391-3-17-.02 LICENSING OF RADIOACTIVE MATERIAL. AMENDED.

(1) Purpose and Scope.

(a) This Rule, 391-3-17-.02, provides for the licensing of radioactive material. No person shall receive, possess, use, transfer, own, or acquire radioactive material except as authorized in a specific or general license issued pursuant to this Rule or as otherwise provided in this Chapter. However, nothing in this Rule shall apply to any person to the extent such person is subject to regulation by the U.S. Nuclear Regulatory Commission.

(b) In addition to the requirements of this Rule, all licensees are subject to the requirements of Rules .01, .03, .06, .07, .10, and .11 of this Chapter. Licensees engaged in industrial radiographic operations are subject to the requirements of Rule .04 of this Chapter. Licensees using radioactive material in the healing arts are also subject to the requirements of Rule .05 of this Chapter. Licensees engaged in the extrusion, mining, storage, beneficiating, processing, use, transfer, or disposal of NORM in such a manner as to alter the chemical properties or physical state of the NORM or its potential exposure pathways to humans are also subject to the requirements of Rule .08 of this Chapter. Licensees using irradiators whose dose rate exceeds 500 rads (5 Grays) per hour at one meter from the radioactive sealed sources are also subject to the requirements of Rule .09 of this Chapter.

Note: All numbered and lettered references within this Rule refer to parts of this Rule, unless stated otherwise.

(2) Exemptions/Source Material.

(a) Any person is exempt from this Rule to the extent that such person receives, possesses, uses, owns, or transfers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than 1/20 of one percent (0.05 percent) of the mixture, compound, solution, or alloy.

(b) Any person is exempt from this Rule to the extent that such person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material; provided that, except as authorized in a specific license, such person shall not refine or process such ore.

(c) Any person is exempt from this Rule to the extent that such person receives, possesses, uses, or transfers:

1. Any quantities of thorium contained in:

(i) Incandescent gas mantles,

(ii) Vacuum tubes,

(iii) Welding rods,

(iv) Electric lamps for illuminating purposes provided that each lamp does not contain more than 50 milligrams of thorium,

(v) Germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting provided that each lamp does not contain more than two grams of thorium,

(vi) Rare earth metals and compounds, mixtures, and products containing not more than 0.25 percent by weight thorium, uranium, or any combination of these, or

(vii) Personnel neutron dosimeters, provided that each dosimeter does not contain more than 50 milligrams of thorium;

2. Source material contained in the following products:

(i) Glazed ceramic tableware, provided that the glaze contains not more than 20 percent by weight source material,

(ii) Glassware containing not more than ten percent by weight source material, but not including commercially manufactured glass brick, pane glass, ceramic tile, or other glass or ceramic used in construction,

(iii) Glass enamel or glass enamel frit containing not more than ten percent by weight source material imported or ordered for importation into the United States, or initially distributed by manufacturers in the United States, before July 25, 1983, or

(iv) Piezoelectric ceramic containing not more than two percent by weight source material;

3. Photographic film, negatives, and prints containing uranium or thorium;

4. Any finished product or part fabricated of, or containing, tungsten-thorium or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed four percent by weight and that this exemption shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such

product or part;

5. Uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles, or stored or handled in connection with installation or removal of such counterweights, provided that:

   (i) The counterweights are manufactured in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission (NRC), authorizing distribution by the licensee pursuant to 10 CFR Part 40,

   (ii) Each such counterweight has been impressed with the following legend clearly legible through any plating or other covering: "DEPLETED URANIUM",

   (iii) Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer and the statement: "UNAUTHORIZED ALTERATIONS PROHIBITED", and

   (iv) This exemption shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such counterweights other than repair or restoration of any plating or other covering;

   Note: The requirements specified in (2)(c)5.(ii) and (iii) need not be met by counterweights manufactured prior to December 31, 1969, provided that such counterweights are impressed with the legend: "CAUTION - RADIOACTIVE MATERIAL - URANIUM".

6. Natural or depleted uranium metal used as shielding constituting part of any shipping container which is conspicuously and legibly impressed with the legend: "CAUTION - RADIOACTIVE SHIELDING - URANIUM" and the uranium metal is encased in mild steel or equally fire-resistant metal of minimum wall thickness of 1/8 inch (3.2 mm);

7. Thorium contained in finished optical lenses, provided that each lens does not contain more than 30 percent by weight of thorium, and that this exemption shall not be deemed to authorize either:

   (i) The shaping, grinding, or polishing of such lens or manufacturing processes other than the assembly of such lens into optical systems and devices without any alteration of the lens, or

   (ii) The receipt, possession, use, or transfer of thorium contained in contact lenses, in spectacles, or in eyepieces in

binoculars or other optical instruments;

8. Uranium contained in detector heads for use in fire detection units, provided that each detector head contains not more than 0.005 microcurie of uranium; or

9. Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, provided that:

(i) The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide), and

(ii) The thorium content in the nickel-thoria alloy does not exceed four percent by weight.

(d) The exemptions in paragraph (2)(c) do not authorize the manufacture of any of the products described.

(3) Exemptions/Radioactive Material Other Than Source Material.

(a) Exempt Concentrations.

1. Except as provided in (3)(a)2., any person is exempt from this Chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires products containing radioactive material in concentrations not in excess of those listed in (21)(a), Schedule A.

2. No person may introduce radioactive material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under (3)(a)1. or equivalent Regulations of the U.S. Nuclear Regulatory Commission, any Agreement State, or a Licensing State, except in accordance with a specific license issued pursuant to (11)(a) or the general license provided in (20).

(b) Exempt Quantities.

1. Except as provided in (3)(b)2. and 3., any person is exempt from this Chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires radioactive material in individual quantities each of which does not exceed the applicable quantity set forth in (21)(b), Schedule B.

2. Paragraph (3)(b) does not authorize the production, packaging, or repackaging of radioactive material for purposes of commercial distribution, or the incorporation of radioactive material into

products intended for commercial distribution.

3. No person may, for purposes of commercial distribution, transfer radioactive material in the individual quantities set forth in (21)(b), Schedule B, knowing or having reason to believe that such quantities of radioactive material will be transferred to persons exempt under (3)(b) or equivalent regulations of the U.S. Nuclear Regulatory Commission, any Agreement State, or a Licensing State, except in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission pursuant to Section 32.18 of 10 CFR, Part 32, or by the Department pursuant to (11)(b) which license states that the radioactive material may be transferred by the licensee to persons exempt under (3)(b) or the equivalent regulations of the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State.

(c) Exempt Items.

1. Certain Items Containing Radioactive Material. Except for persons who apply radioactive material to, or who incorporate radioactive material into, the following products, any person is exempt from this Chapter to the extent that he receives, possesses, uses, transfers, owns, or acquires the following products:

Note: Authority to transfer possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from regulatory requirements may be obtained only from the U.S. Nuclear Regulatory Commission, Washington, D.C., 20555.

(i) Timepieces or hands or dials containing not more than the following specified quantities of radioactive material and not exceeding the following specified radiation dose rates:

(I) 25 millicuries (925 MBq) of tritium per timepiece.

(II) 5 millicuries (185 MBq) of tritium per hand.

(III) 15 millicuries (555 MBq) of tritium per dial (bezels when used shall be considered as part of the dial).

(IV) 100 microcuries (3.7 MBq) of promethium-147 per watch or 200 microcuries (7.4 MBq) of promethium-147 per any other timepiece.

(V) 20 microcuries (0.74 MBq) of promethium-147 per watch hand or 40 microcuries (1.48 MBq) of promethium-147 per other timepiece hand.

(VI) 60 microcuries (2.22 MBq) of promethium-147 per watch dial or 120 microcuries (4.44 MBq) of promethium-147 per other timepiece dial (bezels when used shall be considered as part of the dial).

(VII) The levels of radiation from hands and dials containing promethium-147 will not exceed, when measured through 50 milligrams per square centimeter of absorber:

I. For wrist watches, 0.1 millirad (1 μGy) per hour at ten centimeters from any surface.

II. For pocket watches, 0.1 millirad (1 μGy) per hour at one centimeter from any surface.

III. For any other timepiece, 0.2 millirad (2 μGy) per hour at ten centimeters from any surface.

(VIII) One microcurie (37 kBq) of radium-226 per timepiece in timepieces acquired prior to July 12, 1982.

(ii) Lock illuminators containing not more than 15 millicuries (555 MBq) of tritium or not more than two millicuries (74 MBq) of promethium-147 installed in automobile locks. The levels of radiation from each lock illuminator containing promethium-147 will not exceed one millirad (10 μGy) per hour at one centimeter from any surface when measured through 50 milligrams per square centimeter of absorber.

(iii) Precision balances containing not more than one millicurie (37 MBq) of tritium per balance or not more than 0.5 millicurie (18.5 MBq) of tritium per balance part.

(iv) Automobile shift quadrants containing not more than 25 millicuries (925 MBq) of tritium.

(v) Marine compasses containing not more than 750 millicuries (27.8 GBq) of tritium gas and other marine navigational instruments containing not more than 250 millicuries (9.25 GBq) of tritium gas.

(vi) Thermostat dials and pointers containing not more than 25 millicuries (925 MBq) of tritium per thermostat.

(vii) Electron tubes, provided that the levels of radiation from each electron tube containing radioactive material will not exceed one millirad (10 μGy) per hour at one centimeter from any surface when measured through seven milligrams per square centimeter of absorber. Provided also, that each tube does not contain more than one of the following specified quantities of radioactive material:

(I) 150 millicuries (5.55 GBq) of tritium per microwave receiver protector tube or ten millicuries (370 MBq) of tritium per any other electron tube.

(II) 1 microcurie (37 kBq) of cobalt-60.

(III) 5 microcuries (185 kBq) of nickel-63.

(IV) 30 microcuries (1.11 MBq) of krypton-85.

(V) 5 microcuries (185 kBq) of cesium-137.

(VI) 30 microcuries (1.11 MBq) of promethium-147.

NOTE: For the purpose of (3)(c)1.(vii), "Electron tubes" includes spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pick-up tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical currents.

(viii) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, one or more sources of radioactive material, provided that:

(I) Each source contains no more than one exempt quantity set forth in (21)(b), Schedule B;

(II) Each instrument contains no more than ten exempt quantities. For purposes of this requirement, an instrument's source(s) may contain either one or different types of radionuclides and an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities specified in (21)(b), Schedule B, provided that the sum of such fractions shall not exceed unity; and

(III) For purposes of (3)(c)1.(viii), 0.05 microcurie (1.85 kBq) of americium-241 is considered an exempt quantity under (21)(b), Schedule B; or

(ix) Spark gap irradiators containing not more than one microcurie (37 kBq) of cobalt-60 per spark gap irradiator for use in electrically-ignited fuel oil burners having a firing rate of at least three gallons (11.4 liters) per hour.

2. Self-Luminous Products Containing Radioactive Material.

(i) Tritium, krypton-85, or promethium-147. Except for persons who manufacture, process, or produce self-luminous products containing tritium, krypton-85, or promethium-147, any person is exempt from this Chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires tritium, krypton-85 or promethium-147 in self-luminous products manufactured, processed, produced, imported, or transferred in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission pursuant to Section 32.22 of 10 CFR, Part 32, which license authorizes the transfer of the product to persons who are exempt from regulatory requirements. This exemption does not apply to tritium, krypton-85, or promethium-147 used in products for frivolous purposes or in toys or adornments.

(ii) Radium-226. Any person is exempt from this Chapter to the extent that such person receives, possesses, uses, transfers, or owns articles containing less than 0.1 microcurie (3.7 kBq) of radium-226 that were acquired prior to July 12, 1982.

3. Gas and Aerosol Detectors Containing Radioactive Material.

(i) Except for persons who manufacture, process, or produce gas and aerosol detectors containing radioactive material, any person is exempt from this Chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires radioactive material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards provided that detectors containing radioactive material shall have been manufactured, imported, or transferred in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission pursuant to Section 32.26 of 10 CFR, Part 32; or a Licensing State pursuant to (11)(c), which authorizes the transfer of the detectors to persons who are exempt from regulatory

requirements. (*Nota Bene:* See Note, in (3)(c)1.)

(ii) Gas and aerosol detectors containing naturally-occurring and accelerator-produced radioactive material (NARM) previously manufactured and distributed to general licensees in accordance with a specific license issued by an Agreement State shall be considered exempt under (3)(c)3.(i), provided that the device is labeled in accordance with the specific license authorizing distribution of the generally licensed device, and provided further that they meet the requirements of (11)(c).

(iii) Gas and aerosol detectors containing NARM previously manufactured and distributed in accordance with a specific license issued by a Licensing State shall be considered exempt under (3)(c)3.(i), provided that the device is labeled in accordance with the specific license authorizing distribution, and provided further that they meet the requirements of (11)(c).

4. Resins Containing Scandium-46 and Designed for Sand Consolidation in Oil Wells. Any person is exempt from this Chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires synthetic plastic resins containing scandium-46 which are designed for sand consolidation in oil wells. Such resins shall have been manufactured or imported in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, or shall have been manufactured in accordance with the specifications contained in a specific license issued by the Department or any Agreement State to the manufacturer of such resins pursuant to licensing requirements equivalent to those in Sections 32.16 and 32.17 of 10 CFR, Part 32, of the regulations of the U.S. Nuclear Regulatory Commission. This exemption does not authorize the manufacture of any resins containing scandium-46.

5. Radioactive drug: Capsules containing carbon-14 urea for "in vivo" diagnostic use for humans.

(i) Except as provided in .02(3)(c)5.(ii) and .02(3)(c)5.(iii), any person is exempt from the requirements for a license set forth in O.C.G.A. Section 31-13-5(a)(9) (Georgia Radiation Control Act) and from the regulations in this Chapter provided that such person receives, possesses, uses, transfers, owns, or acquires capsules containing one μCi (37 kBq) carbon-14 urea (allowing for nominal variation that may occur during the manufacturing process) each, for "in vivo"

diagnostic use for humans.

(ii) Any person who desires to use the capsules for research involving human subjects shall apply for and receive a specific license pursuant to Rule .02 and Rule .05 of this chapter.

(iii) Any person who desires to manufacture, prepare, process, produce, package, repackage, or transfer for commercial distribution such capsules shall apply for and receive a specific license pursuant to Rule .02 of this chapter.

(iv) Nothing in .02(3)(c)5. relieves persons from complying with applicable FDA, other Federal, and State requirements governing receipt, administration, and use of drugs.

(4) Types of Licenses. Licenses for radioactive materials are of two types: general and specific.

(a) General licenses provided in this Rule are effective without the filing of applications with the Department or the issuance of licensing documents to the particular persons, although the filing of a certificate with the Department may be required by the particular general license. The general licensee is subject to all other applicable portions of this Chapter and any limitations of the general license.

(b) Specific licenses require the submission of an application to the Department and the issuance of a licensing document by the Department to a named person. The licensee is subject to all applicable portions of this Chapter as well as any limitations specified in the licensing document.

(5) General Licenses - Source Material.

(a) A general license is hereby issued authorizing persons to hold bare title to source material without regard to quantity. This general license does not authorize any person to receive, possess, use, or transfer source material.

(b) A general license is hereby issued authorizing commercial and industrial firms, research, educational, and medical institutions, and State and local government agencies to use and transfer not more than 15 pounds (6.82 kg) of source material at any one time for research, development, educational, commercial, or operational purposes. A person authorized to use or transfer source material, pursuant to this general license, may not receive more than a total of 150 pounds (68.2 kg) of source material in any one calendar year.

(c) Persons who receive, possess, use, or transfer source material pursuant

to the general license in (5)(b) are prohibited from administering source material, or the radiation therefrom, either externally or internally, to human beings except as authorized by the Department in a specific license, and are exempt from the provisions of Rule .03 and Rule .07 of this Chapter to the extent that such receipt, possession, use, or transfer is within the terms of such general license; provided, however, that this exemption shall not be deemed to apply to any such person who is also in possession of source material under a specific license issued pursuant to this Rule.

(d) Depleted Uranium in Industrial Products and Devices.

1. A general license is hereby issued to receive, acquire, possess, use, or transfer, in accordance with the provisions of (5)(d)2., 3., 4., and 5., depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of the product or device.

2. The general license in (5)(d)1. applies only to industrial products or devices which have been manufactured either in accordance with a specific license issued to the manufacturer of the products or devices pursuant to (11)(l) or in accordance with a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission or an Agreement State which authorizes manufacture of the products or devices for distribution to persons generally licensed by the U.S. Nuclear Regulatory Commission or an Agreement State.

3. Persons who receive, acquire, possess, or use depleted uranium pursuant to the general license established by (5)(d)1. shall:

(i) File Department form "Registration Certificate - Use of Depleted Uranium Under General License" with the Department. The form shall be submitted within 30 days after the first receipt or acquisition of such depleted uranium. The registrant shall furnish on the form the following information and such other information as may be required by that form:

(I) Name and address of the registrant;

(II) A statement that the registrant has developed and will maintain procedures designed to establish physical control over the depleted uranium described in (5)(d)1. and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted

uranium; and

(III) Name and/or title, address, and telephone number of the individual duly authorized to act for and on behalf of the registrant in supervising the procedures identified in (5)(d)3.(i)(II); and

(ii) Report in writing to the Department any changes in information furnished by him in Department form "Registration Certificate - Use of Depleted Uranium Under General License". The report shall be submitted within 30 days after the effective date of such change.

4. A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by (5)(d)1:

(i) Shall not introduce such depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium;

(ii) Shall not abandon such depleted uranium;

(iii) Shall transfer or dispose of such depleted uranium only by transfer in accordance with the provisions of (19). In the case where the transferee receives the depleted uranium pursuant to the general license established by (5)(d)1., the transferor shall furnish the transferee a copy of this Regulation and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License". In the case where the transferee receives the depleted uranium pursuant to a general license contained in the U.S. Nuclear Regulatory Commission's or Agreement State's regulation equivalent to (5)(d)1., the transferor shall furnish the transferee a copy of this Regulation and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License "accompanied by a note explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or Agreement State under requirements substantially the same as those in this Regulation;

(iv) Shall report in writing to the Department the name and address of the person receiving the depleted uranium pursuant to such transfer within 30 days of any transfer.

5. Any person receiving, acquiring, possessing, using, or transferring

depleted uranium pursuant to the general license established by (5)(d)1. is exempt from the requirements of Rule .03 and Rule .07 of this Chapter with respect to the depleted uranium covered by that general license.

(6) General Licenses - Radioactive Materials Other Than Source Material. Each general license issued under (6) has its own specific conditions and requirements.

(a) Ownership of Radioactive Material. A general license is hereby issued to own radioactive material without regard to quantity. Notwithstanding any other provisions of this Rule, this general license does not authorize the manufacture, production, transfer, receipt, possession, or use of radioactive material.

(b) Certain Devices and Equipment. A general license is hereby issued to transfer, receive, acquire, own, possess, and use radioactive material incorporated in the following devices or equipment which have been manufactured, tested, and labeled by the manufacturer in accordance with a specific license issued by the Department pursuant to (11)(d) or manufactured in accordance with the specifications contained in a specific license issued to the manufacturer by the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State pursuant to regulations equivalent to (11)(d). This general license is subject to the provisions of (3)(a)2., (13), (18), and (19) of this Rule, (4), (5), (6), (7), (8), (9) and (10) of Rule .01, and also of Rules 391-3-17-.03, .06, and .07 of this Chapter.

1. Static Elimination Device. Devices designed for use as static eliminators that contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries (18.5 MBq) of polonium-210 per device.

2. Ion Generating Tube. Devices designed for the ionization of air which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries (18.5 MBq) of polonium-210 per device or a total of not more than 50 millicuries (1.85 GBq) of hydrogen-3 (tritium) per device.

Note: Attention is directed particularly to the provisions of Rule 391-3-17-.03 of this Chapter, which relate to the labeling of containers.

(c) Certain Measuring, Gauging, or Controlling Devices.

1. A general license is hereby issued to commercial and industrial firms and to research, educational and medical institutions,

individuals in the conduct of their business, and State or local government agencies to own, receive, acquire, possess, use, or transfer, in accordance with the provisions of (6)(c)2., 3., and 4., radioactive material, excluding special nuclear material, contained in devices designed and manufactured for the purpose of detecting, measuring, gauging, or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere.

2. The general license in (6)(c)1. applies only to radioactive material contained in devices which have been manufactured and labeled in accordance with the specifications contained:

   (i) in a specific license issued by the Department pursuant to (11)(d); or

   (ii) in accordance with the specifications contained In a specific license issued by the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State, which authorizes distribution of devices to persons generally licensed by the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State.

   The devices must have been received from one of the specific licensees described in (i) or (ii) above or through a transfer made under (6)(c)3.(viii).

   Note: Regulations under the Federal Food, Drug, and Cosmetic Act authorizing the use of radioactive control devices in food production require certain additional labeling thereon which is found in Section 179.21 of the Code of Federal Regulations, Title 21.

3. Any person who owns, receives, acquires, possesses, uses, or transfers radioactive material in a device pursuant to the general license in (6)(c)1.:

   (i) Shall assure that all labels affixed to the device at the time of receipt, and bearing a statement that removal of the label is prohibited, are maintained thereon and shall comply with all instructions and precautions provided by such labels;

   (ii) Shall assure that the device is tested for leakage of radioactive material and proper operation of the on/off mechanism and indicator, if any, at no longer than six-month intervals or at such other intervals as are specified in the

label; however,

(I) Devices containing only krypton need not be tested for leakage of radioactive material, and

(II) Devices containing only tritium or not more than 100 microcuries (3.7 MBq) of other beta- and/or gamma-emitting material or ten microcuries (0.37 MBq) of alpha-emitting material and devices held in storage in the original shipping container prior to initial installation need not be tested for any purpose;

(iii) Shall assure that the tests required by (6)(c)3.(ii) and other testing, installation, servicing, and removal from installation involving the radioactive material, its shielding or containment, are performed:

(I) In accordance with the instructions provided by the labels, or

(II) By a person holding an applicable specific license from the Department, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State to perform such activities;

(iv) Shall maintain records showing compliance with the requirements of (6)(c)3.(ii) and (iii). The records shall show the results of tests. The records also shall show the dates of performance of, and the names of persons performing, testing, installation, servicing, and removal from installation concerning the radioactive material, its shielding, or containment. Records of tests for leakage of radioactive material required by (6)(c)3.(ii) shall be maintained for one year after the next required leak test is performed. Records of tests of the on/off mechanism and indicator required by (6)(c)3.(ii) shall be maintained for one year after the next required test of the on/off mechanism and indicator is performed. In case of transfer or disposal, records required by this paragraph (iv) shall be maintained for one year after the transfer or disposal. Records which are required by (6)(c)3.(iii) shall be maintained until the Department authorizes their disposition.

(v) Shall, upon the occurrence of a failure of or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on/off mechanism or indicator, or upon the detection of 0.005 microcurie (185

Bq) or more removable radioactive material, immediately suspend operation of the device. The device may not be operated until it has been repaired by the manufacturer or other person holding an applicable specific license from the Department, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State to repair such devices. The device and any radioactive material from the device may only be disposed of by transfer to a person authorized by an applicable specific license to receive the radioactive material contained in the device or as otherwise approved by the Department. A report containing a brief description of the event and the remedial action taken; and, in the case of detection of 0.005 microcurie (185 Bq) or more of removable radioactive material, or failure or damage to a source likely to result in contamination of the premises or environs, a plan for ensuring that the premises and environs are acceptable for unrestricted use, must be furnished to the Department within 30 days. Under these circumstances, the criteria set out in Rule .03(7)(b) "Radiological requirements for unrestricted use" may be applicable, as determined by the Department on a case-by-case basis;

(vi) Shall not abandon the device containing radioactive material;

(vii) Shall, transfer or dispose of the device containing radioactive material only by transfer to another general licensee as specified in (6)(c)3.(viii), or to a specific licensee of the Department, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State whose specific license authorizes him to receive the device or authorizes him to collect waste. Within 30 days after transfer of a device to a specific licensee the licensee shall furnish to the Department a report containing identification of the device by manufacturer's (or initial transferor's) name, model number, serial number, the name and address and license number (license number not applicable if exported) of the person receiving the device and the date of transfer. If transfer is to any other licensee not listed, the licensee shall obtain written approval from the Department before transferring the device to any other person;

(viii) Shall transfer the device to another general licensee only:

(I) Where the device remains in use at a particular location. In such case the transferor shall give the

transferee a copy of this Regulation and any safety documents identified in the label on the device. Within 30 days of the transfer, report to the Department the manufacturer's (or initial transferor's) name, model number, serial number of the device transferred, the name and mailing address for place of use of the transferee, and the name, title and telephone number of a person identified by the transferee as the individual responsible for having knowledge of and authority to take actions to ensure compliance with the appropriate regulations and requirements; or

(II) Where the device is held in storage by an intermediate person in the original shipping container at its intended location of use prior to initial use by a general licensee;

(ix) Shall comply with the provisions of Rule .03(15) of this Chapter for reporting radiation incidents, or the theft or loss of licensed material, but shall be exempt from the other requirements contained in Rules .03 and .07 of this Chapter;

(x) Shall appoint an individual responsible for having knowledge of the appropriate regulations and requirements and the authority for taking required actions to comply with appropriate regulations and requirements. The general licensee, through this individual, shall ensure the day-to-day compliance with appropriate regulations and requirements. This appointment does not relieve the general licensee of any of its responsibility in this regard;

(xi) (I) Shall register, in accordance with paragraphs (6)(c).3(xi)(II) and (III), devices containing at least 10 mCi (370 Mbq) of cesium-137, 0.1 mCi (3.7 MBq) of strontium-90, 1 mCi (37 MBq) of cobalt-60, 10 mCi (370 MBq) of cadmium-109, or 1 mCi (37 MBq) of americium-241 or any other transuranic (i.e., element with atomic number greater than uranium (92)), based on the activity indicated on the label. Each address for a location of use, as described under paragraph 3.(xi)(III)IV. of this section, represents a separate general licensee and requires a separate registration.

(II) If in possession of a device meeting the criteria of paragraph (6)(c)3.(xi)(I), shall register these devices annually with the Department. Registration must be

done by verifying, correcting, and/or adding to the information provided in a request for registration received from the Department. The registration information must be submitted to the Department within 30 days of the date of the request for registration or as otherwise indicated in the request. In addition, a general licensee holding devices meeting the criteria of (6)(c)3.(xi)(I) is subject to the bankruptcy notification requirement in (13)(e) of this rule.

(III) In registering devices, the general licensee shall furnish the following information and any other information specifically requested by the Department;

I. Name and mailing address of the general licensee.

II. Information about each device: the manufacturer (or initial transferor), model number, serial number, the radioisotope and activity (as indicated on the label).

III. Name, title, and telephone number of the responsible person designated as a representative of the general licensee under (6)(c)3.(x).

IV. Address or location at which the device(s) are used and/or stored.

V. Certification by the responsible representative of the general licensee that the information concerning the device(s) has been verified through a physical inventory and checking of label information.

VI. Certification by the responsible representative of the general licensee that they are aware of the requirements of the general license.

(IV) Persons generally licensed by the NRC, an Agreement State, or Licensing State are not eligible for reciprocity.

(xii) Shall report changes to the mailing address for the location

of use (including change in name of general licensee) to the Department within 30 days of the effective date of the change; and

(xiii) May not hold devices that are not in use for longer than two years. If devices with shutters are not being used, the shutter must be locked in the closed position. The testing required by (6)(c)3.(ii) need not be performed during the period of storage only. However, when devices are put back into service or transferred to another person, and have not been tested within the required test interval, they must be tested for leakage before use or transfer and the shutter tested before use. Devices kept in standby for future use are excluded from the two-year time limit if the general licensee performs quarterly physical inventories of these devices while they are in standby.

4. The general license in (6)(c)1. does not authorize the manufacture or import of devices containing radioactive material.

5. The general license provided in (6)(c)1. is subject to the provisions of (13), (18), and (19) of this rule, of paragraphs (4), (5), (6), (7), (8), (9) and (10) of Rule .01, and of Rule .06 of this Chapter.

(d) Luminous Safety Devices for Aircraft.

1. A general license is hereby issued to own, receive, acquire, possess, and use tritium or promethium-147 contained in luminous safety devices for use in aircraft, provided:

(i) Each device contains not more than ten Curies (370 GBq) of tritium or 300 millicuries (11.1 GBq) of promethium-147; and

(ii) Each device has been manufactured, assembled, or imported in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission, or each device has been manufactured or assembled in accordance with the specifications contained in a specific license issued by the Department or any Agreement State to the manufacturer or assembler of such device pursuant to licensing requirements equivalent to those in Section 32.53 of 10 CFR, Part 32, of the regulations of the U.S. Nuclear Regulatory Commission.

2. Persons who own, receive, acquire, possess, or use luminous safety devices pursuant to the general license in (6)(d) are exempt from the requirements of Rules .03 and .07 of this Chapter, except that they shall comply with the provisions of Rule .03(15) of this

Chapter.

3. This general license does not authorize the manufacture, assembly,
or repair of luminous safety devices containing tritium or promethium-147.

4. This general license does not authorize the ownership, receipt, acquisition, possession, or use of promethium-147 contained in instrument dials.

5. This general license is subject to the provisions of paragraphs (13), (18), and (19) of this Rule, of paragraphs (4), (5), (6), (7), (8), (9) and (10) of Rule .01, and of Rule .06 of this Chapter.

(e) Ice-Detection Devices.

1. A general license is hereby issued to own, receive, acquire, possess, use, and transfer strontium-90 contained in ice-detection devices, provided each device contains not more than 50 microcuries (1.85 MBq) of strontium-90 and each device has been manufactured or imported in accordance with a specific license issued by the U.S. Nuclear Regulatory Commission or each device has been manufactured in accordance with the specifications contained in a specific license issued by the Department or any Agreement State to the manufacturer of such device pursuant to licensing requirements equivalent to those in Section 32.61 of 10 CFR, Part 32, of the regulations of the U.S. Nuclear Regulatory Commission.

2. Persons who own, receive, acquire, possess, use, or transfer strontium-90 contained in ice-detection devices pursuant to the general license in (6)(e)1.:

(i) Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating to the device, discontinue use of the device until it has been inspected, tested for leakage, and repaired by a person holding a specific license or equivalent licensing document from the U.S. Nuclear Regulatory Commission or an Agreement State to manufacture or service such devices; or shall dispose of the device pursuant to the provisions of Rule .03(13) of this Chapter;

(ii) Shall assure that all labels affixed to the device at the time of receipt and which bear a statement that prohibits removal of the labels are maintained thereon; and

(iii) Are exempt from the requirements of Rules .03 and .07 of this Chapter except that such persons shall comply with the provisions of Rule .03(13) and (15) of this Chapter.

3. This general license does not authorize the manufacture, assembly, disassembly, or repair of strontium-90 in ice-detection devices.

4. This general license is subject to the provisions of paragraphs (13), (18), and (19) of this Rule, of paragraphs (4), (5), (6), (7), (8), (9) and (10) of Rule .01, and of Rule .06 of this Chapter.

(f) Calibration and Reference Sources.

1. A general license is hereby issued to those persons listed below to own, receive, acquire, possess, use, and transfer, in accordance with the provisions of (6)(f)4. and 5., americium-241 in the form of calibration or reference sources:

(i) Any person who holds a specific license issued by the Department which authorizes him to receive, possess, use, and transfer radioactive material; and

(ii) Any person who holds a specific license issued by the U.S. Nuclear Regulatory Commission which authorizes him to receive, possess, use, and transfer special nuclear material.

2. A general license is hereby issued to own, receive, possess, use, and transfer plutonium in the form of calibration or reference sources in accordance with the provisions of (6)(f)4. and 5. to any person who holds a specific license issued by the Department which authorizes him to receive, possess, use, and transfer radioactive material.

3. A general license is hereby issued to own, receive, possess, use, and transfer radium-226 in the form of calibration or reference sources in accordance with the provisions of (6)(f)4. and 5. to any person who holds a specific license issued by the Department which authorizes him to receive, possess, use, and transfer radioactive material.

4. The general licenses in (6)(f)1., 2., and 3. apply only to calibration or reference sources which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer or importer of the sources by the U.S. Nuclear Regulatory Commission pursuant to Section 32.57 of 10 CFR, Part

32, or Section 70.39 of 10 CFR, Part 70, or which have been manufactured in accordance with the specifications contained in a specific license issued to the manufacturer by the Department, any Agreement State, or Licensing State pursuant to licensing requirements equivalent to those contained in Section 32.57 of 10 CFR, Part 32, or Section 70.39 of 10 CFR, Part 70, of the regulations of the U.S. Nuclear Regulatory Commission.

5. The general licenses provided in (6)(f)1., 2., and 3. are subject to the provisions of paragraphs (13), (18), and (19) of this Rule, of paragraphs (4), (5), (6), (7), (8), (9) and (10) of Rule .01, and of Rules .03, .06, and .07 of this Chapter. In addition, persons who own, receive, acquire, possess, use, or transfer one or more calibration or reference sources pursuant to these general licenses:

   (i) Shall not possess at any one time, at any one location of storage or use, more than five microcuries (185 kBq) of americium-241, five microcuries (185 kBq) of plutonium, or five microcuries (185 kBq) of radium-226 in such sources;

   (ii) Shall not receive, possess, use, or transfer such source unless the source, or the storage container, bears a label that includes one of the following statements, as appropriate, or a substantially similar statement that contains the information called for in one of the following statements, as appropriate:

      (I) The receipt, possession, use, and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of the U.S. Nuclear Regulatory Commission or of a State with which the U.S. Nuclear Regulatory Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL -
THIS SOURCE CONTAINS (AMERICIUM-241)*
(PLUTONIUM)*. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

_____

(NAME OF MANUFACTURER OR IMPORTER)

*Note: Showing only the name of the appropriate material, i.e., either plutonium or americium.

      (II) The receipt, possession, use, and transfer of this source, Model _____, Serial No. _____, are subject to a general license and the regulations of a Licensing State. Do not remove this label.

CAUTION - RADIOACTIVE MATERIAL -
THIS SOURCE CONTAINS RADIUM-226.
DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

_____
(NAME OF MANUFACTURER OR IMPORTER)

(iii) Shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a license from the Department, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State to receive the source;

(iv) Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain americium-241, plutonium, or radium-226 which might otherwise escape during storage; and

(v) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

6. These general licenses do not authorize the manufacture of calibration or reference sources containing americium-241, plutonium, or radium-226.

(g) General License for Use of Radioactive Material for Certain In Vitro Clinical or Laboratory Testing.

Note: The new drug provisions of the Federal Food, Drug, and Cosmetic Act also govern the availability and use of any specified diagnostic drugs in interstate commerce.

1. A general license is hereby issued to any physician, veterinarian in the practice of veterinary medicine, clinical laboratory, or hospital to receive, acquire, possess, transfer, or use, for any of the following radioactive material, in accordance with the provisions of (6)(g) 2., 3., 4., 5., and 6., the following radioactive materials in prepackaged units for use in in-vitro clinical or laboratory tests not involving internal or external administration of radioactive material, or the radiation therefrom, to human beings or animals:

(i) Iodine-125, in units not exceeding ten microcuries (370 kBq) each.

(ii) Iodine-131, in units not exceeding ten microcuries (370 kBq) each.

(iii) Carbon-14, in units not exceeding ten microcuries (370 kBq) each.

(iv) Hydrogen-3 (tritium), in units not exceeding 50 microcuries (1.85 MBq) each.

(v) Iron-59, in units not exceeding 20 microcuries (740 kBq) each.

(vi) Cobalt-57, in units not exceeding ten microcuries (370 kBq) each.

(vii) Selenium-75, in units not exceeding ten microcuries (370 kBq) each.

(viii) Mock Iodine-125 reference or calibration sources, in units not exceeding 0.05 microcurie (1.85 kBq) of iodine-129 and 0.005 microcurie (185 Bq) of americium-241 each.

2. No person shall receive, acquire, possess, use, or transfer radioactive material pursuant to the general license established by (6)(g)1. until he has filed Department form, "Certificate – In-Vitro Testing with Radioactive Material Under General License" with the Department and received from the Department a validated copy of this form with certification number assigned or until he has been authorized pursuant to (9)(e)3. to use radioactive material under the general license in (6)(g). The physician, veterinarian in the practice of veterinary medicine, clinical laboratory, or hospital shall furnish on the form the following information and such other information as may be required by that form:

(i) Name and address of the physician, veterinarian in the practice of veterinary medicine, clinical laboratory, or hospital;

(ii) The location of use; and

(iii) A statement that the physician, veterinarian in the practice of veterinary medicine, clinical laboratory, or hospital has appropriate radiation measuring instruments to carry out in vitro clinical or laboratory tests with radioactive material as authorized under the general license in (6)(g)1. and that such tests will be performed only by personnel competent in the use of such instruments and in the handling of the radioactive material.

3. A person who receives, acquires, possesses, or uses radioactive material pursuant to the general license established by (6)(g)1. shall comply with the following:

   (i) The general licensee shall not possess at any one time, pursuant to the general license in (6)(g)1., at any one location of storage or use, a total amount of iodine-125, iodine-131, selenium-75, iron-59, and/or cobalt-57 in excess of 200 microcuries (7.4 MBq).

   (ii) The general licensee shall store the radioactive material, until used, in the original shipping container or in a container providing the equivalent amount of radiation protection.

   (iii) The general licensee shall use the radioactive material only as authorized by (6)(g)1.

   (iv) The general licensee shall not transfer the radioactive material to a person who is not authorized to receive it pursuant to a license issued by the Department, the U.S. Nuclear Regulatory Commission, any Agreement State, or Licensing State, nor transfer the radioactive material in any manner other than in the unopened, labeled shipping container as received from the supplier.

   (v) The general licensee shall dispose of the Mock Iodine-125 reference or calibration sources described in (6)(g)1.(viii) as required by Rule .03(13) of this Chapter.

4. The general licensee shall not receive, acquire, possess, or use radioactive material pursuant to (6)(g)1.:

   (i) Except as prepackaged units which are labeled in accordance with the provisions of an applicable specific license issued pursuant to (11)(g) or in accordance with the provisions of a specific license issued by the U.S. Nuclear Regulatory Commission, any Agreement State, or Licensing State which authorizes the manufacture and distribution of iodine-125, iodine-131, carbon-14, hydrogen-3 (tritium), iron-59, selenium-75, cobalt-57, or Mock Iodine-125 to persons generally licensed under (6)(g) or its equivalent, and

   (ii) Unless one of the following statements, as appropriate, or a statement which contains the information called for in one of the following statements, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:

(I) This radioactive material shall be received, acquired, possessed, and used only by physicians, veterinarians in the practice of veterinary medicine, clinical laboratories, or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority.

_____
(NAME OF MANUFACTURER)

(II) This radioactive material shall be received, acquired, possessed, and used only by physicians, veterinarians in the practice of veterinary medicine, clinical laboratories, or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of a Licensing State.

_____
(NAME OF MANUFACTURER)

5. The physician, veterinarian in the practice of veterinary medicine, clinical laboratory, or hospital possessing or using radioactive material under the general license of (6)(g)1. shall report in writing to the Department any changes in the information furnished by him in the "Certificate - In Vitro Testing with Radioactive Material Under General License". The report shall be furnished within 30 days after the effective date of such change.

6. Any person using radioactive material pursuant to the general license of (6)(g)1. is exempt from the requirements of Rules .03 and .07 of this Chapter with respect to radioactive material covered by that general license, except that such persons using the Mock Iodine-125 described in (6)(g)1.(viii) shall comply with the provisions of (13) and (15) of Rule .03 of this Chapter.

(7) Filing Application for Specific Licenses.

(a) Applications for specific licenses shall be filed on forms supplied by the

Georgia Department of Natural Resources, Radioactive Materials Program, 4220 International Parkway, Suite 100, Atlanta, Georgia, 30354, or current mailing address. The application shall set forth all applicable information called for by the form.

(b) The Department may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Department to determine whether the application should be granted or denied or whether a license should be modified or revoked.

(c) Each application shall be signed by the applicant or person duly authorized to act for and on his behalf.

(d) An application for a license may include a request for a license authorizing one or more activities.

(e) In his application, the applicant may incorporate, by reference, information contained in previous applications, statements, or reports filed with the Department, provided that such references are clear and specific by page, paragraph, and date.

(f) Applications and documents submitted to the Department may be made available for public inspection except those documents described in Rule .01 (5)(c) which may be withheld from public inspection or discovery.

(g) The Department may verify information contained in applications and secure additional information deemed necessary to make a reasonable determination as to whether to issue a license and whether special conditions should be attached thereto by visiting the facility or location where radioactive materials would be possessed, or used, and by discussing details of proposed possession or use of the radioactive materials with the applicant or the applicant's designated representatives.

(h) Emergency Plan for Large Quantity Users.

1. Each application to possess radioactive materials in unsealed form, on foils or plated sources, or sealed in glass in excess of the quantities specified in (21)(e), Schedule E, must contain either:

(i) An evaluation showing that the maximum dose to a person offsite due to a release of radioactive materials would not exceed one rem (.01 Sv) effective dose equivalent or five rems (.05 Sv) to the thyroid; or

(ii) An emergency plan for responding to a release of radioactive material.

2. One or more of the following factors may be used to support an evaluation submitted under (7)(h)1.(i):

   (i) The radioactive material is physically separated so that only a portion could be involved in an accident;

   (ii) All or part of the radioactive material is not subject to release during an accident because of the way it is stored or packaged;

   (iii) The release fraction in the respirable size range would be lower than the release fraction shown in (21)(e), Schedule E, due to the chemical or physical form of the material;

   (iv) The solubility of the radioactive material would reduce the dose received;

   (v) Facility design or engineered safety features in the facility would cause the release fraction to be lower than shown in (21)(e), Schedule E;

   (vi) Operating restrictions or procedures would prevent a release fraction as large as that shown in (21)(e), Schedule E; or

   (vii) Other factors appropriate for the specific facility.

3. An emergency plan for responding to a release of radioactive material submitted under (7)(h)1.(ii) must include the following information:

   (i) Facility description - a brief description of the licensee's facility and the area near the site.

   (ii) Types of accidents - an identification of each type of radioactive materials accident for which protective actions may be needed.

   (iii) Classification of accidents - a classification system for classifying accidents as alerts or site area emergencies.

   (iv) Detection of accidents - identification of the means of detecting each type of accident in a timely manner.

   (v) Mitigation of consequences - a brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect

workers on site, and a description of the program for maintaining the equipment.

(vi) Assessment of releases - a brief description of the methods and equipment to assess releases of radioactive materials.

(vii) Responsibilities - a brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the Department; also responsibilities for developing, maintaining, and updating the plan.

(viii) Notification and coordination - a commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established to prevent spreading of contamination during recovery activities. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the Department immediately after notification of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency.

Note: This Chapter does not supersede or release licensees from complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L-99-499 or other State or Federal reporting requirements.

(ix) Information to be communicated - a brief description of the types of information on facility status, radioactive releases, and recommended protective actions, if necessary, to be given to offsite response organizations and to the Department.

(x) Training - a brief description of the frequency, performance objectives, and plans for the training that the licensee will provide workers on how to respond to an emergency, including any special instruction and orientation tours the licensee would offer to fire, police, medical, and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also,

the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.

(xi) Safe shutdown - a brief description of the means of restoring the facility to a safe condition after an accident.

(xii) Exercises - provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the biennial exercises. Participation of offsite response organizations in biennial exercises, although recommended, is not required. Exercises must use accident scenarios postulated as most probable for the specific site, and the scenarios shall not be known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for the plan. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and the overall effectiveness of the response. These exercises must be documented and deficiencies found by the critiques must be corrected.

(xiii) Hazardous chemicals - a certification that the applicant has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L.99-499, if applicable to the applicant's activities at the proposed place of use of the radioactive material.

4. The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the licensee's emergency plan before submitting it to the Department. The licensee shall provide any comments received within the 60 days to the Department with the emergency plan.

(i) An application for a specific license to use radioactive material in the form of a sealed source or in a device that contains the sealed source must either:

1. Identify the source or device by manufacturer and model number as registered with the Department under (11)(l); or

2. Contain the information identified in (11)(l)6.

(8) General Requirements for the Issuance of Specific Licenses. A license application will be approved if the Department determines the following:

(a) That the applicant is qualified by reason of training and experience to use the material in question for the purpose requested in accordance with this Chapter in such a manner as to minimize danger to public health and safety or property;

(b) That the applicant's proposed equipment, facilities, and procedures are adequate to minimize danger to public health and safety or property;

(c) That the issuance of the license will not be inimical to the health and safety of the public; and

(d) That the applicant satisfies any applicable special requirements in (9), (10), and (11).

(e) Bonding Requirements.

1. Pursuant to Georgia Laws 1979, pp. 1059, 1060, a specific license will be issued to a Major Processor as defined in Rule .01(2)(ggg) of this Chapter only if the applicant has posted a surety bond with, and made payable to, the Commissioner, Department of Natural Resources, to ensure the protection of the public health and safety in the event of abandonment, insolvency, or other inability of the licensee to meet the requirements of the Act and this Chapter.

(i) The bond provided shall be not less than $100,000.00, nor more than $5,000,000.00.

(ii) The exact amount of the bond shall be determined by the Director, Environmental Protection Division, and shall be based on the probable extent of contamination, the amount of possible property damage, the costs of removal and disposal of sources of radiation used by the licensee, and the costs of reclamation of the property in the event of abandonment, insolvency, or other inability of the licensee to perform such services to the satisfaction of the Department.

2. Persons licensed at the time the bonding requirements of this Chapter became effective, and upon notice by the Department, must, within a period of 90 days following such notice, provide the bond required by (8)(e)1. as a condition for continuation of the license.

(f) Environmental Report, Commencement of Construction. In the case of an application for a license to receive and possess radioactive material for the conduct of any activity which the Department determines will significantly affect the quality of the environment, commencement of construction of the plant or facility in which the activity will be conducted shall not begin until the Department has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess radioactive material in such plant or facility. As used in this paragraph, the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

(g) Financial assurance and record-keeping for decommissioning.

1. The following are required to furnish financial assurance and record-keeping for decommissioning:

(i) Each applicant for a specific license authorizing the possession and use of unsealed radioactive material of half-life greater than 120 days and in quantities exceeding 10^5 times the applicable quantities set forth in Schedule F shall submit a decommissioning funding plan as described in (8)(g)5. The decommissioning funding plan must also be submitted when a combination of isotopes is involved if R divided by 10^5 is greater than 1 (unity Rule), where R is defined here as the sum of the ratios of the quantity of each isotope to the applicable value in Schedule F.

(ii) Each applicant for a specific license authorizing the possession and use of sealed sources or plated foils of half-life greater than 120 days and in quantities exceeding 10^{12} times the applicable quantities set forth in Schedule F shall submit a decommissioning funding plan as described in (8)(g)5. The decommissioning funding plan must also be submitted when a combination of isotopes is involved if R divided by 10^{12} is greater than 1 (unity Rule), where R is defined here as the sum of the ratios of the quantity of each isotope to the applicable value in Schedule F.

2. Each applicant for a specific license authorizing the possession and use of radioactive material of half-life greater than 120 days and in quantities specified in (8)(g)4. shall either:

   (i) Submit a decommissioning funding plan as described in (8)(g)5.; or

   (ii) Submit a certification that financial assurance for decommissioning has been provided in the amount prescribed by (8)(g)4. using one of the methods described in (8)(g)6. For an applicant, this certification may state that the appropriate assurance will be obtained after the application has been approved and the license issued but prior to the receipt of licensed material. As part of the certification, a copy of the financial instrument obtained to satisfy the requirements of (8)(g)6. is to be submitted to the Department. If the applicant defers execution of the financial instrument until after the license has been issued, a signed original of the financial instrument obtained to satisfy the requirements (8)(g)6. must be submitted to the Department before the receipt of licensed material. If the applicant does not defer execution of the financial instrument, the applicant shall submit to the Department, as part of the certification a signed original of the financial instrument obtained to satisfy the requirements of (8)(g)6.

3. (i) Each holder of a specific license issued on or after January 1, 1993, which is of a type described in (8)(g)1. or 2. shall provide financial assurance for decommissioning in accordance with the criteria set forth in this Rule.

   (ii) Each holder of a specific license issued before January 1, 1993, which is of a type described in (8)(g)1. shall submit, on or before January 1, 1993, a decommissioning funding plan or a certification of financial assurance for decommissioning in an amount at least equal to $1,125,000 in accordance with the criteria set forth in this Rule. If the licensee submits the certification of financial assurance rather than a decommissioning funding plan at this time, the licensee shall include a decommissioning funding plan in any application for license renewal.

   (iii) Each holder of a specific license issued before January 1, 1993, and of a type described in (8)(g)2. shall submit, on or before January 1, 1993, a certification of financial assurance for decommissioning or a decommissioning funding plan in accordance with the criteria set forth in this .02(8)(g).

(iv) Waste collectors and waste processors shall provide financial assurance in an amount based on a decommissioning funding plan as described in .02(8)(g)5. The decommissioning funding plan must also include the cost of disposal of the maximum amount (curies) of radioactive material permitted by the license, and the cost of disposal of the maximum quantity, by volume, of radioactive material that could be present at the licensee's facility at any time, in addition to the cost to remediate the licensee's site to meet the license termination requirements in .02(18).

4. Table of required amounts of financial assurance for decommissioning by quantity of material.

Greater than 10^4 but less than or equal to 10^5 times the applicable quantities of Schedule F in unsealed form. (For a combination of isotopes, if R, as defined in (8)(g), divided by 10^4 is greater than 1 but R divided by 10^5 is less than or equal to 1) $1,125,000

Greater than 10^3 but less than or equal to 10^4 times the applicable quantities of Schedule F in unsealed form. (For a combination of isotopes, if R, as defined in (8)(g), divided by 10^3 is greater than 1 but R divided by 10^4 is less than or equal to 1) $225,000

Greater than 10^{10} times the applicable quantities of Schedule F in sealed sources or plated foils. (For a combination of isotopes, if R, as defined in (8)(g), divided by 10^{10} is greater than 1) $113,000

5. Each decommissioning funding plan must contain a cost estimate for decommissioning and a method of assuring funds for decommissioning from (8)(g)6., including means of adjusting cost estimates and associated funding levels periodically over the life of the facility. Cost estimates must be adjusted at intervals not to exceed three (3) years. The decommissioning funding plan must also contain a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning.

6. Financial assurance for decommissioning must be provided by one or more of the following methods:

(i) Prepayment. Prepayment is the deposit prior to the start of operation into an account segregated from licensee assets

and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(ii) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in (21)(d) Schedule D. A parent company guarantee may not be used in combination with other financial methods to satisfy the requirements of this section. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in (21)(g) Schedule G. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning: costs may be used if the guarantee and test are as contained in (21)(d) Schedule D. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are as contained in (21)(h) Schedule H. A guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section or in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(I) The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically, unless 90 days or more prior to the renewal date the issuer notifies the Department, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Department within 30 days after receipt of notification of cancellation.

(II) The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Department. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(III) The surety method or insurance must remain in effect until the Department has terminated the license.

(iii) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provisions must be as stated in (8)(g)2.

(iv) In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning or an amount based on the Table in (8)(g)4., and indicating that funds for decommissioning will be obtained when necessary.

7. Each person licensed under this Chapter shall keep records of information important to the safe and effective decommissioning of the facility in an identified location until the site is released for unrestricted use by the Department. Before licensed activities are transferred or assigned in accordance with .02(13)(b), licensees shall transfer all records described in (7)(i) through (iv) to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated. If records of relevant information to the decommissioning of a facility are kept for other purposes, references to these records and their locations may be used. Information the Department considers important to decommissioning consists of:

(i) Records of spills or other unusual occurrences involving the

spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(ii) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(iii) Except for areas containing only sealed sources (provided the sources have not leaked or no contamination remains after any leak) or radioactive materials having only half-lives of less than 65 days, or depleted uranium used only for shielding or as penetrators in unused munitions, a list contained in a single document and updated every two years, of the following:

(I) All areas designated and formerly designated as restricted areas as defined under Rule 391-3-17-.01(2)(mmmm);

(II) All areas outside of restricted areas that require documentation under (8)(g)7.(i);

(III) All areas outside of restricted areas where current and previous wastes have been buried as documented under Rule .03(14)(i) of this Chapter; and

(IV) All areas outside of restricted areas that contain materials such that, if the license expired, the licensee would be required to either decontaminate the area to unrestricted release levels or apply for approval for disposal under Rule .03(13)(b) of this Chapter.

(iv) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

8. Teletherapy licensees are exempted from decommissioning financial assurance requirements for possession of licensed material in sealed sources in quantities greater than 10^{10} times the applicable quantities of Schedule F of this rule, for the purpose of source changes only. This exemption is granted for no more than 30 days for any one source change.

(h) Expiration and termination of licenses and decommissioning of sites and separate buildings or outdoor areas.

1. Each specific license continues in effect, beyond the expiration date if necessary, with respect to possession of radioactive material until the Department notifies the licensee in writing that the license is terminated. During this time, the licensee shall:

(i) Limit actions involving radioactive material to those related to decommissioning; and

(ii) Continue to control entry to restricted areas until they are suitable for release in accordance with Department requirements.

2. Within 60 days of the occurrence of any of the following, each licensee shall provide notification to the Department in writing of such occurrence, and either begin decommissioning its site, or any separate building or outdoor area that contains residual radioactivity so that the building or outdoor area is suitable for release in accordance with Department requirements, or submit within 12 months of notification a decommissioning plan, if required by (8)(h)5.(i), and begin decommissioning upon approval of that plan if:

(i) The license has expired pursuant to (14) or (18)(c); or

(ii) The licensee has decided to permanently cease principal activities, as defined in this part, at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Department requirements; or

(iii) No principal activities under the license have been conducted for a period of 24 months; or

(iv) No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with Department requirements.

3. Coincident with the notification required by (8)(h)2., the licensee shall maintain in effect all decommissioning financial assurances established by the licensee pursuant to (8)(g) in conjunction with a license issuance or renewal or as required by this section. The amount of the financial assurance must be increased or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to (8)(h)5.(iv)(V).

(i) Any licensee who has not provided financial assurance to cover the detailed cost estimate submitted with the decommissioning plan shall do so when this rule becomes effective.

(ii) Following approval of the decommissioning plan, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the Department.

4. The Department may grant a request to extend the time periods in (8)(h)2. if the Department determines that this relief is not detrimental to the public health and safety and is otherwise in the public interest. The request must be submitted no later than 30 days before notification pursuant to (8)(h)2. The schedule for decommissioning set forth in (8)(h)2. may not commence until the Department has made a determination on the request.

5. (i) A decommissioning plan must be submitted if required by license condition or if the procedures and activities necessary to carry out decommissioning of the site or separate building or outdoor area have not been previously approved by the Department and these procedures could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(I) Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(II) Workers would be entering areas not normally

occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(III) Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation or;

(IV) Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(ii) The Department may approve an alternate schedule for submittal of a decommissioning plan required pursuant to (8)(h)2. if the Department determines that the alternative schedule is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the public health and safety and is otherwise in the public interest.

(iii) Procedures such as those listed in (8)(h)5.(i) with potential health and safety impacts may not be carried out prior to approval of the decommissioning plan.

(iv) The proposed decommissioning plan for the site or separate building or outdoor area must include:

(I) A description of the conditions of the site or separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(II) A description of planned decommissioning activities;

(III) A description of methods used to ensure protection of workers and the environment against radiation hazards during decommissioning;

(IV) A description of the planned final radiation survey; and

(V) An updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning.

(VI) For decommissioning plans calling for completion of

decommissioning later than 24 months after plan approval, the plan shall include a justification for the delay based on the criteria in (8)(h)7.

(v) The proposed decommissioning plan will be approved by the Department if the information therein demonstrates that the decommissioning will be completed as soon as practicable and that the health and safety of workers and the public will be adequately protected.

6. (i) Except as provided in (8)(h)7., licensees shall complete decommissioning of the site or separate building or outdoor area as soon as practical but no later than 24 months following the initiation of decommissioning.

(ii) Except as provided in (8)(h)7. when decommissioning involves the entire site, the licensee shall request license termination as soon as practical but no later than 24 months following the initiation of decommissioning.

7. The Department may approve a request for an alternative schedule for completion of decommissioning of the site or separate building or outdoor area, and license termination if appropriate, if the Department determines that the alternative is warranted by consideration for the following:

(i) Whether it is technically feasible to complete decommissioning within the allotted 24-month period;

(ii) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted 24-month period;

(iii) Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(iv) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(v) Other site-specific factors which the Department may consider appropriate on a case-by-case basis, such as the regulatory requirements of other government agencies, lawsuits, ground-water treatment activities, monitored natural ground-water restoration, actions that could result in more environmental harm than deferred cleanup, and other

factors beyond the control of the licensee.

8. As the final step in decommissioning, the licensee shall follow the requirements of Rule .02(18)(d).

(9) Special Requirements for Issuance of Certain Specific Licenses for Radioactive Material.

(a) Use of Sealed Sources in Industrial Radiography. In addition to the requirements set forth in (8), a specific license for the use of sealed sources in industrial radiography will be issued if the licensee meets all of the requirements of Rule .04 of this Chapter.

(b) Human Use of Radioactive Materials in Institutions. In addition to the requirements set forth in (8), a specific license for the human use of radioactive material in an institution will be issued only if the licensee also meets all of the requirements of Rule .05 of this Chapter.

(c) Specific Licenses to Individual Physicians for Human Use of Radioactive Material.

1. An application by an individual physician or group of physicians for a specific license for human use of radioactive material will be approved if:

(i) The applicant satisfies the general requirements specified in (8), and all of the requirements of Rule .05 of this Chapter;

(ii) The application is for use in the applicant's practice in an office outside a medical institution;

(iii) The applicant has access to a hospital possessing adequate facilities to hospitalize and monitor the applicant's radioactive patients whenever it is advisable; and

(iv) The applicant has extensive experience in the proposed use, the handling and administration of radionuclides, and where applicable, the clinical management of radioactive patients.

2. The Department will not approve an application by an individual physician or group of physicians for a specific license to receive, possess, or use radioactive material on the premises of a medical institution unless:

(i) The use of radioactive material is limited to:

(I) The administration of radiopharmaceuticals for diagnostic or therapeutic purposes;

(II) The performance of diagnostic studies on patients to whom a radiopharmaceutical has been administered;

(III) The performance of in vitro diagnostic studies; or

(IV) The calibration and quality control checks of radioactive assay instrumentation, radiation safety instrumentation, and diagnostic instrumentation;

(ii) The physician brings the radioactive material with him and removes the radioactive material when he departs (The institution cannot receive, possess, or store radioactive material other than the amount of material remaining in the patient.); and

(iii) The medical institution does not hold a radioactive material license under (9)(b).

(d) Human Use of Sealed Sources Containing Radioactive Material. In addition to the requirements set forth in (8), a specific license for the human use of sealed sources containing radioactive material will be issued only if the applicant, or, if the application is made by an institution, the individual user is a physician and either:

1. Has specialized training in the therapeutic use of the sealed source considered (e.g., teletherapy unit, beta applicator), or has experience equivalent to such training; or

2. Has specialized training in the diagnostic use of the sealed source considered (e.g., bone mineral analyzer) or has experience equivalent to such training.

(e) Specific Licenses for Certain Medical Uses of Radioactive Material.

1. Subject to the provisions of (9)(e)2. and 3., an application for a specific license pursuant to (9)(b), (c), or (d), for any medical use or uses of radioactive material specified in Rule .05 of this Chapter, will be approved if:

(i) The applicant satisfies the requirements of (9)(b), (c), or (d);

(ii) The applicant, or the physician designated in the application as the individual user, has adequate clinical experience in the types of uses specified in the application;

(iii) The applicant, or the physicians and all other personnel who will be involved in the preparation and use of the radioactive material, has adequate training and experience in the handling of radioactive material appropriate to his participation in the uses specified in the application;

(iv) The applicant's radiation detection and measuring instrumentation is adequate for conducting the procedures involved in the uses specified in the application;

(v) The applicant's radiation safety operating procedures are adequate for handling and disposal of the radioactive material involved in the uses specified in the application; and

(vi) For uses regulated by Rules .05(41) and (44) of this Chapter, any licensee using radioactive material for clinical procedures other than those specified in the product labeling (package insert) shall comply with the product labeling regarding:

(I) Chemical and physical form,

(II) Route of administration, and

(III) Dosage range.

2. Any licensee who is authorized to use radioactive material pursuant to (9)(e) and to Rule .05 of this Chapter is subject to the following conditions:

(i) For paragraphs (41), (44), and (48) of Rule .05 of this Chapter, no licensee shall receive, possess, or use radioactive material except as a radiopharmaceutical manufactured in the form to be administered to the patient, and labeled, packaged, and distributed in accordance with a specific license issued by the Department pursuant to (11)(i), a specific license issued by the U.S. Nuclear Regulatory Commission pursuant to Section 32.72 of 10 CFR, Part 32, or a specific license issued by an Agreement State or a Licensing State pursuant to equivalent regulations.

(ii) For Rule 391-3-17-.05(44), no licensee shall receive, possess, or use generators or reagent kits containing radioactive material or shall use reagent kits that do not contain radioactive material to prepare radiopharmaceuticals containing radioactive material, except:

(I) Reagent kits not containing radioactive material that are approved by the Department, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State for use by persons licensed pursuant to (9)(d) and to Rule .05 of this Chapter or

(II) Generators or reagent kits containing radioactive material that are manufactured, labeled, packaged, and distributed in accordance with a specific license issued by the Department pursuant to (11)(i), a specific license issued by the U.S. Nuclear Regulatory Commission pursuant to Section 32.73 of 10 CFR, Part 32, or a specific license issued by an Agreement State or a Licensing State pursuant to equivalent regulations; and

(iii) For Brachytherapy, regulated by Rule .05 of this Chapter, no licensee shall receive, possess, or use radioactive material except as contained in a source or device that has been manufactured, labeled, packaged, and distributed in accordance with a specific license issued by the Department pursuant to (11)(j), a specific license issued by the U.S. Nuclear Regulatory Commission pursuant to Section 32.74 of 10 CFR, Part 32, or a specific license issued to the manufacturer by an Agreement State or a Licensing State pursuant to equivalent regulations.

3. Any licensee who is licensed pursuant to (9) for one or more of the medical uses regulated by Rule .05 of this Chapter also is authorized to use radioactive material under the general license in (6)(g) for in vitro uses without filing the Certificate as required by (6)(g)2, provided that the licensee is subject to the other provisions of (6)(g).

(f) Use of Naturally-Occurring Radioactive Material (NORM). In addition to the requirements set forth in (8), a specific license for the use of NORM will be issued if the licensee meets all of the requirements of Rule .08 of this Chapter.

(g) Use of Sealed Sources in Irradiators. In addition to the requirements set forth in (8), a specific license for the use of sealed sources in large irradiators will be issued if the licensee meets all of the requirements of Rule .09 of this Chapter.

(10) Special Requirements for Specific Licenses of Broad Scope. These requirements are for the issuance of non-medical specific licenses of broad

scope for radioactive material ("broad licenses") and contain certain regulations governing holders of such licenses. (The issuance of medical specific licenses of broad scope is addressed in (9).)

Nota Bene: See Note, in (3)(c)1.

(a) The different types of broad scope licenses are set forth below:

1. A "Type A specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use, and transfer of any chemical or physical form of the radioactive material specified in the license, but not exceeding quantities specified in the license, for any authorized purpose. The quantities specified are usually in the multicurie range.

2. A "Type B specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use, and transfer of any chemical or physical form of radioactive material specified in (21)(c), Schedule C, for any authorized purpose. The possession limit for a Type B broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in (21)(c), Schedule C, Column I. If two or more radionuclides are possessed thereunder, the possession limit for each is determined as follows: For each radionuclide, determine the ratio of the quantity possessed to the applicable quantity specified in (21)(c), Schedule C, Column I, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

3. A "Type C specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use, and transfer of any chemical or physical form of radioactive material specified in (21)(c), Schedule C, for any authorized purpose. The possession limit for a Type C broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in (21)(c), Schedule C, Column II. If two or more radionuclides are possessed thereunder, the possession limit is determined for each as follows: For each radionuclide, determine the ratio of the quantity possessed to the applicable quantity specified in (21)(c), Schedule C, Column II, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

(b) An application for a Type A specific license of broad scope will be approved if:

1. The applicant satisfies the general requirements specified in (8);

2. The applicant has engaged in a reasonable number of activities involving the use of radioactive material; and

3. The applicant has established administrative controls and provisions relating to organization and management, procedures, record-keeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(i) The establishment of a Radiation Safety Committee composed of such persons as a Radiation Safety Officer, a representative of management, and persons trained and experienced in the safe use of radioactive material;

(ii) The appointment of a Radiation Safety Officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters; and

(iii) The establishment of appropriate administrative procedures to assure:

(I) Control of procurement and use of radioactive material;

(II) Completion of safety evaluations of proposed uses of radioactive material which take into consideration such matters as the adequacy of facilities and equipment, the training and experience of the user, and the operating or handling procedures; and

(III) Review, approval, and recording by the Radiation Safety Committee of safety evaluations of proposed uses prepared in accordance with (10)(b)3.(iii)(II) prior to the use of the radioactive material.

(c) An application for a Type B specific license of broad scope will be approved if:

1. The applicant satisfies the general requirements specified in (8); and

2. The applicant has established administrative controls and provisions relating to organization and management, procedures, record-keeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(i) The appointment of a Radiation Safety Officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiation safety matters, and

(ii) The establishment of appropriate administrative procedures to assure:

(I) Control of procurement and use of radioactive material,

(II) Completion of safety evaluations of proposed uses of radioactive material which take into consideration such matters as the adequacy of facilities and equipment, the training and experience of the user, and the operating or handling procedures, and

(III) Review, approval, and recording by the Radiation Safety Officer of safety evaluations of proposed uses prepared in accordance with (10)(c)2.(ii)(II) prior to the use of the radioactive material.

(d) An application for a Type C specific license of broad scope will be approved if:

1. The applicant satisfies the general requirements specified in (8);

2. The applicant submits a statement that radioactive material will be used only by, or under the direct supervision of, individuals who have received:

(i) A college degree at the bachelor level, or equivalent training and experience, in the physical or biological sciences or in engineering, and

(ii) At least 40 hours of training and experience in the safe handling of radioactive material, and in the characteristics of ionizing radiation, units of radiation dose and quantities, radiation detection instrumentation, and biological hazards of exposure to radiation appropriate to the type and forms of radioactive material to be used; and

3. The applicant has established administrative controls and provisions relating to procurement of radioactive material, procedures, record-keeping, material control and accounting, and management review necessary to assure safe operations.

(e) Specific non-medical licenses of broad scope are subject to the following conditions:

1. Unless specifically authorized, persons licensed pursuant to (10) shall not:

(i) Conduct tracer studies in the environment involving direct release of radioactive material;

(ii) Receive, acquire, own, possess, use, or transfer devices containing 100,000 Curies (3.7 PBq) or more of radioactive material in sealed sources used for irradiation of materials;

(iii) Conduct activities for which a specific license issued by the Department under (9) or (11) is required; or

(iv) Add or cause the addition of radioactive material to any food, beverage, cosmetic, drug, or other product designed for ingestion or inhalation by, or application to, a human being.

2. Each Type A specific license of broad scope issued under (10) shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's Radiation Safety Committee.

3. Each Type B specific license of broad scope issued under (10) shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's Radiation Safety Officer.

4. Each Type C specific license of broad scope issued under (10) shall be subject to the condition that radioactive material possessed under the license may only be used by, or under the direct supervision of, individuals who satisfy the requirements of (10)(d).

(11) Special Requirements for a Specific License to Manufacture, Assemble, Repair, or Distribute Commodities, Products, or Devices which Contain Radioactive Material.

(a) Licensing the Introduction of Radioactive Material into Products in Exempt Concentrations.

1. In addition to the requirements set forth in (8), a specific license

authorizing the introduction of radioactive material into a product or material owned by or in the possession of the licensee or another to be transferred to persons exempt under (3)(a)1. will be issued only if:

(i) The applicant submits a description of the product or material into which the radioactive material will be introduced, intended use of the radioactive material and the product or material into which it is introduced, method of introduction, initial concentration of the radioactive material in the product or material, control methods to assure that no more than the specified concentration is introduced into the product or material, estimated time interval between introduction and transfer of the product or material, and estimated concentration of the radioactive material in the product or material at the time of transfer; and

(ii) The applicant provides reasonable assurance that the concentrations of radioactive material at the time of transfer will not exceed the concentrations in (21)(a), Schedule A, that reconcentration of the radioactive material in concentrations exceeding those in (21)(a), Schedule A, is not likely, that use of lower concentrations is not feasible, and that the product or material is not likely to be incorporated in any food, beverage, cosmetic, drug, or other commodity or product designed for ingestion or inhalation by, or application to, a human being.

2. Each person licensed under (11)(a) shall file an annual report with the Department which shall identify the type and quantity of each product or material into which radioactive material has been introduced during the reporting period; name and address of the person who owned or possessed the product or material, into which radioactive material has been introduced, at the time of introduction; the type and quantity of radionuclide introduced into each such product or material; and the initial concentrations of the radionuclide in the product or material at the time of transfer of the radioactive material by the licensee. If no transfers of radioactive material have been made pursuant to (11)(a) during the reporting period, the report shall so indicate. The report shall cover the year ending June 30, and shall be filed within 30 days thereafter.

(b) Licensing the Distribution of Naturally-Occurring and Accelerator-Produced Radioactive Material (NARM) in Exempt Quantities.

Nota Bene: See Note, in (3)(c)1.

1. An application for a specific license to distribute NARM to persons exempted from this Chapter pursuant to (3)(b) will be approved if:

   (i) The radioactive material is not contained in any food, beverage, cosmetic, drug, or other commodity designed for ingestion or inhalation by, or application to, a human being;

   (ii) The radioactive material is in the form of processed chemical elements, compounds, mixtures, tissue samples, bioassay samples, counting standards, plated or encapsulated sources, or similar substances identified as radioactive and to be used for its radioactive properties, but is not incorporated into any manufactured or assembled commodity, product, or device intended for commercial distribution; and

   (iii) The applicant submits copies of prototype labels and brochures and the Department approves such labels and brochures.

2. The license issued under (11)(b)1. is subject to the following conditions:

   (i) No more than ten exempt quantities shall be sold or transferred in any single transaction. However, an exempt quantity may be composed of fractional parts of one or more of the exempt quantities provided the sum of the fractions shall not exceed unity.

   (ii) Each exempt quantity shall be separately and individually packaged. No more than ten such packaged exempt quantities shall be contained in any outer package for transfer to persons exempt pursuant to (3)(b). The outer package shall be such that the dose rate at the external surface of the package does not exceed 0.5 millirem (5 μSv) per hour.

   (iii) The immediate container of each quantity or separately-packaged fractional quantity of radioactive material shall bear a durable and legible label which:

      (I) Identifies the radionuclide and the quantity of radioactivity, and

      (II) Bears the words "Radioactive Material".

   (iv) In addition to the labeling information required by

(11)(b)2.(iii), the label affixed to the immediate container, or an accompanying brochure, shall:

(I) State that the contents are exempt from Licensing State requirements,

(II) Bear the words "Radioactive Material - Not for Human Use - Introduction into Foods, Beverages, Cosmetics, Drugs, or Medicinals, or into Products Manufactured for Commercial Distribution is Prohibited - Exempt Quantities Should Not Be Combined", and

(III) Set forth appropriate additional radiation safety precautions and instructions relating to the handling, use, storage, and disposal of the radioactive material.

3. Each person licensed under (11)(b) shall maintain records identifying, by name and address, each person to whom radioactive material is transferred for use under (3)(b) or the equivalent regulations of a Licensing State, and stating the kinds and quantities of radioactive material transferred. An annual summary report stating the total quantity of each radionuclide transferred under the specific license shall be filed with the Department. Each report shall cover the year ending June 30, and shall be filed within 30 days thereafter. If no transfers of radioactive material have been made pursuant to (11)(b) during the reporting period, the report shall so indicate.

(c) Licensing the Incorporation of Naturally-Occurring and Accelerator-Produced Radioactive Material (NARM) into Gas and Aerosol Detectors. An application for a specific license authorizing the incorporation of NARM into gas and aerosol detectors to be distributed to persons exempt under (3)(c)3. will be approved if the application satisfies requirements equivalent to those contained in Section 32.26 of 10 CFR, Part 32. The maximum quantity of radium-226 in each device shall not exceed 0.1 microcurie (3.7 kBq).

(d) Licensing the Manufacture and Distribution of Devices to Persons Generally Licensed Under (6)(c).

1. An application for a specific license to manufacture or distribute devices containing radioactive material to persons generally licensed under (6)(c) or equivalent regulations of the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State will be approved if:

(i) The applicant satisfies the general requirements of (8);

(ii) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions, and potential hazards of the device to provide reasonable assurance that:

(I) The device can be safely operated by persons not having training in radiological protection,

(II) Under ordinary conditions of handling, storage, and use of the device, the radioactive material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive in any period of one year a dose in excess of ten percent of the annual limits specified in Rule .03(5)(a)1. of this Chapter, and

(III) Under accident conditions (such as fire and explosion) associated with handling, storage, and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the following organ doses:

I. Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye .....15 rem (150 mSv);

II. Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than one square centimeter .....200 rem (2 Sv);

III. Other Organs .....50 rem (500 mSv); and

(iii) Each device bears a durable, legible, and clearly visible label or labels approved by the Department, which contain in a clearly identified and separate statement:

(I) Instructions and precautions necessary to assure safe installation, operation, and servicing of the device (documents such as operating and service manuals may be identified in the label and used to provide this information);

(II) The requirement, or lack of requirement, for leak

testing, or for testing any on/off mechanism and indicator, including the maximum time interval for such testing, and the identification of radioactive material by isotope, quantity of radioactivity, and date of determination of the quantity; and

(III) The information called for in one of the following statements, as appropriate, in the same or substantially similar form:

I. The receipt, possession, use, and transfer of this device, Model _____, Serial No. _____, are subject to a general license or the equivalent and to the regulations of the U.S. Nuclear Regulatory Commission or of a State with which the U.S. Nuclear Regulatory Commission has entered into an agreement for the exercise of regulatory authority. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION - RADIOACTIVE MATERIAL

_____
(NAME OF MANUFACTURER OR DISTRIBUTOR)

II. The receipt, possession, use, and transfer of this device, Model _____, Serial No. _____, are subject to a general license or the equivalent, and to the regulations of a Licensing State. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION - RADIOACTIVE MATERIAL

_____
(NAME OF MANUFACTURER OR DISTRIBUTOR)

Note: The model, serial number, and name of the manufacturer or distributor may be omitted from the appropriate label provided the information is elsewhere specified in labeling affixed to the device. Devices distributed pursuant to Regulations equivalent to (11)(d) prior to January 1, 1981, may bear labels authorized by the

Regulations in effect on January 1, 1980. Devices distributed on or after January 1, 1981, including devices redistributed upon radioactive sources exchange, shall bear labels authorized in (11)(d).

(iv) Each device having a separable source housing that provides the primary shielding for the source also bears, on the source housing, a durable label containing the device model number and serial number, the isotope and quantity, the words, "Caution-Radioactive Material," the radiation symbol described in Rule .03(12), and the name of the manufacturer or initial distributor.

(v) Each device meeting the criteria of (6)(c)3.(xi), bears a permanent (e.g., embossed, etched, stamped, or engraved) label affixed to the source housing if separable, or the device if the source housing is not separable, that includes the words, "Caution-Radioactive Material," and, if practical, the radiation symbol described in Rule .03(12).

2. In the event the applicant desires that the device be tested at intervals longer than six months, either for proper operation of the on/off mechanism and indicator, if any, or for leakage of radioactive material, or for both, the applicant shall include in his application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the device or similar devices and by design features which have a significant bearing on the probability or consequences of leakage of radioactive material from the device or failure of the on/off mechanism and indicator. In determining the acceptable interval for the test for leakage of radioactive material, the Department will consider information that includes, but is not limited to:

(i) Primary containment (source capsule);

(ii) Protection of primary containment;

(iii) Method of sealing containment;

(iv) Containment construction materials;

(v) Form of contained radioactive material;

(vi) Maximum temperature withstood during prototype tests;

(vii) Maximum pressure withstood during prototype tests;

(viii) Maximum quantity of contained radioactive material;

(ix) Radiotoxicity of contained radioactive material; and

(x) Operating experience with identical devices or similarly designed and constructed devices.

3. In the event the applicant desires that the general licensee under (6)(c), or under equivalent regulations of the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State, be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the on/off mechanism and indicator, or remove the device from installation, the applicant shall include in his application written instructions to be followed by the general licensee, estimated calendar quarter doses associated with such activity or activities, and the basis for such estimates. The submitted information shall demonstrate that the performance of such activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive a dose in excess of ten percent of the annual limits specified in Rule .03(5)(a)1. of this Chapter.

4. Each person licensed under (11)(d) shall provide the information specified in (11)(d)4.(i) to each generally licensed recipient to whom a device is to be transferred. This information must be provided before the device may be transferred. In the case of a transfer through an intermediate person, the information must also be provided to the intended user prior to initial transfer to the intermediate person.

(i) The required information includes:

(I) A copy of the general license contained in (6)(c); if (6)(c)3.(ii) through (iv) or (6)(c)3.(xi) do not apply to the particular device, these rules may be omitted.

(II) A copy of Rule .01(4), (5), (6), (7), (8), (9) and (10), Rule .02(13), (18), and (19), Rule .03(15)(a) and (b) and Rule .06;

(III) A list of the services that can only be performed by a specific licensee;

(IV) Information on acceptable disposal options including estimated costs of disposal; and

(V) An indication that improper disposal can result in high civil penalties.

(ii) If a device containing radioactive material is to be transferred for use under a general license contained in the U.S. Nuclear Regulatory Commission's, Agreement State's, or Licensing State's regulation equivalent to (6)(c), the licensee shall provide the information specified in (11)(d)4.(ii) to each person to whom a device is to be transferred. This information must be provided before the device maybe transferred. In the case of a transfer through an intermediate person, the information must also be provided to the intended user prior to initial transfer to the intermediate person. The required information includes:

(I) A copy of this equivalent regulation or, alternatively, furnish a copy of the general license contained in (6)(c) to each person to whom he directly or through an intermediate person transfers radioactive material in a device for use pursuant to the general license of the U.S. Nuclear Regulatory Commission, the Agreement State, or the Licensing State. In the case of a transfer through an intermediate person, the information must also be provided to the intended user prior to initial transfer to the intermediate person. If a copy of the general license in (6)(c) is furnished to such a person, it shall be accompanied by a note explaining that the use of the device is regulated by the U.S. Nuclear Regulatory Commission, Agreement State, or Licensing State under requirements substantially the same as those in (6)(c); if certain paragraphs of the regulations do not apply to the particular device, those paragraphs may be omitted;

(II) A list of the services that can only be performed by a specific licensee;

(III) Information on acceptable disposal options including estimated costs of disposal;

(IV) An indication that improper disposal can result in high civil penalties; and

(V) The name or title, address, and telephone number of the contact at the appropriate NRC Regional Office or Agreement State from which additional information

may be obtained.

(iii) An alternative approach to informing customers may be proposed by the licensee for approval by the Department.

5. Each device that is transferred after January 1, 2003, must meet the labeling requirements of (11)(d)1.(iii) through (v).

6. If a notification of bankruptcy has been made under (13)(e) or the license is to be terminated, each person licensed under (11)(d) shall provide, upon request, to the Department and as appropriate to any Agreement State or the NRC, records of final disposition required under (11)(d)4.(viii).

7. The licensee shall report to the Department all transfers of such devices to persons for use under the general license in (6)(c) and report all receipts of such devices from persons licensed under (6)(c).

(i) Such report shall identify each general licensee by the following:

(I) The name and mailing address for the location of use; if there is no mailing address for the location of use, an alternate address for the general licensee shall be submitted along with information on the actual location of use;

(II) The name, title, and telephone number of the person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the appropriate regulations and requirements;

(III) The date of the transfer;

(IV) The type, model number, and serial number of the device transferred; and

(V) The quantity and type of radioactive material contained in the device.

(ii) If one or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report shall include the same information for both the intended user and each intermediate person, and clearly designate the intermediate person(s).

(iii) For devices received from a (6)(c) general licensee, the report must include the identity of the general licensee by name and address, the type, model number, and serial number of the device received, the date of receipt, and, in the case of devices not initially transferred by the reporting licensee, the name of the manufacturer or initial transferor.

(iv) If the licensee makes changes to a device possessed by a (6)(c) general licensee, such that the label must be changed to update required information, the report must identify the general licensee, the device, and the changes to information on the device label.

(v) The report must cover each calendar quarter, must be filed within 30 days of the end of the calendar quarter, and must clearly indicate the period covered by the report.

(vi) The report must clearly identify the specific licensee submitting the report and include the license number of the specific licensee.

(vii) If no transfers have been made to or from persons generally licensed under (6)(c) during the reporting period, the report shall so indicate.

8. The licensee shall furnish reports to other agencies as follows:

(i) Report to the U.S. Nuclear Regulatory Commission all transfers of such devices to persons for use under the U.S. Nuclear Regulatory Commission general license in Section 31.5 of 10 CFR, Part 31 and all receipts of devices from U.S. Nuclear Regulatory Commission Section 31.5 general licensees;

(ii) Report to the responsible state agency all transfers of devices manufactured and distributed pursuant to (11)(d) for use under a general license in that state's regulations equivalent to (6)(c) and all receipts of devices from general licensees in the state agency’s jurisdiction;

(iii) The reports identified in 8.(i) and 8.(ii) shall identify each general licensee by the following:

(I) The name and mailing address for the location of use; if there is no mailing address for the location of use, an alternate address for the general licensee shall be

submitted along with information on the actual location of use.

(II) The name, title and telephone number the person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the appropriate regulations and requirements;

(III) The date of the transfer;

(IV) The type, model, and serial number of the device transferred; and

(V) The quantity and type of radioactive material contained in the device.

(iv) If one or more intermediate persons will temporarily possess the device at the intended place of use prior to its possession by the user, the report shall include the same information for both the intended user and each intermediate person, and clearly designate the intermediate person(s).

(v) For devices received from a (6)(c) general licensee, the report must include the identity of the general licensee by name and address, the type, model number, and serial number of the device received, the date of receipt, and, in the case of devices not initially transferred by the reporting licensee, the name of the manufacturer or initial transferor.

(vi) If the licensee makes changes to a device possessed by a general licensee, such that the label must be changed to update required information, the report must identify the general licensee, the device, and the changes to information on the device label.

(vii) The report must cover each calendar quarter, must be filed within 30 days of the end of the calendar quarter, and must clearly indicate the period covered by the report.

(viii) The report must clearly identify the specific licensee submitting the report and must include the license number of the specific licensee.

(ix) If no transfers have been made to U.S. Nuclear Regulatory Commission licensees during the reporting period, report this information to the U.S. Nuclear Regulatory Commission;

and

(x) If no transfers have been made to general licensees within a particular state during the reporting period, report this information to the responsible state agency upon request of that agency.

9. Each person licensed under (11)(d) to distribute devices to generally licensed persons shall maintain all information concerning transfers and receipts of devices that supports the reports required by (11)(d)4. These records shall be maintained for a period of three years following the date of the recorded event.

(e) Special Requirements for the Manufacture, Assembly, or Repair of Luminous Safety Devices for Use in Aircraft. An application for a specific license to manufacture, assemble, or repair luminous safety devices containing tritium or promethium-147 for use in aircraft, and for distribution to persons generally licensed under (6)(d), will be approved subject to the following conditions:

1. The applicant satisfies the general requirements specified in (8), and

2. The applicant satisfies the requirements of Sections 32.53, 32.54, 32.55, 32.56, and 32.101 of 10 CFR, Part 32, or their equivalent.

(f) Special Requirements for License to Manufacture Calibration Sources Containing Americium-241, Plutonium, or Radium-226 for Distribution to Persons Generally Licensed Under (6)(f). An application for a specific license to manufacture calibration and reference sources containing americium-241, plutonium, or radium-226 to persons generally licensed under (6)(f) will be approved subject to the following conditions:

1. The applicant satisfies the general requirement of (8), and

2. The applicant satisfies the requirements of Sections 32.57, 32.58, 32.59, and 32.102 of 10 CFR, Part 32, and Section 70.39 of 10 CFR, Part 70, or their equivalent.

(g) Manufacture and Distribution of Radioactive Material for Certain In Vitro Clinical or Laboratory Testing Under General License. An application for a specific license to manufacture or distribute radioactive material for use under the general license of (6)(g) will be approved subject to the following conditions:

1. The applicant satisfies the general requirements specified in (8);

2. The radioactive material is to be prepared for distribution in prepackaged units of:

   (i) Iodine-125 in units not exceeding ten microcuries (370 kBq) each,

   (ii) Iodine-131 in units not exceeding ten microcuries (370 kBq) each,

   (iii) Carbon-14 in units not exceeding ten microcuries (370 kBq) each,

   (iv) Hydrogen-3 (tritium) in units not exceeding 50 microcuries (1.85 MBq) each,

   (v) Iron-59 in units not exceeding 20 microcuries (740 kBq) each,

   (vi) Cobalt-57 in units not exceeding ten microcuries (370 kBq) each,

   (vii) Selenium-75 in units not exceeding ten microcuries (370 kBq) each,

   (viii) Mock Iodine-125 in units not exceeding 0.05 microcurie (1.85 kBq) of iodine-129 and 0.005 microcurie (185 Bq) of americium-241 each;

3. Each prepackaged unit bears a durable and clearly visible label:

   (i) Identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed ten microcuries (370 kBq) of iodine-125, iodine-131, carbon-14, cobalt-57, or selenium-75; 50 microcuries (1.85 Mbq) of hydrogen-3 (tritium); 20 microcuries (740 kBq) of iron-59; or Mock Iodine-125 in units not exceeding 0.05 microcurie (1.85 kBq) of iodine-129 and 0.005 microcurie (185 Bq) of americium-241 each; and

   (ii) Displaying the radiation caution symbol described in Rule 391-3-17-.03, of this Chapter, and the words, "CAUTION, RADIOACTIVE MATERIAL", and "Not for Internal or External Use in Humans or Animals";

4. One of the following statements, as appropriate, or a substantially similar statement which contains the information called for in one of the following statements, appears on a label affixed to each

prepackaged unit or appears in a leaflet or brochure which accompanies the package:

(i) This radioactive material may be received, acquired, possessed, and used only by physicians, veterinarians in the practice of veterinary medicine, clinical laboratories, or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations of and a general license of the U.S. Nuclear Regulatory Commission or of a State with which the U.S. Nuclear Regulatory Commission has entered into an agreement for the exercise of regulatory authority.

_____
(NAME OF MANUFACTURER)

ii) This radioactive material may be received, acquired, possessed, and used only by physicians, veterinarians in the practice of veterinary medicine, clinical laboratories, or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations of and a general license of a Licensing State.

_____
(NAME OF MANUFACTURER); and

5. The label affixed to the unit, or the leaflet or brochure, which accompanies the package, contains adequate information as to the precautions to be observed in handling and storing such radioactive material. In the case of the Mock Iodine-125 reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements set out in Rule .03(13) of this Chapter.

(h) Licensing the Manufacture and Distribution of Ice-Detection Devices. An application for a specific license to manufacture and distribute ice-detection devices to persons generally licensed under (6)(e) will be approved subject to the following conditions:

1. The applicant satisfies the general requirements of (8), and

2. The criteria of Sections 32.61, 32.62, and 32.103 of 10 CFR, Part 32, are met.

(i) Manufacture, Preparation, or Transfer, for Commercial Distribution of Pharmaceuticals Containing Radioactive Material for Medical Use. An application for a specific license to manufacture, prepare, or transfer for commercial distribution pharmaceuticals containing radioactive material for use by persons licensed pursuant to (9) for the uses listed in (41), (44), and (48) of Rule .05 of this Chapter will be approved subject to the following conditions:

1. The applicant satisfies the general requirements specified in (8);

2. The applicant submits evidence that the applicant is at least one of the following:

   (i) Registered or licensed with the U.S. Food and Drug Administration (FDA) as a drug manufacturer;

   (ii) Registered or licensed with a State Agency as a drug manufacturer; or

   (iii) Licensed as a pharmacy by the Georgia State Board of Pharmacy.

3. The applicant submits information on the radionuclide, chemical and physical form, packaging including maximum activity per vial, syringe, generator, or other container of the radiopharmaceutical, and shielding provided by the packaging to show it is appropriate for safe handling and storage of radiopharmaceuticals by licensees; and

4. The applicant satisfies the following requirements:

   (i) A label is affixed to each transport radiation shield, whether it is constructed of lead, glass, plastic, or other material, of a radiopharmaceutical to be transferred for commercial distribution. The label must include the radiation symbol and words "Caution, Radioactive Material" or "Danger Radioactive Material"; the name of the radiopharmaceutical or it's abbreviation, and quantity of radioactivity at a specified date and time. For radiopharmaceuticals with a half-life greater than 100 days, the time may be omitted.

   (ii) A label is affixed to each syringe, vial, or other container used to hold a radiopharmaceutical to be transferred for commercial distribution. The label must include the words "Caution, Radioactive Material" or "Danger Radioactive Material" and an identifier that ensures that the syringe, vial,

or other container can be correlated with the information on the transport radiation shield label, leaflet, or brochure.

5. A licensee described by (11)(i)2.(iii):

(i) May prepare radiopharmaceuticals for medical use, as defined in Rule .05 (2)(s) provided that the radiopharmaceutical is prepared by either an authorized nuclear pharmacist, as specified in (ii) and (iii) or an individual under the supervision of an authorized nuclear pharmacist as specified in Rule .05(18)(b).

(ii) May allow a pharmacist to work as an authorized nuclear pharmacist if this individual:

(I) Qualifies as an authorized nuclear pharmacist as defined in .05(2)(e),

(II) Meets the requirements specified in Rule .05 (24)(b) and .05(27) and the licensee has received an approved license amendment identifying this individual as an authorized nuclear pharmacist, or has notified the Department in accordance with Rule .05(11), or

(III) Is designated as an authorized nuclear pharmacist in accordance with (iii).

(iii) The actions authorized in (i) and (ii) are permitted not withstanding more restrictive language in license conditions.

(iv) May designate a nuclear pharmacist in accordance with Rule .05(26) as an authorized nuclear pharmacist if the individual is identified as of December 31, 1996, as an "authorized user" on a license issued by the Department, the NRC, or an Agreement State, under this rule or equivalent requirements.

(v) Shall provide to the Department a copy of each individual's certification by the Board of Pharmaceutical Specialties, or the Department, NRC, Agreement State license, or permit issued by a licensee of broad scope, and a copy of the individual's license to practice pharmacy in the State of Georgia issued by the Secretary of State's office, no later than 30 days after the date that the licensee allows pursuant to (ii) and (iii), the individual to work as an authorized nuclear pharmacist.

6. A licensee shall possess and use instrumentation to measure the radioactivity of radiopharmaceuticals. The licensee shall measure, by direct measurements or by combination of measurements and calculations, the amount of radioactivity in dosages of alpha-, beta-, or photon-emitting radiopharmaceuticals prior to transfer for commercial distribution. In addition, the licensee shall:

   (i) Perform test before initial use, periodically, and following repair, on each instrument for accuracy, linearity, and geometry dependence, as appropriate for the use of the instrument; and make adjustments when necessary; and

   (ii) Check each instrument for constancy and proper operation at the beginning of each day of use.

7. Nothing in this section relieves the licensee from complying with applicable FDA, other Federal, or other State requirements governing radiopharmaceuticals.

(j) Manufacture and Distribution of Sources or Devices Containing Radioactive Material for Medical Use. An application for a specific license to manufacture and distribute sources and devices containing radioactive material to persons licensed pursuant to Rule .05 of this chapter for use as a calibration, transmission, or reference source or for medical uses regulated by Rule .05(55), (65), or (67) of this Chapter will be approved subject to the following conditions:

1. The applicant satisfies the general requirements of (8);

2. The applicant submits sufficient information regarding each type of source or device pertinent to an evaluation of its radiation safety, including:

   (i) The radioactive material contained, its chemical and physical form, and amount,

   (ii) Details of design and construction of the source or device,

   (iii) Procedures for, and results of, prototype tests to demonstrate that the source or device will maintain its integrity under stresses likely to be encountered in normal use and accidents,

   (iv) For devices containing radioactive material, the radiation profile of a prototype device,

(v) Details of quality control procedures to assure that production sources and devices meet the standards of the design and prototype tests,

(vi) Procedures and standards for calibrating sources and devices,

(vii) Legend and methods for labeling sources and devices as to their radioactive content, and

(viii) Instructions for handling and storing the source or device from the radiation safety standpoint. (These instructions are to be included on a durable label attached to the source or device or attached to a permanent storage container for the source or device. Instructions which are too lengthy for such label may be summarized on the label and printed in detail on a brochure that is referenced on the label.)

3. The label affixed to the source or device, or to the permanent storage container for the source or device, contains information on the radionuclide, quantity, and date of assay, and a statement that the source or device is licensed by the Department for distribution to persons licensed pursuant to (9) and to Rule .05(55), (65), or (67) of this Chapter or under equivalent licenses of the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State, provided that such labeling for sources which do not require long term storage (such as gold-198 seeds) may be on a leaflet or brochure which accompanies the source;

4. In the event the applicant desires that the source or device be required to be tested for leakage of radioactive material at intervals longer than six months, he shall include in his application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the source or device or similar sources or devices and by design features that have a significant bearing on the probability or consequences of leakage of radioactive material from the source; and

5. In determining the acceptable interval for test of leakage of radioactive material, the Department will consider information that includes, but is not limited to, that which is listed in (11)(d)2.

(k) Requirements for License to Manufacture and Distribute Industrial Products Containing Depleted Uranium for Mass-Volume Applications.

1. An application for a specific license to manufacture industrial products and devices containing depleted uranium for use pursuant

to (5)(d) or equivalent regulations of the U.S. Nuclear Regulatory Commission or an Agreement State will be approved subject to the following conditions:

(i) The applicant satisfies the general requirements specified in (8);

(ii) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses, and potential hazards of the industrial product or device to provide reasonable assurance that possession, use, or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive in any period of 1 year a radiation dose in excess of ten percent of the annual limits specified in Rule .03(5)(a)1. of this Chapter; and

(iii) The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass-volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.

2. In the case of an industrial product or device whose unique benefits are questionable, the Department will approve an application for a specific license under (11)(k) only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.

3. The Department may deny any application for a specific license under (11)(k) if the end use(s) of the industrial product or device cannot be reasonably foreseen.

4. Each person licensed pursuant to (11)(k)1. shall:

(i) Maintain the level of quality control required by the license in the manufacture of the industrial product or device and in the installation of the depleted uranium into the product or device;

(ii) Label or mark each unit to:

(I) Identify the manufacturer of the product or device and the number of the license under which the product or device was manufactured, the fact that the product or

device contains depleted uranium, and the quantity of depleted uranium in each product or device; and

(II) State that the receipt, possession, use, and transfer of the product or device are subject to a general license or the equivalent and to the regulations of the U.S. Nuclear Regulatory Commission or an Agreement State;

(iii) Assure that the depleted uranium before being installed in each product or device has been impressed with the following legend clearly legible through any plating or other covering: "Depleted Uranium";

(iv) Furnish a copy of the general license contained in:

(I) (5)(d) and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License" to each person to whom he transfers depleted uranium in a product or device for use pursuant to the general license contained in (5)(d), or

(II) The U.S. Nuclear Regulatory Commission's or Agreement State's regulation equivalent to (5)(d) and a copy of the U.S. Nuclear Regulatory Commission's or Agreement State's certificate, or, alternatively, furnish a copy of the general license contained in (5)(d) and a copy of Department form "Registration Certificate - Use of Depleted Uranium Under General License" to each person to whom he transfers depleted uranium in a product or device for use pursuant to the general license of the U.S. Nuclear Regulatory Commission or an Agreement State, with a note explaining that use of the product or device is regulated by the U.S. Nuclear Regulatory Commission or an Agreement State under requirements substantially the same as those in (5)(d);

(v) Report to the Department all transfers of industrial products or devices to persons for use under the general license in (5)(d). Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the Department and the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall

be submitted within 30 days after the end of each calendar quarter in which such a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under (5)(d) during the reporting period, the report shall so indicate;

(vi) Report to other agencies as follows:

(I) To the U.S. Nuclear Regulatory Commission all transfers of industrial products or devices to persons for use under the U.S. Regulatory Commission general license in Section 40.25 of 10 CFR, Part 40;

(II) To the responsible state agency all transfers of devices manufactured and distributed pursuant to (11)(l) for use under a general license in that state's regulations equivalent to (5)(d);

(III) Have such reports identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the agency and the general licensee, the type and model number of the device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which such product or device is transferred to the generally licensed person;

(IV) If no transfers have been made to U.S. Nuclear Regulatory Commission licensees during the reporting period, report this information to the U.S. Nuclear Regulatory Commission; and

(V) If no transfers have been made to general licensees within a particular Agreement State during the reporting period, report this information to the responsible Agreement State agency upon the request of that agency; and

(vii) Keep records showing the name, address, and point of contact for each general licensee to whom he transfers depleted uranium in industrial products or devices for use pursuant to the general license provided in (5)(d) or equivalent regulations of the U.S. Nuclear Regulatory Commission or an Agreement State. The records shall be maintained for a period of two years and shall show the date

of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the report requirements of (11).

(l) Registration of Product Information

1. Any manufacturer or distributor of a sealed source or a device containing a sealed source whose product is intended for use under a specific license may submit a request to the Department for evaluation of radiation safety information about its product and for its registration.

2. The request for review shall be made in duplicate and sent to the Georgia Department of Natural Resources; Radioactive Materials Program; 4220 International Parkway, Suite 100; Atlanta, GA 30354.

3. The request for review of a sealed source or a device, must include sufficient information about the design, manufacture, prototype testing, quality control and assurance programs, labeling, proposed uses and leak testing, and, for a device, the information about installation, service and maintenance, operating and safety instructions, and its potential hazards, to provide reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize the danger to life and property.

4. The Department evaluates a sealed source or a device using radiation safety criteria in accepted industry standards. The Department shall use criteria and standards sufficient to ensure that the radiation safety properties of the sealed source or device are adequate to protect health and minimize danger to life and property.

5. After completion of the evaluation, the Department issues a certificate of registration to the person making the request. The certificate of registration acknowledges the availability of the submitted information for inclusion in an application for a specific license proposing use of the product.

6. The person submitting the request for evaluation and registration of safety information about the product shall manufacture and/or distribute the product in accordance with:

(i) The statements and representations, including quality control and assurance programs, contained in the request; and

(ii) The provisions of the registration certificate.

(12) Issuance of Specific Licenses.

(a) Upon a determination that an application meets the requirements of the Act and the Regulations of the Department, the Department may issue a specific license authorizing the proposed activity in such form and containing such conditions and limitations as it deems appropriate or necessary to effectuate the purposes of the Act.

(b) The Department may incorporate in any license at the time of issuance, or thereafter, such additional requirements and conditions, as authorized by Rule, Regulation, or Order, with respect to the licensee's receipt, possession, use, and transfer of radioactive material subject to this Chapter as necessary in order to:

1. Minimize danger to public health and safety or property;

2. Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as necessary to effectuate the purposes of the Act; and

3. Prevent loss or theft of material subject to this Rule.

(13) Specific Terms and Conditions of Licenses.

(a) Each license issued pursuant to this Rule shall be subject to all the provisions of the Act, and to all Rules, and Regulations of the Department and Orders of the Director.

(b) No license issued or granted under this Rule and no right to possess or utilize radioactive material granted by any license issued pursuant to this Rule shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the Department, after securing full information, finds that the transfer is in accordance with the provisions of the Act, and gives its consent in writing.

(c) Each person licensed by the Department pursuant to this Rule shall confine use and possession of the material licensed to the locations and purposes authorized in the license.

(d) Each licensee shall notify the Department in writing immediately and request termination of his license when the licensee decides to terminate all activities involving radioactive materials authorized under the license. This notification and request for termination must include the information

specified in (18)(d).

(e) Each general licensee required to register by (6)(c)3.(xi) and each specific licensee shall notify the Department in writing immediately following the filing of a voluntary or involuntary petition for bankruptcy under any Chapter of Title 11 (Bankruptcy) of the United States Code by or against:

1. The licensee;

2. An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or

3. An affiliate (as that term is defined in 11 U.S.C. 101(2) of the licensee.

(f) The notification specified in (13)(e) shall indicate the bankruptcy court in which the petition for bankruptcy was filed and the date of the filing of the petition.

(g) Security requirements for portable gauges. Each portable gauge licensee shall use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee.

(14) Expiration of Licenses. Except as provided in (15)(b), each specific license shall expire at the end of the day, in the month and year stated therein.

(15) Renewal of Licenses.

(a) No less than 30 days before the expiration date specified in a specific license, the licensee shall either:

1. Submit an application for license renewal filed in accordance with (7), or

2. Notify the Department in writing in accordance with (13)(d) and (15)(c) if the licensee decides not to renew the license.

(b) In any case in which a licensee, not less than 30 days prior to the expiration of his existing license, has filed an application in proper form for renewal or for a new license authorizing the same activities, such existing license shall not expire until the application has been finally determined by the Department.

(c) If a licensee does not submit an application for license renewal on or

before the expiration date specified in the license, then the licensee shall, on or before that expiration date:

1. Terminate the use of radioactive material,

2. Remove radioactive contamination to the extent practicable,

3. Properly dispose of the radioactive material, and

4. Submit the information specified in (18)(d).

(16) Amendment of Licenses at Request of Licensee. Applications for amendment of a license shall be filed in accordance with (7) and shall specify the respects in which the licensee desires the license to be amended and the grounds for such amendment.

(17) Department Action on Applications to Renew or Amend. In considering an application by a licensee to renew or amend the license, the Department will apply the criteria set forth in (8), (9), (10), or (11), as applicable.

(18) Modification, Revocation, and Termination of Licenses.

(a) The terms and conditions of all licenses shall be subject to amendment, revision, or modification, or the license may be suspended or revoked by reason of amendments to the Act, or by reason of Rules, Regulations, and Orders issued by the Director.

(b) Any license may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or any statement of fact required under provisions of the Act or of this Rule, or because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the Department to refuse to grant a license on an original application, or for violation of, or failure to observe, any of the terms and conditions of the Act, of the license, or of any Rule, Regulation, or Order of the Department.

(c) Each specific license revoked by the Department expires at the end of the day on the date of the Department's final determination to revoke the license, or on the expiration date stated in the determination, or as otherwise provided by Department Order.

(d) The Department may terminate a specific license upon request submitted by the licensee to the Department in writing provided the following:

1. The licensee certifies the disposition of all licensed material, including accumulated wastes, by submitting a completed "Request to Terminate Radioactive Materials License" form or equivalent

information; and

2. The licensee conducts a radiation survey of the premises where the licensed activities were carried out and submits a report of the results of the survey unless the licensee demonstrates that the premises are suitable for release in accordance with the requirements for decommissioning in Rule .03(7). As appropriate, the licensee shall:

   (i) Report levels of gamma radiation in units of microroentgen (millisieverts) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of disintegrations per minute or microcuries (megabecquerels) per 100 square centimeters - removable and fixed - for surfaces, microcuries (megabecquerels) per milliliter for water, and picocuries (becquerels) per gram for solids such as soils or concrete; and

   (ii) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

3. If detectable levels of residual radioactive contamination are found, the license continues to be in effect, even beyond the expiration date if necessary, with respect to possession of residual radioactive material as contamination until the Department notifies the licensee in writing that the license is terminated. Each licensee who possesses residual radioactive material under this paragraph shall initiate decommissioning activities as required by (8)(h).

4. If no residual radioactive contamination is detected, the licensee shall submit a certification that no detectable radioactive contamination was found. If the information submitted is found to be adequate, the Department will notify the licensee in writing that the license is terminated.

(e) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the Department determines that:

1. Radioactive material has been properly disposed;

2. Reasonable effort has been made to eliminate residual radioactive contamination, if present; and

3 (i) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with Department requirements for decommissioning in Rule .03(7); or

(ii) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with Department requirements for decommissioning in Rule .03(7).

4. Prior to license termination, each licensee authorized to possess radioactive material with a half-life greater than 120 days, in an unsealed form, shall forward the following records to the Department:

(i) Records of disposal of licensed material made under Rule .03(13)(b) (including burials authorized before January 28, 1982),.03(13)(c), .03(13)(d), .03(13)(e); and

(ii) Records required by Rule .03(14)(c)2.(iv).

5. If licensed activities are transferred or assigned in accordance with Rule .02(13)(b), each licensee authorized to possess radioactive material, with a half-life greater than 120 days, in an unsealed form, shall transfer the following records to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated:

(i) Records of disposal of licensed material made under Rule .03(13)(b) (including burials authorized before January 28, 1982), .03(13)(c), .03(13)(d), .03(13)(e); and

(ii) Records required by Rule .03(14)(c)2.(iv).

6. Prior to license termination, each licensee shall forward the records required by Rule .02(8)(g)7. to the Department.

(19) Transfer of Material.

(a) Authorization for Transfer. No licensee shall transfer radioactive material except as authorized pursuant to (19)(b).

(b) Condition of Transfer. Any licensee may transfer radioactive material, subject to acceptance by the transferee, to:

1. The Department, after receiving prior approval from the Department;

2. The United States Department of Energy or any successor thereto;

3. Any person exempt from this Rule to the extent permitted under

such exemption;

4. Any person licensed to receive such material under terms of a general license or its equivalent, or specific license or equivalent licensing document issued by the Department, the U.S. Nuclear Regulatory Commission, any Agreement State, or any Licensing State, to any person otherwise authorized to receive such material by the Federal Government or any agency thereof, the Department, any Agreement State, or any Licensing State; or

5. Any person authorized by the Department in writing.

(c) Before transferring radioactive material to a specific licensee of the Department, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State, or to a general licensee who is required to register with the Department, the U.S. Nuclear Regulatory Commission, an Agreement State, or a Licensing State prior to receipt of the radioactive material, the licensee transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred.

(d) The following methods for the verification required by (19)(c) are acceptable:

1. The transferor may possess, and read, a current copy of the transferee's specific license or registration certificate.

2. The transferor may have in his possession a written certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date.

3. For emergency shipments, the transferor may accept oral certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of radioactive material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date; provided that the oral certification is confirmed in writing within ten days.

4. The transferor may obtain other sources of information compiled by a reporting service from official records of the Department, the U.S. Nuclear Regulatory Commission, the licensing agency of an Agreement State, or a Licensing State regarding the identity of licensees and the scope and expiration date of licenses and registration.

5. When none of the methods of verification described in paragraphs (19)(d)1., 2., 3., and 4. is readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the Department, the U.S. Nuclear Regulatory Commission, the licensing agency of an Agreement State, or a Licensing State that the transferee is licensed to receive the radioactive material.

(e) Preparation for shipment and transport of radioactive material shall be in accordance with the provisions of Rule .06 of this Chapter.

(20) Reciprocity.

(a) Persons licensed by other Agencies. Subject to the provisions of this Chapter, any person who holds a specific license from the U.S. Nuclear Regulatory Commission, a Licensing State, or any Agreement State, other than this State, and issued by the agency having jurisdiction where the licensee maintains an office for directing the licensed activity and at which radiation safety records are normally maintained, is hereby granted a general license to conduct the activities authorized in such licensing document within this State, except in areas of exclusive federal jurisdiction, for a period not in excess of 180 days in any calendar year provided that:

1. The licensing document does not limit the activity authorized by such document to specified installations or locations;

2. The out-of-state licensee notifies the Department in writing at least three days prior to engaging in such activity. Such notification shall indicate the location, period, and type of proposed possession and use within the State, and shall be accompanied by a copy of the pertinent licensing document. If, for a specific case, the 3-day period would impose an undue hardship on the out-of-state licensee, he may, upon application to the Department, obtain permission to proceed sooner;

3. The out-of-state licensee complies with all applicable Rules of the Department, and with all the terms and conditions of his licensing document except any such terms and conditions that may be inconsistent with applicable Rules of the Department;

4. Provided further that the Department may require the out-of-state licensee to supply such other information as the Department may reasonably request; and

5. The out-of-state licensee shall not transfer or dispose of radioactive material possessed or used under the general license provided in (20)(a) except by transfer to a person who is:

   (i) Specifically licensed by the Department, the U.S. Nuclear Regulatory Commission, or by another Licensing State to receive such material; or

   (ii) Exempt from the requirements for a license for such material under (3)(a).

(b) Notwithstanding the provisions of (20)(a), any person who holds a specific license issued by the U.S. Nuclear Regulatory Commission, a Licensing State, or an Agreement State authorizing the holder to manufacture, transfer, install, or service a device described in (6)(c)1. within areas subject to the jurisdiction of the licensing body is hereby granted a general license to install, transfer, demonstrate, or service such device in this State provided that:

1. Such person shall file a report with the Department within 30 days after the end of each calendar quarter in which any device is transferred to or installed in this State. Each such report shall identify each general licensee to whom such a device is transferred by name and address, the type of device transferred, and the quantity and type of radioactive material contained in the device;

2. The device has been manufactured, labeled, installed, and serviced in accordance with applicable provisions of the specific license issued to such person by the U.S. Nuclear Regulatory Commission, a Licensing State, or an Agreement State;

3. Such person shall assure that any labels required to be affixed to the device under regulations of the authority which licensed the manufacturing of the device bear a statement that "Removal of This Label is Prohibited"; and

4. The holder of the specific license shall furnish to each general licensee to whom he transfers such a device or on whose premises he installs such a device a copy of the general license contained in (6)(c).

(c) The Department may withdraw, limit, or qualify its acceptance of any specific license or equivalent licensing document issued by another agency, or any product distributed pursuant to such licensing document, upon determining that such action is necessary in order to prevent undue hazard to public health and safety, to property, or to the environment.

(21) Schedules.

(a) Schedule A.

SCHEDULE A
EXEMPT CONCENTRATIONS

Exempt Concentrations Element (Atomic Number)	**Schedule A** Isotope	Column I Gas Concentration (µCi/mL) [1]	Column II Liquid and Solid Concentration (µCi/mL) [2]
Antimony (51)	Sb 122		3×10^{-4}
	Sb 124		2×10^{-4}
	Sb 125		1×10^{-3}
Argon (18)	Ar 37	1×10^{-3}	
	Ar 41	4×10^{-7}	
Arsenic (33)	As 73		5×10^{-3}
	As 74		5×10^{-4}
	As 76		2×10^{-4}
	As 77		8×10^{-4}
Barium (56)	Ba 131		2×10^{-3}
	Ba 140		3×10^{-4}
Beryllium (4)	Be 7		2×10^{-2}
Bismuth (83)	Bi 206		4×10^{-4}
Bromine (35)	Br 82	4×10^{-7}	3×10^{-3}
Cadmium (48)	Cd 109		2×10^{-3}
	Cd 115m		3×10^{-4}
	Cd 115		3×10^{-4}
Calcium (20)	Ca 45		9×10^{-5}
	Ca 47		5×10^{-4}
Carbon (6)	C 14	1×10^{-6}	8×10^{-3}
Cerium (58)	Ce 141		9×10^{-4}
	Ce 143		4×10^{-4}
	Ce 144		1×10^{-4}
Cesium (55)	Cs 131		2×10^{-2}
	Cs 134m		6×10^{-2}
	Cs 134		9×10^{-5}
Chlorine (17)	Cl 38	9×10^{-7}	4×10^{-3}
Chromium (24)	Cr 51		2×10^{-2}
Cobalt (27)	Co 57		5×10^{-3}
	Co 60		5×10^{-4}
Copper (29)	Cu 64		3×10^{-3}
Dysprosium (66)	Dy 165		4×10^{-3}
	Dy 166		4×10^{-4}
Erbium (68)	Er 169		9×10^{-4}
	Er 171		1×10^{-3}
Europium (63) ($T^{0.5}$ = 9.2 h)	Eu 152		6×10^{-4}
	Eu 155		2×10^{-3}

Exempt Concentrations Element (Atomic Number)	**Schedule A** Isotope	Column I Gas Concentration (µCi/mL) [1]	Column II Liquid and Solid Concentration (µCi/mL) [2]
Fluorine (9)	F 18	2×10^{-6}	8×10^{-3}
Gadolinium (64)	Gd 153		2×10^{-3}
	Gd 159		8×10^{-4}
Gallium (31)	Ga 72		4×10^{-4}
Germanium (32)	Ge 71		2×10^{-2}
Gold (79)	Au 196		2×10^{-3}
	Au 198		5×10^{-4}
	Au 199		2×10^{-3}
Hafnium (72)	Hf 181		7×10^{-4}
Hydrogen (1)	H 3	5×10^{-6}	3×10^{-2}
Indium (49)	In 113m		1×10^{-2}
	In 114m		2×10^{-4}
Iodine (53)	I 126	3×10^{-9}	2×10^{-5}
	I 131	3×10^{-9}	2×10^{-5}
	I 132	8×10^{-8}	6×10^{-4}
	I 133	1×10^{-8}	7×10^{-5}
	I 134	2×10^{-7}	1×10^{-3}
Iridium (77)	Ir 190		2×10^{-3}
	Ir 192		4×10^{-4}
	Ir 194		3×10^{-4}
Iron (26)	Fe 55		8×10^{-3}
	Fe 59		6×10^{-4}
Krypton (36)	Kr 85m	1×10^{-6}	
	Kr 85	3×10^{-6}	
Lanthanum (57)	La 140		2×10^{-4}
Lead (82)	Pb 203		4×10^{-3}
Lutetium (71)	Lu 177		1×10^{-3}
Manganese (25)	Mn 52		3×10^{-4}
	Mn 54		1×10^{-3}
	Mn 56		1×10^{-3}
Mercury (80)	Hg 197m		2×10^{-3}
	Hg 197		3×10^{-3}
	Hg 203		2×10^{-4}
Molybdenum (42)	Mo 99		2×10^{-3}
Neodymium (60)	Nd 147		6×10^{-4}
	Nd 149		3×10^{-3}
Nickel (28)	Ni 65		1×10^{-3}
Niobium (columbium) (41)	Nb 95		1×10^{-3}
	Nb 97		9×10^{-3}
Osmium (76)	Os 185		7×10^{-4}
	Os 191m		3×10^{-2}
	Os 191		2×10^{-3}

Exempt Concentrations Element (Atomic Number)	**Schedule A** Isotope	Column I Gas Concentration (µCi/mL) [1]	Column II Liquid and Solid Concentration (µCi/mL) [2]
	Os 193		6×10^{-4}
Palladium (46)	Pd 103		3×10^{-3}
	Pd 109		9×10^{-4}
Phosphorus (15)	P 32		2×10^{-4}
Platinum (78)	Pt 191		1×10^{-3}
	Pt 193m		1×10^{-2}
	Pt 197m		1×10^{-2}
	Pt 197		1×10^{-3}
Polonium (84)	Po 210		7×10^{-6}
Potassium (19)	K 42		3×10^{-3}
Praseodymium (59)	Pr 142		3×10^{-4}
	Pr 143		5×10^{-4}
Promethium (61)	Pm 147		2×10^{-3}
	Pm 149		4×10^{-4}
Radium (88)	Ra 226		1×10^{-7}
	Ra 228		3×10^{-7}
Rhenium (75)	Re 183		6×10^{-3}
	Re 186		9×10^{-4}
	Re 188		6×10^{-4}
Rhodium (45)	Rh 103m		1×10^{-1}
Rubidium (37)	Rb 86		7×10^{-4}
Ruthenium (44)	Ru 97		4×10^{-3}
	Ru 103		8×10^{-4}
	Ru 105		1×10^{-3}
	Ru 106		1×10^{-4}
Samarium (62)	Sm 153		8×10^{-4}
Scandium (21)	Sc 46		4×10^{-4}
	Sc 47		9×10^{-4}
	Sc 48		3×10^{-3}
Selenium (34)	Se 75		3×10^{-3}
Silicon (14)	Si 31		9×10^{-3}
Silver (47)	Ag 105		1×10^{-3}
	Ag 110m		3×10^{-4}
	Ag 111		4×10^{-4}
Sodium (11)	Na 24		2×10^{-3}
Strontium (38)	Sr 85		1×10^{-3}
	Sr 89		1×10^{-4}
	Sr 91		7×10^{-4}
	Sr 92		7×10^{-4}
Sulfur (16)	S 35	9×10^{-8}	6×10^{-4}
Tantalum (73)	Ta 182		4×10^{-4}
Technetium (43)	Tc 96m		1×10^{-1}

Exempt Concentrations Element (Atomic Number)	**Schedule A** Isotope	Column I Gas Concentration (µCi/mL) [1]	Column II Liquid and Solid Concentration (µCi/mL) [2]
	Tc 96		1×10^{-3}
Tellurium (52)	Te 125m		2×10^{-3}
	Te 127m		6×10^{-4}
	Te 127		3×10^{-3}
	Te 129m		3×10^{-4}
	Te 131m		6×10^{-4}
	Te 132		3×10^{-4}
Terbium (65)	Tb 160		4×10^{-4}
Thallium (81)	Tl 200		4×10^{-3}
	Tl 201		3×10^{-3}
	Tl 202		1×10^{-3}
	Tl 204		1×10^{-3}
Thulium (69)	Tm 170		5×10^{-4}
Tin (50)	Sn 113		9×10^{-4}
	Sn 125		2×10^{-4}
Tungsten (wolfram) (74)	W 181		4×10^{-3}
	W 187		7×10^{-4}
Vanadium (23)	V 48		3×10^{-4}
Xenon (54)	Xe 131m	4×10^{-6}	
	Xe 133	3×10^{-6}	
	Xe 135	1×10^{-6}	
Ytterbium (70)	Yb 175		1×10^{-3}
Yttrium (39)	Y 90		2×10^{-4}
	Y 91m		3×10^{-2}
	Y 91		3×10^{-4}
	Y 92		6×10^{-4}
	Y 93		3×10^{-4}
Zinc (30)	Zn 65		1×10^{-3}
	Zn 69m		7×10^{-4}
	Zn 69		2×10^{-2}
Zirconium (40)	Zr 95		6×10^{-4}
	Zr 97		2×10^{-4}
Beta- and/or gamma-emitting radioactive material not listed above with half-life less than three years		1×10^{-10}	1×10^{-6}

Note: Many radioisotopes disintegrate into isotopes that are also radioactive. In expressing the concentrations in Schedule A, the activity stated is that of the parent isotope and takes into account the daughters. For purposes of (3)(a) where there is involved a combination of isotopes, the limit for the combination should be derived as follows:

Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Schedule A for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

EXAMPLE: $\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} +$

$\frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} \leq 1$

Footnotes: [1] Values are given only for those materials normally used as gases.
[2] μCi/gm for solids.

(b) Schedule B.

SCHEDULE B
EXEMPT QUANTITIES

Schedule B – Exempt Quantities Radioactive Material	Exempt Quantity (Microcuries)
Antimony-122 (Sb 122)	100
Antimony-124 (Sb 124)	10
Antimony-125 (Sb 125)	10
Arsenic-73 (As 73)	100
Arsenic-74 (As 74)	10
Arsenic-76 (As 76)	10
Arsenic-77 (As 77)	100
Barium-131 (Ba 131)	10
Barium-133 (Ba 133)	10
Barium-140 (Ba 140)	10
Bismuth-210 (Bi 210)	1
Bromine-82 (Br 82)	10
Cadmium-109 (Cd 109)	10
Cadmium-115m (Cd 115m)	10
Cadmium-115 (Cd 115)	100
Calcium-45 (Ca 45)	10
Calcium-47 (Ca 47)	10
Carbon-11 (C 11)	10
Carbon-14 (C 14)	100
Cerium-141 (Ce 141)	100
Cerium-143 (Ce 143)	100
Cerium-144 (Ce 144)	1
Cesium-129 (Cs 129)	100
Cesium-131 (Cs 131)	1,000
Cesium-134m (Cs 134m)	100
Cesium-134 (Cs 134)	1
Cesium-135 (Cs 135)	10
Cesium-136 (Cs 136)	10
Cesium-137 (Cs 137)	10
Chlorine-36 (Cl 36)	10
Chlorine-38 (Cl 38)	10
Chromium-51 (Cr 51)	1,000
Cobalt-57 (Co 57)	100

Schedule B – Exempt Quantities Radioactive Material	Exempt Quantity (Microcuries)
Cobalt-58m (Co 58m)	10
Cobalt-58 (Co 58)	10
Cobalt-60 (Co 60)	1
Copper-64 (Cu 64)	100
Dysprosium-165 (Dy 165)	10
Dysprosium-166 (Dy 166)	100
Erbium-169 (Er 169)	100
Erbium-171 (Er 171)	100
Europium-152 (Eu 152) 9.2h	100
Europium-152 (Eu 152) 13 yr	1
Europium-154 (Eu 154)	1
Europium-155 (Eu 155)	10
Fluorine-18 (F 18)	1,000
Gadolinium-153 (Gd 153)	10
Gadolinium-159 (Gd 159)	100
Gallium-67 (Ga 67)	100
Gallium-72 (Ga 72)	10
Germanium-68 (Ge 68)	10
Germanium-71 (Ge 71)	100
Gold-195 (Au 195)	10
Gold-198 (Au 198)	100
Gold-199 (Au 199)	100
Hafnium-181 (Hf 181)	10
Holmium-166 (Ho 166)	100
Hydrogen-3 (H 3)	1,000
Indium-111 (In 111)	100
Indium-113m (In 113m)	100
Indium-114m (In 114m)	10
Indium-115m (In 115m)	100
Indium-115 (In 115)	10
Iodine-123 (I 123)	100
Iodine-125 (I 125)	1
Iodine-126 (I 126)	1
Iodine-129 (I 129)	0.1
Iodine-131 (I 131)	1
Iodine-132 (I 132)	10

Schedule B – Exempt Quantities Radioactive Material	Exempt Quantity (Microcuries)
Iodine-133 (I 133)	1
Iodine-134 (I 134)	10
Iodine-135 (I 135)	10
Iridium-192 (Ir 192)	10
Iridium-194 (Ir 194)	100
Iron-52 (Fe 52)	10
Iron-55 (Fe 55)	100
Iron-59 (Fe 59)	10
Krypton-85 (Kr 85)	100
Krypton-87 (Kr 87)	100
Lanthanum-140 (La 140)	10
Lutetium-177 (Lu 177)	100
Manganese-52 (Mn 52)	10
Manganese-54 (Mn 54)	10
Manganese-56 (Mn 56)	10
Mercury-197m (Hg 197m)	100
Mercury-197 (Hg 197)	100
Mercury-203 (Hg 203)	10
Molybdenum-99 (Mo 99)	100
Neodymium-147 (Nd 147)	100
Neodymium-149 (Nd 149)	100
Nickel-59 (Ni 59)	100
Nickel-63 (Ni 63)	10
Nickel-65 (Ni 65)	100
Niobium-93m (Nb 93m)	10
Niobium-95 (Nb 95)	10
Niobium-97 (Nb 97)	10
Nitrogen-13 (N 13)	10
Osmium-185 (Os 185)	10
Osmium-191m (Os 191m)	100
Osmium-191 (Os 191)	100
Osmium-193 (Os 193)	100
Oxygen-15 (O 15)	10
Palladium-103 (Pd 103)	100
Palladium-109 (Pd 109)	100
Phosphorus-32 (P 32)	10

Schedule B – Exempt Quantities Radioactive Material	Exempt Quantity (Microcuries)
Platinum-191 (Pt 191)	100
Platinum-193m (Pt 193m)	100
Platinum-193 (Pt 193)	100
Platinum-197m (Pt 197m)	100
Platinum-197 (Pt 197)	100
Polonium-210 (Po 210)	0.1
Potassium-42 (K 42)	10
Potassium-43 (K 43)	10
Praseodymium-142 (Pm 142)	100
Praseodymium-143 (Pr 143)	100
Promethium-147 (Pm 147)	10
Promethium-149 (Pm 149)	10
Rhenium-186 (Re 186)	100
Rhenium-188 (Re 188)	100
Rhodium-103m (Rh 103m)	100
Rhodium-105 (Rh 105)	100
Rubidium-81 (Rb 81)	10
Rubidium-86 (Rb 86)	10
Rubidium-87 (Rb 87)	10
Ruthenium-97 (Ru 97)	100
Ruthenium-103 (Ru 103)	10
Ruthenium-105 (Ru 105)	10
Ruthenium-106 (Ru 106)	1
Samarium-151 (Sm 151)	10
Samarium-153 (Sm 153)	100
Scandium-46 (Sc 46)	10
Scandium-47 (Sc 47)	100
Scandium-48 (Sc 48)	10
Selenium-75 (Se 75)	10
Silicon-31 (Si 31)	100
Silver-105 (Ag 105)	10
Silver-110m (Ag 110m)	1
Silver-111 (Ag 111)	100
Sodium-22 (Na 22)	10
Sodium-24 (Na 24)	10
Strontium-85 (Sr 85)	10

Schedule B – Exempt Quantities Radioactive Material	Exempt Quantity (Microcuries)
Strontium-89 (Sr 89)	1
Strontium-90 (Sr 90)	0.1
Strontium-91 (Sr 91)	10
Strontium-92 (Sr 92)	10
Sulphur-35 (S 35)	100
Tantalum-182 (Ta 182)	10
Technetium-96 (Tc 96)	10
Technetium-97m (Tc 97m)	100
Technetium-97 (Tc 97)	100
Technetium-99m (Tc 99m)	100
Technetium-99 (Tc 99)	10
Tellurium-125m (Te 125m)	10
Tellurium-127m (Te 127m)	10
Tellurium-127 (Te 127)	100
Tellurium-129m (Te 129m)	10
Tellurium-129 (Te 129)	100
Tellurium-131m (Te 131m)	10
Tellurium-132 (Te 132)	10
Terbium-160 (Tb 160)	10
Thallium-200 (Tl 200)	100
Thallium-201 (Tl 201)	100
Thallium-202 (Tl 202)	100
Thallium-204 (Tl 204)	10
Thulium-170 (Tm 170)	10
Thulium-171 (Tm 171)	10
Tin 113-(Sn 113)	10
Tin 125-(Sn 125)	10
Tungsten-181 (W 181)	10
Tungsten-185 (W 185)	10
Tungsten-187 (W 187)	100
Vanadium-48 (V 48)	10
Xenon-131m (Xe 131m)	1,000
Xenon-133 (Xe 133)	100
Xenon-135 (Xe 135)	100
Ytterbium-175 (Yb 175)	100
Yttrium-87 (Y 87)	10

Schedule B – Exempt Quantities Radioactive Material	Exempt Quantity (Microcuries)
Yttrium-88 (Y 88)	10
Yttrium-90 (Y 90)	10
Yttrium-91 (Y 91)	10
Yttrium-92 (Y 92)	100
Yttrium-93 (Y 93)	100
Zinc-65 (Zn 65)	10
Zinc-69m (Zn 69m)	100
Zinc-69 (Zn 69)	1,000
Zirconium-93 (Zr 93)	10
Zirconium-95 (Zr 95)	10
Zirconium-97 (Zr 97)	10
Any radioactive material not listed above other than alpha- emitting radioactive material	0.1

(c) Schedule C.

SCHEDULE C
LIMITS FOR BROAD LICENSES

Schedule C – Limits For Broad Licenses Radioactive Materials	Column I (Curies)	Column II (Curies)
Antimony-122 (Sb 122)	1	0.01
Antimony-124 (Sb 124)	1	0.01
Antimony-125 (Sb 125)	1	0.01
Arsenic-73 (As 73)	10	0.1
Arsenic-74 (As 74)	1	0.01
Arsenic-76 (As 76)	1	0.01
Arsenic-77 (As 77)	10	0.1
Barium-131 (Ba 131)	10	0.1
Barium-140 (Ba 140)	1	0.01
Beryllium-7 (Be 7)	10	0.1
Bismuth-210 (Bi 210)	0.1	0.001
Bromine-82 (Br 82)	10	0.1

Schedule C – Limits For Broad Licenses

Radioactive Materials	Column I (Curies)	Column II (Curies)
Cadmium-109 (Cd 109)	1	0.01
Cadmium-115m (Cd 115m)	1	0.01
Cadmium-115 (Cd 115)	10	0.1
Calcium-45 (Ca 45)	1	0.01
Calcium-47 (Ca 47)	10	0.1
Carbon-14 (C 14)	100	1.0
Cerium-141 (Ce 141)	10	0.1
Cerium-143 (Ce 143)	10	0.1
Cerium-144 (Ce 144)	0.1	0.001
Cesium-131 (Cs 131)	100	1.0
Cesium-134m (Cs 134m)	100	1.0
Cesium-134 (Cs 134)	0.1	0.001
Cesium-135 (Cs 135)	1	0.01
Cesium-136 (Cs 136)	10	0.1
Cesium-137 (Cs 137)	0.1	0.001
Chlorine-36 (Cl 36)	0.01	0.001
Chlorine-38 (Cl 38)	100	1.0
Chromium-51 (Cr 51)	100	1.0
Cobalt-57 (Co 57)	10	0.1
Cobalt-58m (Co 58m)	100	1.0
Cobalt-58 (Co 58)	1	0.01
Cobalt-60 (Co 60)	0.1	0.001
Copper-64 (Cu 64)	10	0.1
Dysprosium-165 (Dy 165)	100	1.0
Dysprosium-166 (Dy 166)	10	0.1
Erbium-169 (Er 169)	10	0.1
Erbium-171 (Er 171)	10	0.1
Europium-152 (Eu 152) 9.2h	10	0.1
Europium-152 (Eu 152) 13 yr	0.1	0.001
Europium-154 (Eu 154)	0.1	0.001
Europium-155 (Eu 155)	1	0.01
Fluorine-18 (F 18)	100	1.0
Gadolinium-153 (Gd 153)	1	0.01
Gadolinium-159 (Gd 159)	10	0.1

Schedule C – Limits For Broad Licenses

Radioactive Materials	Column I (Curies)	Column II (Curies)
Gallium-72 (Ga 72)	10	0.1
Germanium-71 (Ge 71)	100	1.0
Gold-198 (Au 198)	10	0.1
Gold-199 (Au 199)	10	0.1
Hafnium-181 (Hf 181)	1	0.01
Holmium-166 (Ho 166)	10	0.1
Hydrogen-3 (H 3)	100	1.0
Indium-113m (In 113m)	100	1.0
Indium-114m (In 114m)	1	0.01
Indium-115m (In 115m)	100	1.0
Indium-115 (In 115)	1	0.01
Iodine-125 (I 125)	0.1	0.001
Iodine-126 (I 126)	0.1	0.001
Iodine-129 (I 129)	0.1	0.001
Iodine-131 (I 131)	0.1	0.001
Iodine-132 (I 132)	10	0.1
Iodine-133 (I 133)	1	0.01
Iodine-134 (I 134)	10	0.1
Iodine-135 (I 135)	1	0.01
Iridium-192 (Ir 192)	1	0.01
Iridium-194 (Ir 194)	10	0.1
Iron-55 (Fe 55)	10	0.1
Iron-59 (Fe 59)	1	0.01
Krypton-85 (Kr 85)	100	1.0
Krypton-87 (Kr 87)	10	0.1
Lanthanum-140 (La 140)	1	0.01
Lutetium-177 (Lu 177)	10	0.1
Manganese-52 (Mn 52)	1	0.01
Manganese-54 (Mn 54)	1	0.01
Manganese-56 (Mn 56)	10	0.1
Mercury-197m (Hg 197m)	10	0.1
Mercury-197 (Hg 197)	10	0.1
Mercury-203 (Hg 203)	1	0.01
Molybdenum-99 (Mo 99)	10	0.1

Schedule C – Limits For Broad Licenses

Radioactive Materials	Column I (Curies)	Column II (Curies)
Neodymium-147 (Nd 147)	10	0.1
Neodymium-149 (Nd 149)	10	0.1
Nickel-59 (Ni 59)	10	0.1
Nickel-63 (Ni 63)	1	0.01
Nickel-65 (Ni 65)	10	0.1
Niobium-93m (Nb 93m)	1	0.01
Niobium-95 (Nb 95)	1	0.01
Niobium-97 (Nb 97)	100	1.0
Osmium-185 (Os 185)	1	0.01
Osmium-191m (Os 191m)	100	1.0
Osmium-191 (Os 191)	10	0.1
Osmium-193 (Os 193)	10	0.1
Palladium-103 (Pd 103)	10	0.1
Palladium-109 (Pd 109)	10	0.1
Phosphorus-32 (P 32)	1	0.01
Platinum-191 (Pt 191)	10	0.1
Platinum-193m (Pt 193m)	100	1.0
Platinum-193 (Pt 193)	10	0.1
Platinum-197m (Pt 197m)	100	1.0
Platinum-197 (Pt 197)	10	0.1
Polonium-210 (Po 210)	0.01	0.0001
Potassium-42 (K 42)	1	0.01
Praseodymium-142 (Pm 142)	10	0.1
Praseodymium-143 (Pr 143)	10	0.1
Promethium-147 (Pm 147)	1	0.01
Promethium-149 (Pm 149)	10	0.1
Radium-226	0.01	0.0001
Rhenium-186 (Re 186)	10	0.1
Rhenium-188 (Re 188)	10	0.1
Rhodium-103m (Rh 103m)	1,000	0
Rhodium-105 (Rh 105)	10	0.1
Rubidium-86 (Rb 86)	1	0.01
Rubidium-87 (Rb 87)	1	0.01
Ruthenium-97 (Ru 97)	100	1.0

Schedule C – Limits For Broad Licenses

Radioactive Materials	Column I (Curies)	Column II (Curies)
Ruthenium-103 (Ru 103)	1	0.01
Ruthenium-105 (Ru 105)	10	0.1
Ruthenium-106 (Ru 106)	0.1	0.001
Samarium-151 (Sm 151)	1	0.01
Samarium-153 (Sm 153)	10	0.1
Scandium-46 (Sc 46)	1	0.01
Scandium-47 (Sc 47)	10	0.1
Scandium-48 (Sc 48)	1	0.01
Selenium-75 (Se 75)	1	0.01
Silicon-31 (Si 31)	10	0.1
Silver-105 (Ag 105)	1	0.01
Silver-110m (Ag 110m)	0.1	0.001
Silver-111 (Ag 111)	10	0.1
Sodium-22 (Na 22)	0.1	0.001
Sodium-24 (Na 24)	1	0.01
Strontium-85m (Sr 85m)	1,000	10.0
Strontium-85 (Sr 85)	1	0.01
Strontium-89 (Sr 89)	1	0.01
Strontium-90 (Sr 90)	0.01	0.0001
Strontium-91 (Sr 91)	10	0.1
Strontium-92 (Sr 92)	10	0.1
Sulphur-35 (S 35)	10	0.1
Tantalum-182 (Ta 182)	1	0.01
Technetium-96 (Tc 96)	10	0.1
Technetium-97m (Tc 97m)	10	0.1
Technetium-97 (Tc 97)	10	0.1
Technetium-99m (Tc 99m)	100	1.0
Technetium-99 (Tc 99)	1	0.01
Tellurium-125m (Te 125m)	1	0.01
Tellurium-127m (Te 127m)	1	0.01
Tellurium-127 (Te 127)	10	0.1
Tellurium-129m (Te 129m)	1	0.01
Tellurium-129 (Te 129)	100	1.0
Tellurium-131m (Te 131m)	10	0.1

Schedule C – Limits For Broad Licenses

Radioactive Materials	Column I (Curies)	Column II (Curies)
Tellurium-132 (Te 132)	1	0.01
Terbium-160 (Tb 160)	1	0.01
Thallium-200 (Tl 200)	10	0.1
Thallium-201 (Tl 201)	10	0.1
Thallium-202 (Tl 202)	10	0.1
Thallium-204 (Tl 204)	1	0.01
Thulium-170 (Tm 170)	1	0.01
Thulium-171 (Tm 171)	1	0.01
Tin 113-(Sn 113)	1	0.01
Tin 125-(Sn 125)	1	0.01
Tungsten-181 (W 181)	1	0.01
Tungsten-185 (W 185)	1	0.01
Tungsten-187 (W 187)	10	0.1
Vanadium-48 (V 48)	1	0.01
Xenon-131m (Xe 131m)	1,000	0
Xenon-133 (Xe 133)	100	1.0
Xenon-135 (Xe 135)	100	1.0
Ytterbium-175 (Yb 175)	10	0.1
Yttrium-90 (Y 90)	1	0.1
Yttrium-91 (Y 91)	1	0.1
Yttrium-92 (Y 92)	10	0.1
Yttrium-93 (Y 93)	1	0.01
Zinc-65 (Zn 65)	1	0.01
Zinc-69m (Zn 69m)	10	0.1
Zinc-69 (Zn 69)	100	1.0
Zirconium-93 (Zr 93)	1	0.01
Zirconium-95 (Zr 95)	1	0.01
Zirconium-97 (Zr 97)	1	0.01
Any radioactive material other than source material, or alpha-emitting radioactive material not listed above.	0.1	0.001

(d) Schedule D. Criteria Relating to Use of Financial Tests and Parent Company Guarantees for Providing Reasonable Assurance of Funds for Decommissioning.

1. Introduction. An applicant or licensee may provide reasonable assurance of the availability of funds for decommissioning based on obtaining a parent company guarantee that funds will be available for decommissioning costs and on a demonstration that the parent company passes a financial test. This schedule establishes criteria for passing the financial test and for obtaining the parent company guarantee.

2. Financial Test. To pass the financial test, the parent company must meet the criteria of either (21)(d)2.(i) or (21)(d)2.(ii) as follows:

(i) The parent company must have:

(I) two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5;

(II) Net working capital and tangible net worth each at least six times the current decommissioning cost estimates (or prescribed amount if a certification is used);

(III) Tangible net worth of at least $10 million; and

(IV) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the current decommissioning cost estimates (or prescribed amount if a certification is used).

(ii) The parent company must have:

(I) A current rating for its most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's;

(II) Tangible net worth each at least six times the current

decommissioning cost estimates for the total of all facilities or parts thereof (or prescribed amount if a certification is used);

(III) Tangible net worth of at least $10 million; and

(IV) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the current decommissioning cost estimates for the total of all facilities or parts thereof (or prescribed amount if a certification is used).

(iii) The parent company's independent certified public accountant must have compared the data used by the parent company in the financial test, which is derived from the independently-audited, year end financial statements for the latest fiscal year, with the amounts in such financial statement. In connection with that procedure the licensee shall inform the Department within 90 days of any matters coming to the auditor's attention that cause the auditor to believe that the data specified in the financial test should be adjusted and that the company no longer passes the test.

(iv) After the initial financial test, the parent company must repeat the passage of the test within 120 days after the close of each succeeding fiscal year. If the parent company no longer meets the requirements, as appropriate, of either (21)(d)2.(i) or (21)(d)2.(ii), the licensee must send notice to the Department of intent to establish alternate financial assurance as specified in the Department's Regulations. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the parent company no longer meets the financial test requirements. The licensee must provide alternate financial assurance within 120 days after the end of such fiscal year.

3. Parent Company Guarantee. The terms of a parent company guarantee which an applicant or licensee obtains must provide that:

(i) The parent company guarantee shall remain in force unless the guarantor sends notice of cancellation by certified mail to the licensee and the Department. Cancellation may not occur, however, during the 120 days beginning on the date

of receipt of the notice of cancellation by both the licensee and the Department, as evidenced by the return receipts;

(ii) If the licensee fails to provide alternate financial assurance as specified in the Department's Regulations within 90 days after receipt by the licensee and the Department of a notice of cancellation of the parent company guarantee from the guarantor, the guarantor shall provide such alternative financial assurance in the name of the licensee;

(iii) The parent company guarantee and financial test provisions must remain in effect until the Department has terminated the license; and

(iv) If a trust is established for decommissioning costs, the trustee and trust must be acceptable to the Department. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(e) Schedule E.

SCHEDULE E
QUANTITIES OF RADIOACTIVE MATERIALS REQUIRING CONSIDERATION OF THE NEED FOR AN EMERGENCY PLAN FOR RESPONDING TO A RELEASE

Schedule E – Emergency Plan For Responding to a Release		
Radioactive Material [1]	Release Fraction	Quantity (Curies)
Actinium-228	0.001	4,000
Americium-241	0.001	2
Americium-242	0.001	2
Americium-243	0.001	2
Antimony-124	0.01	4,000
Antimony-126	0.01	6,000
Barium-133	0.01	10,000
Barium-140	0.01	30,000
Bismuth-207	0.01	5,000
Bismuth-210	0.01	600
Cadmium-109	0.01	1,000
Cadmium-113	0.01	80
Calcium-45	0.01	20,000
Californium-252	0.001	9 (20 mg)
Carbon-14 (Non Carbon dioxide)	0.01	50,000
Cerium-141	0.01	10,000
Cerium-144	0.01	300
Cesium-134	0.01	2,000
Cesium-137	0.01	3,000
Chlorine-36	0.5	100
Chromium-51	0.01	300,000
Cobalt-60	0.001	5,000
Copper-64	0.01	200,000
Curium-242	0.001	60
Curium-243	0.001	3
Curium-244	0.001	4
Curium-245	0.001	2

Schedule E – Emergency Plan For Responding to a Release

Radioactive Material [1]	Release Fraction	Quantity (Curies)
Europium-152	0.01	500
Europium-154	0.01	400
Europium-155	0.01	3,000
Germanium-68	0.01	2,000
Gadolinium-153	0.01	5,000
Gold-198	0.01	30,000
Hafnium-172	0.01	400
Hafnium-181	0.01	7,000
Holmium-166m	0.01	100
Hydrogen-3	0.5	20,000
Iodine-125	0.5	10
Iodine-131	0.5	10
Indium-114m	0.01	1,000
Iridium-192	0.001	40,000
Iron-55	0.01	40,000
Iron-59	0.01	7,000
Krypton-85	1.0	6,000,000
Lead-210	0.01	8
Manganese-56	0.01	60,000
Mercury-203	0.01	10,000
Molybdenum-99	0.01	30,000
Neptunium-237	0.001	2
Nickel-63	0.01	20,000
Niobium-94	0.01	300
Phosphorus-32	0.5	100
Phosphorus-33	0.5	1,000
Polonium-210	0.01	10
Potassium-42	0.01	9,000
Promethium-145	0.01	4,000
Promethium-147	0.01	4,000
Ruthenium-106	0.01	200
Samarium-151	0.01	4,000
Scandium-46	0.01	3,000

Schedule E – Emergency Plan For Responding to a Release

Radioactive Material [1]	Release Fraction	Quantity (Curies)
Selenium-75	0.01	10,000
Silver-110m	0.01	1,000
Sodium-22	0.01	9,000
Sodium-24	0.01	10,000
Strontium-89	0.01	3,000
Strontium-90	0.01	90
Sulfur-35	0.5	900
Technetium-99	0.01	10,000
Technetium-99m	0.01	400,000
Tellurium-127m	0.01	5,000
Tellurium-129m	0.01	5,000
Terbium-160	0.01	4,000
Thulium-170	0.01	4,000
Tin-13	0.01	10,000
Tin-123	0.01	3,000
Tin-126	0.01	1,000
Titanium-44	0.01	100
Vanadium-48	0.01	7,000
Xenon-133	1.0	900,000
Yttrium-91	0.01	2,000
Zinc-65	0.01	5,000
Zirconium-93	0.01	400
Zirconium-95	0.01	5,000
Any other beta-/gamma-emitter	0.01	10,000
Mixed fission products	0.01	1,000
Contaminated equipment, beta/gamma	0.001	10,000
Irradiated material, any form other than solid noncombustible	0.01	1,000
Irradiated material, solid noncombustible	0.001	10,000
Mixed radioactive waste, beta/gamma	0.01	1,000
Packaged mixed waste, beta/gamma[2]	0.001	10,000

Schedule E – Emergency Plan For Responding to a Release

Radioactive Material [1]	Release Fraction	Quantity (Curies)
Any other alpha-emitter	0.001	2
Contaminated equipment, alpha	0.0001	20
Packaged waste, alpha[2]	0.0001	20

Footnotes:

(1) For combinations of radioactive materials listed above, consideration of the need for an emergency plan is required if the sum of the ratios of the quantity of each radioactive material authorized to the quantity listed for that material in Schedule E exceeds one.

(2) Waste packaged in Type B containers does not require an emergency plan.

(f) Schedule F

SCHEDULE F
QUANTITIES FOR USE WITH DECOMMISSIONING

Schedule F – Quantities for Use With Decommissioning

Radioactive Material	Quantity (Microcurie [a])
Americium-241	0.01
Antimony-122	100
Antimony-124	10
Antimony-125	10
Arsenic-73	100
Arsenic-74	10
Arsenic-76	10
Arsenic-77	100
Barium-131	10
Barium-133	10
Barium-140	10
Bismuth-210	1
Bromine-82	10
Cadmium-109	10
Cadmium-115m	10
Cadmium-115	100
Calcium-45	10
Calcium-47	10
Carbon-14	100
Cerium-141	100
Cerium-143	100
Cerium-144	1
Cesium-131	1,000
Cesium-134m	100
Cesium-134	1
Cesium-135	10
Cesium-136	10
Cesium-137	10
Chlorine-36	10

[a] To convert µCi to kBq, multiply the µCi value by 37.

Schedule F – Quantities for Use With Decommissioning

Radioactive Material	Quantity (Microcurie [(a)/])
Chlorine-38	10
Chromium-51	1,000
Cobalt-58m	10
Cobalt-58	10
Cobalt-60	1
Copper-64	100
Dysprosium-165	10
Dysprosium-166	100
Erbium-169	100
Erbium-171	100
Europium-152 (9.2 h)	100
Europium-152 (13 yr)	1
Europium-154	1
Europium-155	10
Florine-18	1,000
Gadolinium-153	10
Gadolinium-159	100
Gallium-72	10
Germanium-71	0
Hafnium-181	10
Holmium-166	100
Hydrogen-3	1,000
Indium-113m	100
Indium-114m	10
Indium-115m	100
Indium-115	10
Iodine-125	1
Iodine-126	1
Iodine-129	0.1
Iodine-131	1
Iodine-132	10
Iodine-133	1
Iodine-134	10
Iodine-135	10

Schedule F – Quantities for Use With Decommissioning

Radioactive Material	Quantity (Microcurie [a])
Iridium-192	10
Iridium-194	100
Iron-55	100
Iron-59	10
Krypton-85	100
Krypton-87	10
Lanthanum-140	10
Lutetium-177	100
Manganese-52	10
Manganese-54	10
Manganese-56	10
Mercury-197m	100
Mercury-197	100
Mercury-203	10
Molybdenum-99	100
Neodymium-147	100
Neodymium-149	100
Nickel-59	100
Nickel-63	10
Nickel-65	100
Niobium-93m	10
Niobium-95	10
Niobium-97	10
Osmium-185	10
Osmium-191m	100
Osmium-191	100
Osmium-193	100
Palladium-103	100
Palladium-109	100
Phosphorus-32	10
Platinum-191	100
Platinum-193m	100
Platinum-193	100
Platinum-197m	100

Schedule F – Quantities for Use With Decommissioning

Radioactive Material	Quantity (Microcurie [a])
Platinum-197	100
Plutonium-239	0.01
Polonium-210	0.1
Potassium-42	10
Praseodymium-142	100
Praseodymium-143	100
Promethium-147	10
Promethium-149	10
Radium-226	0.01
Rhenium-186	100
Rhenium-188	100
Rhodium-103m	100
Rhodium-105	100
Rubidium-86	10
Rubidium-87	10
Ruthenium-97	100
Ruthenium-103	10
Ruthenium-105	10
Ruthenium-106	1
Samarium-151	10
Samarium-153	100
Scandium-46	10
Scandium-47	100
Scandium-48	10
Selenium-75	10
Silicon-31	100
Silver-105	10
Silver-11Om	1
Silver-111	100
Sodium-22	1
Sodium-24	10
Strontium-85	10
Strontium-89	1
Strontium-90	0.1

Schedule F – Quantities for Use With Decommissioning

Radioactive Material	Quantity (Microcurie [a])
Strontium-91	10
Strontium-92	10
Sulfur-35	100
Tantalum-182	10
Technetium-96	10
Technetium-97m	100
Technetium-97	100
Technetium-99m	100
Technetium-99	10
Tellurium-125m	10
Tellurium-127m	10
Tellurium-127	100
Tellurium-129m	10
Tellurium-129	100
Tellurium-131m	10
Tellurium-132	10
Terbium-160	10
Thallium-200	100
Thallium-201	100
Thallium-202	100
Thallium-204	10
Thorium (natural)[b]	100
Thulium-170	10
Thulium-171	10
Tin-113	10
Tin-125	10
Tungsten-181	10
Tungsten-185	10
Tungsten-187	100
Uranium (natural)[c]	100
Uranium-233	0.01

[b] Based on alpha disintegration rate of Th-232, Th-230 and their daughter products.

[c] Based on alpha disintegration rate of U-238, U-234, and U-235.

Schedule F – Quantities for Use With Decommissioning

Radioactive Material	Quantity (Microcurie [(a)/])
Uranium-234	0.01
Uranium-235	0.01
Vanadium-48	10
Xenon-131m	1,000
Xenon-133	100
Xenon-135	100
Ytterbium-175	100
Yttrium-90	10
Yttrium-91	10
Yttrium-92	100
Yttrium-93	100
Zinc-65	10
Zinc-69m	100
Zinc-69	1,000
Zirconium-93	10
Zirconium-95	10
Zirconium-97	10
Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition.	0.01
Any radionuclide other than alpha emitting radionuclides, not listed above or mixtures of beta emitters of unknown composition.	0.10

(g) Schedule G. Criteria Relating to Use of Financial Tests and Self Guarantees for Providing Reasonable Assurance of Funds for Decommissioning.

1. Introduction

An applicant or licensee may provide reasonable assurance of the availability of funds for decommissioning based on furnishing its own guarantee that funds will be available for decommissioning costs and on a demonstration that the company passes the financial test of (21)(g)2. The terms of the self-guarantee are in (21)(g)3. This schedule establishes criteria for passing the financial test for the self- guarantee and establishes the terms for a self-guarantee.

2. Financial Test

(i) To pass the financial test, a company must meet all of the following criteria:

(I) Tangible net worth at least ten times the total current decommissioning cost estimate for the total of all facilities or parts thereof (or the current amount required if certification is used) for all decommissioning activities for which the company is responsible as self-guaranteeing licensee.

(II) Assets located in the United States amounting to at least 90 percent of total decommissioning cost estimate for the total of all facilities or parts thereof (or the current amount required if certification is used) for all decommissioning activities for which the company is responsible as self-guaranteeing licensee.

(III) A current rating for its most recent bond issuance of AAA, AA, or A as issued by Standard and Poors (S&P), or Aaa, Aa, or A as issued by Moodys.

(ii) To pass the financial test, a company must meet all of the following additional requirements:

(I) The company must have at least one class of equity securities registered under the Security Exchange Act of 1934.

(II) The company's independent certified public accountant must have compared the data used by the company in the financial test, which is derived from the independently audited, year-end financial statements for the latest fiscal year, with the amounts in such financial statement. In connection with that procedure, the licensee shall inform the Department within 90 days of any matters coming to the attention of the auditor that cause the auditor to believe that the data specified in the financial test should be adjusted and that the company no longer passes the test.

(III) After the initial financial test, the company must repeat passage of the test within 90 days after the close of each succeeding fiscal year.

(iii) If the licensee no longer meets the requirements of (21)(g)2.(i), the licensee must send immediate notice to the Department of its intent to establish alternate financial assurance as specified in the Department's regulations within 120 days of such notice.

3. Company Self-Guarantee

The terms of a self-guarantee which an applicant or licensee furnishes must provide that:

(i) The guarantee will remain in force unless the licensee sends notice of cancellation by certified mail to the Department. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by the Department, as evidence by the return receipt.

(ii) The licensee shall provide alternative financial assurance as specified in the Department's regulations within 90 days following receipt by the Department of a notice of cancellation of the guarantee.

(iii) The guarantee and financial test provisions must remain in effect until the Department has terminated the license or until another financial assurance method acceptable to the Department has been put in effect by the licensee.

(iv) The licensee will promptly forward to the Department and the licensee's independent auditor all reports covering the latest fiscal year filed by the licensee with the Securities and Exchange Commission pursuant to the requirements of Section 13 of the Securities and Exchange Act of 1934.

(v) If, at any time, the licensee's most recent bond issuance ceases to be rated in any category of "A" or above by either Standard and Poors or Moodys, the licensee will provide notice in writing of such fact to the Department within 20 days after publication of the change by the rating service. If the licensee's most recent bond issuance ceases to be rated in any category of A or above by both Standard and Poors and Moodys, the licensee no longer meets the requirements of (21)(g)2.(i).

(vi) The applicant or licensee must provide to the Department a written guarantee (a written commitment by a corporate officer) which states that the licensee will fund and carry out the required decommissioning activities or, upon issuance of an order by the Department, the licensee will set up and fund a trust in the amount of the current cost estimates for decommissioning.

(h) Schedule H. Criteria Relating to Use of Financial Tests and Self-Guarantee For Providing Reasonable Assurance of Funds For Decommissioning by Nonprofit Colleges, Universities, and Hospitals.

1. Introduction

An applicant or licensee may provide reasonable assurance of the availability of funds for decommissioning based on furnishing its own guarantee that funds will be available for decommissioning costs and on a demonstration that the applicant or licensee passes the financial test of (h)2. The terms of the self-guarantee are in (h)3. This schedule establishes criteria for passing the financial test for the self-guarantee and establishes the terms for a self-guarantee.

2. Financial Test

(i) For colleges and universities, to pass the financial test a college or university must meet either the criteria in (h)2.(i)(I) or the criteria in (h)2.(i)(II).

(I) For applicants or licensees that issue bonds, a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A as issued by Standard and Poors (S&P) or Aaa, Aa, or A as issued by Moodys.

(II) For applicants or licensees that do not issue bonds, unrestricted endowment consisting of assets located in the United States of at least $50 million, or at least 30 times the total current decommissioning cost estimate (or the current amount required if certification is used), whichever is greater, for all decommissioning activities for which the college or university is responsible as a self-guaranteeing licensee.

(ii) For hospitals, to pass the financial test a hospital must meet either the criteria in (h)2.(ii)(I) or the criteria in (h)2.(ii)(II):

(I) For applicants or licensees that issue bonds, a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance

of AAA, AA, or A as issued by Standard and Poors (S&P) or Aaa, Aa, or A as issued by Moodys.

(II) For applicants or licensees that do not issue bonds, all the following tests must be met:

I. (Total Revenues less total expenditures) divided by total revenues must be equal to or greater than 0.04.

II. Long term debt divided by net fixed assets must be less than or equal to 0.67.

III. (Current assets and depreciation fund) divided by current liabilities must be greater than or equal to 2.55.

IV. Operating revenues must be at least 100 times the total current decommissioning cost estimate (or the current amount required if certification is used) for all decommissioning activities for which the hospital is responsible as a self-guaranteeing license.

(iii) In addition, to pass the financial test, a licensee must meet all the following requirements:

(I) The licensee's independent certified public accountant must have compared the data used by the licensee in the financial test, which is required to be derived from the independently audited year end financial statements, based on United States generally accepted accounting practices, for the latest fiscal year, with the amounts in such financial statement. In connection with that procedure, the licensee shall inform the Department within 90 days of any matters coming to the attention of the auditor that cause the auditor to believe that the data specified in the financial test should be adjusted and that the licensee no longer passes the test.

(II) After the initial financial test, the licensee must repeat passage of the test within 90 days after the close of each succeeding fiscal year.

(III) If the licensee no longer meets the requirements of (h)1., the licensee must send notice to the Department of its intent to establish alternative financial assurance as specified in Department regulations. The notice must be sent by certified mail, return receipt requested, within 90 days after the end of the fiscal year for which the year end financial data show that the licensee no longer meets the financial test requirements. The licensee must provide alternate financial assurance within 120 days after the end of such fiscal year.

3. Self-Guarantee

The terms of a self-guarantee which an applicant or licensee furnishes must provide that:

(i) The guarantee shall remain in force unless the licensee sends notice of cancellation by certified mail, and/or return receipt requested, to the Department. Cancellation may not occur unless an alternative financial assurance mechanism is in place.

(ii) The licensee shall provide alternative financial assurance as specified in the Department's regulations within 90 days following receipt by the Department of a notice of cancellation of the guarantee.

(iii) The guarantee and financial test provisions must remain in effect until the Department has terminated the license or until another financial assurance method acceptable to the Department has been put in effect by the licensee.

(iv) The applicant or licensee must provide to the Department a written guarantee (a written commitment by a corporate officer or officer of the institution) which states that the licensee will fund and carry out the required decommissioning activities or, upon issuance of an order by the Department, the licensee will set up and fund a trust in the amount of the current cost estimates for decommissioning.

(v) If, at any time, the licensee's most recent bond issuance

ceases to be rated in any category of "A" or above by either Standard and Poors or Moodys, the licensee shall provide notice in writing of such fact to the Department within 20 days after publication of the change by the rating service.

Authority O.C.G.A. 31-13-1 et seq.; Ga. L. 1964, pp. 499, 507, 566-575, as amended (Georgia Radiation Control Act).