

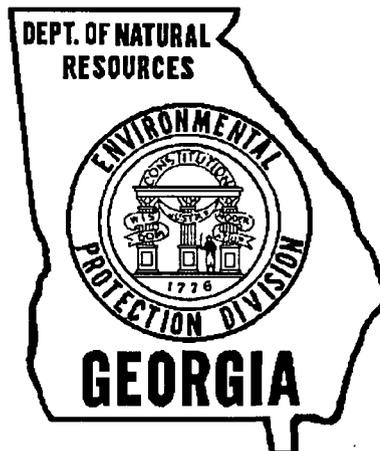
# Georgia Department of Natural Resources

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FAX COVER LETTER  
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Date: August 6, 1993

Please deliver the following pages to:

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This transmission is a total of 22 pages, with the cover letter being page one. If you do not receive all pages or if problems arise during transmission, please call Bill Stocumb at \_\_\_\_\_ immediately.

NOTE: Continuation of last fax transmission!

Item 7 - INDIVIDUALS RESPONSIBLE FOR RADIATION SAFETY--THEIR TRAINING AND EXPERIENCE

Paragraph 30.33(a)(3) of 10 CFR Part 30 specifies that you must be qualified by training and experience to use the material for the purposes requested in such a 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 safety program ("responsible individual").

1. The name of each "responsible individual."

a. The name of the individual or individuals responsible for your day-to-day radiation protection program and ensuring compliance with applicable NRC regulations and the terms and conditions of your license. This individual is normally the Radiation Safety Officer (RSO).

b. The names of any other personnel who will be physically present at your customers' facilities and will be responsible for the services performed under the authority of your license.

NOTE: The "responsible individuals" you list will also 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 resumé of training and experience for each "responsible individual" listed above. This resumé should cover formal academic training and on-the-job training in the services you intend to perform on the specified equipment. Guidelines on training and experience are:

a. Formal training should encompass the following topics.

(1) The principles and practices of radiation protection,

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- (2) Radioactivity measurements, monitoring techniques, and the use of instruments,
- (3) Mathematics basic to the use and measurement of radioactivity and
- (4) The biological effects of radiation.

b. A minimum of 40 hours of formal course work should be completed by each "responsible individual" listed in Item 7.

c. Each "responsible individual" should show evidence of satisfactorily completing the device manufacturer's training course (or the equivalent) on the installation and servicing of each specified device requested in the application.

d. On-the-job training should consist of hands-on training either under the supervision of the manufacturer's personnel specifically authorized to perform the service training or under other individuals specifically licensed to perform the service training.

e. Outline any additional training that will be provided periodically for the "responsible individuals" to keep them up to date on the servicing of the gauging and measuring devices, new equipment to be service and any factory modifications of existing equipment. You should indicate that such training will be augmented by using up-to-date manuals and instruction sheets provided by source and device manufacturers who provide new information on their recommended installation and servicing procedures and methods.

If device manufacturers' courses have been submitted to the NRC or an Agreement State and have been found acceptable, simply provide a signed certificate of training that shows satisfactory completion of the specific course. This certificate should identify by model number the devices upon which the individual is certified to perform the specified services requested in your application.

## Item 8 - TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS

### 8.1 Training Provided to Your Ancillary Employees

Since you have named "responsible individuals" and provided resumés of their training and experience in Item 7, in this item you should provide information on the training (pursuant to § 19.12 of 10 CFR Part 19) that will be provided to ancillary personnel who may frequent any radiation area or work under the direct supervision of your "responsible individuals." Consider secretarial and janitorial personnel and technicians, among others, who might work directly under the supervision of your "responsible individuals" or who might frequent any restricted area in your facility. You should provide the following information on this training:

1. An outline of your training program, including the topics that will be covered. Examples of topics to be included in this training are (1) the basic principles and fundamentals of radiation safety and good safety practices related to your use of radioactive materials, (2) the purpose for which radiation detection instruments will be used, (3) a review of your operating and emergency procedures, including safety procedures unique to your uses and facilities, and (4) specific instructions in precautions and procedures to be used to minimize exposure to radiation and radioactive materials.

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.

3. The name of your training instructor or instructors. If your instructor is not a "responsible individual" specified in Item 7, submit his or her qualifications. The minimal qualifications for an instructor should be the same as those for a "responsible individual" specified in Item 7.

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

### \* 8.2 Training Provided to Other Users (Customer Personnel) \*

You should state whether or not you will be responsible for training your customers' personnel in the safe use of the devices you intend to install or service under your license.

\* If, as part of your services, you will be responsible for training customer user personnel in the safe use of the devices, you should provide the following information on your training program.

1. Name the individual or individuals who will provide this training. If your training instructors are not "responsible individuals" specified in Item 7, you should submit their qualifications.

2. Submit an outline of the training program and include the time to be spent on each segment of the program. The duration of this training will depend, of course, on the complexity of the gauging or measuring device installation. However, as a minimum, this type of training should be from 2 to 8 hours long. Your training program outline should include:

- Basic radiation safety practices applicable to the safe use of the gauging and measuring devices. Include a review of the user manuals and specific instructions provided by the device manufacturer; use of the shutter mechanism; shutter lock procedures during maintenance in device areas; control of access, barriers, warning signs, etc.; maintenance permitted and prohibited under the customer's license; use of leak-test kits, and performance of periodic shutter on-off inspections.
- NRC regulations pertinent to the safe use of the devices, including maintenance of records by the customer for inspection purposes. Records of receipt (device shipment invoices, etc.), radiation surveys, wipe tests, shutter on-off operational checks, personnel monitoring (if required), and the training of user personnel should be included, if applicable.
- Required notices and signs such as "Notice to Employees" (Form NRC-3) and posting "Caution Radiation Area" signs for defining radiation areas
- Means of disposal of the device.
- Emergency procedures to be followed in case of damage resulting from fire, explosion, malfunction of the shutter, etc., including procedures such as limiting access and requesting professional assistance when needed.
- Means of determining the adequacy of the training, such as oral or written tests.

## Item 9 - FACILITIES AND EQUIPMENT

If you wish to perform services only at customer-owned locations, so state. However, if you wish to possess devices in your facility specified in Item 3, your facility and equipment must be adequate to protect health and to minimize danger to life or property pursuant to paragraph 30.33(a)(2) of 10 CFR Part 30. 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 restricted areas of your facility where work is actually performed
- Your means of providing security for work areas to prevent unauthorized use or removal of licensed material
- Storage containers and special shielding
- Remote handling tools and equipment

NOTE: Sketches and descriptions should show the relationship of material use areas to any adjoining unrestricted areas (e.g., offices, rest rooms, cafeterias, and other areas not under your control).

## Item 10 - RADIATION SAFETY PROGRAM

### 10.1 Personnel Monitoring Equipment

Section 20.202 of 10 CFR Part 20 requires that personnel monitoring equipment be used by individuals entering restricted areas who receive, or are likely to receive, a dose in excess of 25% of the dose specified in paragraph 20.101(a) of 10 CFR Part 20. The specified doses per calendar quarter are 1-1/4 rems to the whole body, head and trunk, active blood-forming organs, or gonads; 18-3/4 rems to the hands and forearms or feet and ankles; and 7-1/2 rems to the skin of the whole body. Individuals under 18 years of age need to use personnel monitoring equipment if they receive, or are likely to receive, a dose in excess of 5% of the specified doses in paragraph 20.101(a). In addition, personnel monitoring equipment must be used by any individual who enters a high radiation area.

All your personnel should wear personnel monitoring devices such as film badges or thermoluminescence dosimeters (TLDs) pursuant to § 20.202 of 10 CFR Part 20 when servicing devices containing multimillicurie levels of radioactive material. In most cases you only need to state that all personnel performing the stated services on the listed devices will be required to wear film badges or TLDs.

You should specify that you will obtain personnel monitoring services from a commercial service company; if your operations involve devices containing neutron sources, the supplier will include neutron dosimetry services. At a minimum, film badges should be exchanged at intervals not to exceed 1 month and TLDs at intervals not to exceed 3 months. You should specify your exchange intervals.

You should provide a justification if you have determined that personnel monitoring is not needed because of the low radioactive material content of the devices, radiation levels around the devices, the services to be performed, etc. An example of an acceptable justification is "We will be performing services on Model XXX pipe gauges only with the gauge in the off or shutter-closed position; personnel monitoring is not required for the customer's routine use of this device since the likelihood of receiving 25% of the radiation dose specified in 10 CFR Part 20 is negligible."

## 10.2 Radiation Detection Instruments and Instrument Calibration

According to § 20.201 of 10 CFR Part 20, each licensee must make surveys as necessary to evaluate the extent of radiation hazards that may be present during possession and use of licensed material. Therefore, you need to list the radiation detection instruments you will have available for use during the performance of the services you have requested. The list should include (1) the type of instrument (GM survey meter, ion chamber, scintillation counter, etc.), (2) the number of each type of instrument available, (3) the radiation detected by each specified type, and (4) the sensitivity range (milliroentgens/hour, counts/minute, etc.) of each instrument. This equipment must be adequate to monitor radiation levels during the installation of the device and to perform the required initial radiation survey (which the customer must maintain as a record following the installation). The following is an example of such a listing:

## RADIATION DETECTION INSTRUMENTS

TYPE	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE	USE
Portable thin-window GM survey meter	2	Beta, gamma	0-500 mr/hr	Survey and monitoring

Your survey meters should be calibrated at least every 12 months and after any servicing of the instrument (other than a simple battery exchange) pursuant to § 30.53 of 10 CFR Part 30. State the frequency of calibration for your listed instruments. You have three options for calibration, as follows:

1. If the instruments will be returned to the manufacturer for calibration, so state.
2. If the survey instruments will be contracted out for calibration, state the name and address of the firm and its NRC or Agreement State license number.
3. If the instruments will be calibrated inhouse, provide the following additional information:
  - The name of the manufacturer and model number of each radiation source to be used,
  - The nuclide and quantity of radioactive material contained in each source,
  - The accuracy of each source and the traceability of the source to a primary radiation standard,
  - The step-by-step procedures, including associated radiation safety procedures, you will use in calibrating, and
  - The name and experience and training in instrument calibration of each individual who will perform the calibrations.

**NOTE:** Guidance is being developed on inhouse calibration of survey instruments. Draft Regulatory Guide FC 413-4, "Preparation of Applications for the Use of Radioactive Material in the Performance of Calibrating Radiation Survey and Monitoring Instruments," was issued for public comment recently.

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1. If the instruments will be returned to the manufacturer for calibration, so state.
2. If the survey instruments will be contracted out for calibration, state the name and address of the firm and its NRC or Agreement State license number.
3. If the instruments will be calibrated inhouse, provide the following additional information:
  - The name of the manufacturer and model number of each radiation source to be used,
  - The nuclide and quantity of radioactive material contained in each source,
  - The accuracy of each source and the traceability of the source to a primary radiation standard,
  - The step-by-step procedures, including associated radiation safety procedures, you will use in calibrating, and
  - The name and experience and training in instrument calibration of each individual who will perform the calibrations.

**NOTE:** Guidance is being developed on inhouse calibration of survey instruments. Draft Regulatory Guide FC 413-4, "Preparation of Applications for the Use of Radioactive Material in the Performance of Calibrating Radiation Survey and Monitoring Instruments," was issued for public comment recently.

### 10.3 Operating and Emergency Procedures

Each individual who will perform the specified services on a customer's gauging and measuring devices should have a set of operating and emergency procedures. You should state in the application that your personnel will be provided with operating and emergency procedures and submit an outline of the basic elements of these procedures to be provided to your personnel.

#### 10.3.1 Operating Procedures

The following elements should be included in your operating procedures, if applicable.

1. Step-by-step procedures for performing the requested services. These are usually available in service manuals provided by manufacturers of the devices.
2. Instructions for locking source housings in the "store" or "off" position during mounting, servicing, or relocating the device.
3. Surveys to be performed (such as those around the housing) to be sure the device is in the "safe," "store," or "off" position, and during other specific maintenance and servicing operations when sources may not be shielded by the source holders.
4. Procedures for proper mounting or relocation.
5. Procedures describing when the device can be safely unlocked and checked for proper operation after servicing is completed.
6. Procedures for final survey of the source head during "on" and "off" modes of operation following installation, etc., including leak-testing.
7. Instructions for preparing the final survey and leak-test reports for your customers.
8. Instructions on determining the customer's need for personnel monitoring based on the radiation profile and occupancy evaluation in accordance with the requirements of § 20.202 of 10 CFR Part 20.
9. Determining the need for (and providing procedures to the customer for the use of) appropriate caution signs, labels, signals, and controls appropriate to the installation that will ensure customer compliance with the requirements of § 20.203 of 10 CFR Part 20.

10. Guidelines to be followed in establishing lock-out procedures (for example, procedures for preventing customers' employees from entering the radiation beam during maintenance, repairs, and other work in or around the bin, tank, hopper, etc., on which a device is mounted). Outline these procedures, if applicable to a particular installation, and include such items as the placement of warning signs indicating the need for ensuring that the shutter is locked in the "off" position (tagged off or bolted off, as applicable) until work is completed.

\* As part of the documentation of your radiation protection program, include copies or descriptions of the types of formal servicing and other reports you will provide to your customers, such as: \*

- Certificates of customers' employee (operator) training,
- Leak-test certificates, and
- Reports on the final survey of installed devices showing radiation profiles obtained in both the "on" and "off" positions in accordance with manufacturer's instructions or similar guidelines.

#### 10.3.2 Emergency Procedures

You should provide an outline of the emergency procedures that employees would be required to follow in the event of damage to the device or source holder, etc. The outline should include the following elements:

1. Isolating the device and the immediate area by roping off the area or by other suitable means,
2. Surveying radiation levels around the device,
3. Making sure the shutter or other on-off controls are in the "off" position, if possible,
4. Limiting access to the source housing until a leak test can be performed and source integrity is established,
5. Keeping customer personnel informed about the accident or emergency situation,
6. Obtaining the device manufacturer's assistance, if needed, and
7. Making the required notifications pursuant to regulatory requirements of §§ 20.403 and 20.404 of 10 CFR Part 20.

### Item 11 - WASTE MANAGEMENT

Sections 20.301 and 20.311 of 10 CFR Part 20 specify the general requirements for disposal of licensed material. You should describe the means you will use to dispose of licensed materials such as gauges containing sealed sources that are removed from service from your customer's facilities. State which of the following three options you will exercise.

1. Use a waste disposal service or broker licensed by the NRC or an Agreement State for the disposal of the licensed material.
2. Return any sealed sources or devices to the manufacturer in accordance with the manufacturer's specific packaging and shipping instructions.
3. Describe any other methods you will use and demonstrate their compliance with the regulations.

### Item 12 - LICENSE FEES

An application fee paid in full is required by paragraph 170.12(a) of 10 CFR Part 170 for most types of licenses, including applications for license amendments and renewals. You should refer to § 170.31, "Schedule of Fees for Materials Licenses and Other Regulatory Services," to determine the amount of the fee that must accompany your application. An application received without a fee or with an inadequate fee may be returned to you. All application fees may be charged irrespective of the NRC's disposition of the application or your withdrawal of the application.

### Item 13 - CERTIFICATION

If you are an individual applicant acting in a private capacity, you are required to sign the form pursuant to paragraph 30.32(c) of 10 CFR Part 30. Otherwise, your application should be dated and signed by your representative of the corporation or legal entity who is authorized to sign official documents and to certify that the application contains information that is true and correct to the best of your knowledge and belief. Unsigned applications will be returned for proper signature.