# RADIOACTIVE MATERIALS PROGRAM GUIDE FOR PREPARATION OF APPLICATIONS FOR LICENSE FOR THE USE OF RADIOACTIVE MATERIALS IN LEAK-TESTING SERVICES Rev 2/Date: 01/2003

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# 1. **INTRODUCTION**

#### 1.1 <u>Purpose of Guide</u>

The purpose of this guide is to provide assistance to applicants and licensees in preparing applications for new licenses, license amendments, and license renewals. This guide describes the information the Department of Natural Resources Radioactive Materials Program (Department) staff needs to evaluate an application for a license for the use of radioactive materials in certain commercial services for other Department, United States Nuclear Regulatory Commission (NRC), or Agreement State licensees. The services covered by this guide are leak-testing sealed sources, analyzing leak-test samples, and supplying leak-test kits. This guide also covers the testing of on-off mechanisms and indicators on gauges.

This regulatory 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 the specified services that you provide.

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

#### 1.2 <u>APPLICABLE REGULATIONS</u>

Department regulations applicable to the specified calibration services are:

391-3-1701	"General Provisions. Amended."
391-3-1702	"Licensing of Radioactive Materials. Amended."
391-3-1703	"Standards for Protection Against Radiation. Amended."
391-3-1704	"Special Radiation Safety Requirements for Radiography
	Operations. Amended."
391-3-1705	"Use of Radionuclides in the Healing Arts. Amended."
391-3-1706	"Transportation of Radioactive Material. Amended."
391-3-1707	"Notices, Instructions, and Reports to Workers; Inspections.
	Amended."
391-3-1709	"Licensing and Radiation Safety requirements for Irradiators"

Unless otherwise stated, all regulations cited in this guide are in Chapter 391-3-17, "Rules and Regulations for Radioactive Materials". You may request copies of the above documents from the Department at: Atlanta Tradeport Suite 114, 4244 International Parkway, Atlanta, Georgia 30354 or from the internet at http://www.ganet.org/dnr/environ/aboutepd\_files/branches\_files/rmprogram/default.htm Before preparing your application for a license to use radioactive materials for the specified calibration services, you should be acquainted with the applicable regulations.

It is your responsibility as an applicant and as a licensee to have copies of, to read, and to abide by each regulation. As a licensee, you are subject to all applicable provisions of the regulations as they pertain to leak-testings. The Department will provide one copy of Chapter 391-3-17 for each license issued.

# 1.3 AS LOW AS IS REASONABLY ACHIEVABLE (ALARA) PRINCIPLE

In Rule 391-3-17-.03, the RMP requires the licensee not only to meet specific dose limits but also to operate in a manner that keeps doses "as low as reasonably achievable."Rule .03(4)(b) states: "The licensee shall use, to the extent practical, 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.

The radiation protection program must be reviewed at least annually for the effectiveness of implementation. Licensees must maintain records of the provisions of their radiation protection program until the Department terminates the pertinent license. Licensee must maintain records of audits and other reviews of program content and implementation for 3 years after the record is made.

## 2. <u>FILING AN APPLICATION</u>

You, as the applicant for a radioactive materials license, should complete the Department Application for Radioactive Materials License. You should complete Items 1 through 4 and Items 12 through 13 on the form itself. For Items 5 through 11 that require more space, submit the information on supplementary pages. Each separate sheet or document submitted with the application should be identified and keyed to the item number on the application to which it refers. All typed pages, sketches, and, if possible, drawings should be on  $8-1/2 \times 11$  inch paper to facilitate handling and review. If larger drawings are necessary, they should be folded to  $8-1/2 \times 11$  inches. You should complete all items in the application in sufficient detail for the Department to determine that your equipment, facilities, training and experience, and radiation protection program are adequate to protect health and minimize danger to life and property.

You should prepare your application in duplicate. Submit the original copy to the Department where it will become a part of the license if approved. Retain a copy for your records, because the license will require that you possess and use licensed material in

accordance with the statements and representations in your application and in any supplements to it.

#### 2.1 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 not be submitted; 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<sup>1</sup>. 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.

#### 3. <u>CONTENTS OF AN APPLICATION</u>

This portion of the guide explains, item by item, the information requested on DNR Application for Radioactive Materials License.

# ITEM 1 LICENSE INFORMATION

For a new license, check sub-item A.; for an amendment to an existing license, check sub-item B. and give the license number; and for a renewal of an existing license, check sub-item C. and give the license number.

## ITEM 2a NAME AND MAILING ADDRESS OF APPLICANT

If you are as an individual are the licensee, you should be designated as the applicant only if you are acting in a private capacity and the use of licensed material is not connected with your employment with a corporation or other legal entity. Otherwise you, the applicant, should be the corporation or other legal entity applying for the license.

<sup>&</sup>lt;sup>1</sup> 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.

The address specified here should be your mailing address for correspondence. This address may or may not be the same as the address at which the material will be used, as specified in Item 2b.

## ITEM 2b ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR STORED

You should specify each permanent location of use or storage by the street address, city, and State or other descriptive address (such as 5 miles east on Highway 10, Anytown, Georgia) to allow us to easily locate each facility. A Post Office box address is not acceptable. If you wish to maintain and operate more than one location where licensed material will be used or stored, you must give the specific address of each location. In Items 5 through 11 of your application, describe the intended use and the facilities and equipment at each location. If you wish to perform services at customer facilities, simply indicate this desire at 2.b.C.

#### ITEM 3 PERSON TO BE CONTACTED ABOUT THIS APPLICATION

You should provide the name and telephone number of the person who knows your proposed program and can answer questions about your application. This person, usually the Radiation Safety Officer (RSO) or a principal user of radioactive materials, will serve as the point of contact during the review of the application and during the period of the license. If this person is not your full time paid employee, please specify your relationship with this individual. You should notify the RMP if the individual assigned these functions changes. Notification of a contact change is for information only and would not be considered an application for license amendment. A license amendment would be needed if the new contact person needs to be added to your program as an RSO or a principal user.

The individual named in Item 3 may or may not be the individual who signs the application in Item 13. The individual who signs the application in Item 13 should be someone in upper management who has the authority to make and implement commitments made to the Department.

#### ITEM 4 <u>RECORD RETENTION</u>

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

#### ITEM 5 RADIOACTIVE MATERIAL

A variety of radionuclides may be involved in performing the specified leak-testing services. Example 1 is an acceptable method of completing Item 5 for the leak-test service.

Most users of gauging devices, in addition to a requirement for periodic leak-testing, are required to have the gauge tested by a specific licensee for proper operation of the on-off mechanism. Example "2" below is an acceptable method of completing Item 5 if you are also applying for authorization to perform tests for proper operation of the on-off mechanism on gauges. Frequently the leak-test and the on-off mechanism test are performed by the same specific licensee.

	(a) Element and Mass Number	(b) Chemical and Physical Maxim Form	(c) num Activity	
Example 1.	Any licensed material*	1. Analytical samples	1. See Item 6	
Example 2.	Any licensed Material*	2. Sealed sources	2. See Item 6	
*NOTE:	The wording in sub-item (a) must be compatible with your sample analysis equipment specified in Item 10.3. For example, if you will not have equipment for evaluating alpha radiation, you could state in (a): "Any licensed material except alpha emitters."			
ITEM 6	PURPOSE FOR WH	ICH LICENSED MATERIAL	WILL BE USED	
	For example 1 in item 5, you should specify that your possession use of licensed material as analytical samples will be incident to perform tests on customer's sealed sources or devices containing sealed sources		cident to performing leak-	
	use of licensed materia	in item 5, you should specify th l as sealed sources will be incide proper operation of the on-off i	ent to performing tests of	

# ITEM 7INDIVIDUAL(S) RESPONSIBLE FOR RADIATION PROTECTIONPROGRAM AND THEIR TRAINING AND EXPERIENCE

Rule .02(8)(a) specifies that you must be qualified by training and experience to use the material for the purpose requested in such manner as to protect health and minimize danger to life or property before an application for a license is approved.

You should provide the following information about the individual or individuals who will be responsible for your radiation protection program ("responsible individual").

- 1. The name of each "responsible individual."
  - The name of the individual or individuals responsible for your day-today radiation protection program; ensuring compliance with applicable
     Department regulations; and the terms and conditions of your license.
     This individual is normally the RSO.
  - b. The names of any other personnel who will be responsible for the services performed under the authority of your license.
  - <u>NOTE</u>: The "responsible individuals" you list will be listed as users on your license. The licensed materials specified in your application and on your license should be used by, or under the supervision of, these designated individuals.
- 2. Training of each "responsible individual."

You should submit a resume of training and experience for each "responsible individual" listed above. This resume should cover formal academic training and on-thejob training in the activities and services you intend to perform. Guidelines on training and experience are:

- a. Formal training should encompass the following topics.
  - (1) The principles and practices of radiation protection,
  - (2) Radioactivity measurements, monitoring techniques, and the use of instruments.
  - (3) Mathematics basic to the use and measurements of radioactivity,
  - (4) The biological effects of radiation, and
  - (5) Applicable regulations.
- b. A minimum of 40 hours of formal course work should be completed by each "responsible individual" listed in Item 7.
- c. If the applicant intends for its employees to work independent of on-site supervision in testing devices at customer's facilities, the applicant should describe the training to be provided to such employees.
- d. Outline any additional training that will be provided periodically for the

"responsible individuals" and other service personnel to keep them up to date on customer's devices to be tested, equipment for analysis of samples, and on changes to the regulations.

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This item requires you to provide information on the training (pursuant to Rule.07(3)) that will be given to ancillary personnel who may work under the supervision of your "responsible individuals" indicated in item 7. Consider technicians, among other, who might work directly under the supervision of your "responsible individuals" in the conduct of activities authorized under license. You should provide the following information in this training:

- 1. An outline of your training program, including topics that will be covered. Examples of topics to be included in this training are:
  - (A) the basic principles and fundamentals of radiation safety that includes good safety practices related to your use of radioactive materials;
  - (B) the purpose for which radiation detection instruments will be used;
  - (C) a review of your operating and emergency procedures, including safety procedures unique to your uses and facilities;
  - (D) specific instructions in precautions and procedures to be used to minimize exposure to radiation and radioactive materials; and
  - (E) an overview of Rule 391-3-17-.07.
- 2. The duration of your training program. The duration should be commensurate with your radiological health protection problems, but should be from 2 to 8 hours long. Opportunity should be provided for questions, (Note: records documenting the training of each individual should be maintained.)
- 3. The name of your training instructor(s). If your instructor is not a "responsible individual" specified in Item 7, submit his/her qualifications. The minimal qualifications for an instructor are those of a "responsible individual."

#### ITEM 9 FACILITIES AND EQUIPMENT

If you wish to perform services only at customer-owned locations, so state. However, if you wish to possess licensed material in your facility specified in Item 3, your facility and equipment must be adequate for the conduct of operations without exceeding the occupational and public dose limits in Rule .03(5)(a) and Rule .03(5)(i), respectively. Therefore, you should provide a description of your facility. The description may be brief paragraphs accompanied by annotated sketches that illustrate particular design features. Describe such items as:

- The areas of your facility where work with licensed material is actually performed or where licensed material is stored.
- Your means of providing security for work areas to show how unauthorized removal of, or access to, licensed material is controlled (Rule .03(1)(a) and (b)).
- <u>NOTE:</u> Sketches and descriptions should show the relationship of material use or storage areas to any adjoining controlled or unrestricted areas (e.g., other offices, rest rooms, and cafeterias).

## ITEM 10 RADIATION PROTECTION PROGRAM

Rule .03(4) states:

- "(a) Each licensee shall develop, document, and implement a radiation protection program sufficient to ensure compliance with the provisions of this Rule.
- (b) The licensee shall use, to the extent practical, 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).
- (c) The licensee shall, at least annually, review the radiation protection program content and implementation."

As a licensee, you will be required to have a documented radiation protection program. This program need not be submitted as part of the application; however, in the application you should comment on the following:

10.1 – Personnel Monitoring Equipment for External Dose

Rule .03(8)(b) requires the use of individual monitoring devices to monitor occupational exposures to adults, minors and declared pregnant doses in excess of 10 percent of the limits in Rule .03(5)(a), (5)(g), or (5)(h). The operations of some licensees may require the use of individual monitoring devices to determine both the

deep-dose (commonly called "body dose") and the extremity dose. It should be noted that the requirement for monitoring devices is based on the dose <u>likely</u> to be received. You should comment on your plans for use of individual monitoring devices or explain why such devices are not needed. If you are uncertain about the doses you are likely to receive, you may propose initially to use monitoring devices and then to discontinue their use if your experience over a fixed period, perhaps six months or a year, shows that the doses are sufficiently low. Your plans should clearly state any proposed discontinuance of the use of monitoring devices.

#### 10.2 – <u>Monitoring of Internal Dose</u>

Rule .03(8)(b) requires the monitoring of the occupational intake of radioactive material and assessment of the committed effective dose equivalent if an adult is <u>likely</u> to receive, in 1 year, an intake in excess of 10 percent of the applicable ALI(s) (Annual Limits of Intake) in Appendix B of 10 CFR Part 20, and minors and declared pregnant women are <u>likely</u> to receive, in 1 year, a committed effective dose equivalent in excess of 0.05 rem, and declared pregnant women during the entire pregnancy a committed dose equivalent in excess of 0.1 rem

You should comment on your plans for determining intake of radioactive material or explain why such intake is <u>not likely</u> to cause doses in excess of the applicable 10 percent or 0.05 rem.

With respect to the performance of leak-test services, the need for internal monitoring typically would <u>not be likely</u>.

#### 10.3 - Radiation Detection Instruments

Rule .03(8)(a) states:

- "1 Each licensee shall make, or cause to be made, surveys that:
  - (i) May be necessary for the licensee to demonstrate compliance with this Rule; and
  - (ii) Are reasonable under the circumstances to evaluate:
    - (I) The magnitude and extent of radiation levels;
    - (II) Concentrations or quantities of radioactive material; and

(III) The potential radiological hazards.

2. The licensee shall ensure that instruments and equipment used for quantitative

radiation measurements (e.g., dose rate and effluent monitoring) are calibrated periodically, at least annually, for the radiation measured except when a more frequent interval is specified in other applicable parts of these Rules or a license condition"

In your application you should state the type of instruments (GM survey meter, ion chamber, scintillation, etc.) and sensitivity range (iSv/h, mrem/h, dps, etc.) that you will have available for surveys and analyses. You should indicate a capability to measure 185 Bq (0.005 uCi) of activity on a test sample. If you intend to leak-test for alpha activity, you must show that you have appropriate instrumentation. You should also indicate your plans and frequency for periodic calibration of the instruments.

#### 10.4 – Operating and Emergency Procedures

Each individual who will perform leak-test services or checks of on-off mechanisms at a customer's facility should have a set of operating and emergency procedures and be trained in their use. You should state in your application that personnel will be provided with operating and emergency procedures. Submit an outline of the basic elements of these procedures to be provided to personnel. The following elements should be included in your operating and emergency procedures, if applicable:

- Instructions for performing the wipe tests, including materials to use and methods of handling samples to prevent or minimize exposure to personnel.
- Surveys to be performed, such as those around the housing to be sure the device is in the "safe," "store," or "off" position before wipe samples are taken from designated areas of the device and that the on-off mechanism and on-off indicator are functioning properly.
- Surveys to be performed on wipe or leak-test samples to check for gross contamination before removal from the site.
- Any specific instructions provided by source and device manufacturers on recommended methods and areas to be wiped.
- Instructions on what to do in case of emergencies, for example, if sources or devices are found to be leaking or excessive radiation levels are found around device. These instructions should include procedures for proper notification to customer personnel, means of preventing and controlling the spread of contamination, and means of obtaining professional assistance, if needed.

#### 10.5 - Commercial Leak-Test Kits

If you plan to manufacture and distribute commercial leak-test kits for your customer's use, provide samples of each type of kit you intend to distribute. Commercial leak-test kits are designed to be used by your customers to wipe specific sources or to wipe sources in specific devices. The wipes are returned to you for analysis. Each type of kit you wish to distribute should be identified by a separate model number and clearly labeled as to the type and strength of the source or device it is designed to test.

Each kit should contain all necessary components for use:

- (1) the swabs, wipes, absorbent-tipped sticks, etc., that are to be used to make the wipes on the specific sources or devices;
- (2) instructions for safe use of the particular kit that includes the type and strength of the source the kit is designed for, step-by-step procedures for making the wipes or smears, and procedures for returning the wipes to you for analysis; and
- (3) a label identify the customer's name, license number, source or device (by manufacturer, model number, serial number, and activity) wiped, and the name of the individual who made the wipes.

You must have appropriate sample analysis equipment to properly evaluate the customer's wipes for each type of kit you wish to distribute.

You should include copies or descriptions of the types of records you will maintain on leak-test samples as part of the documentation of your radiation protection program. These records should include:

- Identification of each source or device (manufacturer, model number serial number, isotope, quantity);
- Identification of each customer (name, address, person to contact);
- Radiation survey measurements, as appropriate;
- Date of test;
- Information on test methods used (e.g. the swabs, wipes, absorbent-tipped sticks, etc.,);
- Leak-test results expressed in microcuries for each device or source wiped; and

• Name of the individual who performed the test.

You should include a copy of the leak-test certificate you will supply to your customers.

## ITEM 11 - WASTE MANAGEMENT

Rule .03(13)(a) specifies the general requirements for disposal of licensed material. It is recommended that contaminated wipes and sources be returned back to the customer for disposal. If you choose not to return the contaminated wipe(s) or source(s) back to the customer, you should describe the means you plan to use to dispose of the licensed materials. A frequently selected option is to use a waste disposal service or broker licensed by the NRC or an Agreement State for the disposal of the licensed material.

## 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

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 the corporation or legal entity authorized to sign official documents and to certify that it contains information that is true and correct to the best of your knowledge and belief. Unsigned applications will be returned for proper signature.

# 4. <u>AMENDMENTS TO A LICENSE</u>

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 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. You should anticipate the need for a license amendment insofar as possible. If any of the information provided in your application or other correspondence is to be modified or changed, you should submit an application for an 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 on the basis of a submission requesting an amendment to your license.

An application for a license amendment may be prepared either on the application form (**Appendix A**) or in letter form and should be submitted to the second address specified in section 3 Item 12 of this guide. Your application should identify your license by number and should clearly describe the exact nature of the changes, additions, or deletions. References to previously submitted information and documents should be clear and specific and should identify the pertinent information by date, page, and paragraph.

# Note: Nothing in your radioactive materials license, this guide, or Department regulations relieves you from complying with other applicable Federal, and State requirements.

#### 5. <u>RENEWAL OF A LICENSE</u>

Licenses are issued for a period of up to 5 years. Thirty (30) days prior to the expiration of your license, send an application for renewal to the address specified in section 3 Item 12 of this guide. Retain a copy because 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.

Send your check for the appropriate fee to the <u>Radioactive Materials Fees</u> address specified in section 3 Item 12 of this guide, and send a **copy** of your check with your application for license renewal to the <u>Radioactive Materials Program</u> address specified in section 3 Item 12. 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 an application for a new license without referring to previously submitted information. This is the preferred method of renewing a license, especially for those whose licenses reference a large number of documents 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 up to-date documents. A new application ensures that your program contains all needed information as requested in current licensing guidance.

As an alternative to a new application, you may:

- 1. Review your current license to determine whether the information accurately represents your current and anticipated program. Identify any necessary additions, deletions, or other changes and then prepare information appropriate for the required additions or changes.
- 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 in them that are necessary to reflect your current program. 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 in accordance with items 1, 2, and 3 above, submit a letter and attachments to the Department requesting renewal of your license. Retain a copy for your records. Send your check, for the appropriate fee to the <u>Radioactive Materials Fees</u> address specified in section 3 Item 12, and send a copy of the check with your letter to the <u>Radioactive Materials Program</u>.
- 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 your application for license renewal at least 30 days before the expiration date of your license and include the appropriate fee for license renewal, your present license will automatically remain in effect until the Department takes final action on your renewal application. However, if you file an application less than 30 days before the expiration date and the Department cannot process it before that date, you will be without a valid license when your license expires.

If you do not wish to renew your license, complete the Department's form, "Request to Terminate Radioactive Materials License" and send it to the Department before the expiration date of your license. (Refer to **Section 6** below)

If you cannot dispose of all the licensed radioactive material in your possession before the expiration date, you must renew your license renewal for use 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.

# 6. <u>TERMINATION OF A LICENSE</u>

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 form, "Request to Terminate Radioactive Materials License" (**Appendix C**), certifying that all sources have been disposed in accordance with Rule 391-3-17-.02(19). 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 until the license is terminated by the Department. There is no fee for licensees who request to terminate their license.

#### 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 comple and signed. Retain one copy for your records. Submit original application to: Georgia Department of Natural Resources, Radioactive Materials Program, 4244 International Parkway, Suite 1 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 addres rad\_materials @ dnr.state.ga.us.

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1. This is an Application for: (Check appropriate item)       A New License         If B or C , Please indicate GA. License Number	B Amendment to License C Renewal of License			
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. Coordinat 1. Latitude 2. Longitud 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 S	COPE OF INFORMATION IS DESCRIBED IN THE LICENS	SE APPLICATION GUIDE.		
<ol> <li>RADIOACTIVE MATERIAL         <ol> <li>Element and mass number, b. Chemical and/or physical form; and c             maximum amount which will be possessed at any one time.</li> </ol> </li> </ol>	6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED			
7. INDIVIDUAL(S) RESONSIBLE FOR RADIATION PROTECTION PROGRAM AND THEIR TRAINING & EXPERIENCE	8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS			
9. FACILITIES AND EQUIPMENT	10. RADIATION PROTECTION 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 PROGRA P.O. BOX 101161 ATLANTA, GEORGIA 30392	М,		
13.       CERTIFICATION (Must be completed by the applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.       REPRESENTATIONS				
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		

APPENDIX A

DNR Radioactive Materials Licensee Fee	Schedule			Appendix	Appendix B				
License Category		Licens	ing Fees		Inspect	tion Fees		Annual Fees	
Madical Talathanana	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								
Institutional Medical-Single Use	A.3	740	1 000	420	1 000	1 500	1 200	<u> </u>	405
Private Practice	A.4	710	1,000	430	1,000	1,500	1,200	600	135
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	0.000	4 000	100	1 000	0.500	0.000	000	105
Multiple Job-Site Industrial Radiography	C.3	3,000	1,800	490	1,200	2,500	2,600	600	135
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								
Portable Moisture Density Gauges, Pb analyzers, etc.	C.11								
Calibration Sources	C.12								
Industrial (other)	C.13	500	500	380	1,200	1,200	500	500	135
Broad Scope (Academic)	D.1								
Broad Scope (Industrial R&D)	D.2	2,300	2,000	500	930	1,200	2,100	600	135
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.								
Storage Only	H.								
Academic (Non-Broad)	Ι.	500	500	380	1,200	1,200	500	500	135
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	К.	0	0	0	0	0	Appropriate L	icense Renewal Fe	e
Radioactive Waste Disposal-Burial	L.1								
Radioactive Waste Disposal-Incineration	L.2	50,000	50,000	5,000	12,000	24,000	30,900	600	135
Radiaoactive Waste-Storage, Packaging or Transfer	L.3	2,800	1,900	200	2,100	2,200	3,600	600	
G L Devices(except tritium safety signs)	GL	0	0	0	0	0	100	100	100

# APPENDIX C 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.		License described above be terminated for the following reason:				
7.	Radioactive Material possessed under this license ha					
	No materials have been possessed or procured	d by the licensee under this licensee.				
	All material was used for the licensed purpose	es; none remains.				
	All material was leased, and has been returned	d 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 attach	ned.				
	Material has been disposed of in the following	g 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				
Kee	ep a 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 D CHECKLIST FOR APPLICATION FOR LEAK-TESTING SERVICE

This checklist may be helpful to an applicant when preparing an application for authorization to provide leak-testing services. This checklist should not be submitted with the application. Certain details in this list are not appropriate for all applicants. For example, if you do not intend to supply leak-tests kits, the fifth entry under Item 10 would not apply.

#### Appendix A: Item 1 -License information Item 2 -Name and mailing address Item 3 -Location of use (perhaps add "temporary jobs sites of customers") Item 4 -Person to be contacted about application Item 5 -Radioactive material to be possessed: nuclide form, quantity Item 6 -Purpose for which licensed material will be used

#### Note

Persons using gauges under the general license in Rule .02(6)(c) are required, with certain exceptions, to have the gauges tested periodically for leakage of radioactive material and proper operation of the on-off mechanism, if any. With certain exceptions, the tests must be performed by a person holding a specific license to perform such activities. It often may be advantageous for the Rule .02(6)(c) general licensee to have the leak-test and the shutter test performed by the same specific licensee. It may be noted that under a general license issued in Rule .02(20)(b), a specific licensee authorized to perform leak-tests and shutter checks on gauges used under Rule .02(6)(c) may also be authorized for these activities under the general license.

#### Item 7 -Radiation safety personnel and their training and experience

#### Note

16 hours of training may be appropriate for a limited leak-test program, for example, the applicant only applies for authorization to use a kit to collect samples for a certain manufacturer's gauges and the samples are then analyzed by some other specific licensee that has supplied the kit. However, for a comprehensive leak-test program, the applicant should have at least one responsible user with training comparable to the 40 hours of formal training outlined above. Training in the topics outlined should contribute to an appreciation of the need for the leak-test and its performance in a competent manner.

Item 8 -Training for other individuals working in area

#### Item 9 -Facilities and equipment

#### Note

If the applicant possesses only wipe test samples for analysis, the applicant's facility may be minimal, such as (1) an area where the samples will be received, evaluated and disposed of, and (2) an office or area for maintaining records. The applicant should have a secure area where samples are kept and treated as potentially contaminated until proven otherwise.

Item 10-	Radiation protection program
	Personnel monitoring for external dose
	Monitoring of internal dose
	Radiation detection instruments

#### Note

There may be a variety of acceptable calibration plans and frequencies. For example, an acceptable plan and frequency for an instrument used to measure Am-241 contamination on a wipe could be calibration by the licensee, using a NIST traceable 185 Bq (0.005 uCi)±5% Am-241 standard, at the start of any day that samples are evaluated. Some flexibility should be permitted the licensee in satisfying Rule .03(8)(a).

#### Operating and emergency procedures

Leak-Test kits

#### Note

Make sure that the applicant has adequate sample analysis equipment to properly evaluate the leak-test samples received for each type of kit it supplies.

Item 11-	Waste Management
Item 12-	License fee
Item 13-	Application signed