NRC FORM 374
(10-89)

U.S. NUCLEAR REGULATORY COMMISSION

MATERIALS LICENSE

Amendment No. 43

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 I, Parts 30, 31, 32, 33, 34, 35, 39, 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). 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	
General Electric Company 1. Space Systems Division Valley Forge Space Center 2. P.O. Box 8555 Philadelphia, Pennsylvania 19101	In accordance with letter dated April 12, 1990, 3. License number 37-02006-05 is amended in its entirety to read as follows: 4. Expiration date December 31, 1994 5. Docket or Reference No. 030-06046

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Any byproduct material with Atomic Numbers 3 through 83, except for Strontium 90	A. Sealed sources	A. Not to exceed 10 curies per source and 75 curies total
B. Any byproduct material with Atomic Numbers 3 through 83, except except for Krypton 85	B. Any	B. 20 curies total except for: Iodine 129- 100 millicuries Iodine 131- 330 millicuries Iodine 125- 800 millicuries Phosphorus 32- 1.5 curies Strontium 90- 2.5 curies
C. Any byproduct material with Atomic Numbers 3 through 83	C. Neutron irradiated electronic components	C. 2 curies
D. Krypton 85	D. Any	D. 45 curies
E. Strontium 90	E. Sealed sources	E. 10 curies
F. Polonium 210	F. Any	F. 0.6 curies
G. Americium 241	G. Sealed sources	G. 4 curies
H. Uranium 235	H. Sealed sources	H. 4.7 grams
I. Plutonium 238	I. Sealed sources	I. 6 milligrams total in 5 sources
J. Plutonium 239	J. Sealed sources	J. 10 micrograms total in 2 sources
K. Plutonium 239	K. Sealed sources	K. 6 micrograms total in 4 sources
L. Hydrogen 3	L. Any	L. 100 curies

P-18

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
37-02006-05

Docket or Reference number
030-06046

Amendment No. 43

9. Authorized use

A. through G. Research and development as defined in 10 CFR 30.4.
H. through K. For storage and calibration of instruments.
L. For storage or for use in gas chromatographs for sample analysis.

10. Licensed material may be used at facilities of the licensee located at the Valley Forge Space Center, 230 Goddard Boulevard, King of Prussia, Pennsylvania and ancillary facilities located on Third, Fifth and Vandenburg Avenues and on Allendale Road; 3198 Chestnut Street, D and Luzerne Streets, 401 E. Hunting Park Avenue, Skeats Hi Power Lab, Test Cell No. 6 and Lab Building 20, 7500 Lindbergh Boulevard, Philadelphia, Pennsylvania; Satellite Assembly Building, Cape Canaveral Air Force Station, Cape Canaveral, Florida; Vandenburg Air Force Base, California, and at temporary job sites of the licensee anywhere in the United States where the U. S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.

11. A. Licensed material shall be used by, or under the supervision of, individuals designated by Ionizing Radiation Advisory Group, Dr. S. J. Mucha, Chairman.

B. The Radiation Safety Officer for this license is Charles B. Chilton.

12. Licensed material shall not be used in or on human beings or in field applications where activity is released except as authorized by specific condition of this license.

13. A(1) Each sealed source or detector cell acquired from another person and containing licensed material, other than hydrogen 3, with a half-life greater than 30 days and in any form other than gas shall be tested for contamination and/or leakage before use. In the absence of a certificate from a transferor indicating that a test has been made within 6 months before the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.

(2) Notwithstanding the periodic leak test required by this condition, any licensed sealed source or detector cell is exempt from such leak tests when the source or detector cell contains 100 microcuries or less of beta and/or gamma emitting materials or 10 microcuries or less of alpha emitting material.

(3) Except for alpha sources, the periodic leak test required by this condition does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage before any use or transfer to another person unless they have been leak tested within 6 months before the date of use or transfer.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number
37-02006-05

Docket or Reference number
030-06046

Amendment No. 43

(13. Continued) CONDITIONS

B. Each sealed source or detector cell fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to use or transfer as a sealed source or detector cell. If the inspection or test reveals any construction defects or 0.005 microcurie or greater of contamination, the source shall not be used or transferred as a sealed source or detector cell until it has been repaired, decontaminated and retested.

C. Each sealed source containing licensed material, other than hydrogen 3, with a half-life greater than 30 days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed 6 months except that each source designed for the purpose of emitting alpha particles shall be tested at intervals not to exceed 3 months.

D. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. The test sample shall be taken from the sealed source or detector cell or from the surfaces of the device in which the sealed source or detector cell is permanently or semipermanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Commission. Records may be disposed of following Commission inspection.

E. If the test required by Subsection A. or C. of this condition reveals the presence of 0.005 microcurie or more of removable contamination, the licensee shall immediately withdraw the sealed source or detector cell from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Commission regulations. A report shall be filed within 5 days of the date the leak test result is known with the U. S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406, describing the equipment involved, the test results, and the corrective action taken.

14. In lieu of using the conventional radiation caution colors (magenta or purple on yellow background) as provided in Section 20.203(a)(1), of 10 CFR Part 20, the licensee is hereby authorized to label detector cells and cell baths, containing licensed material and used in gas chromatography devices, with conspicuously etched or stamped radiation caution symbols without a color requirement.

15. Detector cells containing titanium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 225 degrees Centigrade.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License number: 37-02006-05

Docket or Reference number: 030-06046

Amendment No. 43

(Continued) CONDITIONS

16. Detector cells containing scandium tritide foil shall only be used in conjunction with a properly operating temperature control mechanism which prevents foil temperatures from exceeding 325 degrees Centigrade.

17. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 3 years from the date of each inventory.

18. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material".

19. The licensee is authorized to hold radioactive material with a physical half-life of less than 65 days for decay-in-storage before disposal in ordinary trash provided:

    A. Radioactive waste to be disposed of in this manner shall be held for decay a minimum of 10 half-lives.

    B. Before disposal as normal waste, radioactive waste shall be surveyed to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated.

20. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents including any enclosures, listed below. The Nuclear Regulatory Commission's regulations shall govern unless the statements, representations and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Application dated July 26, 1989

For the U.S. Nuclear Regulatory Commission

Date JUN 13 1990

By Original Signed by MICHAEL A. LAMASTRA

Nuclear Materials Safety Branch
Region I
King of Prussia, Pennsylvania 19406

"OFFICIAL RECORD COPY"

JUN 13 1990

License No. 37-02006-05
Docket No. 030-06046
Control No. 112458

General Electric Company
ATTN: S. J. Mucha, M.D.
Chairman
Aerospace
P. O. Box 8555
Philadelphia, Pennsylvania 19101

Gentlemen:

Please find enclosed an amendment to your NRC Material License.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the Region I Material Licensing Section, (215) 337-5093, so that we can provide appropriate corrections and answers.

Please be advised that you must conduct your program involving licensed radioactive materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, please note the items in the enclosed, "Requirements for Materials Licensees."

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, the NRC expects licensees to pay meticulous attention to detail and to achieve the high standard of compliance which the NRC expects of its licensees.

You will be periodically inspected by NRC. A fee may be charged for inspections in accordance with 10 CFR Part 170. Failure to conduct your program safely and in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in prompt and vigorous enforcement action against you. This could include issuance of a notice of violation, or in case of serious violations, an imposition of a civil penalty or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions, 10 CFR Part 2, Appendix C.

OFFICIAL RECORD COPY ML 37-02006-05/LTR - 0001.0.0
06/07/90

ML18

We wish you success in operating a safe and effective licensed program.

Sincerely,

Original Signed by
MICHAEL A. LAMASTRA

for John D. Kinneman, Chief
Nuclear Materials Safety Section B
Division of Radiation Safety
and Safeguards

Enclosures:
1. Amendment No. 43
2. Requirements for Materials Licensees

DRSS:RI	DRSS:RI
Roberts/pmb	Kinneman
06/13/90	06/ /90

OFFICIAL RECORD COPY ML 37-02006-05/LTR - 0002.0.0
06/07/90

GE Aerospace

MS-16
L8

General Electric Company
P.O. Box 8555, Philadelphia, PA 19101

June 1, 1990

Region I, USNRC
475 Allendale Road
King of Prussia, PA 19406

Attn: Mark Robinson

RE: NRC License #37-02-006-09
Mail Control: 112458

NRC License #SUB 831
Mail Control: 112459

NRC License #37-02-006-05
Mail Control: ~~112460~~ 112458

Dear Mr. Robinson:

As we discussed, my resume in the radiation safety field should be amplified by the following information:

Formal Radiation Safety Training:

"Radioisotope Methodology"
Temple University (graduate level) -1974
Instructor: Dr. Elaine Mackowiak

"Ionizing Radiation Instrumentation and Measurement"
Temple University (graduate level) - 1974
Instructor: Dr. Elaine Mackowiak

"Radiation Safety for Engineers"
Two day seminar sponsored by PA Department of Radiation Health - 1970
Principal Instructor: Jordan S. Davis

"Basic Principles of Nuclear Physics"
Virginia Polytechnic Institute (undergraduate physics) - 1955
Instructor: Dr. T. Marshall Hahn

"Basics of Ionizing and Non-Ionizing Radiation"
American Industrial Hygiene Association, 1980

"Ionizing Radiation Safety"
Rutgers University, CA - 1973
One week short course
Multiple Instructors

"Radon and Its Daughters"
Bell Labs - 1983
Two day short course

JUN 04 1990

OFFICIAL RECORD COPY ML 10

112458

Partial List of US Army courses:

"Operations in a Nuclear Environment," 1962.

"Tactical Use of Nuclear Weapons," 1964.

"Tactical Nuclear Weapon Yields and Troop Safety," 1964.

"Chemical, Biological, Radiological Measurement and Decontamination," 1966.

"The CBR Environment": Student - 1966; Instructor - 1972.

"Nuclear Risk Assessment," 1977.

I am not sure that the dates and course titles are exact. If you need more precise data, I can reconstruct it, but it would take a fair amount of time.

My primary experience with specific isotopes would be as follows:

$Selenium_{73}$ - 35 curies	1971 to 1975
$Cobalt_{60}$ - (b)(4) curies	1982 to present
depleted Uranium - up to 30mCi	1972 to 1980
Miscellaneous transuranic isotopes - 1mCi-40mCi	1970 to present
Thorium alloys - 50 Kg	1982 to present
$Krypton_{85}$ - 18 Ci	1982 to present
Miscellaneous Calibration Sources - up to 1 Ci activity	

During my tenure with General Electric, I have supervised the activities of such Health Physicists as R. O. McClintock, J. S. Davis, Dr. J. R. McFadden, all of whom subsequently served with distinction in responsible positions with the USNRC. I have also been directly involved in the collection and evaluation of periodic wipe tests, personnel monitoring (film badges, TLDs, PICs, etc.) record keeping and other aspects of our health physics program. Further, I have conducted radiation safety training for our own employees, NASA employees, and DNA employees. I was involved in three underground nuclear tests at the Nevada underground test site ("Misty Rain" - two tests, "Mighty Epic" - one test) which involved safety assessments for personnel entry into the test tunnel, decontamination of test specimens and preparation of activated test specimens for off-site shipment. While on active duty with the US Army, I participated in two "Broken Arrow" incidents, the details of which are classified by DOD - my responsibilities were to conduct Geiger-Muller surveys to locate widely dispersed source material.

I believe this background in addition to my extensive managerial experience, my certification as a safety professional and my registration as a Professional Engineer (Safety) fully qualify me to be RSO for the referenced licenses.

If you require further information, please feel free to contact me.

Very truly yours,

Charles B. Chilton, PE, C.S.P.
Manager, Industrial Safety & Hygiene
(215) 354-4570

CBC/jed

CONVERSATION RECORD

TIME: 200 p | DATE: 5-31-90

TYPE: ☐ VISIT ☐ CONFERENCE ☒ TELEPHONE ☐ INCOMING ☒ OUTGOING

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU	ORGANIZATION (Office, dept., bureau, etc.)	TELEPHONE NO:
CHARLES CHILTON	GE	354-4570

ROUTING

NAME/SYMBOL	INT

SUBJECT: Amendment Request for 37-02006-05, 37-02006-09 and SNB-831

SUMMARY:

In review of above license Amendment requests, Addtl info. was required.

- Request was for a change in the RSO for all three licenses. Individual appears qualified, but specifics on masters coursework and actual experience with radio isotopes was deficient on ~~at~~ enclosed resumé.

Also, informed licensee that there is an abandonment letter pending for renewal of SNB-831. Addtl info needed from J. Kinneman.

ACTION REQUIRED

continue Actions upon receipt of info.

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
MC Roberts	MCR	5-31-90

ACTION TAKEN

OFFICIAL RECORD COPY ML 10

SIGNATURE	TITLE	DATE

DEC 21 1989

License No. 37-02006-05
Docket No. 030-06046
Control No. 111087

General Electric Company
ATTN: Alfred W. Kobylinski, RSO
Aerospace
P.O. Box 8555
Philadelphia, Pennsylvania 19101

Gentlemen:

Please find enclosed the renewal of your NRC Material License.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the Region I Material Licensing Section, (215) 337-5239, so that we can provide appropriate corrections and answers.

Please be advised that you must conduct your program involving licensed radioactive materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, please note the items in the enclosed, "Requirements for Materials Licensees."

Since serious consequences to employees and the public can result from failure to comply with NRC requirements, the NRC expects licensees to pay meticulous attention to detail and to achieve the high standard of compliance which the NRC expects of its licensees.

You will be periodically inspected by NRC. A fee may be charged for inspections in accordance with 10 CFR Part 170. Failure to conduct your program safely and in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in prompt and vigorous enforcement action against you. This could include issuance of a notice of violation, or in case of serious violations, an imposition of a civil penalty or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions, 10 CFR Part 2, Appendix C.

We wish you success in operating a safe and effective licensed program.

Sincerely,

Original Signed By:
John D. Kinneman

Michael A. Lamastra
Nuclear Materials Safety Section B
Division of Radiation Safety
and Safeguards

Enclosures:
1. Amendment No. 42
2. Requirements for Materials Licensees

DRSS:RI
Lamastra/bj
11/20/89

OFFICIAL RECORD COPY ML 37-02006-05/LTR - 0002.0.0
09/20/89

GE Aerospace

General Electric Company
P.O. Box 8555, Philadelphia, PA 19101

April 12, 1990

030-06046

U.S. Nuclear Regulatory Commission
Division of Radiation Safety and Safeguards
Region 1
475 Allendale Road
King of Prussia, PA 19406

References: Byproduct Licence 37-02006-05
Source Licence SUB-831
Irradiator Licence 37-02006-09

Dear Sir or Madam:

The General Electric Co., Aerospace Group requests an amendment to each of the above licences to effect the following change:

1) Delete the name Alfred W. Kobylinski as Radiation Safety Officer

2) Insert the name Charles B. Chilton as Radiation Safety Officer.

A copy of Mr. Chilton's resume of experience with radioactive material is attached.

Also attached is a check for $1190.00 to cover the cost of each amendment according to the following schedule:

Licence	Category	Amount
37-02006-05	1D and 3L	$610
37-02006-09	3E	210
SUB-831	2C	370
Total		$1190

If there are any questions relative to this request, please contact Charles Chilton at 354-4570.

Sincerely,

R. J. Mucha

S. J. Mucha, M.D., Chairman
Ionizing Radiation Advisory Group

/ezb

RECEIVED
'90 MAY -7 A10:28
U.S. N.R.C.
FEE MGMT. BRANCH

Log May 10
Remitter
Check No. R 205769 $1,190
Amount $120 Sub also 11459 & 112460 Refunded #830
Fee Category 1D 3D
Type of Fee A M D
Date Check Rec'd. 5/16/90
Date Completed
By: sh

112458

MAY 01 1990

OFFICIAL RECORD COPY ML 10

CHARLES B. CHILTON, MANAGER
INDUSTRIAL SAFETY AND HYGIENE

Education

B.S. - Virginia Polytechnic Institute, Blacksburg, VA
Agricultural Engineering

M.S. - Temple University, Philadelphia, PA
Industrial Hygiene

Certified Safety Professional - #1410

Registered Professional Engineer in Safety Engineering
State of California - #676

Work Experience

U.S. Army - 6 months active duty, 30 years active reserve
Rank of Colonel.

Taught/attended numerous chemical, biological, radiological (CBR) courses

Factory Insurance Association - Fire Protection Engineer - 5 years

Celanese Corporation - Safety Supervisor - 5 years

Borg-Warner Corporation - Safety Manager - 1 year

General Electric Company - Safety Manager - 20 years

Memberships

ASSE

NFPA

AIHA

AIA

Supervised HP activities 20 years

Attended numerous HP short courses (U.S. Army, AIHA)

Completed two graduate level HP courses (Temple university)

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

MAY 18 1990

General Electric Company
CBSI-GE Aerospace
Dept-480
P.O. Box 33010
Lakeland, FL 33807-3010

REFUND OF APPLICATION FEE

1. BACKGROUND:

Check Received May 7, 1990

Application Dated April 12, 1990

Check Number R205769

Check Amount $1,190

2. REFUND:

Amount $830

This refund is now being processed and will be sent as soon as possible.

3. REASON FOR REFUND:

Overpayment of amendment fees for application dated April 12, 1990 for Licenses SUB-831, 37-02006-05, and 37-02006-09 as specified in fee Categories 2c ($120), 3L ($120), and 3E ($120) of Section 170.31, 10 CFR 170.

NOTE: THE ENCLOSURE 10 CFR 170 CONTAINS THE COMMISSION'S CURRENT SCHEDULE OF MATERIALS LICENSE FEES. IF YOU HAVE ANY QUESTIONS CONCERNING THE FEES TO BE SUBMITTED WITH FUTURE APPLICATIONS, PLEASE CONTACT US AT 301-492-4650.

Maurice Messier 5/7/90 MM 5/17/90
License Fee and Debt Collection Branch
Division of Accounting and Finance
Office of the Controller

Enclosure: 10 CFR 170

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)
INFORMATION FROM LTS

PROGRAM CODE: 03610
STATUS CODE: 0
FEE CATEGORY: 1D 3L
EXP. DATE: 19941231
FEE COMMENTS: ----------

LICENSE FEE TRANSMITTAL

A. REGION 1

1. APPLICATION ATTACHED
APPLICANT/LICENSEE: GENERAL ELECTRIC CO.
RECEIVED DATE: 900501
DOCKET NO: 3006046
CONTROL NO.: 112458
LICENSE NO.: 37-02006-05
ACTION TYPE: AMENDMENT

2. FEE ATTACHED
AMOUNT: $1,190.00 *
CHECK NO.: 205768

3. COMMENTS
* 112460
112459

SIGNED R. F. Brown
DATE 5/3/90

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED /✓/)

1. FEE CATEGORY AND AMOUNT: 1D 3L $120

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:
AMENDMENT ----------
RENEWAL ----------
LICENSE ----------

3. OTHER ----------

SIGNED ----------
DATE 5/16/90

Supersedes Form 1073
6 Treasury FRM 2000
1047-106

PUBLIC VOUCHER FOR REFUNDS

MAY 30 1990 MAY 18 1990

Voucher No. .....

Schedule No. C0000351

RT

U. S. Nuclear Regulatory Commission
(Department or Establishment, Bureau or Office)

Location: Washington, DC 20555

Appropriation or Fund: 31X6875

PAID BY

To / Address:
General Electric Company
CBSI-GE Aerospace
Dept - 480
P.O. Box 33010
Lakeland, FL 33807-3010

Deposit received from the above-named depositor on May 7, 1990

for AA905 AMD CD 90-170

has been applied as herein stated and the balance indicated is returned herewith:

Amount of deposit	Check No. R205769	$ 1,190
Applied as explained in "Remarks" below		360
Balance authorized to be refunded		$ 830

Remarks:

Overpayment of amendment fees for application dated April 12, 1990 for licenses SUB-831, 37-02006-05, and 37-02006-09 as specified in fee Categories 2C ($120), 3L ($120), and 3E ($120) of Section 170.31, 10 CFR 170.

Maurice Messier 5/17/90

Maurice Messier
License Fee and Debt Collection Branch
Division of Accounting and Finance
Office of the Controller

(Sign original only) .....

Title .....

Refund by

Check No. .....

Cash, $ ..... on ..... (Signature of payee) .....
(Sign original only)

Other method, $ ....., ...
(Describe)

U.S. GOVERNMENT PRINTING OFFICE : 1976 O—640-000