

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

OFFICIAL RECORD COPY

License Number

20-19908-02

Docket or Reference Number

030-32909

Amendment No. 01

General Electric Company
G. E. Aircraft Engines
Environmental Health and Safety Office
1000 Western Avenue
Lynn, Massachusetts 01910

In accordance with letter dated December 2, 1996, License Number 20-19908-02 is hereby terminated.



9703030387 970131
PDR ADOCK 03032909
C PDR

JAN 31 1997

Date _____

For the U.S. Nuclear Regulatory Commission

Original Signed By:

By

John D. Kinneman

Nuclear Materials Safety Branch
Region I

King of Prussia, Pennsylvania 19406



ML 10

JAN 31 1997

Mr. Dan M. Montanaro
Senior EHS Specialist
General Electric Aircraft Engines
1000 Western Avenue, MD164X9
Lynn, MA 01910

Dear Mr. Montanaro:

Please find enclosed Amendment No. 01 terminating License No. 20-19908-02 as requested by the letter dated December 2, 1996. The facility at 1000 Western Avenue, Lynn, Massachusetts may be released for unrestricted use.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:
John D. Kinneman

John D. Kinneman, Chief
Nuclear Material Safety Branch 2
Division of Nuclear Materials Safety

License No. 20-19908-02
Docket No. 030-32909
Control No. 123991

Enclosure:
Amendment No. 01

DOCUMENT NAME: R:\WPS\MLTR\L2019908.02

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	N	DNMS/RI	M			
NAME	JBondick/jmb	db	JKinneman				
DATE	01/22/97		01/28/97		01/ /97		01/ /97

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ML 10



General Electric Company
1000 Western Ave., Lynn, MA 01901

MS16
Q-6

January 14, 1997

Mr. James M. Bondick
Health Physicist
Division of Nuclear Materials Safety
Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, Pennsylvania 19406-1415

License No. 20-19908-02
Docket No. 030-32909
Control No. 123991

Dear Mr. Bondick:

In reference to your response letter dated December 23, 1996 to our request for termination of our NRC License, the following attachments represent the additional information asked for:

1. NRC Form 314, "Certificate of Disposition of Materials" completed and signed by a General Electric certifying official;
2. NRC licenses # 37-2846-02G and # 37-2846-01 for Metorex Inc.;
3. State of California license # 1655-41 for Kevex;

We trust that this completes the required information to finalize the request to terminate our existing NRC License. Please contact me at 617-594-2655, if you have any questions.

Sincerely,

Dan M. Montanaro, CIH
Senior EHS Specialist

123991

JAN 17 1997

OFFICIAL RECORD COPY

ML 10

(6-95)

10 CFR 30.36(c)(1)(iv)

10 CFR 40.42(c)(1)(iv)

10 CFR 70.38(c)(1)(iv)

CERTIFICATE OF DISPOSITION OF MATERIALS

INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED -- PRINT OR TYPE
SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 30 MINUTES. THIS SUBMITTAL IS USED BY NRC AS PART OF THE BASIS FOR ITS DETERMINATION THAT THE FACILITY HAS BEEN CLEARED OF RADIOACTIVE MATERIAL BEFORE THE FACILITY IS RELEASED FOR UNRESTRICTED USE. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0028), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503. AN AGENCY MAY NOT CONDUCT OR SPONSOR, AND A PERSON IS NOT REQUIRED TO RESPOND TO, A COLLECTION OF INFORMATION UNLESS IT DISPLAYS A CURRENTLY VALID OMB CONTROL NUMBER.

LICENSEE NAME AND ADDRESS

General Electric Company; GE Aircraft Engines
Environmental, Health, and Safety Office
1000 Western Avenue
Lynn, Massachusetts 01910

LICENSE NUMBER

20-19908-02

LICENSE EXPIRATION DATE

October 31, 1997

A. MATERIALS DATA (Check one and complete as necessary)

THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT:
(Check and/or complete the appropriate item(s) below.)

- ☐ 1. NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE.
- OR
- ☒ 2. ALL ACTIVITIES AUTHORIZED BY THE LICENSE HAVE CEASED AND ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSE NUMBER CITED ABOVE HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. (If additional space is needed, use the reverse side or provide attachments.)

Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the disposition of low-level radioactive waste, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable.

See Attachment A

For transfers, specify the date of the transfer, the name of the license recipient, and the recipient's NRC license number or Agreement State name and license number.

If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the specific disposal procedures (e.g., decay in storage)

B. OTHER DATA

- ☒ 1. OUR LICENSE HAS NOT YET EXPIRED; PLEASE TERMINATE IT.
2. A RADIATION SURVEY WAS CONDUCTED BY THE LICENSEE TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE. (Check one)
- ☐ NO (Attach explanation)
- ☒ YES, THE RESULTS (Check one)
- ☐ ARE ATTACHED, or
- ☒ WERE FORWARDED TO NRC ON (Date) December 2, 1996; correspondence# 123991

3. THE PERSON TO BE CONTACTED REGARDING THE INFORMATION PROVIDED ON THIS FORM

NAME

Dan M. Montanaro, CIH

TELEPHONE NUMBER
(Include Area Code)

617-594-2655

4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO

General Electric Aircraft Engines
1000 Western Avenue, MD164X9, Lynn, Massachusetts 01910 attn: Dan Montanaro

CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE

Jolene M. Haggard-Leader & Counsel
Environmental, Health, and Safety

SIGNATURE

DATE

11/14/97

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 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 JURISDICTIONS.

Attachment A

1. Metorex - date of transfer: October 14, 1996
- main recipient: Metorex
- NRC license # 37-28461-02G and 37-28461-01

2. Kevex -date of transfer: November 6, 1996
- main recipient: Kevex
-State of California license # 1655-41

NRC FORM 374
(7-94)

U.S. NUCLEAR REGULATORY COMMISSION

PAGE 1 OF 4 PAGES

MATERIALS LICENSE

Amendment No. 02

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 31, 32, 33, 34, 35, 36, 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

1. Metorex Inc.
860 Town Center Drive
2. Langhorne, Pennsylvania 19047

In accordance with the letter dated
March 28, 1995,
3. License Number 37-28461-01 is amended in
its entirety to read as follows:

4. Expiration Date October 31, 2000

5. Docket or
Reference No. 030-314376. 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. Iron 55

Sealed sources (Models
Amersham-IEC:D1, IEC:D2,
and IEC:A1; DuPont
NER-462; and Isotope
Products XFB)

A. Not to exceed 200
millicuries per source
and 50 curies total

B. Cadmium 109

B. Sealed sources (Models
DuPont-NER-165; Amersham
CUC:D1N and CUC:D1; and
Isotope Products XFB)

B. Not to exceed 20
millicuries per source
and 5 curies total

C. Americium 241

C. Sealed sources (Models
Amersham-AMC:A1, AMC:
and AMC:D2; DuPont
NER-478C; and Isotope
Products XFB and GFS)

C. Not to exceed 500
millicuries per source
and 25 curies total

D. Curium 244

D. Sealed sources (Models
Amersham CLCL and
CLC:A1; and Isotope
Products XFB)

D. Not to exceed 200
millicuries per source
and 25 curies total

E. Any byproduct material
atomic numbers 1 through 83

E. Any sealed, plated, or
foil sources

E. Not to exceed 50
millicuries per source
and 500 millicuries total

9. Authorized use

- A. through D. For use and/or possession incident to:
1) Research and development as defined in 10 CFR 30.4.
2) Manufacturing and testing of analyzer devices.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License number

37-28461-01

Docket or Reference number

030-31437

Amendment No. 02

(9. continued)

- 3) Installation into or removal from analyzer devices.
- 4) Repair and servicing of Metorex Inc. and Outokumpu Electronics devices.
- 5) Calibration of instruments.
- 6) Receipt, storage, and transfer of Princeton Gamma Tech, Metorex Inc. and Outokumpu Electronics, devices from customers for disposal.
- 7) Demonstrations of Metorex Inc. and Outokumpu Electronics devices.
- 8) Distribution in Princeton Gamma Tech, Metorex Inc. and Outokumpu Electronic devices to persons authorized to receive licensed material pursuant to the terms and conditions of specific licenses issued by the U.S. Nuclear Regulatory Agency or any Agreement State.
- 9) Instruction and training in the use of Metorex Inc. and Outokumpu Electronic devices.

E. Calibration of instruments.

CONDITIONS

10. Licensed material may be used only at the licensee's facilities located at 860 Town Center Drive, Langhorne, Pennsylvania 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 only be used by or under the supervision of, individuals who have received the training described in letter dated March 6, 1990 and have been designated in writing by the Radiation Safety Officer.
B. The Radiation Safety Officer for this license is Stanlaw Piorek, Ph.D.
12. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 10 CFR 32.210, not to exceed three years.
B. Notwithstanding Paragraph A of this Condition, sealed sources designed to emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed three months.
C. In the absence of a certificate from a transferor indicating that a leak test has been made within six months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.
D. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number

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030-31437

Amendment No. 02

(12. continued)

CONDITIONS

- E. Sealed sources and detector cells need not be leak tested if:
- (i) they contain only hydrogen-3; or
 - (ii) they contain only a radioactive gas; or
 - (iii) the half-life of the isotope is 30 days or less; or
 - (iv) they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material; or
 - (v) they are not designed to emit alpha particles, are in storage, and are not being used. However, when they are removed from storage for use or transfer to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source or detector cell shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- F. The test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission and the source or detector cell shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within five days of the date the leak test results are known with the U.S. Nuclear Regulatory Commission, Region I, ATTN: Chief, Nuclear Materials Safety Branch, 475 Allendale Road, King of Prussia, Pennsylvania 19406. The report shall specify the source or detector cell involved, the test results, and corrective action taken.
- G. The licensee is authorized to collect leak test samples for analysis by the licensee. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
13. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.
14. The licensee shall conduct a physical inventory every six months to account for all sealed sources and devices containing licensed material received and possessed under the license.
15. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.
16. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License No.	PAGE 4 OF 4 PAGES
37-28461-01	
Docket or Reference number	
030-31437	
Amendment No. 02	

(Continued)

CONDITIONS

17. 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 December 7, 1989
- B. Letter dated March 6, 1990
- C. Letter dated November 10, 1993
- D. Letter dated April 20, 1994
- E. Letter dated March 28, 1995



For the U.S. Nuclear Regulatory Commission

Original Signed By:

By John R. McGrath

Nuclear Materials Safety Branch
Region I

King of Prussia, Pennsylvania 19406

Date OCT 12 1995

MATERIALS LICENSE

Amendment No. 02

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, 36, 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 1. Metorex Inc. 2. 860 Town Center Drive Langhorne, Pennsylvania 19047		In accordance with the letter dated March 28, 1995, 3. License Number 37-28461-02G is amended in its entirety to read as follows:
		4. Expiration Date October 31, 2000
		5. Docket or Reference No. 030-31454
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. As specified in Condition 11	A. As specified in Condition 11	A. Not applicable
9. Authorized use		
A. Pursuant to 10 CFR 32.51, the licensee is authorized to distribute the devices containing sealed sources specified in Condition 11 of this license to persons generally licensed pursuant to 10 CFR 31.5 or equivalent provisions of the regulations of any Agreement State.		

CONDITIONS

10. The licensee may distribute material from 860 Town Center Drive, Langhorne, Pennsylvania.
11. Each device distributed pursuant to the conditions of this license shall be in accordance with the following table:

Device Model Number	Isotope	Source Model Number	Maximum Activity Per Source
Metorex Inc., formerly Outokumpu Electronics Model Courier 10 x-ray fluorescence analyzer	Iron 55	Amersham IEC.A1	80 millicuries
	Cadmium 109	Amersham CUC.D1 or Amersham CUC.D1N	20 millicuries
	Americium 241	Amersham AMC.D2	30 millicuries
	Curium 244	Amersham CLCL	100 millicuries

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number

37-28461-026

Docket or Reference Number

030-31454

Amendment No. 02

Device Model Number	Isotope	Source Model Number	Maximum Activity Per Source
Metorex Inc., formerly Outokumpu Electronics Model Courier 20 x-ray fluorescence analyzer	Iron 55	Amersham IEC.A1	200 millicuries
	Cadmium 109	Amersham CUC.A1N or Amersham CUC.A1	20 millicuries
	Americium 241	Amersham AMC.A1	30 millicuries
	Curium-244	Amersham CLC.A1	100 millicuries
Metorex Inc., formerly Outokumpu Electronics Models 820, 840, and 880 portable x-ray, fluorescence analyzer	Iron 55	Amersham IEC.A1 or DuPont NER-462 or Isotope Products XFB	80 millicuries
	Cadmium 109	Amersham CUC.D1 or Amersham CUC.D1N or DuPont NER-465 or Isotope Products XFB	20 millicuries
	Americium 241	Amersham AMC.D2 or DuPont NER-478 or Isotope Products XFB or Isotope Products GFS	30 millicuries
	Curium 244	Amersham CLCL or Isotope Products XFB	100 millicuries
	Metorex Inc., formerly Outokumpu Electronics Model DOPS x-ray fluorescence probe	Iron 55	Isotope Products XFB
	Cadmium 109	Amersham CUC.D1 or Amersham CUC.D1N or DuPont NER-465 or Isotope Products XFB	20 millicuries
	Americium 241	Amersham AMC.D2 or DuPont NER-478 or Isotope Products XFB or Isotope Products GFS	30 millicuries
	Curium 244	Amersham CLCL	100 millicuries

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number

37-28461-02G

Docket or Reference Number

030-31454

Amendment No. 02

Device Model Number	Isotope	Source Model Number	Maximum Activity Per Source
Metorex Inc., formerly Outokumpu Electronics Model SAPS x-ray fluorescence probe	Iron 55	Isotope Products XFB	40 millicuries
	Cadmium 109	Amersham CUC.D1 or Amersham CUC.D1N or DuPont NER-465 or Isotope Products XFB	20 millicuries
	Americium 241	Amersham AMC.D2 or DuPont NER-478 or Isotope Products XFB or Isotope Products GFS	30 millicuries
	Curium 244	Amersham CLCL	100 millicuries
Metorex Inc., formerly Outokumpu Electronics Model HEPS x-ray fluorescence probe	Iron 55	Isotope Products XFB	40 millicuries
	Cadmium 109	Amersham CUC.D1 or Amersham CUC.D1N or DuPont NER-465 or Isotope Products XFB	20 millicuries
	Americium 241	Amersham AMC.D2 or DuPont NER-478 or Isotope Products XFB or Isotope Products GFS	30 millicuries
	Curium 244	Amersham CLCL	100 millicuries
Metorex Inc., formerly Outokumpu Electronics Model LEPS x-ray fluorescence probe	Iron 55	Amersham IEC.A1	80 millicuries

**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License Number	37-28461-02G
Docket or Reference number	030-31454
Amendment No. 02	

<u>Device Model Number</u>	<u>Isotope</u>	<u>Source Model Number</u>	<u>Maximum Activity Per Source</u>
Metorex Inc., formerly Outokumpu Electronics Model SLPS x-ray fluorescence probe	Iron 55	Amersham IEC.A1	40 millicuries

Metorex Inc., formerly Outokumpu Electronics Model SSPS x-ray fluorescence probe	Iron 55	Isotope Products XFB	40 millicuries
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Cadmium 109	Amersham CUC.D1 or Amersham CUC.D1N or DuPont NER-465 or Isotope Products XFB	20 millicuries
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Americium 241	Amersham AMG.D2 or DuPont NER-478 or Isotope Products XFB or Isotope Products GFS	30 millicuries
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12. This license does not authorize possession or use of licensed material.
13. 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 December 7, 1989
 - B. Letter dated March 6, 1990
 - C. Letter dated November 12, 1993
 - D. Letter dated April 20, 1994
 - E. Letter dated March 28, 1995

Date OCT 12 1995

For the U.S. Nuclear Regulatory Commission

Original Signed By:
By John R. McGrath
Nuclear Materials Safety Branch
Region I
King of Prussia, Pennsylvania 19406

DEPARTMENT OF HEALTH SERVICES

714/744 P STREET

P.O. BOX 942732

SACRAMENTO, CA 94234-7320

(916) 445-0931

December 28, 1994



NOTICE OF RECEIPT OF RENEWAL APPLICATION FOR REVIEW

FISONS INSTRUMENTS
355 SHOREWAY ROAD
SAN CARLOS, CALIFORNIA 94070

ATTN: JOHN HARRISON
RADIATION SAFETY OFFICER

REFERENCE: DOCKET NUMBER: 122894-1655-41

LICENSE NUMBER: 1655-41

APPLICATION DATED: DECEMBER 23, 1994

The above captioned renewal application has been received and docketed for review. Your application is deemed timely and accordingly, the license will not expire until final action has been taken by the Department.

This application will be taken up in the order received.

Correspondence or other communication concerning the above referenced application must be submitted **in duplicate** and should make clear reference to your assigned docket number pertaining to this specific request. Future requests, not related to the above request, will be assigned a new docket number.

Thank you.

RADIOACTIVE MATERIALS LICENSING
RADIOLOGIC HEALTH BRANCH

RADIOACTIVE MATERIAL LICENSE

Pursuant to the California Code of Regulations, Division 1, Title 17, Chapter 5, Subchapter 4, Group 2, Licensing of Radioactive Material, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, use, possess, transfer, or dispose of radioactive material listed below, and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules, regulations, and orders of the Department of Health Services now or hereafter in effect and to any standard or specific condition specified in this license.

1. Licensee	John Harrison	3. License No.	1655-41	Amendment No:	56
2. Address	140 Sutherland Drive Auburn, CA 95604	4. Expiration date	January 22, 1995	(3)	
Attention:	John Harrison Radiation Safety Officer	5. Inspection agency	Radiologic Health Branch Berkeley		

License Number 1655-31 is hereby amended as follows:

6. Nuclide	7. Form	8. Possession Limit
A. Any radionuclide with atomic numbers 3-83 except: (1) Strontium 90 and (2) Lead 210	A. Check sources	A. 250 sources not to exceed 100 microcuries each.
B. Any radionuclide with atomic numbers 3-83 except: (1) Strontium 90 and (2) Lead 210	B. Sealed sources, manufactured, labeled, packaged and distributed in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State.	B. 200 sources not to exceed 100 millicuries each.
C. Americium 241	C. Sealed sources, manufactured, labeled, packaged and distributed in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State.	C. 8 sources not to exceed 100 millicuries each.
D. Americium 241	D. Sealed sources, manufactured, labeled, packaged and distributed in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State.	D. 4 sources not to exceed 1 curie each.

State of California Health and Welfare Agency

Department of Health Services

Page 2 of 7 pages

RADIOACTIVE MATERIAL LICENSE

License Number: 1655-41

Supplementary Sheet

Amendment Number: 56

E. Plutonium 238	E. Sealed sources, manufactured, labeled, packaged and distributed in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State.	E. 2 sources not to exceed 100 millicuries total.
F. Curium 244	F. Sealed sources (Isotope Products, XANK-244-NT)	F. 7 sources not to exceed 5 millicuries each.
G. Curium 244	G. Sealed sources (IPL Model AF-244-C)	G. 2 sources not to exceed 1 millicurie each.
H. Uranium, natural or depleted	H. Solid	H. 15 pounds
I. Americium 241	I. Sealed sources, manufactured, labeled, packaged and distributed in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State.	I. 60 sources not to exceed 10 millicuries.
J. Curium 244	J. Plated sources (IPL)	J. 3 sources not to exceed 2 microcuries each.
K. Cesium 137	K. Sealed source (N.E.N. Model NER-570)	K. 1 source not to exceed 1.0 curies.
L. Thorium 228	L. Sealed source (IPL Model GF-228R)	L. 1 source not to exceed 200
M. Nickel 63	M. Foils	M. 20 sources not to exceed 10 millicuries each.
N. Iron 55	N. Any	N.-O. Not to exceed 10 millicuries.
O. Cobalt 57	O. Any	

RADIOACTIVE MATERIAL LICENSE

License Number: 1655-41

Supplementary Sheet

Amendment Number: 569. Authorized Use

- A. To be used as check sources for testing and calibration of instruments and devices.
- B.-E. and I. To be used in the manufacture of devices and distribution of such devices to specific licensees of the Nuclear Regulatory Commission or Agreement States; in calibration, testing, maintenance, demonstration, and repair of devices containing sealed sources; and research and development in the field of x-ray fluorescence.
- F. To be used in research and development of analytical systems.
- G. To be used for Calibration, testing and research and development in the fields of x-ray fluorescence.
- H. To be used for research and development in the field of x-ray fluorescence.
- J. To be used for testing and evaluating silicon detectors.
- K. To be used in a custom source holder for calibration of survey meters (in-house only).
- L. To be used in-house for research and development.
- M. To be used in routine servicing and/or repair of G.C. devices including the removal, cleaning and replacement of foil sources.
- N.-O. To be used in the manufacture of sealed sources for in-house use and for distribution to specific licensees of the Nuclear Regulatory Commission or Agreement States.

LICENSE CONDITIONS

10. Radioactive material shall be used only at the following locations:
- (a) 140 Sutherland Drive, Auburn, CA.
 - (b) Temporary job sites of the licensee throughout the State of California, except areas under federal jurisdiction, limited to demonstration, maintenance and repair of devices manufactured by the licensee.
11. This license is subject to an annual fee for sources of radioactive material authorized to be possessed at any one time as specified in Item 6, 7, 8 and 9 of this license. The annual fee for this license is required by and computed in accordance with Title 17, California Code of Regulations, Sections 30230-30232 and is also subject to an annual cost-of-living adjustment pursuant to Section 113 of the California Health and Safety Code.

RADIOACTIVE MATERIAL LICENSE

License Number: 1655-41

Supplementary Sheet

Amendment Number: 56

12. (a) Radioactive material described in all subitems of this license may be used by the following individuals:

- (1) John Harrison
- (2) Clad E. McNeilly, Ph.D.

- (b) Radioactive material described in all subitems except K and L may be used by the following individuals:

- | | |
|---------------------|-------------------|
| (1) Gary Aden | (3) Jonny Kam |
| (2) Garry Baerwaldt | (4) Rolf Woldseth |

- (c) Radioactive material described in all subitems except K, L and N and demonstrations at temporary job sites may be used by, or under the supervision of, the following individuals:

- | | |
|------------------------|-----------------------|
| (1) Ron Bedier-Prairie | (7) George Jung |
| (2) James Bogert | (8) Vishwa Naicker |
| (3) Luis Cabrido | (9) Louie Schaffer |
| (4) John Colby | (10) Per O. Sjorman |
| (5) Brian Cross | (11) Brian Skillicorn |
| (6) Gary Domingos | (12) David Wherry |

- (d) Radioactive material contained in x-ray fluorescence devices manufactured by the licensee may be used for calibration, testing, maintenance, demonstration and repair by "Field Service Engineers" who have successfully completed the training program described in Condition 13 of this license and are authorized by the Radiation Safety Officer in writing. The licensee shall maintain a list of individuals so authorized for inspection by representatives of the Department.

13. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 7, 8 and 9 of this license in accordance with statements, representations, and procedures contained in the documents listed below. The Department's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

- (a) The application with attachments dated December 22, 1986, signed by John Harrison.
- (b) The letters with attachments dated April 27, 1988, November 2, 1988 and December 13, 1988, all signed by John Harrison.
- (c) The letter with attachments dated April 15, 1988, signed by Wilbur F. Sattler regarding quality assurance procedures for counter.

RADIOACTIVE MATERIAL LICENSE

License Number: 1655-41

Supplementary Sheet

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13. Continued

- (d) The letter dated November 17, 1985, signed by John Harrison regarding leak tests on sealed sources as customer service.
- (e) The letter with attachments dated April 3, 1990, signed by Clad E. McNeilly, Ph.D., regarding vacating the Foster City location.
- (f) The letter dated April 23, 1991, signed by J.P. Halloran committing to license conditions and commitments.
- (g) The letter with attachments dated January 21, 1993, signed by John Harrison relative to deletion of use location.
- (h) The letter with attachments dated September 9, 1993, signed by John Harrison, regarding change of radiation use area in the San Carlos facility.
- (i) The letter with attachments received July 14, 1994, modified by the letter with attachments dated September 29, 1994, all signed by John Harrison regarding routine servicing and repair cleaning and replacement of foil sources.
- (j) The letter with attachment dated June 4, 1996, and the letter dated July 14, 1996, both signed by John Harrison, and the letter dated July 12, 1996, signed by Louie Schaffer, Vice President of Kevex, Inc., regarding name change, addition of nuclides, request for a variance to possess up to 10 mCi of Co-57 and relocation to 140 Sutherland Drive, Auburn, CA.

- 14. (a) The Radiation Safety Officer in this program shall be John Harrison.
- (b) The Alternate Radiation Safety Officers in this program shall be Louie Schaffer.
- 15. Sealed sources possessed under this license shall be tested for leakage and/or contamination as required by Title 17, California Radiation Control Regulations, Section 30275 (c).
- 16. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and/or contamination prior to use or transfer as a sealed source. If the inspection or test reveals any construction defects or 0.005 microcuries or greater of contamination, the source shall not be used or transferred as a sealed source until it has been repaired, decontaminated, and retested.
- 17. Quantitative analytical assays for the purpose of tests for leakage and/or contamination of sealed sources shall be performed only by persons specifically authorized to perform that service.
- 18. The following individuals are authorized to collect wipe test samples of sealed sources possessed under this license using leak test kits acceptable to the California Department of Health Services:
 - (a) The Radiation Safety Officer
 - (b) Qualified individuals designated in writing by the Radiation Safety Officer

RADIOACTIVE MATERIAL LICENSE

License Number: 1655-41

Supplementary Sheet

Amendment Number: 56

19. Records of leak test results shall be kept in units of microcuries and maintained for inspection. Records may be disposed of following Department inspection. Any leak test revealing the presence of 0.005 microcuries or more of removable radioactive material shall be reported to the Department of Health Services, Radiologic Health Branch, 601 N. 7th Street P.O. Box 942732, Sacramento, CA 94234-7320, within five days of the test. This report shall include a description of the defective source or device, the results of the test, and the corrective action taken.
20. The vacuum chamber used with the device in Item 9.G shall be tested for alpha contamination at three-month intervals. The device described in Item 9.G shall be tested for alpha leakage and/or contamination at intervals not to exceed six months.
21. The licensee is authorized to perform tests for leakage and/or contamination of sealed sources. The following tests may be performed for sources possessed under this license and as a customer service:
 - (a) Collection of wipe test samples from Kevex sealed sources and Kevex devices containing sealed sources.
 - (b) Furnishing leak test kits Model KVVX-L-Test for Kevex sealed sources and Kevex devices containing sealed sources to customers authorized to use such leak test kits.
 - (c) Analysis of materials collected by the licensee as stated in (a) above and material returned by customers from leak test kits listed in (b) above for amount of radioactivity. Reports to customers of analysis shall be in microcuries.
 - (d) This authorization only applies to Americium 241, Cadmium 109, Iron 55, cobalt 57, Curium 244 and Cesium 137.
22. The licensee shall conduct a physical inventory every six months to account for all sealed sources and/or devices received and possessed under the license. Records of the inventories shall be maintained for inspection, and may be disposed of following Department inspection.
23. The licensee shall distribute only sealed sources and/or devices for which a Sealed Source and Device Registry Document has been issued or otherwise approved by the California Department of Health Services, the U.S. Nuclear Regulatory Commission, or other Agreement State. Sealed sources and/or devices distributed must adhere to the design specifications described in the Sealed Source and Device Registry Document. Any changes in the design or specifications of these sealed sources and/or devices require the manufacturer to apply for and receive an amendment to the Sealed Source and Device Registry Document prior to distribution.

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RADIOACTIVE MATERIAL LICENSE

License Number: 1655-41

Supplementary Sheet

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24. The licensee shall comply with all requirements of Title 17, California Code of Regulations, Section 30373 when transporting or delivering radioactive materials to a carrier for shipment. These requirements include; (packaging, marking, labeling, loading, storage, placarding, monitoring, and accident reporting). Shipping papers shall be maintained for inspection pursuant to the U.S. Department of Transportation requirements (Title 49, Code of Federal Regulations, Part 172, Sections 172.200 through 172.204).

For the State Department of Health Services

Date July 1, 1996

By: Edward Wong

Radiologic Health Branch
P.O. Box 942732, Sacramento, CA 94234-7320

DEC 23 1996

License No. 20-19908-02
Docket No. 030-32909
Control No. 123991

Jolene M. Haggard, Leader and Counsel
Environmental Health and Safety
General Electric Company
G. E. Aircraft Engines
1000 Western Avenue
Lynn, MA 01910

Dear Ms. Haggard:

This is in reference to your letter dated December 2, 1996 requesting to terminate Nuclear Regulatory Commission License No. 20-19908-02. In order to continue our review, we need the following additional information:

1. Your letter states that all licensed materials associated with this license have been transferred to the appropriate licensed vendors. Please provide the NRC or Agreement State license for these vendors.
2. Please have a General Electric Company certifying official complete, sign and return the enclosed NRC Form 314, "Certificate of Disposition of Materials."

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I Office and refer to Mail Control No. 123991. If you have any technical questions regarding this deficiency letter, please call me at (610) 337-6951.

If we do not receive a reply from you within 30 calendar days from the date of this letter, we shall assume that you do not wish to pursue your application.

Sincerely,
Original Signed By
James M. Bondick

James M. Bondick
Health Physicist
Division of Nuclear Materials Safety

OFFICIAL RECORD COPY

ML 10

License No. 20-19908-02
Docket No. 030-32909
Control No. 123991

Enclosures:

1. 10 CFR Part 30
2. NRC Form 314

DOCUMENT NAME: R:\WPS\DLTR\D2019908.02

To receive a copy of this document, indicate in the box: "C" = Copy w/o attach/encl "E" = Copy w/ attach/encl "N" = No copy

OFFICE	DNMS/RI	N	DNMS/RI				
NAME	JBondick/jmb <i>JB</i>						
DATE	12/20/96	12/ /96	12/ /96	12/ /96	12/ /96		

OFFICIAL RECORD COPY



036-32909

GE Aircraft Engines

General Electric Company
1000 Western Ave., Lynn, MA 01910

December 2, 1996

U.S. Nuclear Regulatory Commission, Region I
475 Allendale Road
King of Prussia, PA 19406-1415
Attn: Mr. John Kinneman

Subject: Radioactive Materials License Termination

Dear Sir:

General Electric Aircraft Engines hereby requests the termination of byproduct materials license number 20-19908-02. All of the licensed materials associated with this license have been transferred to the appropriate licensed vendors. There has been no detection of materia leakage from any of the licensed sources possessed under this license. Enclosed are the transfer documents and the most current leak test results associated with the final disposition of the licensed materials possessed under this license.

If you have any questions regarding this matter or require further information, please contact either Mr. Dan Montanaro at (617)594-2655, or Mr. Peter Chin at (617)589-1867.

Sincerely,

Jolene M. Haggard, Leader and Counsel
Environmental, Health and Safety

**John Harrison**Radiation Safety and Training
Calibration Source Production
Sealed Source Leak-Testing
Radiation Meter Calibration

◆ 140 Sutherland Drive, Auburn, California 95603 ◆

phone: 916.888.0800 | pager: 415.907.8763 | e-mail: jvhjr@newworld.net

General Electric
Peter Chin
M-S 16301
1000 Western Av
Lynn, MA 01910

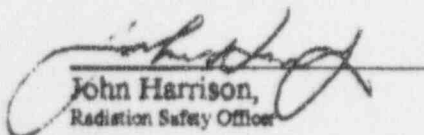
6 Nov, 1996

Receipt of radioactive sealed sources

Your sealed sources, consisting of the following:

Serial No.	containing
13866	21 mCi of Cd109 and 21 mCi of Am241
3852A	21 mCi of Cd109 and 21 mCi of Am241
XSB0074	30 mCi of Cd109 and 7 mCi of Am241

were received by me. All of the radioactive materials will be properly reused or disposed of according to California radioactive materials license no. 1655-41.


John Harrison,
Radiation Safety Officer

Kevex

355 Shoreway Road
San Carlos, CA 94070

Tel. 800 495-3E19
Fax. 415 637-0772

Leak test samples are obtained using a "K-EVEX-TEST" kit as authorized by our California Radioactive Materials License, # 1655-41.

General Electric
Peter Chin
M-S 16301
1000 Western Av
Lynn, MA 01910

NOTICE:

Save this certificate !

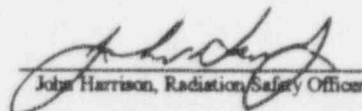
Most regulatory agencies require that you leak-test your sealed radioactive source before you use it and at six month intervals thereafter. You may be asked to show proof of compliance during an inspection by the regulatory agency.

*** Leak Test Certificate ***

The sealed source(s) noted below was/were checked for leakage by wiping the source(s) and the holder assembly with a moistened swab which was then analyzed for contamination using a window-less gas-flow proportional counter. The test showed less than 0.001 microCuries of leakage (contamination). The maximum allowable leakage is 0.005 microCuries.

----- This radioactive sealed source **PASSES** the leak-test -----

Source serial #	Activity, Isotope, and Assay Date	Activity, Isotope, and Assay Date	Leak test Collected by:	Leak test Analyzed by:	Leak test Due Date
13866	21 mCi of Cd109 as of 1 Sep 92	21 mCi of Am241 as of 1 Sep 81	Dennis Puglia on 16 May 96	John Harrison on 17 Jun 96	16 Nov 1996


John Harrison, Radiation Safety Officer

Kevex

355 Shoreway Road
San Carlos, CA 94070

Tel. 800 495-3839
Fax. 415 637-0572

Leak test samples are obtained using a "KVX-L-TEST" kit as authorized by our California Radioactive Materials License, # 1655-41.

General Electric
Peter Chin
M-S 16301
1000 Western Av
Lynn, MA 01910

NOTICE:

Save this certificate !

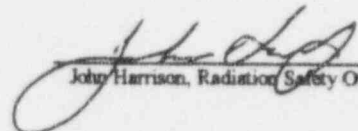
Most regulatory agencies require that you leak-test your sealed radioactive source before you use it and at six month intervals thereafter. You may be asked to show proof of compliance during an inspection by the regulatory agency.

*** Leak Test Certificate ***

The sealed source(s) noted below was/were checked for leakage by wiping the source(s) and the holder assembly with a moistened swab which was then analyzed for contamination using a window-less gas-flow proportional counter. The test showed less than 0.001 microCuries of leakage (contamination). The maximum allowable leakage is 0.005 microCuries.

----- This radioactive sealed source **passes** the leak-test -----

Source serial #	Activity, Isotope, and Assay Date	Activity, Isotope, and Assay Date	Leak test Collected by:	Leak test Analyzed by:	Leak test Due Date
3852A	21 mCi of Cd109	21 mCi of Am241	Dennis Puglia on 16 May 96	John Harrison on 17 Jun 96	16 Nov 1996


John Harrison, Radiation Safety Officer

1 2 3 9 9 1

Kevex

355 Shoreway Road
San Carlos, CA 94070

Tel. 800 495-3839
Fax. 415 637-0572

Leak test samples are obtained using a "KVL-TEST" kit as authorized by our California Radioactive Materials License, # 1655-41.

General Electric
Peter Chin
M-S 16301
1000 Western Av
Lynn, MA 01910

NOTICE:

Save this certificate !

Most regulatory agencies require that you leak-test your sealed radioactive source before you use it and at six month intervals thereafter. You may be asked to show proof of compliance during an inspection by the regulatory agency.

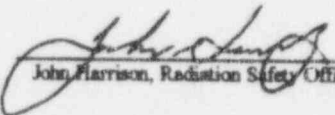
* * * Leak Test Certificate * * *

The sealed source(s) noted below was/were checked for leakage by wiping the source(s) and the holder assembly with a moistened swab which was then analyzed for contamination using a window-less gas-flow proportional counter. The test showed less than 0.001 microCuries of leakage (contamination). The maximum allowable leakage is 0.005 microCuries.

----- This radioactive sealed source **passes** the leak-test -----

Source serial #	Activity, Isotope, and Assay Date	Activity, Isotope, and Assay Date	Leak test Collected by:	Leak test Analyzed by:	Leak test Due Date
-----------------	-----------------------------------	-----------------------------------	-------------------------	------------------------	--------------------

XSB0074	30 mCi of Cd109	7 mCi of Am241	Dennis Puglia on 16 May 96	John Harrison on 17 Jun 96	16 Nov 1996
---------	-----------------	----------------	-------------------------------	-------------------------------	-------------


John Harrison, Radiation Safety Officer



October 14, 1996

Mr. Dan Montanaro
GE Aircraft Engines
1000 Western Avenue, MD646M3
Lynn, MA 01910

Reference PO# 996598L

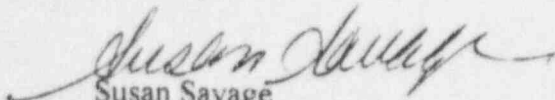
Dear Mr. Montanaro:

We hereby acknowledge receipt and accept ownership of your old Cd-109/5mCi source, sn S232 ; your old Fe-55/40mCi source, sn 2346LG ; and your Am-241/30mCi, sn 1770LV.

If you have any questions, please feel free to contact Dr. Stanislaw Piorek, RSO, or myself.

Thank you for your support of METOREX products.

Sincerely,


Susan Savage
Operations Coordinator

METOREX INC.

Street address
860 Town Center Drive
Langhorne, PA 19047

Telephone
1-215-741-4482

Teletex
1-215-741-6365

Mitchell S. Galanek & Associates, Inc.

Health Physics Consultants
P.O. Box 397366 MIT Station
Cambridge, MA 02139
Telephone: 617 258-9457

September 4, 1998

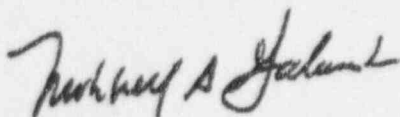
GE Aircraft Company
1000 Western Avenue
Lynn, MA 01910

Attention: Mr. Dan Montanaro, RSO

The following are the results obtained from the sealed source leak tests submitted to this laboratory for radioactivity analysis:

<u>Sample ID</u>	<u>Nuclide</u>	<u>Amount</u>	<u>Date</u>	<u>Results(uCi)</u>
SN-2348LG	⁶⁰ Fe	20 mCi	11/86	< 5.0 X 10 ⁻⁰⁶
SN-97333/S 232	¹⁰⁶ Cd	5 mCi	1/82	< 5.0 x 10 ⁻⁰⁶
SN-1770LV	²⁴¹ Am	30 mCi	8/86	< 5.0 x 10 ⁻⁰⁶

The results of the wipe showed no detectable radioactivity. The wipe tests were performed on 8-27-98. The samples were analysed on 9-04-98. The samples were analysed in a Canberra Model 2400 low background proportional counter that is calibrated with NIST traceable alpha and beta standards. If you have any questions, please give me a call.



Mitchell S. Galanek
Certified Health Physicist
NRC License #20-13302-01

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)
INFORMATION FROM LTS

PROGRAM CODE: 03122
STATUS CODE: 0
FEE CATEGORY: 3P
EXP. DATE: 20021031
FEE COMMENTS: -----
DECOM FIN ASSUR REQD: N
.....

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: GENERAL ELECTRIC COMPANY
RECEIVED DATE: 961206
DOCKET NO: 3032909
CONTROL NO.: 123991
LICENSE NO.: 20-19908-02
ACTION TYPE: TERMINATION

2. FEE ATTACHED

AMOUNT: -----
CHECK NO.: -----

3. COMMENTS

SIGNED Brown, R. J.
DATE 12/18/96

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1 ✓)

1. FEE CATEGORY AND AMOUNT: 3P

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT -----
RENEWAL -----
LICENSE -----

3. OTHER -----

SIGNED -----
DATE -----

1996 DEC 23 PM 1:55

RECEIVED BY LFDCB
Date <u>1/4/97</u>
<u>John S. I (97)</u>
<u>BB</u>
<u>1/4/97</u>