

SIEMENS

32-31021-01
070368A

October 30, 1989

U. S. Nuclear Regulatory Commission, Region III
Materials Licensing Section
799 Roosevelt Road
Glen Ellyn, IL 60137

R
033-12535
11-30-89
311
JCPA

RE: Radioactive Material License 12-00369-02

Enclosed in duplicate is our radioactive material license renewal application. The required fee of \$930 is also attached.

Please feel free to contact me if you require any additional information.

Sincerely,



Inid S. Deneau
Health Physicist
Health Physics Services

ISD/wb
Enc.

136513
NMSC/RGN MATERIALS-002

RECEIVED

OCT 31 1989

REGION III

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATIONS FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

U.S. NUCLEAR REGULATORY COMMISSION
DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY, NMSS
WASHINGTON, DC 20555

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS, IF YOU ARE LOCATED IN:

CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION I
NUCLEAR MATERIALS SAFETY SECTION B
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406

ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION II
NUCLEAR MATERIALS SAFETY SECTION
101 MARIETTA STREET, SUITE 2900
ATLANTA, GA 30333

IF YOU ARE LOCATED IN:

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION III
MATERIALS LICENSING SECTION
799 ROOSEVELT ROAD
GLEN ELLYN, IL 60137

ARKANSAS, COLORADO, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, SOUTH DAKOTA, TEXAS, UTAH, OR WYOMING, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
MATERIAL RADIATION PROTECTION SECTION
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TX 76011

ALASKA, ARIZONA, CALIFORNIA, HAWAII, NEVADA, OREGON, WASHINGTON, AND U.S. TERRITORIES AND POSSESSIONS IN THE PACIFIC, SEND APPLICATIONS TO:

U.S. NUCLEAR REGULATORY COMMISSION, REGION V
NUCLEAR MATERIALS SAFETY SECTION
1450 MARIA LANE, SUITE 210
WALNUT CREEK, CA 94596

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTION.

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- A. NEW LICENSE
 B. AMENDMENT TO LICENSE NUMBER _____
 C. RENEWAL OF LICENSE NUMBER 12-00369-02

2. NAME AND MAILING ADDRESS OF APPLICANT (Include Zip Code)

Siemens Gammasonics, Inc.
Health Physics Services
2501 N. Barrington Road
Hoffman Estates, IL 60195

3. ADDRESSES: WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED.

Licensed material to be possessed at Siemens Medical Systems field service offices located at the following addresses: See Attachment A

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Inid S. Deneau

TELEPHONE NUMBER

312-304-7296

SUBMIT ITEMS 5 THROUGH 11 ON 8 1/2 x 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

a. Element and mass number, b. chemical and/or physical form, and c. maximum amount which will be possessed at any one time.

6. PURPOSES: FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUALS: RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.

B. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

9. FACILITIES AND EQUIPMENT. NA

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSEE FEES (See 10 CFR 170 and Section 170.31)

FEE CATEGORY 3N AMOUNT ENCLOSED \$ 930.00

13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR 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.

SIGNATURE - CERTIFYING OFFICER

TYPED/PRINTED NAME

TITLE

DATE

Inid S. Deneau

Inid S. Deneau

Radiation Safety Officer

10/30/89

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	COMMENTS
AMOUNT RECEIVED	CHECK NUMBER		

RECEIVED

OCT 31 1989

REGION III

Item 5

1. a) Am-241 b) sealed source c) No single source to exceed 2.0 mCi each and/or 12.0 mCi each
2. a) Ba-133 b) sealed source c) No single source to exceed 1.0 mCi each

Item 6

Sources 1 and 2 in item 5 will be used in testing, calibration, repair and demonstration of nuclear medicine analytical and imaging systems.

Item 7

The Radiation Safety Officer for Siemens Gammasonics, Inc., Inid S. Deneau, and each designated Radiation Protection Officer, also the district manager for each office location, are responsible for the radiation safety program. See Attachment B for RSO's resume.

Item 8

All new field service engineers receive in house training at the Siemens Gammasonics, Inc., Hoffman Estates location. Each engineer becomes authorized after this training and are issued papers indicating this.

Item 10

The radiation safety program is as follows:

1. Administration of Radiation Safety Program

A. Corporate Radiation Safety Officer (Health Physicist)

The Radiation Safety Officer or RSO is responsible for radiation protection and licensing within the Siemens field offices. The responsibilities of the RSO are as follows:

1. Initiate programs to educate users in the safe handling of radioactive materials.
2. Implement any changes in governmental regulations.
3. Maintain all NRC licenses and all agreement state licenses for all field service offices (except California).
4. Order, receive, process, store, dispense, and dispose of all radioactive materials and maintain records of such.
5. Report any emergencies or incidents involving radioactive materials to the appropriate authorities.
6. Provide health physics services to all field service offices including leak test kits, processing, and certificates.
7. Maintain inventory information on all sealed sources located throughout the various field offices.

B. Radiation Protection Officer

The district manager at each field office location is the Radiation Protection Officer (RPO). The RPO is responsible for the safe use of all radioactive materials in their district. The responsibilities of the RPO are as follows:

1. Possess a copy of the Field Service Manual for Use of Radioactive Material and have a thorough understanding of its contents.
2. Comply with all federal, state, and Siemens policies for the safe use of radioactive materials as described in the field service manual.

3. Notify the Radiation Safety Officer regarding any changes within the district, including office location changes and changes in the sealed sources in his/her possession.
4. Maintain current records as required by federal and/or state agencies, as described elsewhere in this manual.
5. Report any emergencies or accidents with radioactive materials to the RSO.
6. Insure all personnel are monitored for exposure to radiation.
7. Retain on file a copy of the federal or state license issued to the district office and have an understanding of its contents.

C. Authorized Users

Authorization to use radioactive materials will be granted to individuals who demonstrate the ability to work with radioactive materials in a safe manner. The following are requirements for the authorized user:

1. Have sufficient training in the use of radioactive materials.
2. Follow all federal, state, and Siemens policies dealing with the use of radioactive materials as stated in the field service manual.
3. Keep their exposure to radiation As Low As Reasonably Achievable (ALARA).
4. Wear the radiation monitoring device issued.
5. Report any accidents involving radioactive material immediately to the Radiation Protection Officer.
6. Read and understand this manual.

In addition, female personnel handling radioactive materials shall be informed of the instructions concerning prenatal radiation exposure. (NRC Regulatory Guide 8.13). An example of this guide is found at the back of this manual and must be read.

2. Ordering and Receiving Radioactive Material

Radioactive materials are ordered through the corporate office, Siemens Gammasonics, Inc. (SGI) in Hoffman Estates,

and all orders are received by SGI. Upon receipt of a source, the sealed source is leak tested and a leak test certificate is completed. The sealed source is permanently loaded into either a lead or tungsten holder at SGI. The calibrator source is inventoried indicating the radionuclide, manufacturer's name, model number, serial number and assay date, activity, leak test date, receipt date and the service office's location of use. The source is then packed with the leak test certificate and shipped to the field service office. The leak test certificate is filed at the service office and the receipt date is logged.

3. Accountability of Sealed Sources

The Radiation Protection Officer is responsible for maintaining records of receipt, use and disposal of all radioactive materials in their district. Every six months Siemens Gammasonics sends inventories to each district office listing the sources in each district's possession. The RPO must make an accurate account of all sealed sources, listing any discrepancies, sign the inventory keeping the original and sending the copy back to Siemens Gammasonics. All copies are filed for future inspections.

4. Leak Testing of Sealed Sources

Sealed sources are leak tested by the field service engineers every six months. A Siemens QT-1 commercial leak test kit is utilized for this purpose. See Attachments C, D and E for a copy of the brochure describing the service, a copy of the leak test certificate and a set of instructions for performing the leak test.

5. Rules for Safe Use of Radioactive Sealed Sources

The general rules for the safe use of radioactive sealed sources are as follows:

- 1) Only the authorized user is allowed to handle the source.
- 2) Do not smoke, eat or drink while working with a source.
- 3) Do not look directly into the bore hole of the source holder or cover it with any part of your body.
- 4) Store the sealed source with the lead cap shielding the bore hole.
- 5) Do not point the uncovered bore hole of the source holder towards any person.
- 6) Do not remove the source pellet out of its holder.

- 7) Sources are stored in a locked box or cabinet when not in use. Sources are not left unattended.
- 8) Return decayed sealed sources for disposal to Health Physics Services, Siemens Gammasonics, Inc.

These procedures are incorporated in the Siemens field service office manual, "Standards and Procedures for the Safe Use of Radioactive Material".

6. Personnel Monitoring

All personnel in Siemens field service locations are required to have a film badge radiation monitor. Instructions concerning film badges are as follows:

- 1) The RPO is responsible for issuing film badges to his/her field service personnel.
- 2) Film badges are to be worn when working with radioactive materials.
- 3) Film badges are to be worn on the torso; belt, lapel, or pocket.
- 4) Film badges should not be tampered with or abused. The film is sensitive to heat, light and moisture. Do not tear the film packet.
- 5) A film badge must be worn only by the person to whom it is assigned.
- 6) Film badges are changed on a monthly basis. Expired film badges are returned to the Des Plaines office for processing by the RPO at the end of the monitoring period. The RPO is responsible for insuring that each badge is returned on time each month so that all exposure reports are up to date for inspection purposes.
- 7) Monthly film badge exposure reports must be reviewed and kept on file by the RPO. All reports are subject to inspection.
- 8) The RPO must investigate all incidents where radiation exposure is in excess of 300 mRem in any one calendar quarter. All findings must be reported to the RSO.

7. Radiation Emergency Procedures

A. Definition and Purpose

An emergency is any incident resulting from the use of radioactive material which might cause or has caused an

internal or external radiation hazard to personnel, the general public, equipment or facilities. Such incidents that may be considered an emergency are as follows:

1. Loss or theft or a radioactive source.
2. Sealed source rupture.
3. Fires involving a radioactive source.
4. Contamination of personnel, equipment or facility.

The RSO must be notified immediately of any emergency. It is the responsibility of the RSO to report any incident to the regulatory agency if necessary.

B. Loss or Theft of Source

All regulatory agencies require that a report be made as soon as it becomes known of the loss or theft of radioactive materials. It is the responsibility of the RPO to report immediately to the RSO if such an incident occurs. Reports should include the following information:

1. Description of material, quantity, serial number, and make of sealed source.
2. Description of circumstances concerning the incident, including where and how it was lost.
3. Actions that have been taken to recover the source.

The RSO will notify the appropriate authority.

C. Sealed Source Rupture

The rupture of a sealed source is very unlikely. Extreme stress is needed to cause such an incident. If a sealed source is ruptured contact the RSO. If the RSO cannot be contacted immediately, notify the state authorities or NRC office for help. Extreme care should be taken, especially in the case of a ruptured Americium-241 source. Precautions are as follows:

1. Do not handle the source without the use of gloves. If tweezers are at hand, use these to handle the source.
2. If possible, place the source in a sealed container, i.e., sealed plastic bag, to prevent any contamination.

3. Once the above is done, get away from the source and post a warning to keep out.
4. If nothing can be done, evacuate the area.

D. Fires Involving a Radioactive Source

In the event a sealed source is involved in a fire, the RSO must be notified immediately. Fire fighting personnel should be warned that a sealed source is involved and details concerning the radionuclide and quantity given. Indicate that the sealed source is a small calibration source and is used for testing and repair of instruments. The area must be surveyed after the fire and attempts made to recover the source. Once the source is found the following precautions must be taken:

1. Do not handle the source without gloves. The possibility of leakage remains. •
2. Confine the sealed source in a container, i.e., sealed plastic bag, if possible to prevent contamination.

E. Contamination of Personnel, Equipment, or Facility

Contamination is the presence of radioactive material in any area where it is not desired, and particularly in places where it may be harmful. If contamination is detected, the following must be done:

1. Skin and Hands: Wash approximately two minutes with a mild soap in warm water covering the affected area thoroughly. Particular attention should be given to the nails and cuticles when the hands are contaminated. Repeat two or three times.
2. Surfaces and Materials: Initial decontamination should be by flushing with water. If unsuccessful, the next step is to scrub with soap and water or soaking with commercially available cleansing agents as Radiacwash, Count-Off, or Isolclean. Gloves are worn at all times when decontaminating.

If contamination is suspected, be aware of the possibilities of ingestion or inhalation. Do not put contaminated hands to your mouth, nose, or eyes. Once any radioactivity enters the body it remains longer and results in continual exposure to the body.

Item 11

All radioactive sealed sources used in the field are sent to Siemens Gammasonics, Health Physics Services at Hoffman Estates, IL for disposal. A commercial radioactive waste disposal company is utilized for all radioactive disposals.

FIELD SERVICE DISTRICT OFFICES

Siemens Medical Systems
Nuclear Division
145 Rosemary Street
Needham Heights, Ma 02194
District Manager - Jack Comer

Siemens Medical Systems
Nuclear Division
23900 Haggerty Road
Building A
Farmington Hills, MI 48024
District Manager - Jim Newton

Siemens Medical Systems
Nuclear Division
111 Northfield Avenue
West Orange, NJ 07052
District Manager - Jack Comer

Siemens Medical Systems
Nuclear Division
2266 N. Palmer Drive
Schaumburg, IL 60173
District Manager - John Beck

Siemens Medical Systems
Nuclear Division
8039 Laurel Lakes Ct.
Laurel, MD 20707
District Manager - John Copeman

Siemens Medical Systems
Nuclear Division
1906 Craigshire
St. Louis, MO 63146
District Manager - Wayne Myers

Siemens Medical Systems
Nuclear Division
2939 Pacific Drive
Norcross, GA 30071
District Manager - Tom Schulte

Siemens Medical Systems
Nuclear Division
860 Hinckley Road
Burlingame, CA 94010
District Manager - John Balcomb

Siemens Medical Systems
Nuclear Division
13073 E. 166th St.
Cenitos, CA 90701
District Manager - Les Shehorn

Siemens Medical Systems
Nuclear Division
2020 N. Highway 360
Grand Prairie, TX 75050
District Manager - Pete Wysocki

Materials will also be used at temporary job sites throughout these states.

INID SARA DENEAU

EDUCATION

B.S., Bionucleonics - Radiation Health Physics, Purdue University 1978
Principal Courses:

Environmental Quality 1	Introductory Bionucleonics
Environmental Quality 11	Bionucleonics Laboratory
Applied Health Physics	Applied Bionucleonics
Health Physics Internship	Radiation Biology
Reactor Health Physics	
Environmental Systems Analysis of Trace Contaminants	

Courses in biology, chemistry, math, computer science, pharmacology, psychology, technical writing and supervision.

WORK EXPERIENCE

Radiation Safety Officer/Health Physicist. Employer - Siemens Gammasonics, Inc. Responsibilities include: Radiation safety program for Siemens Gammasonics and Nuclear Medicine Field Service offices throughout the United States, radioactive material licensing, training programs and film badge service. October 14, 1984 to present.

Associate Health Physicist. Employer - Siemens Gammasonics, Inc. Responsibilities include: Implementation of rules and regulations for the radiation safety program at Siemens Gammasonics and film badge customer service. January 23, 1984 to October 15, 1984.

Assistant Radiation Safety Officer. Employer - Indiana University Medical Center. April 1981 to January 1984.

Health Physics Technologist. Employer - Indiana University Medical Center, Radiation Safety Office. Responsibilities include: Personnel dosimetry, bioassays, instrument calibration, laboratory surveys, implant patient monitoring, radionuclide inventory and package monitoring. January 15, 1979 to April 1981.

Lab Technician. Employer - Dr. Robert Gurny in Industrial and Physical Pharmacy Department at Purdue University. Experience in gas chromatography, gel permeation chromatography, handling of radionuclides, animal work and working with liquid scintillation. Received own projects - collected and analyzed data. Summer 1978.

Health Physics Internship. Purdue University, Radiological Control Office. Experience in laboratory surveys, personnel dosimetry, package monitoring and instrument calibration. Fall semester 1978.

Preparation of manual - RADIATION SAFETY IN X-RAY DIFFRACTION - for use in introductory applied health physics course.

Unit Head in summer camp. Employer - Macy B. Hart (HSJ in Utica, Mississippi). Responsible for program planning and directing of counselors. Summer 1977.

Camp Counselor. Employer - Macy B. Hart, Summers 1976, 1975.
Employer - Steve Krams (CBM in Cleveland, Georgia),
Summers 1974, 1973.

Leak Testing Service

Siemens sealed source leak test service is designed to help you comply with the leak testing regulations of the U.S. Nuclear Regulatory Commission (1) and of Agreement States easily and economically.

Our model QT-1 leak test kit contains complete instructions and all materials necessary to do each test. Simply perform the test, complete the data sheet and return the kit to us.

We will analyze your test using instrumentation capable of detecting any alpha, beta or gamma emitting radionuclide in amounts less than 0.001 microcurie. In a few days your leak test certificate will be returned to you. In the event of a positive result greater than 0.001 microcurie, we will call you immediately to inform you

of the possibly hazardous situation. Additional health physics services can be provided if necessary.

Kits may be ordered as needed or on a continuous service basis. If continuous service is requested, we will automatically send you the required number of kits every six months. Before ordering, be sure your license authorizes you to perform this test. If not, your license can easily be amended.

To place your order or if you have any questions, please write or call us toll free at (800) 323-6015 (in Illinois, (312) 635-3387 collect).

(1) Code of Federal Regulations, Title 10, Parts 30, 31, 32 and 34.

QT-1 Sealed Source Leak Test Kit

Number of kits needed _____

Do you wish subscription service for automatic delivery every six months? YES _____ NO _____

Person to contact if a high reading should be detected:

NAME: _____ PHONE: _____

NRC or Agreement State License Number: _____

(NOTE: Be sure your license authorizes you to perform this test.)

BILL TO: _____

SHIP TO: _____

Zip Code _____

Zip Code _____

Purchase Order Number _____ Expires on _____

The price is \$35.00 for each kit shipped to you and includes analysis when the kit is returned to Siemens.

Authorized Signature

Date

Issued by Siemens Gammasonics, Inc., Health Physics Services
2000 Nuclear Drive, Des Plaines, Illinois 60018 (800) 323-6015 In Illinois (312) 635-3387

Siemens Gammasonics, Inc.

CONTROL NO. 88160
Printed in U.S.A.

Siemens Gammasonics, Inc.

Health Physics Services
2000 Nuclear Drive
Des Plaines, Illinois 60018

Customer #
Date sample collected:
Sample Collected by:
Name & Address

Health Physics Section
Assay Date
Operator
Type of Test

'LEAK TEST CERTIFICATE'

This report must be maintained in file
by the system owner for inspection by
N.R.C. or other state regulatory agency.

Sample#	Radionuclide	Source Description Manufacturer & Model #	Serial #	Calibration Date	Activity	Results in μ Ci

Attachment D
Item 10

SIEMENS

QT-1 Leak Testing Instructions For Sealed Sources

- 1). Leak tests may only be performed in accordance with your state and/or Federal License(s).
- 2). Make certain the source is in its shield or the shutter mechanism is closed (where applicable).
- 3). Remove the cotton swab from its test tube and moisten with alcohol or a mild detergent solution.
- 4). Don the pair of latex gloves and carefully wipe the external surface of the fixture, gauge, shield, etc. Wherever, in the event of source leakage, contamination would most likely appear (weld beads, bolt heads, nuts, washers, obvious dents, rust, circumference at base of opening or closing shaft or shutter slide mechanism, if exposed, etc.)
- 5). Return the swab to its tube and remove the latex gloves. Identify the test tube using the source serial number and the label provided. Put the tube and gloves back in the box.
- 6). Complete the enclosed information sheet, place in box, and return the material to us using the label provided with the kit.
- 7). Analysis of leak test samples will be performed by qualified personnel and a Certificate confirming the results will be promptly mailed. In the event that removable contamination, in excess of 0.001 microcurie is observed, we will contact you immediately.