RADIOACTIVE MATERIALS PROGRAM

GUIDE AND APPLICATION FOR LICENSING OF SELF-CONTAINED GAMMA IRRADIATORS

State of Georgia
Dept. Of Natural Resources
Environmental Protection Div.

Radioactive Materials Program
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I. PURPOSE OF GUIDE

This guide describes the information needed by the Georgia Radioactive Materials Program to assist applicants and licensees in preparing applications for new licenses, license amendments, and license renewals for the use of sealed sources in self contained, dry source-storage gamma irradiators (Also known as Category I).

This guide is intended to provide you, the applicant or licensee, with information that will enable you to understand specific regulatory requirements and licensing policies as they apply to self contained, dry source-storage gamma irradiator licenses. The following Georgia Regulations apply and should be used in conjunction with this guide. The applicant or licensee should carefully read the applicable Regulations. This guide should not be considered as an all inclusive and complete substitution for understanding the Regulations, training in radiation safety or developing and implementing an effective Radiation Protection Program.

Rule 391-3-17-.01 "General Provisions, Amended."

Rule 391-3-17-.02 "Licensing of Radioactive Materials, Amended."

Rule 391-3-17-.03 "Standards for Protection Against Radiation, Amended."

Rule 391-3-17-.06 "Transportation of Radioactive Materials, Amended."

Rule 391-3-17-.07 "Notices, Instructions and Reports to Workers; Inspections, Amended."

AS LOW AS IS REASONABLY ACHIEVABLE (ALARA) PHILOSOPHY

Georgia Rule 391-3-17-.03 (4)(b) states "The licensee shall use, to the extent practicable, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA)." As an applicant, you must have an ALARA plan that embraces this philosophy when developing plans for working with radioactive materials.

This radiation safety program must be reviewed at least annually for the effectiveness of implementation. Licensees are required to maintain records of their radiation protection program until the Department terminates the pertinent license. Licensee must maintain records of audits and other reviews of their program and implementations for three (3) years after the record has been made.

II. FILING AN APPLICATION

Complete the form "Application for a Radioactive Materials License"(Appendix A). Complete Items 1 through 4 on the form itself. For items 5 through 13 submit the information on supplementary pages. Each separate sheet or document submitted with the application needs to be identified and keyed to the item number on the application to which it refers. All typed pages, sketches, or drawings should be on 8-1/2 X 11 inch paper to facilitate handling and review. All items should be completed and detailed enough for the Department to determine that your equipment, facilities, training and experience, and radiation safety program are adequate to protect health and minimize danger to life and property.

Public Availability of Records

Licensees should remember that all documents submitted to the State of Georgia may be made available to the public.

The Department recommends that the licensee not include in any submittal trade secrets or personal information about your employees, unless the information is directly related to radiation safety or specifically required by the Department. For example (1) information submitted on training and experience of employees should be limited to training related to radiation safety; (2) home addresses and home telephone numbers should be submitted only if they are part of the emergency procedures; and (3) dates of birth, social security numbers, and radiation dose information should be submitted only if specifically required by the Department.

If you submit trade secrets, proprietary information, or personnel information that you want withheld from public disclosure, you must request withholding in accordance with procedures specified in the Georgia Open Records Law*. Failure to follow this procedure may result in disclosure of the information to the public and/or substantial delays in processing your submittals. Using labels such as "confidential" or "restricted" may not guarantee that your documents will be withheld.

III. CONTENTS OF AN APPLICATION

Item 1. License Information

Indicate whether this is an application for a new license, an amendment, or a renewal. If this is an amendment or a renewal, please identify the license number. An amendment request may be submitted in a letter form without using the application. For an amendment, the licensee must identify the GA. license number and give the business name. In all cases, the appropriate license fee must accompany the application in order to process the request. (See Item 12., License Fees, for the correct fee and mailing address.)

Item 2.A. Name and Mailing Address of Applicant

Enter the applicant's name, mailing address, county, telephone number, and **Internet address** if applicable. The applicant should use the legal name of the corporation and/or should be the legal entity with direct control over the use of the radioactive material. If the applicant is a private practice, the individual should be acting in a private capacity.

Item 2.B. Street Address(es) of Use

List each permanent facility used as a location of storage by the street address, city and state, or another descriptive address (such as on Highway 2 miles east of the intersection of Highway 10 and state Route 234, Any town, State). The descriptive address should be sufficient to allow a Department inspector to find the location. A Post Office Box is not acceptable for Item 2.B. **A storage address must be an in-state storage address.**

If the device will be used at a permanent facility or facilities, give the specific address of each. Please identify the latitude and longitude coordinates (geographic location) of your facility(s).

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* A copy of the Georgia Open Records Law is available from the Georgia Law Library, for a copy of the law the library may be contacted at (404) 656-3468.

Item 3. Person to Contact

Enter the name and telephone number of the contact person(s) for this application and license. This individual should be familiar with the proposed radioactive materials program and be able to answer questions regarding the application. This is usually the person responsible for the radiation safety program. This person will serve as the point of contact during the application review process and after issuance of the license. Notify the Department if the contact person changes. This change **will not be considered as an amendment**, unless it is a change of the Radiation Safety Officer.

The person named in Item 3. above may or may not be the same person who signs the application. Any commitments made by the applicant, must be approved and signed by the authorizing official named in Item 13 of the application. The Department considers this individual as having the authority to make commitments on behalf of the applicant.

Item 4. Location(s) Where Records Will Be Retained

Indicate where records are to be maintained. If multiple locations are being requested, records for each site's operation must be maintained at that site, and at the main Georgia facility location as indicated in Item 2.A.

Item 5. Radioactive Material

1. Identify each radionuclide (e.g., Cobalt-60), the chemical or physical form, the number of sources, and the maximum activity requested. You may specify activity in terms of Curies.

2. Identify the manufacturer's name and model number of each sealed source that will be used in the gamma irradiator.

3. Identify the manufacturer's name and model number of the gamma irradiator in which the sealed sources will be housed.

NOTE: You should be able to obtain the above information from the supplier of the irradiator. When contacting your supplier, you should determine whether safety information on the particular model source has been registered with the Department, NRC or an Agreement State., Rule 391-3-17-.02(11)(l), Registration of Product Information, allows a manufacturer to register safety information about a product. That registered information can then be used in the Department consideration of license applications from the manufacturer's customers. If your manufacturer has not registered information about the source and does not intend to register, then you as the applicant for a license are required by 391-3-17-.02(7) to submit detailed safety information on the source as identified in 391-3-17-.02(11)(l)3. If you need to prepare this detailed information, you are encouraged to follow the guidance in NRC Regulatory Guide 10.11, "Guide for the Preparation of Applications for Radiation Safety Evaluation and Registration of Sealed Sources Containing Byproduct Material."

Item 6. Purpose For Which Licensed Material Will Be Used

Specify the purpose for which the licensed material will be used (e.g., to be used in a Baker Company Model B-25 gamma irradiator for insect eradication through sterile male release programs.)

Item 7. Individuals Responsible For Radiation Safety Program: Their Training And Experience

Among the general requirements for issuance of specific licenses (see 391-3-17-.02(8)) is the requirement that your staff (the users, supervisors of users, and radiation safety officer for an institutional applicant) must be qualified by training and experience to use the material for the purpose requested in such a manner as to protect health and minimize danger to life or property. The information you present in Items 7 and 8 of your application should show how you will satisfy this requirement.

In Item 7, you should state the name, training, and experience of each person responsible for the radiation safety program for the irradiator. The qualifications of each person (who may have a title such as radiation protection officer, radiological protection officer, supervisor, senior operator) should show that he or she will be familiar with:

1. The basic design, operation, and preventive maintenance of the irradiator.
2. The principles and practices of radiation protection.
3. The biological effects of radiation.
4. The written procedures for routine and emergency irradiator operations.
5. Your application for a license, your license, and regulations of the Department

A person with a background in radiation protection (e.g., a person appointed as a radiological safety officer under 391-3-17-.02(10)(b)3.(ii) or 391-3-17-.02(10)(c)2.(i), or as a user under paragraph 391-3-17-.02(10)(d)2.(i) and (ii), or an individual meeting the training and experience requirements of 391-3-17-.05(16)(a)1. or 2. for a radiation safety officer) and specific instruction on the particular model irradiator to be obtained (or a similar model) should have adequate training and experience. How the specific instruction was or will be obtained should be described for each person named in Item 7. Specific instruction on the irradiator should show that, under the supervision of a knowledgeable person, the named person has used the irradiator or a similar irradiator to perform several irradiations of samples. This knowledgeable person might be the irradiator manufacturer's representative or another experienced operator.

Although unlikely, an applicant may designate in Item 7 a person who has no previous training or experience in radiation protection or irradiator operation. In such case, the applicant should state where and from whom the individual will receive training in radiation protection (e.g., a basic radiation protection course of at least 3 days) and on-the-job training in operating an irradiator (e.g., a minimum of 2 days of supervised work at a licensed irradiator) prior to receipt of the irradiator by the applicant.

Acceptable training and experience also may be obtained at an irradiator manufacturer's course consisting of a combination of radiation safety lectures, classroom exercises, written tests, and hands-on work on self-shielded irradiators.

Item 8. <u>Training For Individuals Working In Or Frequenting Restricted Areas</u>

According to 391-3-17-.07(3), all individuals who work in or frequent restricted areas must be instructed in the health protection problems associated with exposure to radioactive material. In addition, persons who actually work with radioactive material should receive training in the safe use of radioactive material.

You should submit a general description of the training you will provide to all persons working in or frequenting your restricted areas and provide more specific information about the training of irradiator operators.

Persons who will operate the irradiator under the supervision of a responsible individual (named in Item 7)

do not need to be designated by name; however, the following should be submitted.

1. An outline of the training program for these persons, including the topics that will be covered. Topics expected to be included in the training program are (1) the principles and fundamentals of radiation safety and good safety practices related to the use of radioactive materials, (2) the use of radiation detection instruments, and (3) the design and operation of the irradiator. This training usually is several hours long and may be covered in part by instructions provided to workers to meet the requirements of 391-3-17-.07(3).

2. A means of evaluating the understanding of the individuals who have completed the training program. One acceptable technique is to use a written examination of about 25 multiple-choice questions with all aspects of the training program covered. You should describe in your application how you will determine the trainee's understanding of the subject.

3. A discussion of the on-the-job training that will be given to trainees. The training should consist of a minimum of several complete irradiation procedures by the trainee under close supervision by a responsible individual specified in Item 7.

4. The name of the training instructor. If this person is not a responsible individual specified in Item 7, submit this person's qualifications. The minimal qualifications for an instructor should be the same as those of an individual specified in Item 7.

5. A commitment that records documenting the training of each individual will be maintained.

Item 9. <u>Facilities And Equipment</u>

Rule 391-3-17-.02(8)(b) states that an application will be approved if, among other things, the applicant's proposed equipment and facilities are adequate to protect health and to minimize danger to life or property. As indicated above, information about the sealed source and irradiator should be presented in Items 5 and 6 of your application. Present information about the space where the irradiator will be located here in Item 9.

You should briefly describe the space where the irradiator will be located and comment on (a) control of access to the radioactive material by unauthorized persons and (b) fire protection considerations.

Regarding control of access to the radioactive material, if the irradiator will be located in a room that can be locked to prevent access by unauthorized persons, you need only repeat this statement in your application in a manner that constitutes a positive commitment. If the irradiator will not be located in a room that can be locked, you should explain how the requirements of 391-3-17-.03(10) will be met. Rule 391-3-17-.03(10) states that licensed materials in an unrestricted area must be secured from unauthorized removal from the place of storage and that licensed materials in an unrestricted area and not in storage must be under the constant surveillance and immediate control of the licensee.

Regarding fire protection, you should confirm that the room where the irradiator will be located will be equipped with an automatically operated fire detection and control system (sprinkler, chemical, or gas) that is adequate to ensure the integrity of the irradiator and source in a fire. Alternatively, you should describe the conditions (e.g., ground floor location in fire-resistant building with little combustible material) and other controls (e.g., coordination with and training of fire-fighting personnel) that ensure a very low level of radiation risk attributable to fires.

Item 10. Radiation Safety Program

10.1 Personnel Monitoring Equipment

Personnel monitoring equipment is to be used by individuals entering restricted areas who are likely to receive a dose in excess of 10% of the dose specified in 391-3-17-.03 (7)(b). The specified annual dose to the whole body of adults is 0.05 sievert (5 rems). The whole body includes the head, trunk (including male gonads), arms above the elbow, and legs above the knee. The specified annual dose limit to the skin or any extremity (shallow dose equivalent) is 0.50 sievert (50 rems). The specified annual dose limit for minors is 10 percent of the annual dose limits specified for adult workers, and the specified occupational dose limit for the embryo/fetus of a declared pregnant woman is 5 millisieverts (0.5 rem).

Thus, you will need to monitor all gamma irradiator users with a film badge, thermoluminescent dosimeter (TLD), or other device which can be evaluated by a NVLAP-approved processor when they use the irradiator unless you can demonstrate, in accordance with 391-3-17-.03(7)(b), that individuals using irradiator are not likely to receive a radiation dose in excess of 10 percent of the allowable limits.

In determining the need for personnel monitoring equipment, you should consider both the doses related to the irradiator and the doses from other sources of radiation.

For various reasons, including the requirements in 391-3-17-.03(7)(b) most licensees require their personnel to wear a film badge, thermoluminescence dosimeter (TLD), or other NVLAP-approved device when they use the irradiator. Assuming that you propose to use such equipment, state the type of dosimeter you will use and the frequency at which it will be exchanged. The frequency of change should be at least monthly for film badges, and quarterly for TLDs or optically-stimulated luminescence dosimeters (OSLs). For other devices, you must contact the Department to learn the approved exchange rate.

Some licensees elect to use direct-reading pocket dosimeters. If you propose to use this type of personnel monitoring equipment, you should state the range of the dosimeters and describe your program for their use. It is expected that the dosimeters have a range from zero to at least 200 milliroentgens, be worn by only one individual between readings, and be checked at periods not to exceed one year for correct response to radiation. Acceptable dosimeters should read within +/- 30% of the true radiation exposure. If an individual's pocket dosimeter is discharged beyond its range, your program should prescribe action to evaluate the individual's dose.

10.2 Radiation Detection Instruments

Rule 391-3-17-.03(7)(a)1. requires the performance of such surveys as are necessary to evaluate the extent of radiation hazards that may be present and to comply with regulatory requirements. In order to perform appropriate surveys, you need to have operable, calibrated instrumentation.

State that you will have available for use a calibrated, operable survey meter that can measure up to several hundred milliroentgens per hour. You do not need to name the manufacturer or the model number of the survey meter. The reasons for the survey meter are the need to determine norm al radiation levels near the irradiator, in the room housing the irradiator and in adjacent unrestricted areas, and the need to detect radiation levels that may indicate safety interlock and shielding failure, sealed source displacement, or sealed source failure with a resultant spread of contamination.

In order to perform adequate surveys, instruments must be operable and calibrated with an appropriate radiation source. State that the instrument will (l) be calibrated so that the readings are within +/- 20% of the actual values over the range of the instrument and (2) be calibrated at least annually and after servicing (other than a simple battery exchange). Also state that calibration records will be kept for a minimum of 2 years after each calibration, and identify your selected means of calibration. There are three options for calibration:

1. If the instrument will be returned to the manufacturer for calibration, so state.

2. If a contractor will perform the calibration, state the name and address of the firm and its Department, NRC or Agreement State license number.

3. If the instrument will be calibrated in-house, provide the experience and training in instrument calibration of each named person who will perform the calibrations and the methodology to be used.

10.3 <u>Leak-Testing</u>

As a licensee, you must perform such tests as the Department deems appropriate or necessary pursuant to 391-3-17-.03(6). Tests to determine if there is any leakage from the sealed sources in the irradiator are necessary and must be performed at intervals not to exceed 6 months. The measurement of the leak-test sample should be a quantitative measurement and must be sufficiently sensitive to detect 0.005 microcurie of activity.

The options for leak-testing are:

1. Engage the services of a consultant or commercial facility to take samples, evaluate the samples, and report the results to you.

2. Use a commercial leak-test kit. You take the sample and send the sample to the kit supplier, which reports the results to you.

3. You perform the entire leak-test sequence, including taking the sample and measurement.

For option 1, specify the name, address, and license number of the consultant or commercial organization.

For Option 2, specify the kit model number and the name, address, and license number of the kit supplier. State if the test samples will be taken by the individual specified in Item 7 who is responsible for the irradiator program. Instructions for taking the sample should be included in your operating and emergency procedures. Include in the instructions a requirement that any indication of possible source leakage should be reported to the individual responsible for the irradiator program for appropriate action.

For Option 3, state whether the test sample will be taken and measured by the individual specified in Item 7 who is responsible for the irradiation program. Instruction for those tasks should be included in your operating and emergency procedures. You should commit to use of an instrument capable of quantitatively measuring 0.005 microcurie or more activity; however, it is not necessary to identify the instrument in your application. If you also hold a specific license of broad scope, state that the leak-test sequence will be performed by or under the supervision of the radiological safety officer (appointed pursuant to 391-3-17-.02(10)(b)3.(ii) or 391-3-17-.02(10)(c)2.(i)) or by or under the supervision of individuals satisfying the requirements of 391-3-17-.05(16)(a)1. or 2.

10.4 Operating and Emergency Procedures

You should provide your personnel with written operating and emergency procedures and you should state in your application that the written procedures will be provided to each person who uses the irradiator. The operating procedures should be maintained at the control station, and the emergency procedures should be conspicuously posted in the area. It is not necessary to submit the detailed operating and emergency procedures to the Department. However, you should list the topics covered in your procedures, and you should state that these procedures include instructions in the following topics and will be available prior to use of the irradiator.

1. Step-by-step procedures for operation of the irradiator. Information may be extracted from the irradiator manufacturer's manual.

2. Determination and recording of radiation doses to persons operating the irradiator.

3. The methods to ensure that only authorized persons will use the irradiator.

4. Inspections, test procedures, and maintenance to ensure that all safety interlocks, devices, and components associated with the irradiator are functioning properly. Prohibited modifications (for example, changing the safety control system or removing the source) should be stated.

5. Emergency situations, e.g., when a survey reveals abnormal radiation levels around the irradiator, personnel should leave the irradiator room, lock the door, and contact the individual responsible for the irradiator program. Telephone numbers for the irradiator manufacturer's representative and the Department should be included. In addition, your procedures should require that a survey be made with a radiation survey meter outside the irradiator room to determine whether further restriction of the area is necessary to ensure that no one can enter the area if the radiation level exceeds 2 milliroentgens per hour.

10.5 Plans for Installation and Certain Repairs

You should discuss your plans for irradiator installation, pre-operational check-out, and repairs or alterations involving removal of shielding or access to the licensed material. Normally these plans indicate that the tasks will be performed by the supplier or other persons who are specifically licensed by the Department or an Agreement State for such work. If your plans depart from the normal, you should clearly explain how these tasks will be safely and adequately performed.

Note that under current licensing practice, your license contains a condition that requires you to file a report with the Department, if you incur a failure of a safety lock mechanism or a failure of the shielding of the irradiator. Reports submitted under this condition will be evaluated for indications of possible generic defects in your model irradiator and the need for the Department to alert other users of that model to take corrective action. Under this condition, you will be expected to report the failure of a door interlock on a moving source irradiator. You would not be expected to report routine maintenance, such as a burned out indicator bulb on the irradiator's control console (just replace the bulb).

Item 11. Waste Management

Because of the nature of the licensed material contained in devices, your only option for disposal is to transfer the material to an authorized recipient. Authorized recipients are the original supplier of the device, a

commercial firm licensed by the Department, NRC or an Agreement State to accept radioactive waste from other persons, or another specific licensee authorized to possess the licensed material (i.e., whose license specifically authorizes the source and irradiator by manufacturers' names and model numbers or similar designation). No one else is authorized to receive and dispose of licensed material.

Before transferring radioactive material, you must verify that the recipient is properly authorized to receive it by using one of the methods described in 391-3-17-.02(19)(d) In addition, you must package and ship the material in accordance with the Departments and DOT regulations, and you must maintain records of the transfer as required by 391-3-17-.03(13)(i). In response to Item 11, it is acceptable to state that "disposal will be by transfer of the radioactive material to a person who is specifically licensed to receive and possess it."

Item 12. License Fees

The applicant should refer to the DNR Radioactive Materials License Fee Schedule (Appendix B) to determine the appropriate licensing fee and category. (Note that, in addition to licensing fees licensees are required to pay inspection fees and annual fees. No action will be taken on applications filed without the proper fee. Checks for the fees should be made payable to the **Department of Natural Resources, Radioactive Materials Program**, and mailed to the following address:

Radioactive Materials Fees
P.O. Box 101161
Atlanta, Georgia 30392

Note: Prior approval from the Department must be obtained before Small Entity classification can be used.

Mail license applications, amendment, renewal requests, and terminations of license to the following address:

Radioactive Materials Program
4244 International Parkway
Atlanta Tradeport, Suite 114
Atlanta, GA. 30354

Item 13. Certification

If you are an individual applicant acting in a private capacity, you must sign the completed application form, otherwise, the application should be dated and signed by a representative of organization or legal entity that has authority to make binding commitments and sign off on official documents. The signing official must certify that the application contains information that is true and correct to the best of the his/her knowledge and belief. The Department will not process an unsigned application, and it will be returned for proper signature.

IV. AMENDMENTS TO A LICENSE

After you are issued a license, you must conduct your program in accordance with (1) the statements, representations, and procedures contained in your application and other correspondence with the Department (2) the terms and conditions of the license, and (3) the Department's regulations.

It is your obligation to keep your license current. If any of the information provided in your application is to be modified or changed, submit an application for a license amendment. In the meantime, you must comply with the terms and conditions of your license until it is actually amended. Department regulations do not allow you to implement changes solely on the submission of an amendment request.

An application for a license amendment may be prepared either on the application form, Appendix A, or in a letter. It should be prepared in duplicates as stated in Section 2 of this guide. Retain one copy , the license requires that you possess and use licensed material in accordance with the statements and representations in your amendment request and in any additional attachments.

Your application should specify your license number and clearly describe the nature of the changes, additions, or deletions. References to previously submitted information and documents should be clear and specific. Identify the pertinent information by date, page, and paragraph. For example, if you wish to change the RSO, your application for a license amendment should specify the proposed RSO's name, training, and experience. The qualifications of the proposed RSO should be equivalent to those specified in Item 7 of this guide.

You need to include the appropriate fee with an amendment request. The Department will not issue the amendment prior to receipt of the proper fee as specified in the Fee Schedule, Appendix B.

V. RENEWAL OF A LICENSE

Licenses are issued for a period of up to 5 years. Send an application for renewal, in duplicates, to the address specified in Section 2 of this guide. Retain one copy, the license requires that you possess and use licensed material in accordance with the statements and representations in your renewal request and in any supplements to it.

It is important that the appropriate fee, accompany your application for license renewal. The Department will not issue the license renewal prior to receipt of the fee.

You may submit an entirely new application for renewal as if it were for a new license without referring to previously submitted information. The Department prefers this method for renewals, especially for those applicants who reference a large number of documents and/or old documents. Submitting an entirely new application allows you to reevaluate your program periodically and consolidate the description of your program into one or two current documents. A new application ensures that your program contains all needed information as requested in current licensing guide.
As an alternative to a new application, you may:

1. Review your current license to determine whether the information about sealed sources and gamma irradiators accurately represents your current and anticipated program. Identify any necessary additions, deletions or changes and then prepare information as appropriate for the change(s).

2. Review the documents submitted to the Department in the past to determine whether the

information is up to date and accurately represents your facilities, equipment, personnel, radiation safety procedures, locations of use, etc. The documents considered to represent your current program must be identified by date. Also identify any out-of-date and superseded documents and indicate the changes that are necessary. Documents referenced in your license should not be older than 5 years unless all the information in the document accurately represents your current program. If you need to update information in documents 5 years old or older, you should submit a new application.

3. Review current Department regulations to ensure that any changes in the regulations are appropriately covered in your program description.

4. After you have completed your review, submit a letter to the Department, with the proper application fee for a license renewal. Provide the information in items 1, 2, and 3 as necessary.

5. Include the name and telephone number of the person to be contacted about your renewal application and include a current mailing address if it is not indicated correctly on your license.

If you file an application for a license renewal at least 30 days before the expiration date of your license, include the appropriate application fee and your current license will automatically remain in effect until the Department takes final action on your renewal application.

If you do not wish to renew your license, dispose of all licensed radioactive material possessed in a manner authorized by 391-3-17-.02(19). Complete the Department's form, "Request to Terminate Radioactive Materials License" (see Appendix C) and send it to the Department before your license expires.

If you cannot dispose of all the licensed radioactive material in your possession before the expiration date, you must request a license renewal for "storage only" of the radioactive material. The renewal is necessary to avoid violating the Department's regulations that do not allow possession of licensed material without a valid license.

VI. TERMINATION OF A LICENSE

You may request termination of your license at any time. This notification should include a request to terminate the license and must include a completed Department's form, "Request to Terminate Radioactive Materials License" (see Appendix C) , certifying that all sources have been disposed of properly. Note that a license is not terminated until the Department takes action to terminate the license. An application for license termination does not relieve the licensee from its obligations to comply with Department's regulations and the terms and conditions of the license.

APPENDIX A

Georgia Department of Natural Resources

Environmental Protection Division

Radioactive Materials Program

APPLICATION FOR RADIOACTIVE MATERIALS LICENSE

INSTRUCTIONS - Complete Items 1 through 13 if this is an initial application or renewal of a license. Use supplemental sheets where necessary. Item 13 on the application must be completed and signed. Retain one copy for your records. Submit original application to: Georgia Department of Natural Resources, Radioactive Materials Program, 4244 International Parkway, Suite 114, Atlanta, Georgia, 30354. Upon approval of this application, the applicant will receive a Georgia Radioactive Materials License. Georgia Radioactive Materials Licenses are issued in accordance with the general requirements contained in the Georgia Department of Natural Resources Rules and Regulations, Chapter 391-3-17. **The Department can be reached via the Internet. The address is rad_materials @ mail.dnr.state.ga.us.**

1.This is an Application for: (Check appropriate item) A.☐ New License B. ☐ Amendment to License C. ☐ Renewal of License
If B or C , Please indicate GA. License Number _____

2.a. Name and Mailing Address of Applicant	2.b. Address where licensed material will be stored and/or used (Street Address)
Name: Address: City, State, Zip Code: County: Telephone Number ( ) _____ -_____ Internet Address:	A. Permanent B. Coordinates 1. Latitude: 2. Longitude: C. Temporary sites throughout Georgia? Yes _____ No_____
3. Person to Contact Regarding this Application Name: Title: Telephone Number ( ) _____ - _____	4. Locations where records will be kept:

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION 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. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED
7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE	8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS
9. FACILITIES AND EQUIPMENT	10. RADIATION SAFETY PROGRAM
11. WASTE MANAGEMENT	12. LICENSEE FEES (SEE DEPARTMENT'S FEE SCHEDULE) FEE CATEGORY : AMOUNT ENCLOSED $ CHECK MAILED ☐ PLEASE INVOICE ☐
MAKE CHECKS PAYABLE TO: DEPARTMENT OF NATURAL RESOURCES RADIOACTIVE MATERIALS PROGRAM	**MAIL FEES TO: RADIOACTIVE MATERIALS PROGRAM, P.O. BOX 101161 ATLANTA, GEORGIA 30392**

13. CERTIFICATION (Must be completed by the 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 CERTIFICATE ON BEHALF OF THE APPLICANT NAMED IN ITEM 1, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH GEORGIA DEPARTMENT OF NATURAL RESOURCES RULES AND REGULATIONS, DESIGNATED CHAPTER 391-3-17 AND THAT ALL INFORMATION CONTAINED HEREIN, INCLUDING ANY SUPPLEMENTS ATTACHED HERETO, IS TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

CERTIFYING OFFICER -- TYPED PRINTED NAME AND TITLE	SIGNATURE	DATE

FOR DEPARTMENT USE ONLY

TYPE OF FEE	FEE CATEGORY	AMOUNT RECEIVED	INVOICE DATE	COMMENTS

APPROVED BY DATE:

License Category	Licensing Fees				Inspection Fees		Annual Fees		
	Code	Application	Renewal	Amendment	Routine	Non-Routine	Nominal	Small Entity	Lower Tier
Medical Teletherapy	A.1	3,400	790	430	1,200	1,900	3,200	600	135
Institutional Medical-Mult. Use	A.2	710	1,000	430	1,000	1,500	1,200	600	135
Institutional Medical-Single Use	A.3								
Private Practice	A.4								
In-Vitro Studies Only	A.5	500	500	380	1,200	1,200	500	500	135
In-Vitro General Licenses	A.6	0	0	0	0	0	100	100	100
Bone Mineral Analyzers	A.7	710	1,000	430	1,000	1,500	1,200	600	135
Medical Manufacturer for Distribution	A.8.a.	3,400	1,400	460	1,400	1,900	2,900	600	135
Medical Distribution or Redistribution Only	A.8.b.	1,100	500	310	800	1,200	900	600	135
Mobile Nuclear Medicine	A.9	710	1,000	430	1,000	1,500	1,200	600	135
Broad Medical	A.10	2,300	2,000	360	1,600	1,800	3,300	600	135
Eye Applicators	A.11	710	1,000	430	1,000	1,500	1,200	600	135
Depleted Uranium	A.12	110	110	110	290	350	130	130	130
Special Nuclear Material(sealed sources in devices)	B.1	500	500	380	460	1,300	400	400	135
Special Nuclear Material(other)	B.2	690	690	230	690	800	1,000	600	135
Industrial Mfg. for Distribution	C.1	1,300	2,300	550	1,000	2,000	1,500	600	135
In-house Industrial Radiography	C.2	3,000	1,800	490	1,200	2,500	2,600	600	135
Multiple Job-Site Industrial Radiography	C.3								
Gamma Irradiators (Self-Shielded)	C.4.a.	500	480	250	460	690	400	400	135
Gamma Irradiators (<10K Ci)	C.4.b.1.	1,000	750	250	500	1,000	1,000	600	135
Gamma Irradiators (>10K<100K Ci)	C.4.b.2.	5,000	3,750	1,250	1,200	2,400	5,000	600	135
Gamma Irradiators (>100K<1M Ci)	C.4.b.3.	10,000	7,500	2,500	2,500	5,000	10,000	600	135
Gamma Irradiators (>1M Ci)	C.4.b.4.	30,000	22,500	7,500	5,000	10,000	30,000	600	135
Broad Scope Distribution, Specific	C.5.a.	2,300	1,400	230	2,100	2,100	2,100	600	135
GL Distribution (source and/or device evaluation)	C.5.b.	2,500	580	390	690	690	1,700	600	135
GL Distribution (no source and/or device evaluation)	C.5.c.	1,900	940	290	690	690	1,400	600	135
NARM Exempt Distribution (device evaluation)	C.6.a.	2,100	1,100	250	690	690	1,500	600	135
NARM Exempt Distribution (no device evaluation)	C.6.b.	2,600	1,200	350	460	690	1,700	600	135
Well Logging/Tracers	C.7	3,400	2,000	540	800	800	2,300	600	135
Nuclear Laundries	C.8	1,400	1,400	350	1,200	1,900	1,600	600	135
Industrial Research & Development	C.9	1,100	1,100	630	800	930	1,300	600	135
Gas Chromatograph, Installed Gauges, etc.	C.10	500	500	380	1,200	1,200	500	500	135
Portable Moisture Density Gauges, Pb Analyzers, etc.	C.11								
Calibration Sources	C.12								
Industrial (other)	C.13								
Broad Scope (Academic)	D.1	2,300	2,000	500	930	1,200	2,100	600	135
Broad Scope (Industrial R&D)	D.2								
Civil Defense	E.	580	400	310	690	690	500	500	135
Teletherapy Service Co.	F.	1,400	1,100	630	800	690	1,500	600	135
Consultants (Leak Testing Service)	G.	500	500	380	1,200	1,200	500	500	135
Storage Only	H.								
Academic (Non-Broad)	I.								
Device Evaluation	J.1	3,300	0	1,200	0	0	2,100	600	135
Source Evaluation	J.2	690	0	230	0	0	500	500	135
Reciprocity	K.	0	0	0	0	0	Appropriate License Renewal Fee		
Radioactive Waste Disposal-Burial	L.1	50,000	50,000	5,000	12,000	24,000	30,900	600	135
Radioactive Waste Disposal-Incineration	L.2								
Radioactive Waste-Storage, Packaging or Transfer	L.3	2,800	1,900	200	2,100	2,200	3,600	600	135
G L Devices(except tritium safety signs)	GL	0	0	0	0	0	100	100	100

GEORGIA DEPARTMENT OF NATURAL RESOURCES
RADIOACTIVE MATERIALS PROGRAM
REQUEST TO TERMINATE RADIOACTIVE MATERIAL LICENSE

1. Licensee Name _____ 2. License Number _____

3. Address _____
No. Street/P. O. Box No. City, State Zip code

4. Contact Person _____ 5. Telephone Number _____

6. Request is hereby made that the Radioactive Material License described above be terminated for the following reason:

_____

_____

7. Radioactive Material possessed under this license has been disposed of as indicated below:

☐ No materials have been possessed or procured by the licensee under this licensee.

☐ All material was used for the licensed purposes, none remains.

☐ All material was leased, and has been returned to lessor.

Name of lessor: _____ License No. _____

☐ Lessor acknowledgement of receipt attached.

☐ Material has been transferred to the following licensee:

Licensee Name _____ License No. _____

Address _____
No. Street/P.O. Box No. City, State Zip code

Date of transfer: _____ ☐ Transferee acknowledgement of receipt attached.

☐ Material has been disposed of in the following manner:

_____

_____

☐ A radiation survey was conducted to confirm the absence of radioactive material and to determine whether any contamination remains at the facility covered by the license.

☐ Copy of survey results attached.

8. Management Official or Radiation Safety Officer

_____ _____
Signature of certifying officer Date

_____ _____
Print name Title

Keep one copy for your records and send original to:

GEORGIA DEPARTMENT OF NATURAL RESOURCES
RADIOACTIVE MATERIALS PROGRAM
4244 INTERNATIONAL PARKWAY, SUITE 114
ATLANTA, GEORGIA 30354

Appendix C