

25 April 1994

U.S. Nuclear Regulatory Commission
Region 1
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

Attention: Sharon Johnson

Dear Ms Johnson:

On 15 March 1994 we applied for a renewal of our By-product License, 08-00604-04, for purposes of storage only. Subsequently we have disposed of all radio isotopes that we listed for the Barnwell, South Carolina site under South Carolina D.H.E.C permit number 2409-08-94. Radiation Service Organization functioned as our broker and removed the material from our premises on 29 March 1994, receipt number 12643.

It was our intention to return the 10 mCi of Am-241, which South Carolina refused to accept, to the Amersham Corporation from whom we purchased it twenty years ago. Last week Amersham informed us, after months of discussion and correspondence, that the fee for this service will be \$5000, a sum not available in our budget. On consulting with you and the Service Facility Regulation Administration of the D.C. Government as to the fees that would be owed by us for storing this source, we have decided to retain it.

This is to a great extent motivated by the nature of this source. This source is intended for generating x rays by fluorescence radiation using the 59 keV gamma ray of Am-241. The potent part of the decay is the 5.5 MeV alpha particle. The danger of this radiation is essentially zero owing to the isotope being incorporated into a piece of ceramic, which allows free passage to the gamma rays but stops all but the alphas that are found near the surface, which are in turn stopped by the stainless steel case. It is one degree safer than a sealed source. Enclosed is a copy of the specification sheet.

We wish to alter our application of 15 March as follows:

5. The isotopes listed for disposal by Radiation Service Organization will not be on our license.

9. Facilities and equipment. The Am-241 source is stored in a filing cabinet safe in Room 110 of the Cyclotron

Building, the office of Louis Brown, Radiation Safety Officer.
Our equipment consists of an Eberline Model ASP-1 survey meter.

Please write or call me for further information.

Yours sincerely,

LB

Louis Brown
Radiation Safety Officer

Copy: Dr. Sean Solomon, Director
Mr. Terry Stahl, Fiscal Officer

GENERAL OR NUMBER

(1) GENERATOR NAME Carnegie Institution of Washington
 ADDRESS 5241 Broad Branch Road, NW
Department of Terrestrial Magnetism
 CITY Washington STATE D.C. ZIP 20015
 CONTACT Mr. Louis Brown PHONE (202)686-4370
 USER PERMIT # _____ SHIPMENT # _____

(2) BILL DISPOSAL CHARGES TO Broker
 NAME _____ PURCHASE ORDER # _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____

RADIOACTIVE WASTE SHIPMENT & DISPOSAL MANIFEST

RSO, Inc.

Wash. (301)953-2482 • Balt. (410)792-7444
 P.O. BOX 1526 • LAUREL, MARYLAND 20725-1526

(3) AGENT/BROKER RSO Inc.
 BROKER'S US ECOLOGY #
 ADDRESS 5204 Minnick Road
 CITY Laurel STATE Md. ZIP 20707
 CONTACT David Wellner PHONE (301)953-2482
 BROKER SHIPMENT # _____ BROKER USER PERMIT # _____

Broker's Authorized Signature Acknowledging Waste Receipt _____ Date _____

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 (4) CONSIGNED TO OTHER
 RSO, INC.
 5204 MINNICK RD.
 LAUREL, MD 20707
 CONTACT _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP _____
 PHONE (301)953-2482

(5) CARRIER RSO Inc. SHIPPING DATE 1/1/94
 CARRIER EPA # (if any) 3000 05 027 9669
 ADDRESS 5204 Minnick Road
 CITY Laurel STATE Md. ZIP 20707
 PHONE (301)953-2482
 CASK TYPE N/A CASK SURFACE EXPOSURE RATE N/A mR/hr

TOTAL FOR EACH CLASS		PROPER SHIPPING NAME & HAZARD CLASS (PER 49 CFR 172.101)	ID NUMBER
# OF PACKAGES	WEIGHT (Pounds)	WASTE	
		Radioactive Material, empty packages	UN2906
		Radioactive Material, fissile, n.o.s. -- Radioactive Material	UN2913
		Radioactive Material, low specific activity, n.o.s. -- Radioactive Material	UN2912
		Radioactive Material, n.o.s. -- Radioactive Material	UN2982
		Radioactive Material, limited quantity, n.o.s. -- Radioactive Material	UN2910
		Radioactive Material, special form, n.o.s. -- Radioactive Material	UN2974
		Radioactive Material, instruments and articles -- Radioactive Material	UN2911
		Thorium Nitrate -- Radioactive Material	UN2976
		Uranyl Acetate (RQ-5000/2270) -- Radioactive Material	NA518G
		Uranyl Nitrate, solid (RQ-5000/2270) -- Radioactive Material	UN2981

(7) SHIPMENT TOTALS (DO NOT WRITE IN SHADED AREAS)						
VOLUME (cu ft)	TOTAL # OF PACKAGES	SOURCE MATERIAL (kg)	SPECIAL NUCLEAR MATERIAL (grams)			
			U-233	U-235	PLUTONIUM	TOTAL
		0.00766E+7	N/A	N/A	N/A	N/A
ACTIVITY TOTALS						
		TRITIUM	C-14	Tc-99	I-129	ALL ISOTOPES
<input type="checkbox"/> Curies						
<input type="checkbox"/> Millicuries (d)						
		(10CFR20.311)				

(8) THIS IS TO CERTIFY THAT THE HEREIN-NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION AND ARE IN COMPLIANCE WITH ALL REQUIREMENTS APPLICABLE AT THE DESIGNATED DISPOSAL SITE, AND THAT THE MATERIALS ARE CLASSIFIED AND DESCRIBED IN ACCORDANCE WITH THE REQUIREMENTS OF 10CFR PART 81 AND PART 20.311 OR EQUIVALENT STATE REGULATIONS.

 Authorized Signature Title Date

EMERGENCY NUMBERS

CEMXTREC: 1-800-424-9300

RSO 24hr: (301)953-4997

SOUTH CAROLINA RADIOACTIVE WASTE TRANSPORT PERMIT

Pursuant to Act No. 429 of 1980, the South Carolina Radioactive Waste Transportation and Disposal Act, a Radioactive Waste Transport Permit is hereby issued to the below-named applicant (shipper). This Permit shall not, in itself, be construed as authorizing a shipper to dispose of radioactive waste within the State of South Carolina. This Permit shall not be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly, or indirectly, through transfer of control to any person, unless the Department shall, after securing full information, find the transfer is in accordance with the provisions of Act No. 429 and shall give written consent.

1. Name and Address of Applicant (Shipper):

Carnegie Institution of Washington
 Department of Terrestrial Magnetism
 5241 Broad Branch Road, NW
 Washington, D.C. 20015

2. Permit Number:

2409-08-94

Type:

X

Non Restricted

Y

Restricted

Z

3. Expiration Date:

December 31, 1994

Restricted

1994

Permit Valid for Following Locations:

Transportation of waste into or within the State of South Carolina is restricted to the services of RSO, Inc

Same as #1

March 29, 1994

Date of Issuance

For the South Carolina Department of Health and Environmental Control

By Virgil R. Autry
 Virgil R. Autry, Director
 Division of Radioactive Waste Management