PROPOSED AMENDMENTS TO THE RULES OF THE DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION RADIOACTIVE MATERIALS, SUBJECT 391-3-17

The Rules of the Department of Natural Resources, Subject 391-3-17, Radioactive Materials, are hereby amended, added to, repealed in part, revised, as hereinafter explicitly set forth in the attached amendments, additions, partial repeals, and revisions for specific rules, or such subdivisions thereof as may be indicated.

[Note: Underlined text is proposed to be added. Lined-through text is proposed for deletion.]

Rule 391-3-17-.01(2), "Definitions," is being amended to read as follows:

(2) **Definitions.** As used in this Subject~~Chapter~~, these terms have the definitions set forth below. Additional definitions used only in a certain Rule will be found in that Rule.

(a) "A_1" means the maximum activity of special form radioactive material permitted in a Type A package. "A_2" means the maximum activity of radioactive material, other than special form, LSA and SCO material, permitted in a Type A package. These values are either listed in the "Table of A_1 and A_2 Values for Radionuclides" of 49 CFR 173.435 or may be derived in accordance with the procedure prescribed in 49 CFR 173.433-173.435.

(b) "Absorbed dose" means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the rad and the Gray (Gy).

(c) "Accelerator-produced radioactive material" means any material made radioactive by a particle accelerator.

(d) "Act" means Chapter 13 of the Official Code of Georgia, Annotated, entitled "Radiation Control" as amended.

(e) "Activity" means the rate of disintegration or transformation or decay of radioactive material. The units of activity are the Curie (Ci) and the Becquerel (Bq).

(f) "Adult" means an individual 18 or more years of age.

(g) "Agreement State" means any State with which the U.S. Nuclear Regulatory Commission or the U.S. Atomic Energy Commission has entered into an effective agreement under subsection 274b. of the Atomic Energy Act of 1954, as amended (73 Stat. 689).

(h) "Airborne radioactive material" means any radioactive material dispersed in the air in the form of dusts, fumes, particulates, mists, vapors, or gases.

(i) "Airborne radioactivity area" means a room, enclosure or operating area in which airborne radioactive materials, composed wholly or partly of licensed materials, exist in concentrations;

1. In excess of the derived air concentrations (DACs) specified in Appendix B, to 10 CFR 20.1001-20.2401, or

2. To such a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or 12 DAC-hours.

(j) "Annually" means once every 12 calendar months or no later than the last day of the same calendar month of the following year.

(k) "As low as is reasonably achievable" (ALARA) means making every reasonable effort to maintain exposures to radiation as far below the dose limits in this Subject~~Chapter~~ as is practical, consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed or registered sources of radiation in the public interest.

(l) "Background radiation" means radiation from cosmic sources; naturally occurring radioactive materials, including radon, except as a decay product of source or special nuclear material, and including global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation and are not under the control of the licensee. "Background radiation" does not include sources of radiation from radioactive materials regulated by the Division.

(m) "Becquerel" (Bq) means the SI unit of activity. One Becquerel is equal to one disintegration or transformation per second.

(n) "Bioassay" means the determination of kinds, quantities or concentrations, and, in some cases, the locations of radioactive material in the human body, whether by direct measurement, in vivo counting, or by analysis and evaluation of materials excreted or removed from the human body. For purposes of this Subject~~Chapter~~, "radiobioassay" is an equivalent term.

(o) "Byproduct material" means:

1. Any radioactive material, except special nuclear material, yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;

2. The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition.

3. (i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that:

(I) Has been made radioactive by use of a particle accelerator; and

(II) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

4. Any discrete source of naturally occurring radioactive material, other than source material, that:

(i) The Nuclear Regulatory Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

(p) "Calibration" means the determination of:

1. The response or reading of an instrument relative to a series of known radiation values over the range of the instrument, or

2. The strength of a source of radiation relative to a standard.

(q) "CFR" means the Code of Federal Regulations.

(r) "Collective dose" means the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

(s) “Committed dose” means the radiation dose that will accumulate over time as a result of retention in the body of radioactive material. Committed dose is a generic term for internal dose and must be calculated by summing the projected dose over the 50 years after intake for all irradiated organs or tissues multiplying the doses to individual organs and tissues by applicable tissue weighting factors.

(t) "Committed dose equivalent" ($H_{T,50}$) means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

(u) "Committed effective dose equivalent" ($H_{E,50}$) is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to each of these organs or tissues ($H_{E,50} = \Sigma\, w_T H_{T,50}$).

(v) "Consortium" means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution or a Federal facility or a medical facility.

(w) "Curie" means a unit of quantity of radioactivity. One Curie (Ci) is that quantity of radioactive material that decays at the rate of 3.7×10^{10} transformations per second (tps).

(x) "Daily" means once every calendar day worked.

(y) "Deep dose equivalent" (H_d), which applies to external whole body exposure, means the dose equivalent at a tissue depth of one centimeter (1,000 mg/cm^2).

(z) "Department" means the Department of Natural Resources of the State of Georgia.

(aa) "Depleted uranium" means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

(bb) "Derived air concentration" (DAC) means the concentration of a given radionuclide in air which, if breathed by the reference man for a working year of 2,000 hours under conditions of light work (inhalation rate 1.2 cubic meters of air per hour), results in an intake of one ALI. (Annual Limit on Intake defined in Rule .03(2)-(d)) DAC values are given in Table 1, Column 3 of Appendix B to 10 CFR 20.1001 - 20.2401.

(cc) "Discrete source" means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

(dd) "Dose" is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, or total effective dose equivalent.

(ee) "Dose equivalent" (H_T) means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the rem and Sievert (Sv).

(ff) "Dose limits" means the permissible upper bounds of radiation doses established in accordance with this Subject~~Chapter~~. For purposes of this Subject~~Chapter~~, "limits" is an equivalent term.

(gg) "Effective dose equivalent" (H_E) means the sum of the products of the dose equivalent to each organ or tissue (H_T) and the weighting factor (w_T) applicable to each of the body organs or tissues that are irradiated ($H_E = \Sigma\, w_T H_T$).

(hh) "Embryo/fetus" means the developing human organism from conception until the time of birth.

(ii) "Entrance or access point" means any opening through which an individual or extremity of an individual could gain access to radiation areas or to licensed radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

(jj) "Explosive material" means any chemical compound, mixture, or device that produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

(kk) "Exposure" means being exposed to ionizing radiation or to radioactive material.

(ll) "Exposure rate" means the exposure per unit of time, such as Roentgen per minute or milliroentgen per hour.

(mm) "External dose" means that portion of the dose equivalent received from any source of radiation outside the body.

(nn) "Extremity" means hand, elbow, arm below the elbow, foot, knee, and leg below the knee.

(oo) "Former U.S. Atomic Energy Commission (AEC) or U.S. Nuclear Regulatory Commission (NRC) licensed facilities" means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants, or critical mass experimental facilities where AEC or NRC licenses have been terminated.

(pp) "Generally applicable environmental radiation standards" means standards issued by the U.S. Environmental Protection Agency (EPA) under the authority of the Atomic Energy Act of 1954, as amended, that impose limits on radiation exposures, levels, concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

(qq) "Gray" (Gy) means the SI unit of absorbed dose. One Gray is equal to an absorbed dose of one Joule/kilogram (100 rad).

(rr) "Hazardous waste" means those wastes designated as hazardous by U.S. Environmental Protection Agency regulations in 40 CFR Part 261.

(ss) "Healing arts" means medicine, dentistry, chiropractic, podiatry, osteopathy or veterinary medicine.

(tt) "High radiation area" means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv) in one hour at 30 centimeters from any source of radiation or from any surface that the radiation penetrates. For purposes of this Subject~~Chapter~~, rooms or areas in which diagnostic x-ray systems are used for healing arts purposes are not considered high radiation areas.

(uu) "Human use" means the internal or external administration of radiation or radioactive material to human beings.

(vv) "Individual" means any human being.

(ww) "Individual monitoring" means the assessment of:

1. Dose equivalent by the use of:

(i) Individual monitoring devices, or

(ii) Survey data; or

2. Committed effective dose equivalent:

(i) By bioassay, or

(ii) By determination of the time-weighted air concentrations to which an individual has been exposed, that is, DAC-hours [See the definition of DAC-hours in Rule 391-3-17-.03(2)(q)].

(xx) "Individual monitoring devices" means devices designed to be worn by a single individual for the assessment of dose equivalent. For purposes of this Subject~~Chapter~~, individual monitoring devices and personnel monitoring equipment are equivalent terms. Examples of individual monitoring devices are film badges, thermoluminescent dosimeters (TLDs), optically stimulated luminescent devices, pocket ionization chambers, and personal air sampling devices.

(yy) "Inspection" means an official examination or observation including, but not limited to, tests, surveys, and monitoring to determine compliance.

(zz) "Interlock" means a device arranged or connected such that the occurrence of an event or condition is required before a second event or condition can occur or continue to occur.

(aaa) "Internal dose" means that portion of the dose equivalent received from radioactive material taken into the body.

(bbb) "Lens dose equivalent" (LDE) means the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm^2).

(ccc) "License" means a license issued by the Director in accordance with the Regulations promulgated by the Board.

(ddd) "Licensed material" means radioactive material received, possessed, used, transferred or disposed of under a general or specific license issued by the Director.

(eee) "Licensee" means any person who is licensed by the Director in accordance with this Subject~~Chapter~~ and the Act.

(fff) [Reserved]

(ggg) "Limits" [See Dose limits].

(hhh) "Lost or missing licensed material" means licensed material whose location is unknown. This definition includes licensed material that has been shipped but has not reached its planned destination and whose location cannot be readily traced in the transportation system.

(iii) "Major processor" means a user processing, handling, or manufacturing radioactive material exceeding Type A quantities as unsealed sources or material, or exceeding four times Type B quantities as sealed sources, but does not include nuclear medicine programs, universities, industrial radiographers, or small industrial programs. Type A and B quantities are defined in Section 71.4 of 10 CFR Part 71.

(jjj) "Management" means the chief executive officer or other individual having the authority to manage, direct, or administer the licensee's activities, or those persons' delegate or delegates.

(kkk) "Member of the public" means any individual except when that individual is receiving an occupational dose.

(lll) "Minor" means an individual less than 18 years of age.

(mmm) "Monthly" means once every calendar month, not to exceed an interval of 35 days.

(nnn) "Monitoring" means the measurement of radiation, radioactive material concentrations, surface area activities or quantities of radioactive material and the use of the results of these measurements to evaluate potential exposures and doses. For purposes of this Subject~~Chapter~~, "radiation monitoring" and "radiation protection monitoring" are equivalent terms.

(ooo) "NARM" means any naturally-occurring or accelerator-produced radioactive material. It does not include byproduct, source, or special nuclear material.

(ppp) "Natural radioactivity" means radioactivity of naturally-occurring nuclides.

(qqq) "NORM" (Naturally-Occurring Radioactive Material) means any nuclide which is radioactive in its natural physical state (i.e., not man-made), but does not include byproduct, source, or special nuclear material.

(rrr) "Nuclear Regulatory Commission" (NRC) means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.

(sss) "Occupational dose" means the dose received by an individual in the course of employment while engaged in activities licensed by the Director in which the individual's assigned duties involve exposure to licensed and unlicensed sources of radiation whether in the possession of the licensee, or other person. Occupational dose does not include doses received from background radiation, as a patient from medical practices, from exposure from individuals administered radioactive material and released in accordance with Rule 391-3-17-.05(37), from voluntary participation in medical research programs, or as a member of the public.

(ttt) "Package" means the assembly of components necessary to ensure compliance with packing requirements of DOT regulations together with its radioactive contents as presented for transport.

1. "Fissile material package" means a fissile material packaging together with its fissile material contents.

2. "Type B package" means a Type B packaging together with its radioactive contents. On approval, a Type B package design is designated by NRC as B(U) unless the package has a maximum normal operating pressure of more than 700 kPa (100 lb/in^2) gauge or pressure relief device that will allow the release of radioactive material to the environment under the tests specified in 10 CFR 71 (hypothetical accident conditions), in which case it will receive a designation B(M). B(U) refers to the need for unilateral approval of international shipments; B(M) refers to the need for multilateral approval of international shipments. There is no distinction made in how packages with these designations may be used in domestic transportation. To determine their distinction for international transportation, see DOT regulations in 49 CFR 173. A Type B package approved before September 6, 1983, was designated only as Type B. Limitations on its use are specified in 10 CFR 71.13.

(uuu) "Particle accelerator" means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of one MeV. For purposes of this definition, "accelerator" is an equivalent term.

(vvv) "Person" means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this State, any other state or political subdivision or agency thereof, and any legal successor, representative, agent, or department of the foregoing, but shall not include federal government agencies.

(www) "Personnel monitoring equipment" [See Individual monitoring devices].

(xxx) "Pharmacist" means any individual who is licensed to practice Pharmacy in this State by the Georgia State Board of Pharmacy.

(yyy) "Physician" means any person who is licensed to engage in the practice of medicine under the Authority of O.C.G.A. 43-34-20 or the limited practice of medicine under O.C.G.A. 43-35-1.

(zzz) “Positron Emission Tomography (PET) radionuclide production facility” is defined as a facility operating a cyclotron or accelerator for the purpose of producing PET radionuclides.

(aaaa) "Principal activities," as used in this Subject~~Chapter~~, means activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no license material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

(bbbb) "Public dose" means the dose received by a member of the public from radiation and/or radioactive material released by a licensee or from any other source of radiation under the control of a licensee. It does not include occupational dose, doses received from background radiation, doses received as a patient from medical practices, from exposure from individuals administered radioactive material and released in accordance with Rule 391-3-17-.05(37), or doses from voluntary participation in medical research programs.

(cccc) "Pyrophoric liquid" means any liquid that ignites spontaneously in dry or moist air at or below 130 °F (54.4 °C). A pyrophoric solid is any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and, when ignited, burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

(dddd) "Qualified expert" means an individual having the knowledge and training to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs, for example, individuals certified in the appropriate field by a specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or qualifications/Training & Experience have been approved by an agreement state and meet the NRC requirements in 10 CFR 35~~the American Board of Radiology or the American Board of Health Physics, or those having equivalent qualifications~~.

With reference to the calibration of radiation therapy equipment, an individual having, in addition to the above qualifications, training and experience in the clinical applications of radiation physics to radiation therapy, for example, individuals certified in Therapeutic Radiological Physics or X-Ray and Radium Physics~~ by the American Board of Radiology~~, or those having equivalent qualifications.

(eeee) "Quality factor" (Q) means the modifying factor, listed in Tables 1 and 2 of this Rule that is used to derive dose equivalent from absorbed dose.

(ffff) "Quarterly" means once every three calendar months or no later than the last day of the third month after the initial month.

(gggg) "Rad" means the special unit of absorbed dose. One rad is equal to an absorbed dose of 100 ergs/gram or 0.01 Joule/kilogram (0.01 Gray).

(hhhh) "Radiation" means alpha particles, beta particles, gamma rays, x- rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. For purposes of this Subject~~Chapter~~, ionizing radiation is an equivalent term. Radiation, as used in this Subject~~Chapter~~, does not include non-ionizing radiation, such as radiowaves, microwaves, visible, infrared, or ultraviolet light.

(iiii) "Radiation area" means any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 5 mrem (0.05 mSv) in one hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.

(jjjj) "Radiation machine" means any device capable of producing radiation except those devices with radioactive material as the only source of radiation.

(kkkk) "Radiation Safety Officer" (RSO) means an individual who has the knowledge and responsibility to apply appropriate radiation protection regulations.

(llll) "Radioactive material" means any solid, liquid, or gas that emits radiation spontaneously.

(mmmm) "Radioactivity" means the transformation of unstable atomic nuclei by the emission of radiation.

(nnnn) "Regulations of the U.S. Department of Transportation" means the regulations in 49 CFR Parts 100-189.

(oooo) "Rem" means the special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rem is equal to the absorbed dose in rad multiplied by the quality factor (1 rem = 0.01 Sievert).

(pppp) "Research and development" means

1. Theoretical analysis, exploration, or experimentation; or

2. The extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes. Research and development does not include the internal or external administration of radiation or radioactive material to human beings.

(qqqq) "Restricted area" means any area to which access is limited by the licensee for purposes of protecting individuals against undue risks from exposure to sources of radiation and

radioactive material. A restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a restricted area.

(rrrr) "Roentgen" means the special unit of exposure. One Roentgen (R) equals 2.58×10^{-4} Coulombs/kilogram of air.

(ssss) "Sealed source" means radioactive material that is permanently bonded or fixed in a capsule or matrix designed to prevent release and dispersal of the radioactive material under the most severe conditions which are likely to be encountered in normal use and handling.

(tttt) "Sealed Source and Device Registry" means the national registry that contains all the registration certificates, generated by both the NRC and the Agreement States, that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for the product.

(uuuu) "Shallow dose equivalent" (H_s), which applies to the external exposure of the skin of the whole body or the skin of an extremity, means the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm^2).

(vvvv) "SI" means an abbreviation of the International System of Units.

(wwww) "Sievert" means the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in Sievert is equal to the absorbed dose in Gray multiplied by the quality factor (1 Sv = 100 rem).

(xxxx) "Site boundary" means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee.

(yyyy) "Source material" means

1. Uranium or thorium, or any combination thereof, in any physical or chemical form; or

2. Ores that contain by weight one-twentieth of one percent (0.05 percent) or more of uranium, thorium, or any combination thereof. Source material does not include special nuclear material.

(zzzz) "Source material milling" means any activity that results in the production of byproduct material as defined by .01(2)(o)2.

(aaaaa) "Source of radiation" means any radioactive material or any device or equipment emitting, or capable of producing, radiation.

(bbbbb) "Special form radioactive material" means radioactive material that satisfies the following conditions:

1. It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;

2. The piece or capsule has at least one dimension not less than five millimeters (0.197 inch); and

3. It satisfies the test requirements specified by the U.S. Nuclear Regulatory Commission. A special form encapsulation designed in accordance with the U.S. Nuclear Regulatory Commission requirements in effect on June 30, 1983, and constructed prior to July 1, 1985, may continue to be used. A special form encapsulation either designed or constructed after June 30, 1985, must meet requirements of this definition applicable at the time of its design or construction.

(ccccc) "Special nuclear material" means:

1. Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the U.S. Nuclear Regulatory Commission, pursuant to the provisions of section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material but does not include source material; or

2. Any material artificially enriched by any of the foregoing but does not include source material.

(ddddd) "Special nuclear material in quantities not sufficient to form a critical mass" means uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; uranium-233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula: For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed 1.

For example, the following quantities in combination would not exceed the limitation and are within the formula:

$$\frac{\text{175 (grams contained U-235)}}{350} + \frac{\text{50 (grams U-233)}}{200} + \frac{\text{50 (grams Pu)}}{200} \leq 1$$

(eeeee) "Survey" means an evaluation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of sources of radiation. When appropriate, such evaluation includes, but is not limited to, tests, physical examinations, and measurements of levels of radiation or concentrations of radioactive material present.

(fffff) "Test" means the process of verifying compliance with an applicable regulation.

(ggggg) "This Subject~~Chapter~~" means all of the Rules in Subject~~Chapter~~ 391-3-17.

(hhhhh) "Total effective dose equivalent" (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

(iiiiii) "U.S. Department of Energy" means the Department of Energy established by Public Law 95-91, August 4, 1977, 91 Stat. 565, 42 U.S.C. 7101 et seq., to the extent that the Department exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers, and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Public Law 93-438, October 11, 1974, 88 Stat. 1233 at 1237, 42 U.S.C. 5814, effective January 19, 1975) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Public Law 95-91, August 4, 1977, 91 Stat. 565 at 577-578, 42 U.S.C. 7151, effective October 1, 1977).

(jjjjj) "Unrefined and unprocessed ore" means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining. Processing does not include sieving or encapsulation of ore or preparation of samples for laboratory analysis.

(kkkkk) "Unrestricted area" means an area to which access is neither limited nor controlled by the licensee.

(lllll) "Very High Radiation Area" means an area, accessible to individuals, in which radiation levels could result in an individual receiving an absorbed dose in excess of 500 rads (5 Grays) in one hour at one meter from a radiation source or from any surface that the radiation penetrates.

(mmmmm) "Waste" means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level waste has the same meaning as radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in .01(2)(o)2., 3., and 4.

(nnnnn) "Waste handling licensees" mean persons licensed to receive and store radioactive wastes prior to disposal and/or persons licensed to dispose of radioactive waste.

(ooooo) "Weekly" means once every calendar week, not to exceed an interval of ten days.

(ppppp) "Whole body" means, for purposes of external exposure, head, trunk, including male gonads, arms above the elbow, or legs above the knee.

(qqqqq) "Worker" means an individual engaged in work under a license issued by the Director and controlled by a licensee. If the licensee is an individual rather than one of the other legal entities defined under "person," the radiation exposure limits for the worker also apply to the individual who is the licensee.

(rrrrr) "Working level" (WL) means any combination of short-lived radon daughters in one liter of air that will result in the ultimate emission of 1.3×10^5 MeV of potential alpha particle energy. The short-lived radon daughters for radon-222 are: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.

(sssss) "Working level month" (WLM) means an exposure to one working level for 170 hours. Two thousand working hours per year divided by 12 months per year is approximately equal to 170 hours per month.

(ttttt) "Year" means the period of time beginning in January used to determine compliance with the provisions of this Subject~~Chapter~~. The licensee may change the starting date of the year used to determine compliance by the licensee provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

(uuuuu) "Director" means the Director of the Environmental Protection Division of the Department of Natural Resources.

(vvvvv) "Division" means the Environmental Protection Division.

Rule 391-3-17-.03(12), "Precautionary Procedures," is being amended to read as follows:

(12) **Precautionary Procedures**

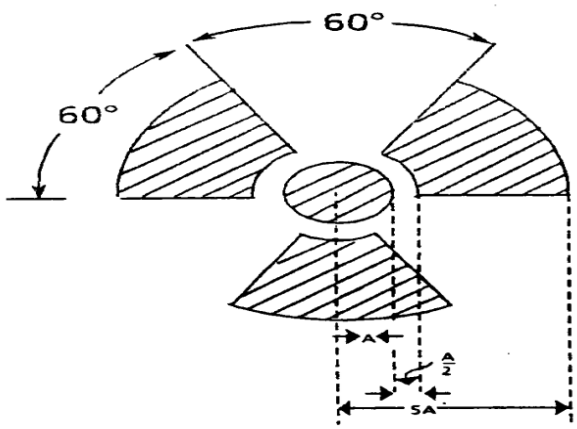
(a) Caution Signs.

1. Standard Radiation Symbol. Unless otherwise authorized by the Division, the symbol prescribed by (12)(a) of this Rule uses the colors magenta (or purple or black) on yellow background. The symbol prescribed is the three-bladed design as follows:

(i) Cross-hatched area is to be magenta, purple, or black; and

(ii) The background is to be yellow.

2. Exception to Color Requirements for Standard Radiation Symbol. Notwithstanding the requirements of (12)(a)1. of this Rule, licensees are authorized to label sources, source holders, or device components containing sources of radiation that are subjected to high temperatures with conspicuously etched or stamped radiation caution symbols without a color requirement.



3. In addition to the contents of signs and labels prescribed in this Rule, the licensee shall provide, on or near the required signs and labels, additional information, as appropriate, to make individuals aware of potential radiation exposures and to minimize the exposures.

(b) Posting Requirements.

1. Posting of Radiation Areas. The licensee shall post each radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIATION AREA."

2. Posting of High Radiation Areas. The licensee shall post each high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, HIGH RADIATION AREA" or "DANGER, HIGH RADIATION AREA." The licensee may satisfy this requirement by posting the sign at the boundary of the high radiation area.

3. Posting of Very High Radiation Areas. The licensee shall post each very high radiation area with a conspicuous sign or signs bearing the radiation symbol and words "GRAVE DANGER, VERY HIGH RADIATION AREA."

4. Posting of Airborne Radioactivity Areas. The licensee shall post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA."

5. Posting of Areas or Rooms in which Licensed Material is Used or Stored. The licensee shall post each area or room in which there is used or stored an amount of licensed material exceeding ten times the quantity of such material specified in Appendix C of 10 CFR Part 20 with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL(S)" or "DANGER, RADIOACTIVE MATERIAL(S)".

(c) Exceptions to Posting Requirements.

1. A licensee is not required to post caution signs in areas or rooms containing sources of radiation for periods of less than eight hours, if all of the following conditions are met:

(i) The sources of radiation are constantly attended during these periods by an individual who takes the precautions necessary to prevent the exposure of individuals to sources of radiation in excess of the limits established in this Rule; and

(ii) The area or room is subject to the licensee's control.

2. Rooms or other areas in hospitals that are occupied by patients are not required to be posted with caution signs pursuant to (12)(b) of this Rule provided that the patient could be released from licensee control pursuant to Rule 391-3-17-.05.

3. A room or area is not required to be posted with a caution sign pursuant to (12)(b) of this Rule because of the presence of a sealed source provided that the radiation level at 30 centimeters from the surface of the source container or housing does not exceed 0.005 rem (0.05 mSv) per hour.

(d) Labeling Containers and Radiation Machines.

1. The licensee shall ensure that each container of licensed material bears a durable, clearly visible label bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." The label shall also provide information such as the radionuclides present, an estimate of the quantity of radioactivity, the date for which the activity is estimated, radiation levels, kinds of materials, and mass enrichment, to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions to avoid or minimize exposures.

2. Each licensee shall, prior to removal or disposal of empty uncontaminated containers to unrestricted areas, remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive materials.

(e) Exemptions to Labeling Requirements. A licensee is not required to label:

1. Containers holding licensed material in quantities less than the quantities listed in Appendix C of 10 CFR 20;

2. Containers holding licensed material in concentrations less than those specified in Table III of Appendix B of 10 CFR 20;

3. Containers attended by an individual who takes the precautions necessary to prevent the exposure of individuals in excess of the limits established by this Rule;

4. Containers when they are in transport and packaged and labeled in accordance with the regulations of the U.S. Department of Transportation[4];

5. Containers that are accessible only to individuals authorized to handle or use them or to work in the vicinity of the containers, if the contents are identified to these individuals by a readily available written record. Examples of containers of this type are containers in locations such as water-filled canals, storage vaults, or hot cells. The record shall be retained as long as the containers are in use for the purpose indicated on the record; or

6. Installed manufacturing or process equipment, such as chemical process equipment, piping, and tanks.

(f) Procedures for Receiving and Opening Packages.

[4] Labeled with a Radioactive White I, Yellow II, or Yellow III label as specified in U.S. Department of Transportation (DOT) regulations, 49 CFR 172.403-172.440.

1. Each licensee who is authorized to receive a package containing quantities of radioactive material in excess of a Type A quantity, as defined in Rule 391-3-17-.06(3), shall make arrangements to receive:

(i) The package when the carrier offers it for delivery; or

(ii) The notification of the arrival of the package at the carrier's terminal and to take possession of the package expeditiously.

2. Each licensee shall:

(i) Monitor the external surfaces of a labeled[5] package for radioactive contamination unless the package contains only radioactive material in the form of gas or in "special form" as defined in Rule 391-3-17-.01(2);

(ii) Monitor the external surfaces of a labeled package for radiation levels unless the package contains quantities of radioactive material that are less than or equal to the Type A quantity, as defined in Rule 391-3-17-.06(3), and the radioactive material is in the form of a gas or in special form as defined in Rule 391-3-17-.01(2); and

(iii) Monitor all packages known to contain radioactive material for radioactive contamination and radiation levels if the package has evidence of potential contamination, such as packages that are crushed, wet, or damaged.

3. The licensee shall perform the monitoring required by (12)(f)2. of this Rule as soon as practicable after receipt of the package, but not later than three hours after the package is received at the licensee's facility if it is received during the licensee's normal working hours, or not later than three hours from the beginning of the next working day if it is received after working hours.

4. The licensee shall immediately notify the final delivery carrier and the Division by telephone, telegram, mailgram, or facsimile, and notify the NRC Headquarters Operations Center by telephone (at the numbers specified in Appendix A to Part 73—U.S. Nuclear Regulatory Commission Offices and Classified Mailing Addresses) when:

(i) Removable radioactive surface contamination exceeds the limits of Rule 391-3-17-.06(16)(i); or

(ii) External radiation levels exceed the limits of Rule 391-3-17-.06(14).

5. Each licensee shall:

[5] Labeling of packages containing radioactive materials is required by the U.S. Department of Transportation (DOT) if the amount and type of radioactive material exceeds the limits for an excepted quantity or article as defined and limited by U.S. Department of Transportation (DOT) regulations 49 CFR 173.403(m) and (w) and 173.421-.424.

(i) Establish, maintain, and retain written procedures for safely opening packages in which radioactive material is received; and

(ii) Ensure that the procedures are followed and that special instructions for the type of package being opened are followed.

6. Licensees transferring special form sources in vehicles owned or operated by the licensee to and from a work site are exempt from the contamination monitoring requirements of (12)(f)2. of this Rule, but are not exempt from the monitoring requirement in (12)(f)2. of this Rule for measuring radiation levels to ensure that the source is still properly lodged in its shield.

Rule 391-3-17-.03(15), "Reports," is being amended to read as follows:

(15) **Reports**

(a) Reports of Stolen, Lost, or Missing Licensed Sources of Radiation.

1. Telephone. Each licensee shall report to the Division and notify the NRC Headquarters Operations Center (at the numbers specified in Appendix A to Part 73—U.S. Nuclear Regulatory Commission Offices and Classified Mailing Addresses) by telephone as follows:

(i) Immediately after its occurrence becomes known to the licensee, stolen, lost, or missing licensed radioactive material in an aggregate quantity equal to or greater than 1,000 times the quantity specified in Appendix C of 10 CFR 20, under such circumstances that it appears to the licensee that an exposure could result to individuals in unrestricted areas; or

(ii) Within 30 days after its occurrence becomes known to the licensee, lost, stolen or missing licensed radioactive material in an aggregate quantity greater than ten times the quantity specified in Appendix C of 10 CFR 20 that is still missing.

2. Written. Each licensee who is required to make a report pursuant to (15)(a)1. of this Rule shall, within 30 days after making the telephone report, make a written report to the Division setting forth the following information:

(i) A description of the licensed source of radiation involved, including, for radioactive material, the kind, quantity, and chemical and physical form;

(ii) A description of the circumstances under which the loss or theft occurred;

(iii) A statement of disposition, or probable disposition, of the licensed material or source of radiation involved;

(iv) Exposures of individuals to radiation, the circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas;

(v) Actions that have been taken, or will be taken, to recover the source of radiation; and

(vi) Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed sources of radiation.

3. Subsequent to filing the written report, the licensee shall also report additional substantive information on the loss or theft within 30 days after the licensee learns of such information.

4. The licensee shall prepare any report filed with the Division pursuant to (15)(a) of this Rule so that names of individuals who may have received exposure to radiation are stated in a separate and detachable portion of the report.

(b) Notification of Incidents.

1. Immediate notification. Each licensee shall:

(i) Notify the Division and the NRC Headquarters Operations Center (at the numbers specified in Appendix A to Part 73—U.S. Nuclear Regulatory Commission Offices and Classified Mailing Addresses) as soon as possible but not later than four hours after the discovery of an event that prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed regulatory limits or releases of licensed material that could exceed regulatory limits (events may include fires, explosions, toxic gas releases, etc.).

(ii) Notwithstanding any other requirements for notification, immediately report, to the Division, any event involving radioactive material or sources of radiation possessed by the licensee that may have caused or threatens to cause any of the following conditions:

(I) An individual to receive:

I. A total effective dose equivalent of 25 rem (0.25 Sv) or more; or

II. A lens dose equivalent of 75 rem (0.75 Sv) or more; or

III. A shallow-dose equivalent to the skin or extremities of 250 rad (2.5 Gy) or more; or

(II) The release of radioactive material, inside or outside a restricted area, so that had an individual been present for 24 hours, the individual could have received an intake five times the annual limit on intake (the provisions of this paragraph do not apply to locations where personnel are not normally stationed during routine operations, such as hot cells or process enclosures).

2. Twenty-four hour report. Each licensee shall notify the Division and the NRC Headquarters Operations Center (at the numbers specified in Appendix A to Part 73—U.S. Nuclear Regulatory Commission Offices and Classified Mailing Addresses) within 24 hours after the discovery of any of the following events involving licensed material:

(i) An unplanned contamination event that:

(I) Requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area;

(II) Involves a quantity of material greater than five times the lowest annual limit on intake specified in Appendix B of 10 CFR Part 20 for the material; and

(III) Has access to the area restricted for a reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.

(ii) An event in which equipment is disabled or fails to function as designed when:

(I) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;

(II) The equipment is required to be available and operable when it is disabled or fails to function; and

(III) No redundant equipment is available and operable to perform the required safety function.

(iii) An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body;

(iv) An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:

(I) The quantity of material involved is greater than five times the lowest annual limit on intake specified in Appendix B of 10 CFR Part 20 for the material; and

(II) The damage affects the integrity of the licensed material or its container.

(v) Notwithstanding any other requirements for notification, within 24 hours report, to the Division any event involving radioactive material or sources of radiation possessed by the licensee that may have caused or threatens to cause any of the following conditions:

(I) An individual to receive, in a period of 24 hours:

I. A total effective dose equivalent exceeding 5 rems (0.05 Sv); or

II. A lens dose equivalent exceeding 15 rems (0.15 Sv); or

III. A shallow-dose equivalent to the skin or extremities exceeding 50 rems (0.5 Sv); or

(II) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours, the individual could have received an intake in excess of one occupational annual limit on intake (the provisions of this paragraph do not apply to

locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures).

3. Preparation and submission of reports. Reports made by licensees in response to the requirements of this paragraph must be made as follows:

(i) Licensees shall make reports required by (15)(b)1. and 2. by telephone to the Division and the NRC Headquarters Operations Center (at the numbers specified in Appendix A to Part 73—U.S. Nuclear Regulatory Commission Offices and Classified Mailing Addresses). To the extent that the information is available at the time of notification, the information provided in these must include:

(I) The caller's name, position title, and call back telephone number;

(II) Date, time, and the exact location of the event;

(III) Description of the event, including:

I. Radiological or chemical hazards involved, including isotopes, quantities, and chemical and physical form of any material released;

II. Actual or potential health and safety consequences to the workers, the public, and the environment, including relevant chemical and radiation data for actual personnel exposures to radiation or radioactive materials or hazardous chemicals produced from licensed materials (e.g., level of radiation exposure, concentration of chemicals, and duration of exposure);

III. The sequence of occurrences leading to the event, including degradation or failure of structures, systems, equipment, components, and activities of personnel relied on to prevent potential accidents or mitigate their consequences; and

IV. Whether the remaining structures, systems, equipment, components, and activities of personnel relied on to prevent potential accidents or mitigate their consequences are available and reliable to perform their function;

(IV) External conditions affecting the event;

(V) Additional actions taken by the licensee in response to the event;

(VI) Status of the event (e.g., whether the event is on-going or was terminated);

(VII) Current and planned site status, including any declared emergency class;

(VIII) Notifications, related to the event, that were made or are planned to any local, State, or other Federal agencies;

(IX) Status of any press releases, related to the event, that were made or are planned.

(ii) Written report. Each licensee who makes a report required by (15)(b)1. and 2. shall submit a written follow-up report within 30 days of the initial report. Written reports prepared pursuant to other regulations may be submitted to fulfill this requirement if the reports contain all of the necessary information and the appropriate distribution is made. These written reports must be sent to the Radioactive Materials Program, 4244 International Parkway, Suite 120, Atlanta, Georgia 30354 or current mailing address. The written report must include the following:

(I) Complete applicable information required by (b)3.(i);

(II) A description of the event, including the probable cause, all factors that contributed to the event, and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned; and

(III) Corrective actions taken or planned to prevent occurrence of similar or identical events in the future and the results of any evaluations or assessments.

4. The licensee shall prepare each report filed with the Division pursuant to (15)(b) of this Rule so that names of individuals who have received exposure to sources of radiation are stated in a separate and detachable portion of the report.

5. Licensees shall make the required by (15)(b)1. and 2. of this Rule by telephone to the Division, and shall confirm the initial contact by telegram, mailgram, or facsimile to the Division.

6. The provisions of (15)(b) of this Rule do not apply to doses that result from planned special exposures, provided such doses are within the limits for planned special exposures and are reported pursuant to (15)(d) of this Rule.

(c) Reports of Exposures, Radiation Levels, and Concentrations of Radioactive Material Exceeding the Limits.

1. Reportable Events. In addition to the notification required by (15)(b) of this Rule, each licensee shall submit a written report to the Division within 30 days after learning of any of the following occurrences:

(i) Incidents for which notification is required by (15)(b) of this Rule;

(ii) Doses in excess of any of the following:

(I) The occupational dose limits for adults in (5)(a) of this Rule;

(II) The occupational dose limits for a minor in (5)(g) of this Rule;

(III) The limits for an embryo/fetus of a declared pregnant woman in (5)(h) of this Rule;

(IV) The limits for an individual member of the public in (5)(i) of this Rule;

(V) Any applicable limit in the license; or

(VI) The ALARA constraints for air emissions established under .03(4)(d).

(iii) Levels of radiation or concentrations of radioactive material in:

(I) A restricted area in excess of applicable limits in the license; or

(II) An unrestricted area in excess of ten times the applicable limit set forth in this Rule or in the license, whether or not the exposure of any individual in excess of the limits in (5)(i) of this Rule is involved; or

(iv) For licensees subject to the provisions of U.S. Environmental Protection Agency's generally applicable environmental radiation standards in 40 CFR 190, levels of radiation or releases of radioactive material in excess of those standards, or of license conditions related to those standards[7].

2. Contents of Reports.

(i) Each report required by (15)(c)1. of this Rule shall describe the extent of exposure of individuals to radiation and radioactive material, including, as appropriate:

(I) Estimates of each individual's dose;

(II) The levels of radiation and concentrations of radioactive material involved;

(III) The cause of the elevated exposures, dose rates, or concentrations; and

(IV) Corrective steps taken or planned to ensure against a recurrence, including the schedule for achieving conformance with applicable limits, ALARA constraints, generally applicable environmental standards, and associated license conditions.

(ii) Each report filed pursuant to (14)(c)1. of this Rule shall include for each occupationally exposed individual: the name, Social Security account number, and date of birth. With respect to the limit for the embryo/fetus in (5)(h) of this Rule, the identification should be that of the declared pregnant woman. The report shall be prepared so that this information is stated in a separate and detachable portion of the report.

3. All licensees who make pursuant to (15)(c)1. of this Rule shall submit the report in writing to the Division.

[7] For purposes of these Regulations, the U.S. Environmental Protection Agency Standards apply only to source material mills and nuclear power plants.

(d) Reports of Planned Special Exposures. The licensee shall submit a written report to the Division within 30 days following any planned special exposure conducted in accordance with (5)(f) of this Rule, informing the Division that a planned special exposure was conducted and indicating the date that the planned special exposure occurred and the information required by (14)(g) of this Rule.

(e) Reports to Individuals of Exceeding Dose Limits. When a licensee is required, pursuant to the provisions of (15)(c), (15)(d), or (15)(f), to report to the Division any exposure of an identified occupationally exposed individual, or an identified member of the public to radiation or radioactive material, the licensee shall also provide a copy of the report submitted to the Division to the individual. This report must be transmitted at a time no later than the transmittal to the Division.

(f) Notifications and Reports to Individuals.

1. Requirements for notification and to individuals of exposure to radiation or radioactive material are specified in Rule 391-3-17-.07(4).

2. When a licensee is required pursuant to (15)(c) of this Rule to report to the Division any exposure of an identified occupationally exposed individual or identified member of the public to radiation or radioactive material, the licensee shall also provide the individual a report on his or her exposure data included in the report to the Division. This report shall be transmitted at a time not later than the transmittal to the Division, and shall comply with the provisions of Rule 391-3-17-.07(4)(a).

(g) Reports of Leaking or Contaminated Sealed Sources. If the test for leakage or contamination required pursuant to Rule .03(6) indicates that the sealed source is leaking or contaminated, a report of the test shall be filed within five days with the Division describing the equipment involved, the test results, and the corrective action taken.

(h) [Reserve]

(i) Serialization of Nationally Tracked Sources.

1. Each licensee who manufactures a nationally tracked source after February 6, 2007 shall assign a unique serial number to each nationally tracked source. Serial numbers must be composed only of alpha-numeric characters.

(j) Reports of Transactions Involving Nationally Tracked Sources.

1. Each licensee who manufactures, transfers, receives, disassembles, or disposes of a nationally-tracked source shall complete and submit a National Source Tracking Transaction Report as specified below for each type of transaction.

2. Each licensee who manufactures a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(i) The name, address, and license number of the reporting licensee;

(ii) The name of the individual preparing the report;

(iii) The manufacturer, model, and serial number of the source;

(iv) The radioactive material in the source;

(v) The initial source strength in becquerels (curies) at the time of manufacture; and

(vi) The manufacture date of the source.

3. Each licensee that transfers a nationally tracked source to another person shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(i) The name, address, and license number of the reporting licensee;

(ii) The name of the individual preparing the report;

(iii) The name and license number of the recipient facility and shipping address;

(iv) The manufacturer, model, and serial number of the source or, if not available, other information to uniquely identify the source;

(v) The radioactive material in the source;

(vi) The initial or current source strength in becquerels (curies);

(vii) The date for which the source strength is reported;

(viii) The shipping date;

(ix) The estimated arrival date; and

(x) For nationally tracked sources transferred as waste under a Uniform Low-Level Radioactive Waste Manifest, the waste manifest number and the container identification of the container with the nationally tracked source.

4. Each licensee that receives a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(i) The name, address, and license number of the reporting licensee;

(ii) The name of the individual preparing the report;

(iii) The name, address and license number of the person that provided the source;

(iv) The manufacturer, model, and serial number of the source or, if not available, other information to uniquely identify the source;

(v) The radioactive material in the source;

(vi) The initial or current source strength in becquerels (curies);

(vii) The date for which the source strength is reported;

(viii) The date of receipt; and

(ix) For material received under a Uniform Low-Level Radioactive Waste Manifest, the waste manifest number and the container identification with the nationally tracked source.

5. Each licensee that disassembles a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(i) The name, address, and license number of the reporting licensee;

(ii) The name of the individual preparing the report;

(iii) The manufacturer, model, and serial number of the source or, if not available, other information to uniquely identify the source;

(iv) The radioactive material in the source;

(v) The initial or current source strength in becquerels (curies);

(vi) The date for which the source strength is reported; and

(vii) The disassemble date of the source.

6. Each licensee who disposes a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(i) The name, address, and license number of the reporting licensee;

(ii) The name of the individual preparing the report;

(iii) The waste manifest number;

(iv) The container identification with the nationally tracked source;

(v) The date of disposal; and

(vi) The method of disposal.

7. The reports discussed in (15)(j)2.-6. above must be submitted by the close of the next business day after the transaction. A single report may be submitted for multiple sources and transactions. The reports must be submitted to the National Source Tracking System by using:

(i) The on-line National Source Tracking System;

(ii) Electronically using a computer-readable format;

(iii) By facsimile;

(iv) By mail to the address on the National Sources Tracking Transaction Report Form (NRC Form 748); or

(v) By telephone with follow-up by facsimile or mail.

8. Each licensee shall correct any error in previously filed reports or file a new report for any missed transaction within five (5) business days of the discovery of the error or missed transaction. Such errors may be detected by a variety of methods such as administrative reviews or by physical inventories required by regulation. In addition, each licensee shall reconcile the inventory of nationally tracked sources possessed by the licensee against that licensee's data in the National Source Tracking System. The reconciliation must be conducted during the month of January in each year. The reconciliation process must include resolving any discrepancies between the National Source Tracking System and the actual inventory by filing the reports identified in (15)(j)2.-6. of this paragraph. By January 31 of each year, each licensee must submit to the National Source Tracking System confirmation that the data in the National Source Tracking System is correct.

Table 3: Nationally Tracked Source Thresholds

Radioactive Material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Actinium-227	20	540	0.2	5.4
Americium-241	60	1,600	0.6	16
Americium-241/Beryllium	60	1,600	0.6	16
Californium-252	20	540	0.2	5.4
Cobalt-60	30	810	0.3	8.1
Curium-244	50	1,400	0.5	14
Cesium-137	100	2,700	1	27
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,200	0.8	22
Plutonium-238	60	1,600	0.6	16
Plutonium-238/Beryllium	60	1,600	0.6	16
Polonium-210	60	1,600	0.6	16
Promethium-147	40,000	1,100,000	400	11,000
Radium-226	40	1,100	0.4	11
Selenium-75	200	5,400	2	54
Strontium-90	1,000	27,000	10	270
Thorium-228	20	540	0.2	5.4
Thorium-229	20	540	0.2	5.4
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81

The Terabecquerel (TBq) values are the regulatory standard. The Curie (Ci) values specified are obtained by converting from the TBq value. The Curie values are provided for practical usefulness only and are rounded after conversion.

Rule 391-3-17-.04(19), "Personnel Monitoring Control," is being amended to read as follows:

(19) **Personnel Monitoring Control.**

(a) The licensee shall not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, each individual wears, on the trunk of the body, a combination of direct-reading dosimeter, an alarming ratemeter, and a personal monitoring device. At permanent radiographic installations where other appropriate alarming or warning devices are in routine use the use of an alarming ratemeter is not required.

1. Pocket dosimeters shall have a range from zero to 200 milliroentgens (2 millisieverts) and shall be recharged daily or at the start of each shift. Electronic personal dosimeters may only be used in place of ion-chamber pocket dosimeters.

2. Each personal monitoring device shall be assigned to and worn by only one individual.

3. Personal monitoring devices must be exchanged at periods not to exceed one month. After replacement each personal monitoring device must be returned to the supplier for processing within 14 calendar days of the end of the monitoring period, or as soon as practicable. If circumstances exist which make it impossible to return each personal monitoring device within 14 calendar days, such circumstances must be documented and available for review by the Division.

(b) Direct reading dosimeters such as pocket dosimeters or electronic personal dosimeters shall be read and exposures recorded at the beginning and end of each shift, and records must be maintained in accordance with .04(33).

(c) Pocket dosimeters or electronic personal dosimeters shall be checked at periods not to exceed one year for correct response to radiation, and records must be maintained in accordance with .04(33). Acceptable dosimeters shall read within plus or minus 20 percent of the true radiation exposure**.**

(d) If an individual's pocket dosimeter is found to be off-scale, or the electronic personal dosimeter reads greater than 200 mrem (2 millisieverts), the personal monitoring device must be sent for processing within 24 hours. For personnel dosimeters that do not require processing, evaluation of the dosimeter ~~may~~must be started within 24 hours. In addition, the individual may not resume work associated with the use of sources of radiation until a determination of the individual's radiation exposure has been made. This determination must be made by the radiation safety officer or the radiation safety officer's designee. The results of this determination must be included in the records maintained in accordance with .04(33).

(e) If a personal monitoring device is lost or damaged, the worker shall cease work immediately until a replacement personal monitoring device is provided and the exposure is calculated for the time period from issuance to loss or damage of the personal monitoring device. The results of the calculated exposure and the time period for which the personal monitoring device was lost or damaged must be included in the records maintained in accordance with .04(33).

(f) Reports received from personal monitoring devices shall be retained in accordance with .04(33).

(g) Each alarm ratemeter must:

1. Be checked to ensure that the alarm functions properly prior to use at the start of each shift;

2. Emit an alarm signal at a preset dose-rate of 500 mr (5 mSv) per hour; with an accuracy of plus or minus 20 percent of the true radiation dose rate.

3. Require special means to change the preset alarm function; and

4. Be calibrated at periods not to exceed one year for correct response to radiation. The licensee shall maintain records of alarming ratemeter calibrations in accordance with .04(33).

Rule 391-3-17-.05(2), "Definitions," is being amended to read as follows:

(2) **Definitions.**

(a) "Accredited institution," means a teaching facility for nuclear medicine technology or radiation therapy technology whose standards are accepted by the United States Department of Education.

(b) "Address of use," means the building or buildings that are identified on the license and where radioactive material may be produced, prepared, received, used, or stored.

(c) "Area of use," means a portion of an address of use that has been set aside for the purpose of receiving, using, or storing radioactive material.

(d) "Authorized medical physicist," means an individual who:

1. Meets the requirements in Rules .05(23)(a) and .05(27); or

2. Is identified as an authorized medical physicist on a license or equivalent permit issued by the Director, Nuclear Regulatory Commission or Agreement State; or

3. Is identified as an authorized medical physicist on a permit issued by the Director, Nuclear Regulatory Commission or Agreement State specific license of broad scope that is authorized to permit the use of radioactive material.

(e) "Authorized nuclear pharmacist," means a pharmacist who:

1. Meets the requirements in Rules .05(24)(a) and .05(27); or

2. Is identified as an authorized nuclear pharmacist on a license or equivalent permit issued by the Director, Nuclear Regulatory Commission or Agreement State; or

3. Is identified as an authorized nuclear pharmacist on a permit issued by the Director, Nuclear Regulatory Commission or Agreement State specific license of broad scope that is authorized to

permit the use of radioactive material.

(f) "Authorized user," means a physician, dentist, or podiatrist who:

1. Meets the requirements in Rule .05(27) and .05(43)(a), .05(47)(a), .05(52)(a), .05(53)(a), .05(54)(a), .05(63)(a), .05(66)(a), or.05(84)(a); or

2. Is identified as an authorized user on a license or equivalent permit issued by the Director, Nuclear Regulatory Commission or Agreement State; or

3. Is identified as an authorized user on a permit issued by the Director, Nuclear Regulatory Commission or Agreement State specific license of broad scope that is authorized to permit the use of radioactive material.

(g) "Brachytherapy," means a method of radiation therapy in which plated, embedded, activated, or sealed sources are utilized to deliver a radiation dose at a distance of up to a few centimeters, by surface, intracavitary, intraluminal or interstitial application.

(h) "Brachytherapy source," means a radioactive source or a manufacturer- assembled source train or a combination of these sources that is designed to deliver a therapeutic dose within a distance of a few centimeters.

(i) "Client's address," means the address of use or a temporary jobsite for the purpose of providing mobile medical service in accordance with Rule .05(38).

(j) "Dedicated check source," means a radioactive source that is used to assure the consistent response of a radiation detection or measurement device over several months or years.

(k) "Dentist," means an individual licensed to engage in the practice dentistry under the Authority of O.C.G.A. 43-11-40.

(l) "Diagnostic clinical procedures manual," means a collection of written procedures that describes each method (and other instructions and precautions) by which the licensee performs diagnostic clinical procedures; where each diagnostic clinical procedure has been approved by the authorized user and includes the radiopharmaceutical, dosage, and route of administration, or in the case of sealed sources for diagnosis, the procedure.

(m) "High dose-rate remote afterloader," (HDR) means a device that remotely delivers a dose rate in excess of 12 gray (1200 rad) per hour at the treatment site.

(n) "Low dose-rate remote afterloader," (LDR) means a device that remotely delivers a dose rate of less than or equal to 2 gray (200 rad) per hour at the treatment site.

(o) "Management," means the chief executive officer or other individual having the authority to manage, direct, or administer the licensee's activities, or those persons' delegate or delegates.

(p) "Manual brachytherapy," means a type of therapy in which brachytherapy sources are manually applied or inserted.

(q) "Medical institution," means an organization in which several medical disciplines are practiced.

(r) "Medical use," means the intentional internal or external administration of radioactive material or the radiation from radioactive material to patients or human research subjects under the supervision of an authorized user.

(s) "Medium dose-rate remote afterloader," (MDR) means a device that remotely delivers a dose rate of greater than 2 gray (200 rad), but less than, or equal to, 12 gray (1200 rad) per hour at the treatment site.

(t) "Misadministration," means an event that meets the criteria in Rule .05(115)(a).

(u) "Mobile medical service," means the transportation of radioactive material or its medical use at the client's address.

(v) "Nuclear medicine technologist," means ~~an individual~~a medical professional who meets the requirements of Rule .05(25)(a) and, is certified and/or registered by the Nuclear Medicine Technology Certification Board (NMTCB), the American Registry of Radiologic Technologists (ARRT) and/or any other certification board accepted by the state and is responsible for the safe use of ionizing and nonionizing radiation and molecular imaging for diagnostic, therapeutic, and research purposes under the supervision of an authorized user~~, to prepare or administers radioactive drugs to patients or human research subjects, or perform *in vivo* or *in vitro* measurements for medical purposes~~.

Some of their primary responsibilities involve preparing, and administering radioactive chemical compounds, known as radiopharmaceuticals; administering adjunctive medications, performing patient imaging procedures using radiation-detecting instrumentation; and providing images, data analysis, and patient information to the physician for diagnostic interpretation.

(w) "Nuclear medicine technology," ~~means the science and art of in vivo and in vitro detection and measurement of radioactivity and the administration of radioactive drugs to patients or human research subjects for diagnostic and therapeutic purposes~~a medical imaging and therapeutic modality that utilizes sealed and unsealed radioactive materials for diagnostic, treatment, and research purposes. Nuclear medicine instrumentation may be combined with computed tomography (CT), magnetic resonance imaging (MRI), or other modalities to produce three-dimensional images. Adjunctive and/or other imaging medications, such as contrast media, may additionally be used to enhance the evaluation of physiological processes at a molecular level.

(x) "Output," means the exposure rate, dose rate, or a quantity related in a known manner to these rates from a brachytherapy source, or a teletherapy, remote afterloader, or gamma stereotactic radiosurgery unit for a specified set of exposure conditions.

(y) "Patient intervention," means actions by the patient or human research subject, whether intentional or unintentional, such as dislodging or removing treatment devices or prematurely terminating the administration.

(z) "Pharmacist," means any individual who is licensed to practice Pharmacy in this State by the Georgia State Board of Pharmacy.

(aa) "Physician," means any person who is licensed to engage in the practice of medicine under the Authority of O.C.G.A. 43-34-20 or the limited practice of medicine under O.C.G.A. 43-35-1.

(bb) "Podiatrist," means an individual licensed by the appropriate authority to practice podiatry in the state of Georgia.

(cc) “Positron Emission Tomography (PET) radionuclide production facility” is defined as a facility operating a cyclotron or accelerator for the purpose of producing PET radionuclides.

(dd) "Preceptor," means an individual who provides, directs or verifies training and experience required for an individual to become an authorized user, an authorized medical physicist, an authorized nuclear pharmacist, an Associate Radiation Safety Officer or a Radiation Safety Officer.

(ee) "Prescribed dosage," means the specified activity or range of activity of radioactive drug as documented:

1. In a written directive; or

2. In accordance with the directions of the authorized user for procedures performed pursuant to Rule .05(41), (44) and (48).

(ff) "Prescribed dose," means:

1. For gamma stereotactic radiosurgery, the total dose as documented in the written directive;

2. For teletherapy, the total dose and dose per fraction as documented in the written directive;

3. For brachytherapy, either the total source strength and exposure time or the total dose, as documented in the written directive; or

4. For remote brachytherapy afterloaders, the total dose and dose per fraction as documented in the written directive.

(gg) "Pulsed dose-rate remote afterloader," (PDR) means a special type of remote afterloading device that uses a single source capable of delivering dose rates in the “high dose-rate" range, but:

1. Is approximately one-tenth of the activity of typical high dose-rate remote afterloader sources; and

2. Is used to simulate the radiobiology of a low dose rate treatment by inserting the source for a given fraction of each hour.

(hh) "Radiation Safety Officer," means an individual who:

1. Meets the requirements in Rule .05(22)(a) or .05(22)(c)1. a~~A~~nd .05(27); or

2. Is identified as a Radiation Safety Officer on a Nuclear Regulatory Commission or Agreement State license or other equivalent permit or license recognized by the Division for similar types and uses of radioactive material.

(ii) "Radiation therapist," means an individual who meets the requirements of Rule .05(25)(b) and is under the supervision of an authorized user to perform procedures and apply radiation emitted from external beam radiation and sealed radioactive sources placed directly into tumors (interstitial) on in body cavities (intercavitary)~~sealed radioactive sources~~ to human beings for therapeutic purposes.

(jj) "Radiation therapy technology," means the science and art of applying radiation emitted from external beam radiation and sealed radioactive sources placed directly into tumors (interstitial) on in body cavities (intercavitary) to patients or human research subjects for therapeutic purposes.

(kk) "Radioactive drug," means any chemical compound containing radioactive material that may be used on or administered to patients or human research subjects as an aid in the diagnosis, treatment, or prevention of disease or other abnormal condition.

(ll) "Sealed source," means any radioactive material that is encased in a capsule designed to prevent leakage or escape of the radioactive material within the body.

(mm) "Sealed Source and Device Registry," means the national registry that contains the registration certificates maintained by the Nuclear Regulatory Commission, that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for the product.

(nn) "Stereotactic radiosurgery," means the use of external radiation in conjunction with a stereotactic guidance device to very precisely deliver a dose to a treatment site.

(oo) "Structured educational program," means an educational program designed to impart particular knowledge and practical education through interrelated studies and supervised training.

(pp) "Teletherapy," as used in this Rule, means a method of radiation therapy in which collimated gamma rays are delivered at a distance from the patient or human research subject.

(qq) "Temporary jobsite," as used in this Rule, means a location where mobile medical services are conducted other than the location(s) of use authorized on the license.

(rr) "Therapeutic dosage," means a dosage of unsealed radioactive material that is intended to deliver a radiation dose to a patient or human research subject for palliative or curative treatment.

(ss) "Therapeutic dose," means a radiation dose delivered from a sealed source containing radioactive material to a patient or human research subject for palliative or curative treatment.

(tt) "Treatment site," means the anatomical description of the tissue intended to receive a radiation dose, as described in a written directive.

(uu) "Type of use," means use of radioactive material as specified under Rule .05(41), (44), (48), (55), (65), (67) or (85).

(vv) "Unit dosage," means a dosage that:

1. Is obtained or prepared in accordance with the regulations for uses described in Rule .05(41), (44), (48); and

2. Is to be administered as a single dosage to a patient or human research subject without any further manipulation of the dosage after it is initially prepared.

(ww) "Written directive," means an authorized user's written order for the administration of radioactive material or radiation from radioactive material to a specific patient or human research subject, as specified in Rule .05(19).

(xx) “Associate Radiation Safety Officer,” means an individual who:

1. Meets the requirements in 391-3-17-.05(22) and .05(27); and

2. Is currently identified as an Associate Radiation Safety Officer for the types of use of byproduct material for which the individual has been assigned duties and tasks by the Radiation Safety Officer on:

(i) A specific medical use license issued by the Commission or an Agreement State; or

(ii) A medical use permit issued by a Commission master material licensee.

(yy) “Ophthalmic physicist,” means an individual who:

1. Meets the requirements in 391-3-17-.05(27) and 391-3-17-.05(64)(c)2.; and

2. Is identified as an ophthalmic physicist on a:

(i) Specific medical use license issued by the Commission or an Agreement State;

(ii) Permit issued by a Commission or Agreement State broad scope medical use licensee;

(iii) Medical use permit issued by a Commission master material licensee; or

(iv) Permit issued by a Commission master material licensee broad scope medical use permittee.

Rule 391-3-17-.05(22), "Training for Radiation Safety Officer," is being amended to read as follows:

(22) **Training for Radiation Safety Officer.** Except as provided in Rule .05(26), the licensee shall require an individual fulfilling the responsibilities of the Radiation Safety Officer (RSO) or an individual assigned duties and tasks as an Associate Radiation Safety Officer as provided in Rule .05(15) to be an individual who:

(a) Is certified by a specialty board whose certification process includes all of the requirements in Rule. 05(22)(d), and whose certification has been recognized by the Nuclear Regulatory Commission or an Agreement State. (The names of board certifications that have been recognized by the Nuclear Regulatory Commission or an Agreement State will be posted on the NRC's Web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

1. (i) Hold a bachelor's or graduate degree from an accredited college or university in physical science or engineering or biological science with a minimum of 20 college credits in physical science;

(ii) Have 5 or more years of professional experience in health physics (graduate training may be substituted for no more than 2 years of the required experience) including at least 3 years in applied health physics; and

(iii) Pass an examination administered by diplomates of the specialty board, which evaluates knowledge and competence in radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, radiation biology, and radiation dosimetry; or

2. (i) Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;

(ii) Have 2 years of full-time practical training and/or supervised experience in medical physics:

(I) Under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized by the Nuclear Regulatory Commission or an Agreement State; or

(II) In clinical nuclear medicine facilities providing diagnostic and/or therapeutic services under

the direction of physicians who meet the requirements for authorized users in Rule .05(26), .05(47) or .05(52); and

(iii) Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical diagnostic radiological or nuclear medicine physics and in radiation safety; or

(b) 1. Has completed a structured educational program consisting of both:

(i) 200 hours of classroom and laboratory training in the following areas:

(I) Radiation physics and instrumentation;

(II) Radiation protection;

(III) Mathematics pertaining to the use and measurement of radioactivity;

(IV) Radiation biology; and

(V) Radiation dosimetry; and

(ii) One year of full-time radiation safety experience under the supervision of the individual identified as the RSO on a Nuclear Regulatory Commission, Agreement State license or permit issued by a Commission master material licensee that authorizes similar type(s) of use(s) of radioactive material. An Associate Radiation Safety Officer may provide supervision for those areas for which the Associate Radiation Safety Officer is authorized on a Nuclear Regulatory Commission, Agreement State license or permit issued by a Commission master material licensee that authorizes similar type(s) of use(s) of radioactive byproduct material. The full-time radiation safety experience must involve the following;

(I) Shipping, receiving, and performing related radiation surveys;

(II) Using and performing checks for proper operation of dose calibrators, survey meters, and instruments used to measure radionuclides;

(III) Securing and controlling radioactive material;

(IV) Using administrative controls to avoid mistakes in the administration of radioactive material;

(V) Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures;

(VI) Using emergency procedures to control radioactive material; and

(VII) Disposing of radioactive material; or

2. This individual must obtain a written attestation, signed by a preceptor Radiation Safety Officer or Associate Radiation Safety Officer who has experience with the radiation safety aspects of similar types of use of byproduct material for which the individual is seeking approval as a Radiation Safety Officer or an Associate Radiation Safety Officer. The written attestation must state that the individual has satisfactorily completed the requirements in subparagraphs (b)1. and (d) of this paragraph, and is able to independently fulfill the radiation safety-related duties as a Radiation Safety Officer or as an Associate Radiation Safety Officer for a medical use license; or

(c) 1. Is a medical physicist who has been certified by a specialty board whose certification process has been recognized by the Nuclear Regulatory Commission or an Agreement State under Rule .05(23)(a) and has experience in radiation safety for similar types of use of byproduct material for which the licensee is seeking the approval of the individual as Radiation Safety Officer or Associate Radiation Safety Officer and who meets the requirements in .05(22)(d); or

2. Is an authorized user, authorized medical physicist, or authorized nuclear pharmacist identified on a Commission or an Agreement State license, a permit issued by a Commission master material licensee, a permit issued by a Commission or an Agreement State license broad scope permittee, has experience with the radiation safety aspects of similar types of use of radioactive byproduct material for which the licensee seeks the approval of the individual as the Radiation Safety Officer or Associate Radiation Safety Officer, and meets the requirements in subparagraph .05(22)(d); or

3. Has experience with the radiation safety aspects of the types of use of byproduct material for which the individual is seeking simultaneous approval both as the Radiation Safety Officer and the authorized user on the same new medical use license or new medical use permit issued by a Commission master material licensee. The individual must also meet the requirements in subparagraph .05(22)(d).

(d) Has training in the radiation safety, regulatory issues, and emergency procedures for the types of use for which a licensee seeks approval. This training requirement may be satisfied by completing training that is supervised by a Radiation Safety Officer, an Associate Radiation Safety Officer, authorized medical physicist, authorized nuclear pharmacist, or authorized user, as appropriate, who is authorized for the type(s) of use for which the licensee is seeking approval.

Rule 391-3-17-.05(25), "Training and Technical Requirements for Nuclear Medicine Technologists and Radiation Therapists," is being amended to read as follows:

(25) **Training and Technical Requirements for Nuclear Medicine Technologists and Radiation Therapists.**

(a) The licensee shall require a nuclear medicine technologist using radioactive materials under the supervision of an authorized user to be an individual who:

1. Is certified and maintains registration in:

(i) Nuclear Medicine by the Nuclear Medicine Technology Certification Board;

(ii) Nuclear Medicine by the American Registry of Radiologic Technologists with competency in Nuclear Medicine; or,

2. Is ~~board~~ eligible to take the CNMT or ARRT(N) examinations.~~;~~ The individual must successfully complete the CNMT or ARRT(N) examination within 12 months of becoming eligible for examination.~~or,~~

~~3. Has successfully completed a training program in nuclear medicine which has resulted in a certificate, associate degree, or baccalaureate degree in a nuclear medicine technology program from an accredited institution; or,~~

~~4. Has performed as a full-time nuclear medicine technologist for a minimum of two years during the past five-year period under the supervision of an authorized user who attests the experience in writing; or,~~

~~5. Has completed 80 hours of training and experience in basic radionuclide handling techniques applicable to the medical use of unsealed radioactive material that includes:~~

~~(i) Classroom and laboratory training in the following areas:~~

~~(I) Radiation physics and instrumentation;~~

~~(II) Radiation protection;~~

~~(III) Mathematics pertaining to the use and measurement of radioactivity;~~

~~(IV) Chemistry of radioactive material for medical use; and~~

~~(V) Radiation biology; and~~

~~(ii) Work experience, under the supervision of an authorized user involving:~~

~~(I) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;~~

~~(II) Quality Control checking of instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;~~

~~(III) Calculating, measuring, and safely preparing patient or human research subject dosages;~~

~~(IV) Using administrative controls to prevent a misadministration involving the use of unsealed radioactive material;~~

~~(V) Using procedures to contain spilled radioactive material safely and using proper decontamination procedures;~~

~~(VI) Administering dosages to patients or human research subjects; and~~

~~(iii) Has obtained written attestation, signed by a preceptor authorized user that the individual has satisfactorily completed the requirements of this section and has achieved a level of competency sufficient to independently function as a nuclear medicine technologist.~~

(b) The licensee shall require a radiation therapist using radioactive materials or external beam radiation under the supervision of an authorized user to be an individual who:

1. Is certified and maintains registration in Radiation Therapy by the American Registry of Radiologic Technologists (ARRT(T)); or

2. Is board eligible to take the ARRT(T) examination.~~;~~ The individual must successfully complete the ARRT(T) examination within 12 months of becoming eligible for examination.~~or,~~

~~3. Has successfully completed a training program in radiation therapy which has resulted in a certificate, associate degree, or baccalaureate degree in a radiologic technology program that complies with the requirements of the Joint Review Committee on Education in Radiologic Technology[1];or,~~

~~4. Has performed as a full-time radiation therapist for a minimum of two years during the past five-year period under the supervision of an authorized user who attests the experience in writing; or~~

~~5. Has completed 200 hours of training and experience in basic radionuclide handling techniques applicable to the medical use of radioactive material that includes:~~

~~(i) Classroom and laboratory training in the following areas:~~

~~(I) Radiation physics and instrumentation;~~

~~(II) Radiation protection;~~

~~(III) Mathematics pertaining to the use and measurement of radioactivity; and~~

~~(IV) Radiation biology; and~~

~~(ii) Work experience, under the supervision of an authorized user involving:~~

~~(I) Ordering, receiving, and unpacking radioactive materials safely and performing the related~~

~~1 "Essentials and guidelines of an Accredited Educational Program for the Radiation Therapy Technologist", Joint Review Committee on Education in Radiologic Technology, 1988.~~

~~radiation surveys;~~

~~(II) Assisting the authorized user in simulating the patient for treatment;~~

~~(III) Preparing the patient for treatment;~~

~~(IV) Implementing treatment plans as prescribed by the authorized user;~~

~~(V) Providing written documentation of treatment setup and patient treatments;~~

~~(VI) Quality control checks to determine that devices used to deliver the radiation doses are in compliance with institutional standards and performing checks for proper operation of survey meters;~~

~~(VII) Preparing or assisting in the preparation of sources, and implantation and removal of sealed sources;~~

~~(VIII) Delivering doses to patients or human research subjects under the supervision of the authorized user;~~

~~(IX) Preparing, implanting, and removing sealed sources;~~

~~(X) Delivering dose to patients or human research subjects;~~

~~(XI) Maintaining running inventories of material on hand;~~

~~(XII) Using administrative controls to prevent a misadministration involving the use of radioactive material; and,~~

~~(XIII) Properly implementing emergency procedures and~~

~~(iii) Has obtained written attestation, signed by a preceptor authorized user that the individual has satisfactorily completed the requirements of this section and has achieved a level of competency sufficient to independently function as a radiation therapist.~~

(c) Individuals working as nuclear medicine technologists or radiation therapists prior to ~~July 1, 2003~~September 1, 2024 for a facility holding a Division license need not comply with the training requirements of this section as long as they do not change place of employment.

(d) The licensee shall maintain records of the above training as specified in Rule .05(100).

Rule 391-3-17-.05(26), "Provisions for Experienced Radiation Safety Officer, Teletherapy or Medical Physicist, Authorized Medical Physicist, Authorized User, Nuclear Pharmacist, and Authorized Nuclear Pharmacist," is being amended to read as follows:

(26) **Provisions for Experienced Radiation Safety Officer, Teletherapy or Medical**

Physicist, Authorized Medical Physicist, Authorized User, Nuclear Pharmacist, and Authorized Nuclear Pharmacist.

(a) 1. An individual identified as a Radiation Safety Officer, a teletherapy or medical physicist, an authorized medical physicist, a nuclear pharmacist or an authorized nuclear pharmacist on a Division, Nuclear Regulatory Commission or Agreement State license or on a permit issued by the Division, Nuclear Regulatory commission or Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before the effective date of this rule, need not comply with the training requirements of Rules .05(22), .05(23), or .05(24), respectively except the Radiation Safety Officers and authorized medical physicists identified in this paragraph must meet the training requirements in Rule .05(22)(d) or .05(23)(c), as appropriate, for any material or uses for which they were not authorized prior to this date.

2. Any individual certified by the American Board of Health Physics in Comprehensive Health Physics; American Board of Radiology; American Board of Nuclear Medicine; American Board of Science in Nuclear Medicine; Board of Pharmaceutical Specialties in Nuclear Pharmacy; American Board of Medical Physics in radiation oncology physics; Royal College of Physicians and Surgeons of Canada in nuclear medicine; American Osteopathic Board of Radiology; or American Osteopathic Board of Nuclear Medicine on or before October 24, 2005, need not comply with the training requirements of Rule .05(22) to be identified as a Radiation Safety Officer or as an Associate Radiation Safety Officer on a Division, U.S. Nuclear Regulatory Commission or an Agreement State license or U.S. Nuclear Regulatory Commission master material license permit for those materials and uses that these individuals performed on or before October 24, 2005.

3. Any individual certified by the American Board of Radiology in therapeutic radiological physics, Roentgen ray and gamma ray physics, x-ray and radium physics, or radiological physics, or certified by the American Board of Medical Physics in radiation oncology physics, on or before October 24, 2005, need not comply with the training requirements for an authorized medical physicist described in Rule .05(23), for those materials and uses that these individuals performed on or before October 24, 2005.

4. A Radiation Safety Officer, a medical physicist, or a nuclear pharmacist, who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses or in the practice of nuclear pharmacy at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC, need not comply with the training requirements of Rules .05(22), .05(23) or .05(24), respectively, when performing the same uses. A nuclear pharmacist, who prepared only radioactive drugs containing accelerator-produced radioactive materials, or a medical physicist, who used only accelerator-produced radioactive materials, at the locations and time period identified in this paragraph, qualifies as an authorized nuclear pharmacist or an authorized medical physicist, respectively, for those materials and uses performed before these dates, for purposes of this Subject~~chapter~~.

(b) 1. Physicians, dentists, or podiatrists identified as authorized users for the medical use of

radioactive byproduct material on a license issued by the Division, Nuclear Regulatory Commission or an Agreement State, a permit issued by a Nuclear Regulatory Commission master material licensee, a permit issued by a Division, Nuclear Regulatory Commission or an Agreement State broad scope licensee, or a permit issued by a Nuclear Regulatory Commission master material license broad scope permittee on or before March 17, 2020, who perform only those medical uses for which they were authorized on that date need not comply with the training requirements of Rules .05(43), .05(47), .05(52), .05(53), .05(54), .05(54.1), .05(63), .05(64), .05(66), and .05(84), respectively.

2. Physicians, dentists, or podiatrists not identified as authorized users for the medical use of radioactive byproduct material on a license issued by the Division, Nuclear Regulatory Commission or Agreement State, a permit issued by a Nuclear Regulatory Commission master material licensee, a permit issued by a Division, Nuclear Regulatory Commission or Agreement State broad scope licensee, or a permit issued in accordance with a Nuclear Regulatory Commission master material license broad scope permittee who perform only those medical uses for which they were authorized on or before October 24, 2005, need not comply with the training requirements of Rules .05(43), .05(47), .05(52), .05(53), .05(54), .05(54.1), .05(63), .05(64), .05(66), and .05(84), as follows:

(i) For uses authorized under Rules .05(41) or .05(44), or oral administration of sodium iodide I–131 requiring a written directive for imaging and localization purposes, a physician who was certified on or before October 24, 2005, in nuclear medicine by the American Board of Nuclear Medicine; diagnostic radiology by the American Board of Radiology; diagnostic radiology or radiology by the American Osteopathic Board of Radiology; nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or American Osteopathic Board of Nuclear Medicine in nuclear medicine;

(ii) For uses authorized under Rule .05(48), a physician who was certified on or before October 24, 2005, by the American Board of Nuclear Medicine; the American Board of Radiology in radiology, therapeutic radiology, or radiation oncology; nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or the American Osteopathic Board of Radiology after 1984;

(iii) For uses authorized under Rules .05(55) or .05(67), a physician who was certified on or before October 24, 2005, in radiology, therapeutic radiology or radiation oncology by the American Board of Radiology; radiation oncology by the American Osteopathic Board of Radiology; radiology, with specialization in radiotherapy, as a British "Fellow of the Faculty of Radiology" or "Fellow of the Royal College of Radiology"; or therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; and

(iv) For uses authorized under Rules .05(65), a physician who was certified on or before October 24, 2005, in radiology, diagnostic radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology; nuclear medicine by the American Board of Nuclear Medicine; diagnostic radiology or radiology by the American Osteopathic Board of Radiology; or nuclear medicine by the Royal College of Physicians and Surgeons of Canada.

3. Physicians, dentists, or podiatrists who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses performed at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC, need not comply with the training requirements of Rules .05(43), .05(47), .05(52), .05(53), .05(54), .05(54.1), .05(63), .05(64), .05(66), and .05(84) respectively, when performing the same medical uses. A physician, dentist, or podiatrist, who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses at the locations and time period identified in this paragraph, qualifies as an authorized user for those materials and uses performed before these dates, for purposes of this Subject~~chapter~~.

(c) Individuals who need not comply with training requirements as described in this paragraph may serve as preceptors for, and supervisors of, applicants seeking authorization on the Division licenses for the same uses for which these individuals are authorized.

Rule 391-3-17-.10, "Administration," is being amended to read as follows:

391-3-17-.10 Administration

(1) Scope. The provisions of this Rule, 391-3-17-.10, shall apply to the administrative procedures required by this Subject~~Chapter~~.

(2) Administration.

(a) Administrative Examination of Applications. Applications for the issuance of a license, amendment of a license at the request of the holder, and renewal of a license will be given a docket or other identifying number for administrative examination. The applicant may be required to submit additional information and may be requested to confer informally regarding the application. The Division will give to others such notice of the filing of applications as is required under the applicable provisions of this Subject~~Chapter~~ and such additional notices as it deems appropriate.

(b) Effect of Timely Renewal Application. In the case of an application for renewal, if the licensee has made application for the renewal of an existing license at least 30 days prior to its expiration date, the license shall not be deemed to have expired until such application shall have been determined.

(c) Filing of Papers. Unless otherwise specified, papers required to be filed with the Division shall be filed with the Environmental Protection Division, Radioactive Materials Program, 4244 International Parkway, Suite 120 Atlanta, Georgia 30354. Papers required to be filed with the Division shall be deemed filed upon actual receipt with the Division at the location specified. Unless otherwise specified, the filing, when by mail, shall upon actual receipt be deemed complete as of the date of deposit in the mail. Papers may be filed at the Division's offices in Atlanta, Georgia.

(d) Payment of Fees. All licensees shall remit annual fees in accordance with Table 1, the Radioactive Materials License Fee Schedule. Annual fee payments for general and specific licenses are due before the end of the calendar year for the following calendar year. New licensees shall be invoiced for annual fees at a prorated rate. Such fees shall be due and payable thirty (30) days after the invoice date. Fees for applications for specific licenses, and annual fees for reciprocity applicants, shall accompany the request. An application fee must accompany renewal applications that are submitted after a license has expired. Licensees with fees which are delinquent shall not have any request for amendment or renewal of their licenses, except in the interest of public health and safety, honored by the Division until such fees are paid in full or a payment plan has been accepted by the Division.

Table 1
Radioactive Materials License Fee Schedule

License Category	**Fee Category**	**New License Application Fee**	**Annual Fee, Nominal**	**Annual Fee, Small Entity** **[See subparagraph (e)]**	**Annual Fee, Lower Tier** **[See subparagraph (f)]**
Medical Teletherapy	A.1.a	$4,750.00	$9,500.00	$3,500.00	$2,000.00
Stereotactic Radiosurgery (i.e., Gamma Knife) & Proton Beam Therapy	A.1.b	$4,750.00	$9,500.00	$3,500.00	$2,000.00
Broad Medical (single campus)	A.10.a	$3,774.00	$20,468.40	$5,460.00	$4,483.50
Broad Medical (multiple campuses) (2-5 locations of use)	A.10.b	$5,683.20	$34,796.25	$9,282.00	$7,621.95
Broad Medical (multiple campuses) (6-10 locations of use)	A.10.c	$9,679.20	$43,495.35	$11,602.50	$9,527.50
Broad Medical (multiple campuses) (11+ locations of use)	A.10.d	$9,679.20	$52,194.50	$13,923.00	$11,432.90
Eye Applicators	A.11	$1,198.80	$3,818.40	$2,379.30	$1,402.80
Source Material	A.12	$2,397.60	$5,505.60	$522.90	$522.90
Depleted Uranium	A.12	$266.40	$799.20	$319.20	$319.20
Institutional Medical-Mult. Use (Including HDR)	A.2.a	$2,250.00	$4,500.00	$4,250.00	$3,900.00
Institutional Medical-Mult. Use	A.2.b	$1,198.80	$3,818.40	$2,379.30	$1,402.80
Institutional Medical-Mult. Use (diagnostic only)	A.2.c	$1,198.80	$3,818.40	$2,100.00	$1,123.50
Institutional Medical-Single Use (therapy only)	A.3	$1,198.80	$3,818.40	$2,379.30	$1,402.80
Private Practice (Therapy-HDR)	A.4.a	$1,198.80	$3,818.40	$3,780.00	$2,803.50
Private Practice (Limited Therapy)	A.4.b	$1,198.80	$3,818.40	$2,379.30	$1,402.80
Private Practice (Diagnostic Only)	A.4.c	$1,198.80	$3,818.40	$2,205.00	$1,228.50
Private Practice (Veterinary)	A.4.d	$665.00	$2,100.00	$1,950.00	$1,100.00
In-Vitro Specific Licenses	A.5	$665.00	$2,175.60	$1,764.00	$997.50
In-Vitro General Licenses	A.6	$0.00	$120.00	$120.00	$120.00

License Category	Fee Category	New License Application Fee	Annual Fee, Nominal	Annual Fee, Small Entity [See subparagraph (e)]	Annual Fee, Lower Tier [See subparagraph (f)]
Bone Mineral Analyzers	A.7	$1,198.80	$3,818.40	$2,100.00	$1,123.50
Nuclear Pharmacy	A.8.a.1	$4,250.00	$8,500.00	$5,500.00	$4,000.00
Medical Manufacturer for Distribution	A.8.a.2	$2,886.00	$7,503.60	$2,828.70	$1,852.20
Medical Distribution or Redistribution Only (sealed sources)	A.8.b.1	$2,262.86	$4,460.63	$2,030.70	$1,054.20
Medical Distribution or Redistribution Only (GL)	A.8.b.2	$488.40	$1,420.80	$1,420.80	$829.50
Mobile Nuclear Medicine	A.9.a	$1,198.80	$3,818.40	$2,730.00	$1,753.50
Mobile HDR	A.9.b	$1,198.80	$3,818.40	$2,730.00	$1,753.50
Special Nuclear Material (sealed sources in devices)	B.1.a	$577.20	$1,598.40	$1,243.20	$686.70
Special Nuclear Material (power sources in devices)	B.1.b	$1,110.00	$3,241.20	$1,188.60	$632.10
Special Nuclear Material (other)	B.2	$1,110.00	$3,241.20	$2,274.30	$1,297.80
Pacemaker, Byproduct or SNM -- Medical Inst	B.3	$1,198.80	$3,818.40	$2,274.30	$1,297.80
Industrial Mfg. for Distribution	C.1	$1,953.60	$5,505.60	$2,925.30	$1,948.80
Installed Gauges	C.10.a	$665.00	$2,100.00	$1,950.00	$997.50
Gas Chromatograph, etc.	C.10.b	$665.00	$2,175.60	$1,680.00	$913.50
Portable Moisture Density Gauges, Pb analyzers, etc.	C.11	$665.00	$2,100.00	$1,950.00	$1,300.00
Calibration Sources	C.12.a	$665.00	$2,175.60	$2,100.00	$1,333.50
Calibration Sources (Radium)	C.12.b	$665.00	$2,175.60	$1,619.10	$852.60
Decontamination Services	C.13.a	$2,841.60	$6,615.60	$2,520.00	$1,753.50
Industrial (other) (NORM) (Gauge Service)	C.13.b	$2,841.60	$6,615.60	$2,100.00	$1,333.50
Contaminated Equipment	C.14	$665.00	$2,175.60	$1,619.10	$852.60
In-house Industrial Radiography	C.2	$3,000.00	$12,500.00	$4,900.00	$3,800.00
Multiple Job-Site Industrial Radiography	C.3	$3,000.00	$12,500.00	$4,900.00	$3,800.00
Gamma Irradiators (Self-Shielded)	C.4.a	$1,420.80	$4,040.40	$1,362.90	$806.40
Gamma Irradiators (<10K Ci)	C.4.b.1	$2,841.60	$6,882.00	$2,100.00	$1,123.50
Gamma Irradiators (>10K<100K Ci)	C.4.b.2	$27,172.80	$62,559.60	$5,355.00	$4,378.50
Gamma Irradiators (>100K<1M Ci)	C.4.b.3	$27,172.80	$62,559.60	$9,660.00	$8,683.50
Gamma Irradiators (>1M Ci)	C.4.b.4	$27,172.80	$62,559.60	$21,210.00	$20,233.50
Broad Scope Distribution, Specific (Type A)	C.5.a.1	$5,683.20	$19,314.00	$6,258.00	$5,281.50
Broad Scope Distribution, Specific (Type B)	C.5.a.2	$5,683.20	$19,314.00	$3,318.00	$2,341.50

License Category	Fee Category	New License Application Fee	Annual Fee, Nominal	Annual Fee, Small Entity [See subparagraph (e)]	Annual Fee, Lower Tier [See subparagraph (f)]
Broad Scope Distribution, Specific (Type C)	C.5.a.3	$5,683.20	$19,314.00	$2,730.00	$1,753.50
GL Distribution (source and / or device evaluation)	C.5.b	$888.00	$2,131.20	$1,986.60	$1,010.10
GL Distribution (no source and /or device eval)	C.5.c	$488.40	$1,420.80	$1,420.80	$1,161.30
Possession Incident to NRC Exempt Distribution	C.6.c	$665.00	$2,175.60	$2,087.40	$1,110.90
Well Logging /Tracers	C.7.a	$1,465.20	$4,528.80	$2,660.70	$1,684.20
Field Flooding Studies	C.7.b	$1,028.58	$3,520.62	$2,100.00	$1,333.50
Nuclear Laundries	C.8	$9,679.20	$20,468.40	$3,108.00	$2,131.50
Industrial Research & Development	C.9	$1,554.00	$3,862.80	$2,282.70	$1,306.20
Broad Scope (Academic) (Type A & B)	D.1.a	$3,250.00	$7,000.00	$3,998.80	$2,275.00
Broad Scope (Academic) (Type C)	D.1.b	$3,250.00	$7,000.00	$3,237.80	$1,640.25
Broad Scope (Industrial R&D) (Type A)	D.2.a	$2,397.60	$6,526.80	$3,076.50	$2,100.00
Broad Scope (Industrial R&D) (Type B)	D.2.b	$2,397.60	$6,526.80	$2,751.00	$1,774.50
Broad Scope (Industrial R&D) (Type C)	D.2.c	$2,397.60	$6,526.80	$2,490.60	$1,514.10
Broad Scope (Medical Manufacturer for Dist) (R&D)	D.3	$2,886.00	$6,882.00	$3,318.00	$2,341.50
Broad Scope (Industrial - Other) (Single campus, 1 location of use)	D.4.a	$2,397.60	$6,526.80	$3,076.50	$2,100.00
Broad Scope (Industrial - Other) (2-5 locations of use)	D.4.b	$3,774.00	$20,468.40	$5,460.00	$4,483.50
Broad Scope (Industrial - Other) (6-10 locations of use)	D.4.c	$5,683.20	$34,796.25	$9,282.00	$7,621.95
Broad Scope (Industrial - Other) (11+ locations of use)	D.4.d	$9,679.20	$43,495.35	$11,602.50	$9,527.50
Civil Defense (Emergency Management)	E.1	$1,110.00	$3,996.00	$1,507.80	$741.30
Civil Defense (Emergency Response)	E.2	$1,110.00	$3,996.00	$1,425.90	$659.40
Teletherapy Service Co.	F.1	$2,841.60	$6,615.60	$2,282.70	$1,306.20
Service Providers (Medical)	F.2.a	$2,841.60	$6,615.60	$2,282.70	$1,306.20
Service Providers (Industrial)	F.2.b	$2,841.60	$6,615.60	$2,282.70	$1,306.20
Consultants (Leak Testing Service)	G	$665.00	$2,175.60	$1,619.10	$493.50
Generally Licensed Devices (except tritium safety signs)	GL	$0.00	$120.00	$120.00	$120.00
Academic (Non-Broad)	I	$1,554.00	$3,862.80	$1,680.00	$913.50

License Category	Fee Category	New License Application Fee	Annual Fee, Nominal	Annual Fee, Small Entity [See subparagraph (e)]	Annual Fee, Lower Tier [See subparagraph (f)]
Device Evaluation	J.1	$5,514.48	$6,420.24	$1,260.00	$283.50
Source Evaluation	J.2	$2,051.28	$2,783.88	$1,050.00	$283.50
Radioactive Waste Disposal-Burial	L.1	$185,143.84	$186,240.92	$47,460.00	$46,483.50
Radioactive Waste Disposal-Incineration	L.2	$185,143.84	$186,240.92	$47,460.00	$46,483.50
Radioactive Waste, Processing & Repackaging	L.3.a	$3,729.60	$14,208.00	$6,468.00	$5,491.50
Radioactive Waste, Prepackaged	L.3.b	$2,175.60	$6,615.60	$4,263.00	$3,286.50
Drop-ship Distribution	M	$2,841.60	$6,615.60	$2,282.70	$1,306.20
Fusion Machines, Small Modular Reactors and Similar Technologies (R&D)	X.1	Contact	Contact	N/A	N/A
Fusion Machines, Small Modular Reactors and Similar Technologies (Production)	X.2	Contact	Contact	N/A	N/A
Reciprocity	K.	$500 + Appropriate nominal annual fee (eligible for Small Entity/Lower Tier)			

(e) **Small Entity**

The size standards for Georgia small entities are as follows:

1. A small business is a business with annual receipts of $3.5 million or less except private practice physicians for which the standard is annual receipts of $1 million or less.

2. A small organization is a not-for-profit organization which is independently owned and operated and has annual receipts of $3.5 million or less.

3. Small governmental jurisdictions are governments of cities, counties, towns, school districts, or special districts with a population of less than 50,000.

4. A small educational institution is one that is (1) supported by a qualifying small governmental jurisdiction, or (2) one that is not state or publicly supported and has 500 employees or less.

(f) **Small Entity Lower Tier**

Small businesses and not-for-profit organizations with annual receipts of less than $250,000 and small governmental jurisdictions with populations of less than 20,000 qualify for the lower tier small entity fee.

(3) Penalties.

(a) Any person who engages in any of the following conduct shall be guilty of a misdemeanor as found in O.C.G.A. Section 31-13-13: 1. Hindering, obstructing, or otherwise interfering with any representative of the Department in the discharge of his official duties in making inspections or impounding radioactive materials as provided in Code Section 31-13-5 and 31-13-11 respectively; or 2. Violating the provisions of Code Section 31-13-7 (permits for disposal of radioactive waste; bonding of permittees), or any Rule or Regulation promulgated thereunder; or 3. Violating the provisions of Code Section 31-13-12 (Prohibited Uses of Sources of Radiation).

(b) Any person who submits any false statements or writings, concealment of facts, and fraudulent documents in matters within the jurisdiction of the Division shall be guilty of a felony as found in O.C.G.A. Section 16-10-20:

1. A person who knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact; makes a false, fictitious, or fraudulent statement or representation; or makes or uses any false writing or document, knowing the same to contain any false, fictitious, or fraudulent statement or entry, in any matter within the jurisdiction of the Division shall, upon conviction thereof, be punished by a fine of not more than $1,000.00 or by imprisonment for not less than one nor more than five years, or both.

(c) Any person who:

1. Violates any licensing provision of this 31-13-1, et. seq., or any Rule, Regulation, or Order issued under 31-13-1, et. seq., or any term, condition, or limitation of any license issued under this Subject~~Chapter~~; or

2. Commits any violation for which a license may be revoked under rules or regulations issued pursuant to this 31-13-1, et. seq., may be subject to a civil penalty, to be imposed by the Division, not to exceed $10,000.00. If any violation is a continuing one, each day of such violation shall constitute a separate violation for the purpose of computing the applicable civil penalty.

3. If a violation is found to exist during an inspection or visit and is then found to exist on a subsequent inspection or visit, there shall arise a rebuttable presumption that the violation continued throughout the period of time between the initial inspection or visit and the subsequent inspection or visit.

(d) Whenever the Division proposes to subject a person to the imposition of a civil penalty, it shall notify such person in writing:

1. Setting forth the date, facts, and nature of each act or omission with which the person is charged.

2. Specifically identifying the particular provision or provisions of the Code section, Rule, Order, or license condition involved in the violation; and

3. Advising of each penalty which the Division proposes to impose and its amount.

(e) Such written notice shall be sent by registered or certified mail by the Division to the last known address of such person. The person so notified shall be granted an opportunity to show in writing, within ten days from receipt of such notice, why such penalty should not be imposed. The notice shall also advise such person that upon failure to pay the civil penalty subsequently determined by the Division, if any, the penalty may be collected by civil action.

(f) Upon receipt of a written response from the person so notified, alleging that a penalty should not be imposed, the Director shall consider the response and make a final decision on the appropriateness and amount of the penalty. The Division may, at its discretion, conduct an onsite inspection in order to make a final decision. In making this decision, the Director may, as deemed appropriate by the Director, consider such factors as: errors concerning the amount or nature of the penalty, corrective action taken by the licensee, and approved disposal of radioactive material by the licensee.

(g) The Division shall inform the licensee of its final decision by registered or certified mail to the last known address of the licensee. Within 10 days of receipt of the Division's final determination concerning the civil penalty, the licensee may request an administrative hearing pursuant to the Georgia Administrative Procedure Act, O.C.G.A. 50-13-1, et. seq.

Rule 391-3-17-.13, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Materials," is being amended to read as follows:

391-3-17-.13 Physical Protection of Category 1 and Category 2 Quantities of Radioactive Materials

(1) Except as set forth in (2) and (3) below, this Rule incorporates by reference 10 CFR Part 37 with an Effective Date of December 30, 2019.

(2) The following provisions of 10 CFR Part 37 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

(a) 10 CFR 37.1, Purpose

(b) 10 CFR 37.3, Scope

(c) 10 CFR 37.7, Communications

(d) 10 CFR 37.9, Interpretations

(e) 10 CFR 37.11 (a-b), Specific Exemptions

(f) 10 CFR 37.13, Information collection requirements: OMB approval

(g) 10 CFR 37.105, Inspections

(h) 10 CFR 37.109, Criminal penalties

(3) The following provisions of 10 CFR Part 37 are incorporated by reference with the specified changes:

(a) "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 37 of the Code of Federal Regulations that are incorporated by reference, mean the Georgia Environmental Protection Division, except:

1. 10 CFR 37.5 Definitions for: *Commission, Fingerprint orders, Person*,

2. 10 CFR 37.25(b) *Grandfathering*,

3. 10 CFR 37.27(a) and (c) *General performance objective and requirements, Procedures for processing fingerprint checks*,

4. 10 CFR 37.29(a)

5. 10 CFR 37.71 referring to NRC's license verification system,

6. 10 CFR 37.71 "licensee of the Commission or an Agreement State" shall be deemed to be a reference to "licensee of the Georgia Environmental Protection Division, NRC or an Agreement State."

(4) In lieu of the address given in 10 CFR 37.27(c), licensee shall submit fingerprint cards or records to:
U.S. Nuclear Regulatory Commission
Director, Division of Physical and Cyber Security Policy
Attn: Criminal History Program/Mail Stop – T-07D04M
11545 Rockville Pike
Rockville, MD 20852-2738

(5) Reference in 10 CFR 37 to the following NRC regulation shall be deemed a reference to the identified section(s) in Georgia DNR Subject~~Chapter~~ 391-3-17:

(a) NRC Regulation (10 CFR) 30.41(d) refers to 391-3-17-.02(19)

(6) License required reports of events or notifications as specified in the following sections shall be submitted to Georgia Department of Natural Resources, Environmental Protection Division, as specified in Georgia DNR Subject~~Chapter~~ 391-3-17:

(a) 10 CFR 37.41,

(b) 10 CFR 37.45,

(c) 10 CFR 37.57,

(d) 10 CFR 37.77(a) – (d),

(e) 10 CFR 37.81

(7) In lieu of the address given in 10 CFR 37.23(~~a~~b)(2), licensee should provide oath or affirmation certifications to the Georgia Department of Natural Resources, Environmental Protection Division.

Authority: O.C.G.A. Section 31-13-1 et seq., as amended.