

GENERAL ELECTRIC COMPANY

ORDNANCE SYSTEMS DIVISION
100 Woodlawn Ave., Pittsfield, MA 01201, Tel. (413)494-3949

July 2, 1985

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RECEIVED

Division of Fuel Cycle and Material Safety
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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U.S. NRC
LIC. FEE MGMT. BRANCH

Gentlemen:

Please amend our NRC License #20-03316-03 as described in the attached request for amendment form.

The following items have been disposed of:

- 6A. Cobalt 60
- 6B. 2 Foils of Nickel 63 (1 foil retained)
- 6D. Hydrogen 3
- 6F. Hydrogen 3

Please refer to our Materials License. The bill of lading and other information are also enclosed.

If you have any questions, please call me on (413) 494-3949.

Sincerely,

Edward R. Verminski

Edward R. Verminski
Manager, Industrial Hygiene and Safety

-mh NRC1

"OFFICIAL RECORD COPY"

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REG1 LIC30
20-03316-03 PDR

ML10

19087

NRC Form 313 I (12-81) 10 CFR 30		U.S. NUCLEAR REGULATORY COMMISSION		
APPLICATION FOR BYPRODUCT MATERIAL LICENSE INDUSTRIAL		1. APPLICATION FOR: <i>(Check and/or complete as appropriate)</i>		
<i>See attached instructions for details.</i> Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.		a. NEW LICENSE		
		b. AMENDMENT TO: LICENSE NUMBER 20-03316-03		
		c. RENEWAL OF: LICENSE NUMBER		
2. APPLICANT'S NAME <i>(Institution, firm, person, etc.)</i> General Electric Company TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (413) 494-3949		3. NAME AND TITLE OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION Edward R. Verminski TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION (413) 494-3949		
4. APPLICANT'S MAILING ADDRESS <i>(Include Zip Code)</i> <i>(Address to which NRC correspondence, notices, bulletins, etc., should be sent.)</i>		5. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED <i>(Include Zip Code)</i> 100 Woodlawn Avenue Pittsfield, MA 01201		
(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)				
6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL <i>(See Items 16 and 17 for required training and experience of each individual named below)</i>				
FULL NAME		TITLE		
a. Edward R. Verminski		Manager, Industrial Hygiene and Safety		
b. David Fisher		Development Chemist		
c.				
7. RADIATION PROTECTION OFFICER Edward R. Verminski		Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.		
8. LICENSED MATERIAL				
LINE NO.	ELEMENT AND MASS NUMBER A	CHEMICAL AND/OR PHYSICAL FORM B	NAME OF MANUFACTURER AND MODEL NUMBER <i>(If Sealed Source)</i> C	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTIVITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME D
(1)				
(2)		APPENDIX I		
(3)				
(4)				
DESCRIBE USE OF LICENSED MATERIAL E				
(1)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <i>July 4 - 80</i> Applicant: 30065-9 Check No. 30065-9 Amount: Fee Category 3M Type of Fee: Amendment The Check Book: 7/3/85 Received By: Jacques Date: 7/9/85 taken record </div>			
(2)				
(3)				
(4)				

9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED	NAME OF MANUFACTURER	MODEL NUMBER
	A.	B.	C.
(1)			
(2)	APPENDIX	II	
(3)			
(4)			

10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT	MANUFACTURER'S NAME	MODEL NUMBER	NUMBER AVAILABLE	RADIATION DETECTED (alpha, beta, gamma, neutron)	SENSITIVITY RANGE (milliroentgens/hour or counts/minute)
	A	B	C	D	E	F
(1)		Victoreen	471A	1	Alpha > 8 MeV	0 to 1000 mR/h
(2)					Beta > 120 keV	
(3)					Gamma and X-Ray > 10 keV	
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

<input type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY Nuclear Instrument Company 65 Grove St. Rockland, MA 02370	<input type="checkbox"/> b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments.
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12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A	SUPPLIER (Service Company) B	EXCHANGE FREQUENCY C
<input type="checkbox"/> (1) FILM BADGE <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD) <input type="checkbox"/> (3) OTHER (Specify): _____ _____ _____	None required.	<input type="checkbox"/> MONTHLY <input type="checkbox"/> QUARTERLY <input type="checkbox"/> OTHER (Specify): _____ _____ _____

13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)

- ☐ a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC.
☐ b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC.
☐ c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC.
☐ d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

14. WASTE DISPOSAL

- a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED

 b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE

INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

APPENDIX III

15. **RADIATION PROTECTION PROGRAM.** Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures (*if needed*), day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.

APPENDIX IV

16. **FORMAL TRAINING IN RADIATION SAFETY.** Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.

- a. Principles and practices of radiation protection.
- b. Radioactivity measurement standardization and monitoring techniques and instruments.
- c. Mathematics and calculations basic to the use and measurement of radioactivity.
- d. Biological effects of radiation.

APPENDIX V

17. **EXPERIENCE.** Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

18. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 30, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

WARNING.—18 U.S.C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

a. LICENSE FEE REQUIRED
(See Section 170.31, 10 CFR 170)

b. CERTIFYING OFFICIAL (*Signature*)

c. NAME (*Type or print*)

(1) LICENSE FEE CATEGORY:

d. TITLE

(2) LICENSE FEE ENCLOSED: \$

e. DATE

APPENDIX #1
#8 LICENSED MATERIALS

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
1. NICKEL 63	Foils	New England Nuclear Model NER-002 Amersham/Searle NBC	1 foil of 15 millicuries	To be used in Perkin-Elmer Corp. Model 900 Gas Chromatograph for sample analysis.
2. NICKEL 63	Foils	New England Nuclear Model NER-001	3 foils of not more than 10 millicuries each.	To be used in Shimadzu Seisakusho, LTD Model GC-6 AM Gas Chromatograph for sample analysis.
3. HYDROGEN 3	Foils	U.S. Radium	2 foils not to exceed 200 millicuries each.	For use in Analytical Instrument Developments Gas Chromatograph for sample analysis.

APPENDIX #2

#9 STORAGE OF SEALED SOURCES

<u>A</u>	<u>B</u>	<u>C</u>
1. Stored in locked cabinets installed in detector cells.	Perkin Elmer	009-0282
2. Stored in locked cabinets installed in detector cells.	Shimadzu	EDC-4m
3. Stored in locked cabinets in detector cells.	Analytical Instruments Developments	#510-6007

APPENDIX #3

#15 RADIATION PROTECTION PROGRAM

Leakage and contamination tests are made on the nickel 63 sources by New England Nuclear at the specified six month intervals. Servicing, maintenance, and repair of the sources will be performed by the respective manufacturers of the sources.

APPENDIX #4

#16 FORMAL TRAINING IN RADIATION SAFETY

<u>NAME</u>	<u>WHERE TRAINED</u>	<u>DURATION OF TRAINING</u>	<u>ON THE JOB</u>	<u>FORMAL COURSES</u>
<u>Edward R. Verminski</u>	University of Pittsburgh Graduate School of Public Health	1 Semester		
16A			No	Yes
16B			No	Yes
16C			No	Yes
16D			No	Yes
<u>David J. Fisher</u>				
16A	Knolls Atomic Power Laboratory	21 Years On The Job Experience	Yes	No
16B	Knolls Atomic Power Laboratory		Yes	Yes
16C	Knolls Atomic Power Laboratory		Yes	Yes
16D	Knolls Atomic Power Laboratory		No	No

APPENDIX #5

#17 EXPERIENCE

<u>NAME</u>	<u>ISOTOPE</u>	<u>MAX. AMOUNT</u>	<u>WHERE EXPERIENCE WAS GAINED</u>	<u>OF EXPERIENCE</u>	<u>TYPE OF CASE</u>
<u>Edward R. Verminski</u>	None Used				
<u>David J. Fisher</u>	Spent Nuclear Fuel	10 R	Knolls Atomic Power Laboratory	10 Years	Analysis of fission products

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter 1, Parts 30, 31, 32, 33, 34, 35, 36, 40 and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s); and to import such byproduct and source material. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee

1. General Electric Company

2. 100 Woodlawn Avenue
Pittsfield, Massachusetts 01201In accordance with application dated
August 19, 1982,3. License number 20-03316-03 is amended in
its entirety to read as follows:

4. Expiration date September 30, 1987

5. Docket or
Reference No. 030-046296. Byproduct, source, and/or
special nuclear material7. Chemical and/or physical
form8. Maximum amount that licensee
may possess at any one time
under this license

A. Cobalt 60

A. Sealed sources (Nuclear
Chicago Model RR-60)A. Not to exceed 10
millicuries per
source

B. Nickel 63

B. Foil contained in Perkin-
Elmer Model 009-0282
detector cellsB. Not to exceed 15
millicuries per
foil

C. Nickel 63

C. Foil contained in Shimadzu
Model EDC-4M detector cellsC. Not to exceed 10
millicuries per
foil

D. Hydrogen 3

D. Scandium Tritide foil
contained in Varian Model
96-095 detector cellsD. Not to exceed 1
curie per foil

E. Hydrogen 3

E. Titanium tritide foil
contained in Analytical
Instrument Developments
Model H510-6007 detector
cellsE. Not to exceed 200
millicuries per
foil

F. Hydrogen 3

F. Sealed sources (G.E. Custom)

F. Not to exceed 100
millicuries per
source and 1 curie
total

RWSD No. 63483

RADIAC RESEARCH CORP.

261 ~~ONT~~ AVENUE
BROOKLYN, NEW YORK 11211
718 - 963-2233

No. 50155

DATE 6-26-85
BLDG. NO. 11
ROOM NO. 336
DEPT. NO. Materials Laboratory

RADIOACTIVE WASTE DISPOSAL RECORD

COMPANY/INSTITUTION General Electric Company

CONTAINERS NUMBER			
<u>64514</u>			

I hereby certify that the above listed radioactive wastes are properly described, packaged marked and labeled, in accordance with D.O.T. Regulations and RADIAC'S General Terms and Conditions.

CUSTOMER REP. Robert P. Anderson R.R.C. REP. Glen M. Muto

ISOTOPE	ACTIVITY	ISOTOPE	ACTIVITY
<u>Ni 63</u>	<u>30 MCi</u>		
<u>Co 60</u>	<u>8 MCi</u>		
<u>H 3</u>	<u>3000. MCi</u>		

TYPE	P/U	DEL
5 Gallon Dry		
30 Gallon Dry		
30 Gallon A/P		
30 Gallon S/P		
30 Gallon LSV		
55 Gallon Dry	<u>1</u>	<u>1</u>
55 Gallon LSV		
De Reg LSV		
Cases 1 Gallon		
5 Gallon Liners		
55 Gallon Liners		
Security Seals		
Labels (Roll)		
Preservative		
Absorbent Material		
Miscellaneous		

ID # 8-1113 Site # _____ Expiration Date 3-31-86 Instrument _____

**LOW-LEVEL RADIOACTIVE WASTE SHIPMENT
CERTIFICATION FOR COMMERCIAL GENERATOR/PACKAGERS,
AND BROKERS AND CARRIERS**

The following certification, completed as applicable, is made to the State of Washington:

Certification is hereby made to the State of Washington that Radiation Shipment Record No. 63483 of low-level radio-active waste has been inspected in accordance with requirements of the Governor of Washington's Executive Order dated November 19, 1979, prior to its shipment. Further certification is made that the inspection has revealed no items of non-compliance with all applicable laws, rules and regulations.

The undersigned shall indemnify and hold harmless the State of Washington, in an amount not to exceed \$1,000,000.00 per individual who may be injured, provided that indemnification shall not exceed \$5,000,000.00 in total, for each occurrence, from any and all claims, suits, losses, damage, injury and expenses to any person whomsoever or to property arising or growing out of or in any manner connected with the activities performed under this order.

Except for any violation of applicable existing state or federal statute or regulation respecting packaging and shipment, inspection and acceptance of any item, or container or material covered by this certification by the State of Washington or a duly authorized contractor shall release the party who executed this certificate from any and all requirement of indemnification from injury or loss.

SECTION A:

FOR THE GENERATOR/PACKAGER:

General Electric Company
(Company Name)

PERMIT NUMBER: 8-1113

VOLUME OF WASTE IN THIS SHIPMENT:

7.5 Ft³

DATE: 6-26-85

BY: X Robert P. Anderson

TITLE: X Mgr - Robert P. Anderson

SECTION B:

FOR THE BROKER:

RADIAC Research Corp
(Company Name)

PERMIT NUMBER:

5760

VOLUME OF WASTE IN THIS SHIPMENT:

7.5 Ft³

DATE: 6-26-85

BY: James Minto

TITLE: DRIVER TECH

SECTION C:

FOR THE CARRIER:

(Company Name)

VOLUME OF WASTE IN THIS SHIPMENT:

DATE: _____ BY: _____

TITLE: _____

DSHS RHF-31A
DSHS 13-424 (4/80)

The following drum numbers are included in this shipment:

64514



By: X Robert P. Anderson

Title: X Mgr. Materials Lab

US ECOLOGY, INC.

GENERATOR NAME General Electric Company

CONTINUATION SHEET

AGENT/BROKER _____

REV. 1/84

MANIFEST # 63483

PAGE 2 OF 2

[illegible]

NOTE #1 - Waste Description Codes

- | | |
|----------------------|----------------------------------------------------------------|
| 2. Dry Solid | 10. Absorbed Aqueous Liquid |
| 3. Solidified Liquid | 11. Absorbed Organic Liquid |
| 4. Biological | 12. Scintillation (or organic) Liquid
in Vials in Absorbent |
| 7. Filter Media | 13. Aqueous Liquid in Vials in Absorbent |
| 8. Dewatered Resins | 14. Animal Carcasses in Absorbent |
| 9. Solidified Resins | 999. Other |

NOTE #2 - Shifted or Absorbent Media Cycles

- | | |
|-------------------------|------------------------------|
| 2. Speed-Dry | 10. Zonoxite, Grades 2, 3, 4 |
| 3. Cenatom (MP-78) | 11. Dow Media |
| 4. Flood Dry-Super Fine | 12. Cement |
| 5. Hi-Dry | 13. Asphalt |
| 6. Floxco or Floxco-X | 14. Detaware Custom Media |
| 7. Instant-Dry | 15. Envestostone |
| 8. Safe-T-Sorb | 16. Krokite |
| 9. Oil-Dry (Safe n Dry) | #99. Other |

NOTE 43 - NRC
Stability Class
Code

- 5 - Stabile
12 - Unstabil

* MY USE OF "OTHER" AS A DESCRIPTION MUST INCLUDE A WRITTEN AND SIGNED EXPLANATION ATTACHED TO THIS MANIFEST

CUSTOMER COPY



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

BETWEEN: William O. Miller, Chief
License Fee Management Branch
Office of Administration

Regional License Section
Material Licensing Branch
FCMS, Office of Nuclear Material
Safety & Safeguards

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: General Electric Co.

Application Dated: 7/2/85

Control No.: 19087

License No.: 20-13316-03

2. FEE ATTACHED

Amount: _____

Check No.: _____

3. COMMENTS

03620

Signed _____

Date _____

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: 3M - \$120

9/87

2. Correct Fee Paid. Application may be processed for:

Amendment ✓

Renewal _____

License _____

Signed D Jackson

Date 9/15/85