied with by all vehicles designated exclusive use. Changes to the following instructions are not acceptable without the approval of consignee.

- 1. Do not change out tractor before arrival at the radioactive burial site.
- 2. Do not change the fifth wheel adjustment on the tractor.
- 3. Do not move or transfer packages within the van or between vans.
- 4. Shipments must be braced so as to prevent shifting of load under conditions normally incident to transportation.
- 5. The shipment must be loaded and unloaded from original transport vehicle by the consignor or the consignee only .
- (Check the box(es) for additional instructions that are applicable)
 - 3 The vehicle must be placarded "RADIOACTIVE" on all four sides until shipment is unloaded.
 - X b) This shipment will have the following intermediate stops.

loaded initially at Belliesda Naval Med. Center, Bethesda, MD intermediate load at <u>2 4FRET, Bethosda</u>, MD intermediate load at <u>3 USUMS, Bethesda</u>, MD intermediate load at <u>4 WRANC</u>, <u>Washington</u>, DC unload vehicle at <u>6 Detense Consclidation Facility</u>, Imile west of Snelling, SC all loading must be performed under broker's supervision.

- [] c) Notify Washington Port of Entry four hours prior to arrival. I-90: (509) 226-3360, I-84: (509) 783-4014. Notify Richland, Washington (Hanford) burial site within 24 hours of arrival: (509) 377-2411.
- I] e) Notify the Nevada Highway Patrol, (702) 885-5300, no later than four (4) hours and no earlier than 48 hours prior to entering the state.

If the vehicle is involved in; 1) an accident, 2) emergency braking, 3) mechanical malfunction, 4) or any deviation from these instructions, contact any one of the following CNSI employees:

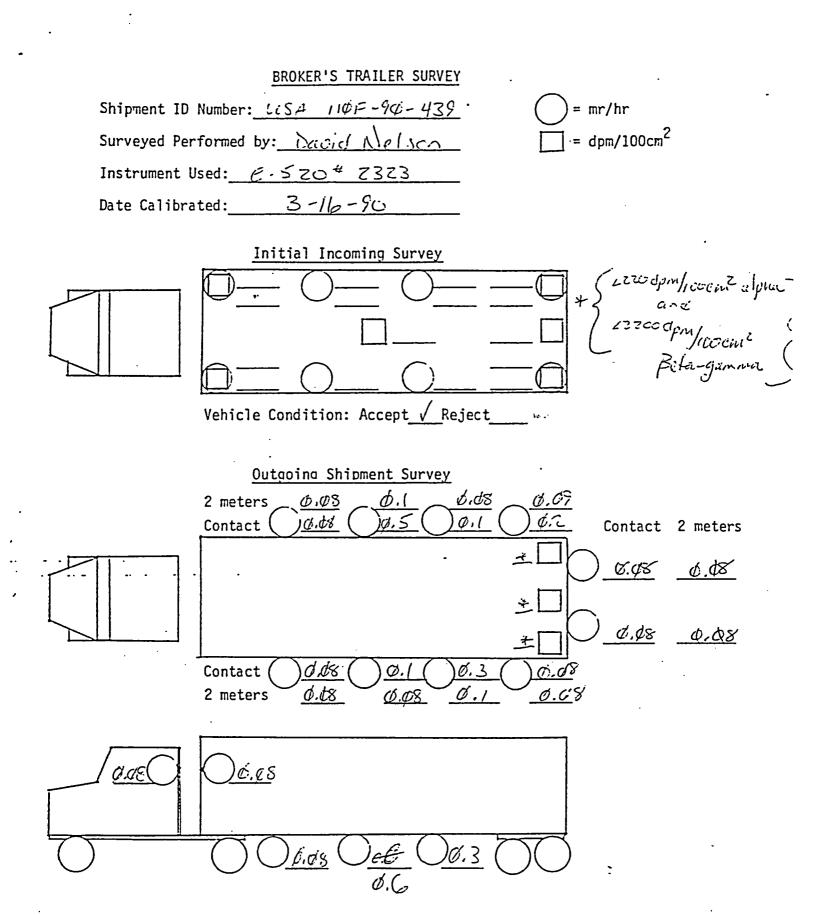
Roger Johnson	(803) 256-0450	office
_	(803) 781–0818	home
Mark Lewis	(803) 256-0450	office
	(803) 794-7726	home
Barnwell Security	(803) 259–1786	
Corporate HP/RSO	(803) 256-0450	

Any deviation from these instructions are violations of State and Federal laws and could result in carrier penalty.

<u>*M.M.M.M.M.*</u> Drivers Signature

9-14-9¢ Date

FS-OP-015, APPENDIX B PAGE 5



FS-OP-015, Appendix B Page 8

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(10) ITEM	(11) RADIONUCLIDE	ACTIVITY	(13) PHYSICAL	(14) CHEMICAL FORM	•	(15) WASTE		(16) WASTE	(17) SPECIAL	(18) SOURCE	(19) CONTAINER	(20) CONTAINER	(21) CONTAINER	RADIATIO	2) N LEVELS	CONTA	(23) MINATION	(24) LABEL/MARKINGS
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ITEM NO.	EACH CONTAINER	ACTIVITY EACH RADIONUCLIDE (mCi)	PHYSICAL FORM (Solid or Gas)	CHELATING AGENT	· ·	(15) WASTE DESCRIPTION		WASTE CLASS (A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds)	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container	N LEVELS	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	
ITEM		ACTIVITY EACH RADIONUCLIDE (mCi)	PHYSICAL FORM	CHELATING AGENT	Complete VenTeles	DESCRIPTION		WASTE CLASS	SPECIAL NUCLEAR MATERIAL	SOURCE	CONTAINER WEIGHT	CONTAINER VOLUME	CONTAINER TYPE	RADIATIO Container Surface DmR/hr	N LEVELS	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm²)	USED Radioactive-VVT
ITEM NO.	EACH CONTAINER	ACTIVITY EACH RADIONUCLIDE (mCi)	PHYSICAL FORM (Solid or Gas)	CHELATING AGENT	Connected VenTelie Logisperte VenTelie	DESCRIPTION		WASTE CLASS (A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds)	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr DR/hr	N LEVELS	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED
ITEM NO.	EACH CONTAINER H 3 H 3 PA1 147	ACTIVITY EACH RADIONUCLIDE (mCi) 347155 50030 51,226	PHYSICAL FORM (Solid or Gas) Sr 1::(if n f fr f; f	CHELATING AGENT	tomplate alexants	DESCRIPTION		WASTE CLASS (A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds)	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr DR/hr	N LEVELS	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive-VVT
ITEM NO.	EACH CONTAINER H ? H ? FAI 147 (a f C	ACTIVITY EACH RADIONUCLIDE (mCi) 347155 40030 57,326 57,326	PHYSICAL FORM (Solid or Gas) Scificil (1/115) (1/115) (1/115) (1/115) (1/115)	CHELATING AGENT	townate wents formate Wave Forder	DESCRIPTION	•	WASTE CLASS (A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds)	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr DR/hr	N LEVELS	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive—VVT Radioactive— Radioactive— Radioactive—
Гтем NO. Гу] Гу]	H 2 H 2 H 3 FAI 147 (a F C FAI 147	ACTIVITY EACH RADIONUCLIDE (mCi) 347,00 (roci) 77,224 (roi) 77,224 (roi) 77,224	PHYSICAL FORM (Solid or Gas) Scilitical (solid or Gas) Scilitical (solid or Gas) Scilitical (solid or Gas) (solid or Gas) (solid or Gas) (solid or Gas)	CHELATING AGENT	townate wents formate Wave Forder	DESCRIPTION	•	(A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds)	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr DR/hr	N LEVELS	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive—VUT Radioactive— Radioactive—
6.71 6.71 6.71	EACH CONTAINER H 3 FAI 147 G & C FAI 147 C it 147	ACTIVITY EACH RADIONUCLIDE (mCi) 347155 40030 57,326 57,326	PHÝSICAL FORM (Solid or Gas) (Solid	CHELATING AGENT A MEDE C N T DE C N T DE C N T DE C N T DE C N T DE	townate wents formate Wave Forder	DESCRIPTION	•	WASTE CLASS (A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds)	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr OR/hr .03	N LEVELS (T.I.) (T.I.) (Meter) (T.S.) (T.S.	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive— <i>VVT</i> Radioactive— Radioactive— Radioactive—
Гтем NO. Гу] Гу]	EACH CONTAINER H 3 FAI 147 (2 F C FAI 147 CH147 CH147 CH147	ACTIVITY EACH RADIONUCLIDE (mCi) 347/55 FOC3D 57,226 FOC3D 57,226 FOC30 57,226 FOC30 57,226 FOC30 FOC3	PHYSICAL FORM (Solid or Gas) Scilitical (solid or Gas) Scilitical (solid or Gas) Scilitical (solid or Gas) (solid or Gas) (solid or Gas) (solid or Gas)	CHELATING AGENT A COF A COF C N TOE C N TOE C N TOE C N TOE	tourste words formate Wave Juide Source for To Source	DESCRIPTION	•	(A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds)	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr OR/hr .01	N LEVELS (T.I.) 1 Meter mR/hr . (75	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	Radioactive—WT Radioactive— Radioactive— Radioactive— Radioactive— Radioactive—
6.71 6.71 6.71	EACH CONTAINER H3 FAI 147 (240 FAI 147 CH147 CH147 CH147 CH147 CH147	ACTIVITY EACH RADIONUCLIDE (mCi) 347155 FOC30 57.226 50.226 50.226 50.226 50.226 50.2511 50.00315 1	PHÝSICAL FORM (Solid or Gas) (Solid	CHELATING AGENT A NE DE A NE DE CNEDE CN	tourse wines formas Ware roide Sume tour to Sume tour to Sume tours Sume Sume	DESCRIPTION	•	(A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds)	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr OR/hr .01	N LEVELS (T.I.) (T.I.) (Meter) (T.S.) (T.S.	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive—V/T Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive—
6.71 6.71 6.71	EACH CONTAINER H 3 FAI 147 (a F C FAI 147 C H	ACTIVITY EACH RADIONUCLIDE (mCi) 347155 FOCID 57,126 	PHÝSICAL FORM (Solid or Gas) (Solid	CHELATING AGENT A COF A COF C N TOE C N TOE C N TOE C N TOE	tourse winds tourse Wave route Sume touche Sume touche Sume	DESCRIPTION	•	(A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams) NP NP Ni ²	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds) CCC 270 270 70	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr OR/hr .01	N LEVELS (T.I.) (T.I.) (Meter) (T.S.) (T.S.	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive—WT Radioactive— Radioactive— Radioactive— Radioactive—I=4 Radioactive—I=4 Radioactive—VT Radioactive— Radioactive—
FUI	EACH CONTAINER H 3 FAI 147 (~ f C FAI 147 (~ f C FAI 147 C · 17 An 341 T G () (- 17	ACTIVITY EACH RADIONUCLIDE (mCi) 347,55 57,224 57,224 57,224 56,535 1 66,535 1 66 57,224 542	PHÝSICAL FORM (Solid or Gas) (Solid	CHELATING AGENT A DE A DE C N I D	tomparte aurors formare (Unar Topde Surre Topde Surre Sure Surre Surre Surre Surre Surre Surre Surre	DESCRIPTION	•	A CLASS (A, B, C) A A A C C C	SPECIAL NUCLEAR MATERIAL (Grams)	SOURCE MATERIAL (Pounds)	CONTAINER WEIGHT (Pounds) CCC 270 270 270 70	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr OR/hr OR/hr OR/hr I S I	N LEVELS (T.I.) (T.I.) (Meter (P3) (73) (73) (73) (73) (73) (73) (73) (7	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive—WT Radioactive— Radioactive— Radioactive— Radioactive— <u>F</u> =4 Radioactive— <u>F</u> =4 Radioactive— <u>F</u> =4 Radioactive— Radioactive— Radioactive— Radioactive— Radioactive—
FUI	EACH CONTAINER H3 PAI 147 (af C FAI 147 CH147 CH147 CH147 CH147 CH147 CH147 CH147 CH147 CH177 CH177 CALO	ACTIVITY EACH RADIONUCLIDE (mCi) 347,55 FOC3D 57,224 FOC3D 57,224 FOC53(5 I FCC53(5) I FCC53(5) I FCC53(5) I FCC53(5) I FCC53(5) I FCC53(7) F42 7,11	PHYSICAL FORM (Solid or Gas) $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{f_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{f_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$	CHELATING AGENT A TOF A TOF C NTOF C NTOF C NTOF C NTOF C NTOF C NTOF C NTOF C NTOF C NTOF C NTOF	tompart were tompart were tompart there to de Source Sour	DESCRIPTION	•	A A A A A A A A A A A A A A	SPECIAL NUCLEAR MATERIAL (Grams) NP NP Ni ²	SOURCE MATERIAL (Pounds) NP NP NP NP AP	CONTAINER WEIGHT (Pounds) 2 C C 2 T C 7 C 7 C	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr OR/hr .01	N LEVELS (T.I.) (T.I.) (Meter) (T.S.) (T.S.	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive—WT Radioactive— Radioactive— Radioactive— Radioactive— T=4 Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive—
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FU2 FU2 FU2 FU2 FU2 FU2 FU2 FU2 FU2 FU2	EACH CONTAINER H3 FAI 147 (240 FAI 147 Cal 147	ACTIVITY EACH RADIONUCLIDE (mCi) 347,00 70,224 .0037	PHYSICAL FORM (Solid or Gas) $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{f_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{f_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$ $\frac{S_{c}(f_{c})}{f_{c}(f_{c})}$	CHELATING AGENT A NEDE A NEDE C NED	tompart were tompart were tompart there to de Source Sour	DESCRIPTION	•	A CLASS (A, B, C)	SPECIAL NUCLEAR MATERIAL (Grams) NP NP NP NP NP NP NP	SOURCE MATERIAL (Pounds) NP NP NP NP AP	CONTAINER WEIGHT (Pounds) 2 C C 2 C 2 C 2 T 2 C 2 T C 2 C 2 T C 2 C C 2 C C C C	CONTAINER VOLUME (Cu. FL)	CONTAINER TYPE	RADIATIO Container Surface DmR/hr OR/hr OR/hr OR/hr OR/hr OR/hr I S I	N LEVELS (T.I.) (T.I.) (Meter (P3) (73) (73) (73) (73) (73) (73) (73) (7	CONTA CON SUI (DPM Alpha E	MINATION TAINER RFACE //100cm ²) Beta-Gamma	USED Radioactive—WT Radioactive— Radioactive— Radioactive— Radioactive— T=4 Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive— Radioactive—
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White—Consolidation Facility; Blue—Shipper; Green—Carrier; Canary—CNSI Management; Pink—Contracting Officer; Goldenrod—U.S. Mail

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White-Consolidation Facility; Blue-Shipper; Green-Carrier; Canary-CNSI Management; Pink-Contracting Officer; Goldenrod-U.S. Mail

CHEM-NUCLEAR SYSTEMS INC.

P.O. Box 726 • Barnwell, South Carolina 29812 • (803) 259-1781

STRAIGHT BILL OF LADING - SHORT FORM - ORIGINAL - NOT NEGOTIABLE. RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

Control Number

70

90 - 13

Trailer No. 292013

Tractor No.

The property described below, in opparent good order, except as noted (contents and condition of contents of pockages unknown). Marked, consigned, and destin-ed as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the ing any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination. If on its route, otherwise to deliver to another carrier on the raule to said destination. It is mutually agreed, as to each carrier of all or any of said property over all or any portion of said route to destination. And as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the terms and conditions of the uniform domestic-straight bill of loding set forth (1) in official, Southern, Western and Illinois Freight Classifications in effect on the date hereof. If this is a rail-water shipment. Or (2) in the applicable motor carrier classification or torfff if this is a motor carrier shipment.

Shipper hereby certifies that he is familiar with all the terms and conditions of the said bill of lading, including thase on the back thereof, set forth in the classifica-tion or tariff which governs the transportation of this shipment, and the said terms and conditions are hereby ogreed to by the shipper and accepted for himself and

his assigns.		(MAIL OR STREET ADDRESS OF CONSIGNEE FOR PURPOSES OF NOTIFICATION ONLY.)	ENGTH STORES
FROM.	For	T Belupir Date 7-18-90	Legal
At F	ort	Belvoir Va	HEIGHT AND AND
CONSIGN	ED TO	•	
0	0D	Consolidation Facility	Leual
DESTINAT	ION	STATE COUNTY	WIDTH
2_	osße	RNE Rd Snelling S.C.	
		A Page 1 of 2	Leual
NO. PKGS.	НМ	KIND OF PACKAGE, DESCRIPTION OF ARTICLES, LINER NUMBERS, SPECIAL MARKS & EXCEPTIONS	*WEIGHT (Sub. to Correction)
7	Х	Radioactive Material nos, UN 2982, RQ	3060
		Radioective Material nos, UN 2982, RQ electron Tubes Lonses, dials, check sources, Wave quides, sels Luminous sources compasses watches chemical reagents, markers survey Nob3, Re187, Th230, Winars Isotopes: H3 Razza 660 (5127, Cd 109, Them. Pon 147 MmA	Lights Heitery
		N.63, Re187, Th230, Winats Isotopes: H3, Razze, Coto (5127, Cd 109, Thing, PM147, HmA	14241
		Total activity: 141,652,5309 mill: Curies	
		Physical form: Solid gas Chemical form: OXINE H3, K	Kr85
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		T.I: 6.6	
		Truck Menanded : "Rudionetive" Truck sealed exclusive use	shiphert
		EMERGENCY-CONTACT 1-S03-259-1786	
cla	ssified, des	This is to certify that the above named materials are properly kribed, packaged, marked and labeled and are in proper condition tion according to the applicable regulations of the Department at	in good condition,
	nsportatio		
Sia	nature	fierd & Carrier Driver Emert Burge	\mathcal{U}
		<u>NST</u> Date and Time <u>7-15-90</u> Date and Time <u>7-15-90</u>	/
SCHEDL TO ARRIV		COMPLETED	R'S SIGNATURE
}			PER'S SIGNATURE
ARRIV AT SHIPP	۔ .	-16-11 COLT P.M. SHIPPER 7-10-46 1440 B. Causa	100000

SHIPPER IMPORTANT NOTE: Your signature certifies that the above dates and times are correct for record keeping and billing purposes. FORM 205

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CHEM-NUCLEAR SYSTEMS INC.

P.O. Box 726 • Barnwell, South Carolina 29812 • (803) 259-1781

Control Number	
	•
90-1313	

BILL OF LADING-CONTINUATION PAGE

PAGE_2_OF_2_

SHIPMENT NUMBER USA 6 -90___

NO. PKGS.	НМ	KIND OF PACKAGE, DESCRIPTION OF ARTICLES, LINER NUMBERS, SPECIAL MARKS & EXCEPTIONS	*WEIGHT (Sub. to Correction)
2	\mid	Radioactive Material Instruments + Articles UN 2911	570
		Surge arrestors motion detectors	
		Isotopes: Pm 147	
		Total activity: 1.2000694 mCi	
	<u> </u>	STRONG Tight Container, T&A Statement on drams	
	<u> </u>	Physical form: Solid Chemical form - Oxide	
		Statement from 49CFR 173.421-1 on each package	
3		Empty 55 gallon Orum s	165
İ		20wc-4 DOT Container Empty	600 .
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		Ser Leverse Side	for Instructio	×14				
	1. Hame and Address of Shippe			sponsible for Waste Shipwent:				
	U.S. ARMY, AMCCOM, (ATT	N:AMSHC-SFS)	a) Kane:BYRON E. MORRIS b) TitleHEALTH PHYSICIST c) Telephone:() (309)782-2964					
	ROCK ISLAND, IL 61299-6	000	b) Title;	IEALTH PHYSICIST (309)782	2964			
	3. Radioactive Waste Transpor	t Permit No.	4. Shipaent	Identification No.:				
	•	•		017-1112				
	0137-00 5. Location from which waste		(1)FF E	40 - 412 Address of Cousignee: Consolid				
		••						
	FT. BPhis.r. Hu. 7. Scheduled Date of Departur			SBORNE RD., SNELLING, S	<u>.</u> C.			
	7. Scheduled Date of Departur	e of Shipment:	8. Escimated	Date of Arrival of Shipment:				
	7-18-90		7-2	0-90				
	9. Carrier:	10. Trailer No. 6	ومشاور والمستحد والمستحد والمستحد والمستحد والمستحد والمستحد والمستحد والمستحد والمستحد والمستحد والمستحد والم	11. Type Transport Vehicle:				
	CNSI	(if available	CNCT	VAN	•			
	12. Routes shipment will foll	70:0:3	CNSI					
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	I 95, US 201. 56.	<u>70.3664</u>			-			
	13. Type Package or Cask Hodel Ko.:	14. Type Containe	r in Cask: '	13. Package or Cask Spec .:				
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	illetal inum 16. Complete Vaste Description	a (Be Specific):		<i>,</i>				
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	17. Physical & Chemical Form:	18. Total N	o. of . 19.	Provinent Radionuclides:				
	SOLID yas Keri	- Package	** [Do	50, ES137, Amz41, H3, Krys,	Mn54, Nu22, Ni63,			
	OXIDES H3 K		9 Rot		57 Ph 710 Pully PSE			
•	20. Total Curies:	21. Waste Class &	Strotticl:	ZZ. IOCAL CODIC FEEL.				
	10011 141.653.7307	A U,		. 9001 67.5 .	Przzer Print Razze			
	23. DOT Sub Type:	24. DOT CLASE. 4	5007 11 2411	25. Huy. Route Controlled: (Large Quantity)	12 Spege, These Thiss			
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•		Cherin I	CATION Rdiane	(Large Quantity) [] Yes [X] No <u>Str. Roding, Time Material, MCS</u> <u>Time Material</u> , <u>Entroposition Fro</u> or to the South Carolina Depart-	These the the			
	I hereby certify on behalf of	the above-named a	hipper/generat	or to the South Carolina Depart-	. <u>.</u>			
	•	AI CONTROL COME C	ue futoration	browroed mercin in conditions and				
				erator has complied with all the lina Radioactive Waste Transport				
	tion and Disposel Act, and Dep				_			
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	This acknowledges to the South	Carolina Departm	ent of Health	and Environmental Control that				
	the above-described radioactiv	•						
	Date of Delivery '	Sig	nature of Cons	ignee's Authorized				
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	DEEC 802 (Rev. 10/84)			•				
	(Copies of 1	this form may be r	eproduced loca	lly as needed)				
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		• •						

AUGINE and Menifest Fore

CNSI_DRIVER'S INSTRUCTIONS FOR EXCLUSIVE USE VEHICLES U.S. GOVERNMENT

- The Code of Federal Regulations, 49 CFR 173.425 (b)(9) requires that specific instructions for maintenance of exclusive use shipments controls be provided to the carrier. <u>These instructions must be included with the shipment documents</u>. The following instructions shall be complied with by all vehicles designated exclusive use. Changes to the following instructions are not acceptable without the approval of consignee.
 - 1. Do not change out tractor before arrival at the radioactive burial site.
 - 2. Do not change the fifth wheel adjustment on the tractor.
 - 3. Do not move or transfer packages within the van or between vans.
 - 4. Shipments must be braced so as to prevent shifting of load under conditions normally incident to transportation.
 - 5. The shipment must be loaded and unloaded from original transport vehicle by the consignor or the consignee only .

(Check the box(es) for additional instructions that are applicable)

[Q] a) The vehicle must be placarded "RADIOACTIVE" on all four sides until shipment is unloaded.

DQ b) This shipment will have the following intermediate stops.

- loaded initially at <u>FT. Belvoir, Va</u> intermediate load at <u>N/A</u> intermediate load at <u>I</u> intermediate load at <u>I</u> unload vehicle at <u>DCD Consolidation Fa</u>chity, Snelling, S.C. all loading must be performed under broker's supervision.
- [] c) Notify Washington Port of Entry four hours prior to arrival. I-90: (509) 226-3360, I-84: (509) 783-4014. Notify Richland, Washington (Hanford) burial site within 24 hours of arrival: (509) 377-2411.
- [] e) Notify the Nevada Highway Patrol, (702) 885-5300, no later than four (4) hours and no earlier than 48 hours prior to entering the state.

If the vehicle is involved in; 1) an accident, 2) emergency braking, 3) mechanical malfunction, 4) or any deviation from these instructions, contact any one of the following CNSI employees:

Roger Johnson	(803) 256-0450	office
	(803) 781-0818	home
Mark Lewis	(803) 256-0450	office
	(803) 794–7726	home
Barnwell Security	(803) 259-1786	
Corporate HP/RSO	(803) 256-0450	

Any deviation from these instructions are violations of State and Federal laws and could result in carrier penalty.

Drivers Signature

7*-i8-00* Da

Date FS-OP-015, APPENDIX B PAGE 5 FORM RHA-CT SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (5/80) Radioactive Waste Shipment Certification Form

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

Part I: Shipper's	Certificate of Compliance
1. Name of Shipper and Address:	2. Shipment Identification No.
HQ, U.S. ARMY, AMCCOM	134 6-00 -412
(Attn: AMSMC-SFR/Morris)	3. Transport Permit No.
Rock Island, IL 61299-6000 Telephone No. (309)782-2964	0137-00-90-Е

In compliance with Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, I hereby certify on behalf of the above-named shipper to the South Carolina Department of Health and Environmental Control that the above-named shipper has complied with all provisions of Act No. 499 of 1980, and all applicable laws and administrative rules and regulations, both State and Federal, regarding the packaging, transportation, storage, disposal and delivery of such wastes. I further certify that this shipment of radioactive waste has been inspected within 48 hours of the time of departure and that no items of non-compliance with applicable laws, rules or regulations were found.

Date 7-18-40

Devel 5. (crnetic Typed Name and Title of Agent of Shipper

Deak (1. P. atto Signature

Part II: Carrie	r's Certification
1. Name of Carrier and Address:	2. Shipment Identification No.
Chein-Nuclear Systems Inc	USA 6-90 -412
OSBORNE RU	3. Transport Trailer No.
Sucling, SC Telephone No. (803) 2541781	292013
4. Scheduled Date of Departure of Shipment:	5. Estimated Date of Arrival of Shipment:
7-18-40	7-19-90

Certification is hereby made to the South Carolina Department of Health and Environmental Control that: (a) the shipper has provided the carrier with a copy of the shipment manifest, the certificate of compliance, and the routing instructions; (b) the shipment of radioactive waste has been properly placarded for transport according to applicable U.S. Department of Transportation Regulations; (c) all shipping papers originated or reproduced by the carrier have been properly executed; (d) the transport vehicle has been inspected according to applicable State and Federal regulations within the prescribed intervals and that all safety and operational components are in good working order and meet the requirements of regulations; (e) all drivers who will operate the vehicle within the State of South Carolina are qualified to transport hazardous materials as specified by applicable U.S. Department of Transportation regulations; (f) the Department shall be immediately notified of any variance, occuring after departure, from the shipper's notification of primary routes in South Carolina and estimated date of arrival; (g) all applicable laws and administrative rules and regulations, both State and Federal, regarding the transportation of radioactive wastes will be complied with.

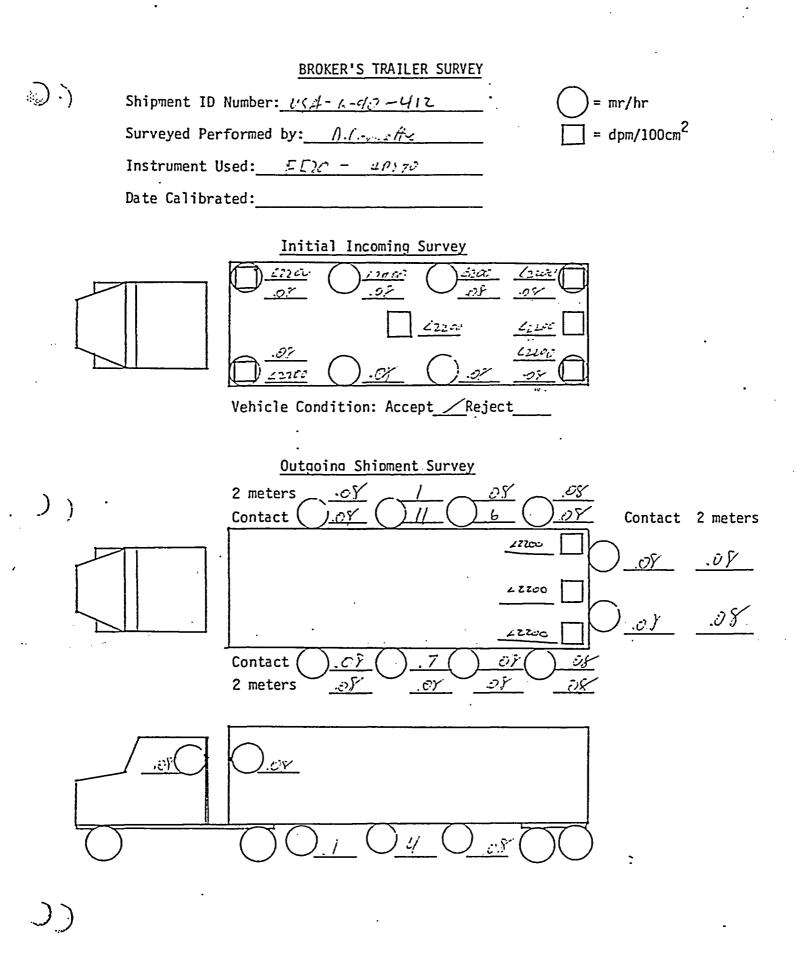
Date 7-18-90

FAMEST BUSSELL MAINER TELL Typed or Printed Name and Title

Simature

DHEC 803 (5/80)

(Copies of this form may be reproduced locally as needed)



FS-OP-015, Appendix 1 Page 8

- ____ RADIOACTIVE MATERIAL,
 - AL, Limited Quantity, N.O.S.; UN2910
 - RADIOACTIVE MATERIAL, Instruments and Articles; UN2911
- ____ RADIOACTIVE HATERIAL, Empty Packages; UN2908
- ____ RADIOACTIVE MATERIAL, A
 - , Articles, Manufactured from Natural or Depleted Uranium or Natural Thorium; UN2909

ie. .

POTENTIAL HAZARDS

HEALTH HAZARDS

Fire may produce irritating or poisonous gases. Low level radioactive material; little personal radiation hazard.

FIRE OR EXPLOSION

Some of these materials may burn, but none of them ignites readily.

EMERGENCY ACTION

Keep unnecessary people away. Isolate hazard area and deny entry. Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection. Delay clean-up until arrival or instruction of qualified Radiation Authority. CALL CHEM-NUCLEAR AT 1-803-259-1786 AS SOON AS POSSIBLE especially if there is no local hazardous material team available.

FIRE

Move container from fire area is you can do it without risk. Small Fires: Dry chemical, CO2, Halon, water spray, or standard foam. Large Fires: Water spray, fog (Flooding amounts).

SPILL OR LEAK

Do not touch damaged containers or spilled material. Small Liquid Spills: Take up with sand, earth, or other noncombustible absorbent material.

FIRST AID

Use first aid treatment according to the nature of the injury. Advise medical care personnel that injured persons may be contaminated with radioactive material.

EHERGENCY CONTACT

CNSI Security: 1-803-259-1786

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RADIOACTIVE HATERIAL, N.O.S.; UN2982

> RADIOACTIVE MATERIAL. Special Form, N.O.S.; UN2974

RADIOACTIVE HATERIAL.

Fissile, N.O.S.; UN2918

POTENTIAL HAZARDS

HEALTH HAZARDS

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External radiation from unshielded radioactive material Internal radiation from inhalation, ingestion, or skin absorption. Radioactive material; degree of hazard will vary greatly, depending on type and quality of radioactive material. Runoff from fire control or dilution water may cause pollution.

FIRE OR EXPLOSION

Some of these materials may burn, but none of them ignites readily.

EMERGENCY ACTION

Keep unnecessary people at least 150 feet upwind; greater distances may be necessary if advised by qualified Radiation Authority. Isolate hazard area and deny entry.

Self-contained breathing apparatus (SCBA) and structural firefighter's protective clothing will provide limited protection. Detain uninjured persons and equipment exposed to radioactive material until arrival or instruction of qualified Radiation Authority.

Delay clean-up until arrival or instruction of qualified Radiation Authority.

CALL CHEM-NUCLEAR AT 1-803-259-1786 FOR EMERGENCY ASSISTANCE. If water pollution occurs, notify the appropriate authorities.

FIRE

Do not move damaged containers; move undamaged containers out of fire zone.

Small Fires: Dry chemical, CO2, Halon, water spray, or standard foam. Large Fires: Water spray, fog (flooding amounts). For massive fire in cargo area, use unmanned hose holder or monitor nozzles.

Fight fire from maximum distance. Stay away from ends of tanks.

SPILL OR LEAK

Do not touch damaged containers or spilled material. Damage to outer container may not affect primary inner container. Small Liquid Spills: Take up with sand, earth, or other noncombustible absorbent material. Large Spills: Dike far ahead of liquid spill for later disposal.

FIRST AID

Call emergency medical care.

If not affecting injury, remove and isolate contaminated clothing and

shoes; wrap victim in blanket before transporting. If not injured, remove and isolate contaminated clothing and shoes; shower victim with soap and water.

Except for the injured, detain persons and equipment exposed to radioactive material until arrival or instruction of Radiation Authority. Advise medical care personnel that injured persons may be contaminated with radioactive material.

EHERGENCY CONTACT

CHSI Security: 1-803-259-1786

(512) 925-46431 (5097/57) (512) 925-46431 (512) 925-46441 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-46481 (512) 925-66481 (512) 925-66481 (512) 925-66681 (512) 925-666801 (512) 925-66680000000000000000000000000000000000			(5)	OTALACTIVITIES (10CFR20.311)
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SCIT PHA-CT SCUTH CAROLINA DEPARTMENT O	F HEALTH AND ENVIRONMENTAL CONTROL
(5/80) Radioactive Waste Sh	ipment Certification Form
Concel Instructions and Informations . Main i	
General Instructions and Information: This i	s a two part form to be used by shippers and
	tions contained herein satisfy the requirements of 4
Section 13-7-150, of Act No. 499 of 1980, the	South Carolina Radioactive Waste Transportation
and Disposal Act. This certification along w	ith a copy of the prior notification form shall
accompany each shipment of radioactive waste	into and within the State of South Carolina. The
shipper is to complete his portion of the for	m and present it to the carrier as part of the
shipping documents. Upon receipt, the carrie	r shall complete his portion of the form. Upon
delivery of the shipment to the consignee, a	copy of this certification form, and a copy of the
	consignee acknowledgement, shall be returned to
the Department.	
	ertificate of Compliance
1. Name of Shipper and Address:	2. Shipment Identification No.
HQS. AMCCOM ATTN: AMSMC-SFS FOR VIRGINIA	USA 10-88-134
ATTN: AMSMC-SFS FOR VIRGINIA	
ROCK ISLAND, IL 61299-6000 *	3. Transport Permit No.
Telephone No. (309.) 782-2964	EXEMPT
	outh Carolina Radioactive Waste Transportation and
	he above-named shipper to the South Carolina Depart-
	the above-named shipper has complied with all pro-
visions of Act No. 499 of 1980, and all appli	cable laws and administrative rules and regulations,
	ng, transportation, storage, disposal and delivery
	Shipment of radioactive waste has been inspected
within 48 hours of the time of departure and	that no items of non-compliance with applicable
laws, rules or regulations were found.	
Date X 23 March 1988	· · · · · · · · · · · · · · · · · · ·
Shirley Carlson	
Shirley Carlson X Freight Rate Specialist	y Shule m. B. Bor TH
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X Freight Rate Specialist Typed Name and Title of Agent of Shipper Part II: Carr Part II: Carr Part II: Carr A Marietta, GA Telephone No. (800) 845-7151 Scheduled Date of Departure of Shipment: X 24 March 88 Certification is hereby made to the South Car that: (a) the shipper has provided the carrie cate of compliance, and the routing instructi properly placarded for transport according to lations; (c) all shipping papers originated of executed; (d) the transport vehicle has been regulations within the prescribed intervals a good working order and meet the requirements vehicle within the State of South Carolina and specified by applicable U.S. Department of Tr be immediately notified of any variance, occu of primary routes in South Carolina and estim administrative rules and regulations, both St radioactive wastes will be complied with. Date X	ier's Certification 2. Shipment Identification No. USA $10-88-134$ 3. Transport Trailer No. NA 5. Estimated Date of Arrival of Shipment: X 25 March 88 Olina Department of Health and Environmental Control r with a copy of the shipment manifest, the certifi- cons; (b) the shipment of radioactive waste has been applicable U.S. Department of Transportation Regu- or reproduced by the carrier have been properly inspected according to applicable State and Federal and that all safety and operational components are in of regulations; (e) all drivers who will operate the re qualified to transport hazardous materials as cansportation regulations; (f) the Department shall pring after departure, from the shipper's notification material and Federal, regarding the transportation of
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 X Freight Rate Specialist Typed Name and Title of Agent of Shipper Part II: Carr Part II: Carr I. Name of Carrier and Address: X McGils Specialized Carriers 6426 Station A Marietta, GA Telephone No. (800) 845-7151 Scheduled Date of Departure of Shipment: X 24 March 88 Certification is hereby made to the South Car that: (a) the shipper has provided the carrie cate of compliance, and the routing instructi properly placarded for transport according to lations; (c) all shipping papers originated c executed; (d) the transport vehicle has been regulations within the prescribed intervals a good working order and meet the requirements vehicle within the State of South Carolina an specified by applicable U.S. Department of Tr be immediately notified of any variance, occu of primary routes in South Carolina and estim administrative rules and regulations, both St radioactive wastes will be complied with. 	ier's Certification 2. Shipment Identification No. USA $10-88-134$ 3. Transport Trailer No. NA 5. Estimated Date of Arrival of Shipment: X 25 March 88 Olina Department of Health and Environmental Control r with a copy of the shipment manifest, the certifi- cons; (b) the shipment of radioactive waste has been applicable U.S. Department of Transportation Regu- or reproduced by the carrier have been properly inspected according to applicable State and Federal and that all safety and operational components are in of regulations; (e) all drivers who will operate the re qualified to transport hazardous materials as cansportation regulations; (f) the Department shall pring after departure, from the shipper's notification material and Federal, regarding the transportation of

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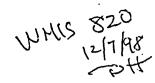
DHEC 803 (5/80)

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(Copies of this form may be reproduced locally as needed)

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[Failure to Complete ALL Entries Will Result in Return of Yorm and Constitute Moncompliance.] See Leverse Side for Instructions 1. Name and Address of Shipper/Generators HOS. AMCCOM /FOR/ FT. BELVOIK 2. Person Responsible for Vaste Shipuent: a) Fame: BYRON MORRIS ٧A b) Title: HEALTH PHYSICIST c) Telephone: (309, 782-2964 AMSMC-SFS ROCK_ISLAND. 1161299-6000 3. Radioactive Waste Transport Permit No. A. Shipment Identification No.: 39 EXEMPT USA 10-88 6. Name and Address of Consigness CNSI TWO OSBORNE ROAD SNELLING, SC 29812 5. Location from which waste will be shipped: BELVOIR, VA 7. Scheduled Date of Departure of Shipment: 8. Estimated Date of Arrival of Shipment: Х X 24 March 88 25 March 88 9. Carrier: 10. Trailer No. & Owner: 11. Type Transport Vehicle: (if available) -X McGils Spec Carrieds NA Drom NA 12. Routes shipment will follow in State of South Carolina (Be Specific): SCION. 'SC64W 53015 T95S14. Type Container in Cask: 15. Package XXXXXXXXXXX: SPEC: 13. Type Package at Cash Xoccexxiox: CARTON NA STC 16. Complete Waste Description (Be Specific): DIALS INSTRU MENTS WITH JULUMINATED 17. Physical & Chemical Form: 18. Total No. of . 19. Promiment Radionuclides: Packages: GAS/TRITIUM 3 NUD PAIN Total Curies 21. Waste Class & Stability: 22. Total Cubic Feet: NĂ 23. DOT Sub Type: 24. DOT Class. & Hazard Class 25. Huy. Route Controlled: UN No .: 2911 (Large Quantity) A2 [] Yes IX No NSTRUMENTS & ARTICLE CATIFICATION . I hereby certify on behalf. of the above-named shipper/generator to the South Carolina Departsent of Health and Environmental Control that the information provided herein is couplete and correct to the best of my knowledge; and that the shipper/generator has complied with all the provisions as required by Act No. 429 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, and Department Regulation 61-83. 23 March 88 **X** Shirley Carlson Date X Typed Name ·* .5 Signature. of Consignee's Authorized Representative CONSIGNE ACTIONLEDGENENT This acknowledges to the South Carolina Department of Realth and Environmental Control that the above-described radioactive waste shipment was received. Date of Delivery Signature of Consignee's Authorized Lepresentative . Typed or Printed Name and Title DEEC 802 (Rev. 10/84) (Copius of this form may be reproduced locally as needed)



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1. IS THIS AN "EXCLUSIVE USE SHIPHENT? 1. TOTAL MUMBER OF PACKAGES IDENTFIED NO VES NO VES COES EPA NEGULATED WASTE RECURRING A MANAFEST ACCOUPANY NO NA NA NA		HSATMAN ANTA: ANTA 10115 L Ft. B S.C. TANNS CONTACT CONTACT Tri-S CONTACT Tri-S L CONTACT Tri-S CONTACT TO PLI CONTACT MI SIGNATURE	00-98E US4 . Kelly Crooks Norma and Advised forte Motor Trans, 7th, RO. BOX 113 n, MO 64802 Mitch Lunsfo Autorium cange afframing ma	126 5847 1 HAUNGER 78-070 76-070 7, Co	SHIPHLANT ID MUMABLA LLSA 98-070 COLLECTON . PROCESSOR COLLECTON . FIGURATION COLLECTON FIGURATION COLLECTON FIGURATION COLLECTON FALD. NUMBER JA HUPPING DATE 8(21 198 SCB-1898 SCB-1898 SCB-1898	ADDAU 542 AND 5 ADDATEONAL MEC 5. CONSIGNEE - Num CREMMUCLE HWY 64 B MA Banned, 502 SIGNATURY - Austral This is is certify Past 0 In the issertify Past 0 In the issertify Past 0 Augi/Draugo Signury	41A 42A HALATION No and Facally Address In CONSOLIDATION for WIST OF SHELLINGS 3812 If decemping activity to decemping a constraint of the constraint of the property that according to that are characted, pector and the production of the second and the second of the second and the second of the second and the second of the second and the second of the second and the second of the second and the second of the second and the second of the second and the second of the second and the second of the second and the second of the second of the second and the second of the second of the second and the second of the second of the second and the second of the second of the second and the second of the second of the second of the second and the second of the second of the second of the second and the second of the second of the second of the second and the second of the second of the second of the second of the and the second of the second of the second of the second of the and the second of	ANT AND AND AND AND AND AND AND AND AND AND	Provid SCN-02 CUNTACT BULLEPRIONE FRAM 803285-11 20475 8-2	there an efficient contraction LID - 9B Arr CONTROL BER Materia Arm Care 19 4-99
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hereid class, UN ID number,	12. DOT LABEL	13. TRANSPORT	HYSICAL AND		15. NDIVIDUAL	TOTAL	ACKAGE	17. 184/5CD	18. TOTAL WEIGHT OR VOLUME	18. IDENTIFICATION NUMBER OF
Radioactive Material, nos, 7, UN2982	· YEllow IL	D,1	solid and oxides		BS Pin-147	8,367.07		ANA NA	150 kg (330 16)	FB-1
Radioactive Material, 105, 7, UN 2982	VellowI	0.2	solid and oxides lglass		90, C-14. Th - Nat,	34 3432	e 233 6	NA	118 ×5 (26016)	FB-2 M
Radioactive material, nos, 7, UN 2982	YellowIL	0.3	Solid and Oxides / Class	Th-Nat	Du	110.15	2.977	NA	(245 16)	· FB-3 ~
Radioactive Material, nos, 7, UN2982	Ye 10WI	0.2	solid und glass	Th-Nat		44.03	1.19	NA	159 kg (350 16)	FB-4
Radioactive Muterial, nos, 7, UNZ982	VelbNJL	0.5	solid and glass	Th-Na-		35.19	.951	NA	145 Kg (320 16)	FB-5
Radioactive Muterial, nOS, 7, UN2982	YellowI	0,3	Suid and <u>Oxides/Glass</u>	RazzG,Co. Thi-Nati	60, H-3, Th-232	1,420,817.61	38,400.48	NA	181 kg (400 16)	FB-6
DR CONSIGNEE USE ONLY 20. "Cerification is hereby made to the South Carolina Department of Health and Environmental Control that this anipment of low-level rediaactive waste has been inspected in accordance with the requirements of South Carolina rediaactive Meterials License No. 287-04 as amended, and the effective consolidation facility acceptance criteria, within 48 hours prior to shipment, and further certification is made that the inspection revealed no items of non-compliance with all applicable laws, rules and regulations." Data <u>8/21/9B</u> signature R 1L581 - R 1L584 Telephone No. 803) <u>356-3717 or (925)</u> <u>443-7967</u>										
R 16581-R16	596		Telephone No.	6031 <u>35</u>	6-3117 ar	(925)	<u>443-</u> /80	- (

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL Radioactive Waste Shipment Prior Notification and Manifest Form

(Failure to Complete ALL Entries Will Result in Return of Form and Constitute Noncompliance.)

	See Reverse Side	for Inch					
1. Name and Address of Shipper/Generator:		2. Person Responsible for Waste Shipment:					
H.Q. U.S. Army, Industrial Operations Com	nand (IOC)	1	ame:	Mr. Kelly Crooks			
(ATTN: AMSIO-DMW/Crooks)	• • • •	ыт		Health Physicist			
Rock Island, IL 61299-6000		c) T	elephone:	(309) 782-0338			
3. Radioactive Waste Transport Permit No.	·	4. Ship	ment Identifica	tion No.:			
0137-00-98-E				USA 98-070/SCN 0210-98			
5. Location from which waste will be shipped :		6. Nam	e and Address	of Consignee :			
US Amry TMDE Activity, 10115 Duportail F				ar Consolidation Facility			
Attn: AMSAM-TMD-SB, Fort Belvoir, MD 2	2060-5847		Snelling, SC				
7. Scheduled Date of Departure of Shipment:		8. Estimated Date of Arrival of Shipment:					
21-Aug-98		24-Aug-98 11. Type Transport Vehicle :					
9. Carrier :	10. Trailer No. & Owner:		II. Type Tra	•			
Tri-State Motor Transit Co.	(if avail.) 448876 TSMT		I	Closed Van			
12. Routes shipment will follow in State of So	un Carolina (Be Specific):						
I-95, US-301, SC -70, <u>SC-64</u>				•			
13. Type Package or Cask	14. Type Container in Cask:		15. Package	or Cask Spec.: US DOT 7A Type A			
Model No. : Metal Drum	N/A						
16. Complete Waste Description (Be Specific):			L				
Luminous dials and devices, Instrum		s, Thori	ated glass ler	nses, Gormanium Windows 9			
		·	-				
17. Physical & Chemical Form;	18. Total No.	19 CP	rominent Radio	onuclides :			
Solid Oxides 19625	of Packages :	as	-AM-241, Ra	-226, Co-60, Cs-137 , Kr-85, Pm-147, Th-232			
	1		Sr-90, H-3,	Th-232, C-14,			
	21. Waste Class & Stability:			22. Total Cubic Feet :			
a 200-33.7 Straff	BYAU			32.8 45			
23. DOT Sub Type: 38,132/145	24. DOT Class. & Hazard Class			25. Hwy. Route Controlled:			
	UN No.: UN 2982, Radio	active	+	(Large Quantity)			
<a2< td=""><td>Material, n.o.s., 7</td><td></td><td></td><td>[]Yes [X]No</td></a2<>	Material, n.o.s., 7			[]Yes [X]No			
·····	CERTIFICATI	ON		I			
I hereby certify on behalf of the above ment of Health and Environmental Correct to the best of my knowledge; provisions as required by Act No. 429 tion and Disposal Act, and Department	atrol that the information pro- and that the shipper/generato of 1980, the South Carolina	vided ho r has o	erein is com complied with	plete and h all the			
Date 8/16/1998		Todd V	V. Eastman. J	Agent for U.S. Army, IOC			
	•		1	Typed Name			
		1	111				
		A	alle				
		Sighatu	re of Consigne	e's Authorized Representative			
				······································			
	CONSIGNEE ACKNOWLEDGM	ENT					
This acknowledges to the South Carolin the above-described radioactive waste sh		Enviro	nmental Cont	trol that			
Date of Delivery	-	Signatu	re of Consigne	ee's Authorized Representative			
		7	yped or Printe	ed Name and Title			
DHEC 802 (Rev. 10/84)	es of this form may be reproduce	d locally	as needed)				

Form RHA-CT SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (5/80) Radioactive Waste Shipment Certification Form

General Instructions and Information: This is a two part form to be used by shippers and carriers of radioactive waste. The certifications contained herein satisfy the requirements of Section 13-7-150, of Act No. 499 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act. This certification along with a copy of the prior notification form shall accompany each shipment of radioactive waste into and within the State of South Carolina. The shipper is to complete his portion of the form and present it to the carrier as part of the shipping documents. Upon receipt, the carrier shall complete his portion of the form. Upon delivery of the shipment to the consignee, a copy of this certification form, and a copy of the Prior Notification and Manifest form with the consignee acknowledgement, shall be returned to the Department.

Part I: Shipper's Certificate	of Compliance						
1. Name of Shipper and Address:	2. Shipment Identification No.						
H.Q. U.S. Army, Industrial Operations Command (IOC)	USA 98-070 /SCN 0210-98						
(ATTN: AMSIO-DMW/Crooks) (formerly US Army, AMCCOM,	3. Transport Permit No.						
Rock Island, IL 61299-6000 AMSMC-RW)	0137-00-98-E						
Telephone No. (309) 782-0338	· · · · · ·						
In compliance with Act No. 499 of 1980, the South Carolina Radi	oactive Waste Transportation and						
Disposal Act, I hereby certify on behalf of the above-named shipp	er to the South Carolina Depart-						
ment of Health and Environmental Control that the above-named sh							
visions of Act No. 499 of 1980, and all applicable laws and administrative rules and regulations,							
both State and Federal, regarding the packaging, transportation, storage, disposal and delivery							
of such wastes. I further certify that this shipment of radioactive	•						
within 48 hours of the time of departure and that no items of non-	-compliance with applicable						
laws, rules or regulations were found.							
Date $\frac{8}{2}(98)$							
Date 8/21/98	CaM D						
Todd Eastman, Agent for H.S. HMY, FOC	1 Sol h						
	enge						
Typed Name and Title of Agent of Shipper	Signature /						
Part II: Carrier's Certific I. Name of Carrier and Address:	2. Shipment Identification No.						
Tri-State Motor Transit Co.	USA 98-070 /SCN - 0210-98						
East 7th, P.O. Box 113	3. Transport Trailer No.						
Joplin, Mo 64802							
Telephone No. (800) 846-8768	448876						
4. Scheduled Date of Departure of Shinment:	5. Estimated Date of Arrival of Shipment :						
4. Scheduled Date of Departure of Shipment : 08/21/98	5. Estimated Date of Arrival of Shipment : 08/24/98						
08/21/98	08/24/98						
08/21/98 Certification is hereby made to the South Carolina Department of H	08/24/98 Health and Environmental Control						
08/21/98 Certification is hereby made to the South Carolina Department of H that: (a) the shipper has provided the carrier with a copy of the	08/24/98 Health and Environmental Control shipment manifest, the certifi-						
08/21/98 Certification is hereby made to the South Carolina Department of H that: (a) the shipper has provided the carrier with a copy of the cate of compliance, and the routing instructions; (b) the shipmen	08/24/98 Health and Environmental Control shipment manifest, the certifi- it of radioactive waste has been						
08/21/98 Certification is hereby made to the South Carolina Department of H that: (a) the shipper has provided the carrier with a copy of the cate of compliance, and the routing instructions; (b) the shipmen properly placarded for transport according to applicable U.S. Depar	08/24/98 Health and Environmental Control shipment manifest, the certifi- it of radioactive waste has been tment of Transportation Regu-						
08/21/98 Certification is hereby made to the South Carolina Department of H that: (a) the shipper has provided the carrier with a copy of the cate of compliance, and the routing instructions; (b) the shipmen properly placarded for transport according to applicable U.S. Depar lations; (c) all shipping papers originated or reproduced by the c	08/24/98 Health and Environmental Control shipment manifest, the certifi- it of radioactive waste has been tment of Transportation Regu- arrier have been properly						
08/21/98 Certification is hereby made to the South Carolina Department of H that: (a) the shipper has provided the carrier with a copy of the cate of compliance, and the routing instructions; (b) the shipmen properly placarded for transport according to applicable U.S. Depar lations; (c) all shipping papers originated or reproduced by the c executed; (d) the transport vehicle has been inspected according to	08/24/98 Health and Environmental Control shipment manifest, the certifi- it of radioactive waste has been tment of Transportation Regu- arrier have been properly to applicable State and Federal						
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Date Typed or Printed Name and Title

William Kyl Signature

DHEC 803 (5/80)

ENTEROLICE RESTONSE INFORMATION	EMEROLACI RESPO	<u>M3E GUIDE 105</u>
New World Technology. 1236 Concannon Blvd. 94550	••24 Hour Em Tom Dias (92	ergency Contact 5) 443-7967
Shipping Date: 8/21/98	Manifest No.:	SCN-0210-98
Proper Shipping Name	Hazard Class	ID Number
Radioactive Material, n.o.s.,	7	UN2982
POTENTIAL HA	ZARDS	
 HEALTH Radiation presents minimal risk to transport workers, emergency response personn related to potential hazards of material. Undamaged packages are safe; contents of damaged packages may cause external Type A packages (cartons, boxes, drums, etc.) identified as "Type A" by marking Partial releases might be expected if "Type A" packages are damaged in moderate Type B packages (large and small, usually metal) identified as "Type B" by marking those of utmost severity. Radioactive White-I labels indicate radiation levels outside undamaged packages are Radioactive Yellow-III labeled packages have higher radiation level level in mrem/h one meter from package. Some radioactive materials cannot be detected by commonly available instruments. 	and/or internal radiation ex on packages or by shippin ely serve accidents. ing on packages or by ship releases are not expected in are very low (less than 0.00 ls. The transport index (TI)	xposure. g papers contain non-life endangering amounts. ping papers contain potentially life endangering n accidents involving "Type B" packages except 05mS/h (0.5 mrem/h)).
 FIRE OR EXPLOSION Some of these materials may burn, but none of them ignites readily. Type B packages are designed and evaluated to withstand total engulfment in flarm PUBLIC SAF 	nes at temperature of 800°C	hange flammability or other properties of materials. C(1475°F) of a period of 30 minutes.
 Call Tom Dias at (925) 443-7967. IF NO ANSWER, THEN CALL CHEMTRE Priorities for rescue, life-saving, first-aid, and control of fire and other hazards are Radiation authority must be notified of accident conditions, and is usually respons Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in Stay upwind. Keep unauthorized p Detain or isolate uninjured persons or equipment suspected to be contaminated; de Radiation Authority. 	higher than the priority for sible for radiological decision all directions. personnel away.	measuring radiation levels.
 PROTECTIVE CLOTHING Positive pressure self-contained breathing apparatus (SCBA) and structural firefigiradiation exposure, but not external radiation exposure. 	hters' protective clothing w	vill provide adequate protection against internal
EVACUATION Large Spill		
• Consider initial downwind evacuation for at least 100 meters (330 feet).		

ENERGENCY DECRONCE CUIDE 141

Fire

When a large quantity of this material is involved in a major fire, consider an initial evacuation distance of 300 meters (1000 feet) in all directions.

EMERGENCY RESPONSE

FIRE

Presence of radioactive material will not change effectiveness of fire control techniques. • Move containers from fire area you can do it without risk. Do not move damaged packages; move undamaged containers out of fire zone.

Small fires

Dry chemicals, CO2, Water spray or regular foam.

Large fires

Water spray, fog (flooding amounts).

•Dike fire-control water for later disposal.

SPILL OR LEAK

- Do not touch damaged packages or spilled material.
- Slightly damaged or damp outer surfaces seldom indicate failure of packages since most have an inner container.

ENERCENCY DECRONCE INFORMATION

Liquid Spills

- Cover with sand, earth or other non-combustible absorbent material.
- FIRST AID
 - Medical problems take priority over radiological concerns. •Use first aid treatment according to the degree of the injury. •Apply artificial respiration if victim is not breathing.
 - Do not delay care and transport of a seriously injured person.
- Administer oxygen if breathing is difficult.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Injured persons who contacted released material may be a minor contamination problem to contacted persons, equipment and facilities.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

The above information is intended to satisfy the requirements of 49 CFR part 172.600, 172.602 & 172.604.

NWT EMERGENCY PROCEDURES

New World Technology 1236 Concannon Blvd. Livermore CA 94550 (925)443-7967 ** 24 Hour Emergency Contact Thomas J. Dias (925) 443-7967

EMERGENCY PROCEDURE TO BE FOLLOWED BY VEHICLE DRIVER IN THE EVENT OF AN ACCIDENT:

- 1. Perform lifesaving rescue and emergency first aid. Delay other first aid care until victims can be removed from the vicinity of any potentially hazardous material. Notify receiving medical facilities of possible contamination or radiation exposure of the injured.
- 2. Establish a control zone. The perimeter of this zone will be determined by the accident scene conditions. If there is no release of radioactive material, a distance of 20 feet is required. If the containers are breached and dispersal is a potential increase the control zone as large as possible.
 - A. Limit time near radioactive shipping packages as much as possible.
 - B. Cover spilled radioactive material with plastic sheeting or tarps to prevent or limit dispersal.
 - C. Avoid direct contact with radioactive material. Utilize protective clothing and utilize anything available for remote handling.
- 3. Detain personnel in the immediate area and items with possible contamination until they can be monitored for radioactive contamination
- 4. If there is a fire, advise individuals and emergency responders that everyone should move upwind, Use respirators if you need to enter the area. Inform the Fire Department that the truck is carrying radioactive materials.
- 5. The following persons are to be notified in the sequence shown below:
 - A. Thomas J. Dias, Director of Brokerage Operations, Livermore, CA

Day:	(925) 443-7967

- Night: (510) 581-3244
- Pager: (510) 277-6452
- B. Additional 24 Hour Emergency Contact: Don Wadsworth, Livermore, CA Day: (925) 443-7967
 - Night: (510) 443-7982
 - Pager: (888) 771-9710
- C. Notify the state and local emergency responders by dialing **911** in the event the emergency contacts above can not be reached or if there is a serious threat to life or property.
- D. For general information on the chemicals identified in the accident call CHEMTREC at (800) 424-9300.

NWT INSTRUCTIONS FOR EXCLUSIVE USE OF VEHICLES

Shipment No. SCN-0210-98

8/21/98 Date

CFR 49 sections 173.403(i) and 173.441(c) and (e) require that specific instructions for maintenance of exclusive use shipments controls be provided by the shipper to the carrier. These instructions must be included with the shipment documents.

The following instructions shall be complied with for all exclusive use shipments.

The shipper must be notified prior to changing of the tractor or making fifth wheel adjustments.

- Do not move or transfer packages on the transport vehicle from the original configuration.
- The shipment must be loaded by the consignor and unloaded by the consignee from the transport vehicle on which it was originally loaded.
- The shipment must be blocked and braced so as to prevent leakage or shifting of load under incidents normal to transportation.
- If placards are required. The vehicle must be placarded on four (4) sides of the transport vehicle in a clearly visible position with the appropriate placards.
- Notify shipper immediately if the vehicle is involved in an accident or is required to apply emergency breaking which could shift the load and change radiation levels.

In case of accident, vehicle malfunction or deviation from the above instructions immediately contact one of the following NWT employees:

Thomas J. Dias	Home	(925) 443-7967 (510) 581-3244 (510) 277-6452
Don Wadsworth		(925) 443-7967 (510) 443-7982
		(888) 771-9710

Deviations from these instructions are violations of federal laws and could result in carrier penalties.

I have read and understand the above statements concerning the maintenance of exclusive use

vehicles. 1 1 1 linn

Signature of Drive

SHIPMENT NO. USA 98-070
DRUM/PACKAGE NO
CONTAINER WEIGHT 330
CONTAMINATION _100/21000

PAGE NO	<u></u>	1
SURFACE DR	0,8	
1 METER DR	104	•/
SURFACE DR 0,8		L

CONTAMINA	10N _2100/2100		LABELS_	<u> 42.100</u>		
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
1	Radiac Meter	various	81	Raz26	.0017	.137
2	Mx-7338 Source Annuciator - Intrusion	various	7	Kr85		, 137 Z.S
12345	Annuccator - Intrusion	6350-00-179- 1854	2	Pm147	30	60
4	IAW Sights	UNK	47	Pr 147		141
5	Dewar Defectus	cenk	12	Thereat)	22-6	2.42-5
ļ ļ						•
·	·					
	Totals			· · · · · ·		
	Razzlo = 0.137					
	PM147 = 201				· · · · · · · · · · · · · · · · · · ·	
	Th (Nat) = 2.4E-5	=2.4E-416				
•	Pm147 = 201 T71(Naf) = 2.4E-5	= 1.9=-4 kg				
		9				
	226.13702	fmci				
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As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

<u>M</u>

8/21/98 Date

gnature

DRUM/PACKAG	$\frac{USA - 98 - 070}{EIGHT - 260}$		- - - mCi			
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
1	Thorizted glass	202 165	NA	Th(Mat)	,807	· 807
	(8.08 165= 3,67 145)	UNK				
2	Check Source	UNK	1	Razzlo	.001	-001
3	Ice Defector	UNK		5-90	.025	. 025.
4	Cleck Sources	UNK	2 24	Th-232	.0003-2-	·,0006
5	chock luminous	UNK	å	Culi	≈0 5	.10
	markens					
-	Totals					
	Razzin = .001					
	Sr90 = .025					
	C - 14 = 10.0					
,	Th(Nat) = . 807 =	8.08 16/3.6	7kg			
	M-232=.0006=	01216/:005	4STer			
	10:8336		0-		_	
					ļ	· ·
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<u> 8/21/98</u> Date

gnature

DRUM/PACKAG	$\frac{USA98-070}{EIGHT}$		SURFACE	(DR3, DR0, 	.D	- -
ID NO.	ITEM/NOMEN	FSN	Ω ΤΥ	ISOTOPE	ACT/ITEM	TOTAL ACT.
1	Thoriaded glass	177 16s	NA	Th(Nat)	. 707	.707
2	DU contaminated	10 16s			2,27	2.27
	- Sarap					
	<i>, , ,</i>					
					·	
		•				•
				· · · ·		
	Dials					
	Th(Nef) = -707 = DU = 2.27 = 1016/	7.0716/3.2	-1 leg			
	Du = 2.27 = 1016/	4.54 kg	· 0			
	2.977	- a				
				<u> </u>		
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				· · ·		
		· · · · · ·				

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21/98 Date

gnature

CONTAINER W	<u>USA 98-070</u> SE NO. <u>FB-4</u> EIGHT <u>K910 350</u> ON <u>2100/21000</u>	. •	PAGE NO SURFACE 1 METER I LABELS	- - - mCc		
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
1	Thoriated glass	298165	NA	Th(Nat)	1.19	1.19
[· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		
	•					
GE.	That tester					•
	Thot totel Th (Not)= 11.9216/5.44	kg				
	·	N. 		÷		
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As installation Radiation Safety Officer or designee, I certify, based on direct observation or performance, that the listed inventory is accurate and correct to the best of my knowledge, and that no free standing liquids or unacceptable hazardous materials (such as Lead) are present.

Alil

8/21/9.8 Date

gnature

DRUM/PACKAC CONTAINER W	$\frac{USA 98 - 070}{FB - 25}$ $\frac{FB - 25}{FB - 25}$	· .	PAGE NO SURFACE 1 METER LABELS	 DRΞ DRζ	0f_/ 5,0 2,5 1/2~IT	- - - mCi
ID NO.	ITEM/NOMEN	FSN	QTY	ISOTOPE	ACT/ITEM	TOTAL ACT.
7	Thoriated a lass	(238 lbs)	NIA	Th(Nat)	. 951	.951
	Thoriated glass (9.5216 4.32kg)					
	*	·				
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Pol Pl

<u>8/2/95</u> Date

gnature

DRUM/PACKAG	$\frac{USA 98-070}{EIGHT} = \frac{400}{400}$:	SURFACE		5.0	-
CONTAMINATIO	ON			- yo.l	low the	mCi
ID NO.	ITEM/NOMEN	FSN		ISOTOPE	ACT/ITEM	TOTAL ACT.
1	Theriated glass	110 145	NA-	(Thraf)	-439	. 439
2	Sand (51bs)	Lenk	NA	(ThNet)	.02	-02
3	radiameters.	Lenk	4	Razzlo	.0017	.0068
	Check Source	UNK		74232	.0003	<u> </u>
5	Telescopemant	UNK		HB	5,810	23,240
(e	Wavequides	LENK	14	C060	0.007	:0098
7	Com Watches	unk	40_	H-3	25	1,000
8_	Gun Sights	UNK	6	H-3.	160	960
9	Compassies	-ttpk-	_110_	H-3	12.D	13,200
		6605-01-196- 6971				
	Totals					
·	H-3=38,400					
. /	$p_{0.226} = .0068$					
· · ·	Cobo =Co98			·		
<u></u>	Th(Nwf) = 24.59 = 4.66	165/2.09kg				
	Th 232 = , 0003 = , 0	0616/0027	3 kg		·	. · .
	-38,400,476.as					
	38,400,4759		[
	· · · · · · · · · · · · · · · · · · ·					
<u></u>		· ·		<u> </u>		

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 $\frac{S/2I/98}{Date}$

gnature

NWT RADIOLOGICAL SURVEY REPORT

SHIPMENT SURVEY FORM

Date: 8/2//93	Time: 18=25	Surveyor (printed name):	T. Eastinan
Surveyor (Signature):	Blue	Reviewed by: \mathcal{N}_{1}	A Date: NA
Purpose of Survey:	OUT Going St	signent USA	98-070
Location:	Fort Beluoi	C, VA	
	INSTRUMENTS	ÚSED	· · ·
MODEL NO.	SERIAL NO.	CAL. DUE DATE	BKGRD
1. Model 19	133178	12 NOV 98	· 01 10
2. Model 3 w/44-38	-32397/pr069310	1 JUL 99	
3. Model 3 w/HP-260	32397/NWT#102	1 JUL 99	50cpm

ITEM OR LOCATION	Dose Rate	Contan	ination	Distance
* Smear locations are circled	mR/hr	counts/	minute	or smear
		iv.	•	location
		Alpha	B-G	
1. Max D/R on the sides of the vehicle	1.0	NA	NA	1"
2. Max D/R 2- M from the sides of the vehicle	0.1			2-Meter
3. Max D/R in the occupied portion of the cab	002			Field
4. Max D/R on the underside of the vehicle	1.20105			1"
5. Max D/R on the top of the vehicle	<i>•</i> 01			1"
6. Max D/R on the containers surface	3.0	¥	V	1"
7 Smears of the vehicle prior to loading	NA	ND	20	
8 Smears of containers prior to loading	*	DU	ND	
9.				
10.				
11.				
2 Maters -/ 00/		\cap		· · ·
	4 	0/	Surface 2	2 M
Surface <u></u>			<u>o/ _</u>	ก
		<u>'</u>	<u></u>	<u>, </u>
Cab Top -O/ Bo	ottom <u>100</u>		.01 .	.07
	•			<u></u>
Surface 100 004	[01		
Surface O(<u>0(</u> :0[
				
Remarks: $\# 000269 / 0000$	دح			
(DOOR Seally)				

' ·			1	7 ~ 7 7 7 5 .	1 200 C	ALL HUCL		TRITIUM	C-14	To-99	1-129				lvoir,	VA
Additional Nuclea	r Regulatory Commission Disposal of R	(NRC) Requin	ements for Con	trol, Transfer	and Meq	++++29,7	444	1,420,800		0	0	kg 23.	66.0	IPMENTID NUMBER	5-07	- -
· · · · · · · · · · · · · · · · · · ·			ER DESCRIPTI			5070-4-6					FOR EACH WASTE	10 5/1°		ust 70	5-070	110
5.	DI3PU3.	7.	8,	<u>e.</u>	10. SUR	FACE		Y. 4 1 PHYSICAL DESCRIP			AL DESCRIPTION	ITPEINCUI		AL DESCRIPTION		WASTE
CONTAINER IDENTIFICATION NUMBER S.C. TRANSPORT PERMIT NUMBER	CONTAINER DESCRIPTION (See Note 1 & Note 1A)	VOLUME 	WASTE AND CONTAINER WEIGHT b	SURFACE RADIATION LEVEL mSwftr mremftr	MBq/	100 cm ² 00 cm ² BETA- GAMMA	11. WASTE DESCRIP- TOR See Note 2 & Note 2A)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER	13. SOLIDIFICATION OR STABLIZATION MEDIA (See Note 3 & Note 3A)	CHELATING AGEN	WEIGHT	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	NDIVIDUAL RADIONUCL NTAINER TOTAL; OR CO AND RADIONUC	JOES AND ACTIVITY AN ONTAINER TOTAL ACTIV CLIDE PERCENT	//TY	CATION AS-Class A Stable NU-Class A Unstable B-Class B
FB-1	3	.21	150	• 06B	<1.672-6		36H	.21	100	oxides,		Razzo	мва 5-07	0.	137	AN
0137-00-98		7.5	330	•B	2100	<1000		7.5		no Chelat	es 0%	Kr85	925	Z	5	
	<u></u>	i										Pm147	7,43		01	
		1										Th (Nat)	.0008		45-5	
													(1.98-4	kg) (z.	4E-4 16	ļ
4												total	8,367	207 22	6.137	
		1		 												
										-						
·														<u>.</u>		<u> </u>
		- <u>-</u>						.								
l Drum or Pail ic Drum or Pail I Tank or Liner	ed structural overpacks,	Codes. (Choose A High Integrity B High Integrity C High Integrity D High Integrity	vellSpecific Container one code as may be Container - Poly Container - Poly with Drum Overpack - Pol Container - Stainless Container - Fiberylas	applicable.) Steel Shell M Steel 8	Note 2: Waste De: 20. Charcoal 21. Incinerator Ash 22. Sol 23. Gas 24. Oil 25. Aqueous Liquic 26. Filter Media 27. Mechanical Filt 28. EPA or State H	29. Der 30. Cat 31. Ani 32. Mix 33. Cor 1 34. Org 5. Gt er 36. Sea	nolition Rubb ion Ion-excha ed Bed Ion-e ntaminated En janic Liquid issware or La alled Source/C	inge Media 39. Co nge Media 40. No xchange Media 41. Ani quipment 42. Bio 43. Act bware 59. Ott	aporator Bottoms/Sludy mpactible Trash ncompactible Trash	yes/Concentrates D at animal carcass)	Inte 2A: Barnwell Specific Interpretation Codes (Choose Implicable codes.) G Dewatered H Sold I Combustible J Non-combustible K Air Fitration Filters L Asbestos	Code trais must medi be id Recu Solidi 90. C (en 92. B	ification 94. 99. Cement I Concrete I	teroest site struc- te numerical code of all solidification of name must also	Note 3A: Barrow tion and Stability (Choose this co M W	ution media

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1	DISPOSA		ER DESCRIPTI	ON					WAS	TE DESCRIPTION FOR I	ACH WASTE	TYPE IN CO	NTAINER		16. WASTE CLASSIFF
5.	6.	1;	8. WASTE	9.	10. SUR	FACE		PHYSICAL DESCRIP	TION	14. CHEMICAL DESC	RIPTION	13. RADIOLOGICAL DESCRIPTION			
CONTAINER IDENTIFICATION NUMBER/ S.C. TRANSPORT PERMIT NUMBER	CONTAINER DESCRIP- TION (See Note 1 &	VOLUME 	AND CONTAINER WEIGHT	SURFACE RADIATION LEVEL mSwity	MBq/	00 cm ² 00 cm ² BETA- GAMMA	11. WASTE DESCRIP- TOR (See Note	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ¹ R ³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3	CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT		NOMIDUAL RADIONUCLIDES AND A VTAINER TOTAL: OR CONTAINER TO AND RADIONUCLIDE PERCI	OTAL ACTIVITY	CATION AS-Class A Stable AU-Class A Unstable B-Class B
	Note 1A1	1 h j	l)	. mrem/hr		Gommo	2 and Note 2A1		and Note 3A)		iF > 0.1%	RADIONUCLIDES	MBq	mCl	C-C12858 C
FB-2	3	.21	118	.05	<u><1.67E-6</u>	41.678-5	36H	.21	100	oxides+gloss ho	<u>6</u> 0.	Ra226	- 037	•001	
0137-00-98E		7.5	2.60	5.0	~100	21000		7.5		chelates	0%	5090	.925		B
	•		·	·· ·	· · · · · · · · · · · · · · · · · · ·					•		C-14	3.1	olmei	
												Th-Nut	29,86	- 807 ·	
		;						•			<u></u>		(3.67 kg)	(8.08 B)	
												Th 232	·0722	.0006	
•											<u></u>		(.00545kg)	(=012 15)	
		· · ·		• . • -				· • · · · ·				total	4000132 34. 5432	1078336 0,9336	
FB-3	3	150	111	.03	11.172-6	4.672-5	36H	.21	100	oxides-iglass	60.	Th-nat	26.16		AU
6137-00-9BE		7.5	z45	3.0	~100	21000	39H	7.5	· .	no chelates	0%		(3.21 kg)	(7,07 16)	<u> </u>
			• • • •									DU	83,99	2.27	
				ļ		,							(4,54 kg)	(10 16)	
		• •••••	••••••••••••••••••••••••••••••••••••••					· · · ·	:	· .			110.15	2,977	

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FORM 541A (10-96)

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DISPOSAL CONTAINER DESCRIPTION								WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								
S. CONTAINER IDENTIFICATION NUMBER/ S.C. TRANSPORT PERMIT NUMBER	6. CONTAINER DESCRIP- TION (See Note 1 & Note 1A	7. VOLUME <u>m³</u> <u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u>	5. AND CONTAINER WEIGHT 	8. SURFACE RADIATION LEVEL <u>mSvRy</u> <u>mremfr</u>	10. SURFACE CONTAMINATION		PHYSICAL DESCRIPTION			14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION			a a a a	
						100 cm ² 100 cm ² BETA- GAMMA	11. 1 WASTE DESCRIP- TOR (See Note 2 and Note 7A)	IZ. APPROXIMATE WASTE VOLUME(S) IN CONTAINER R	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3 and Note 3A)		WEIGHT % CHELATING AGENT IF > 0.1%	INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL: OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
												RADIONUCLIDES	M8q		_	
FB-4	उ	•21	159	.03	<u><1.676-6</u>	21.672-5	36H	.21	100	glass, no	0%	Th-Net	44.03	1.19	ľ	
0137-00-98E		7.5	350	3.0	2100	5000		7.5		Chelates			(5.41 leg)	(11.92 16)		
		· · · ·								•		total	44.03	1019		
F.B-450E	3	.21	145	•05	×1.675-6	1.678-5	36H	021	100	gluss,	6	Th-Nat	35.19	· 951 ·	A	
0137-00-985	<u> . </u>	7.5	320	5.0		~1000		7.5		^{no} chelates	0%		(4.32 kg)	(9.5216)	╀	
•						...						Fotal	35.19	0957		
FB-6	3	.21	181	.05	×1.67E-6	×1.67E-5	364	•21	100	oxides,	0%	Razzb	-2516	• 0068	T	
0137-00-98E		7.5	400	5.0	~100	~1000		7.5		no chekates	\bigcirc b	Co 60	.3626	· co 98		
		• • •						· · · · · · · · · · · · · · · · · · ·				#-3	1,420,800	38,400	Ϋ́.	
						· ·		<i>_</i>				Th-Nat	16.983	. 459	Ť	
										<u> </u>			(2.09 kg)	(4.6 16)		
												Th-232	00:11	.0003		
••	·									 			(,00273 kg)	(.006 16)		
												Hotal	1,420,817.61	38,400,48	3	
ORM 541A (10-96)	<u> </u>	<u> </u>		<u> </u>		<u> </u>	<u> </u>	<u> </u>		L		I		l		

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