

## **Title 15: Mississippi State Department of Health**

### **Part 21: Division of Radiological Health**

#### **Subpart 78: Radiological Health**

#### **Chapter 1 REGULATIONS FOR CONTROL OF RADIATION IN MISSISSIPPI**

##### **Subchapter 1 General Provisions**

Rule 1.1.1 Scope. Except as otherwise specifically provided, these regulations apply to all persons who receive, possess, use, transfer, own, or acquire any source of radiation; provided, however, that nothing in these regulations shall apply to any person to the extent such person is subject to regulation by the U.S. Nuclear Regulatory Commission.<sup>1</sup>

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.2 Definitions. As used in these regulations, these terms have the definitions set forth below. Additional definitions used only in a certain section will be found in that section.

1. "A<sub>1</sub>" means the maximum activity of special form radioactive material permitted in a Type A package. "A<sub>2</sub>" 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 Appendix A, Table A-1 of Subchapter 13 of these regulations or may be derived in accordance with the procedure prescribed in Appendix A of Subchapter 13 of these regulations.
2. "Absorbed dose" means the energy imparted to matter by ionizing radiation per unit mass of irradiated material at the place of interest. The units of absorbed dose are the rad and the gray (Gy).
3. "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 1 MeV. For purposes of this definition, "particle accelerator" is an equivalent term.
4. "Accelerator-produced radioactive material" means any material made radioactive by a particle accelerator.
5. "Acute" as used in this part, means a single radiation dose or multiple radiation dose occurring within a short time (24 hours or less).

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<sup>1</sup> Attention is directed to the fact that regulation by the State of source material, byproduct material, and special nuclear material in quantities not sufficient to form a critical mass is subject to the provisions of the agreement between State and the U.S. Nuclear Regulatory Commission and to 10 CFR Part 150 of the Commission's regulations.

6. "Act" means the Mississippi Radiation Protection Law of 1976.
7. "Activity" means the rate of disintegration (transformation) or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq).
8. "Adult" means an individual 18 or more years of age.
9. "Agency" means the Mississippi State Department of Health.
10. "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 Subchapter 274b. of the Atomic Energy Act of 1954, as amended (73 Stat. 689).
11. "Airborne radioactive material" means any radioactive material dispersed in the air in the form of dusts, fumes, particulates, mists, vapors, or gases.
12. "Airborne radioactivity area" means a room, enclosure, or area in which airborne radioactive materials exist in concentrations:
  - a. in excess of the derived air concentrations (DACs) specified in Appendix B, Table I of Subchapter 4 of these regulations; or
  - b. 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.
13. "Alert" means events may occur, are in progress, or have occurred that could lead to a release of radioactive material but that the release is not expected to require a response by offsite response organizations to protect persons offsite.
14. "As low as is reasonably achievable" (ALARA) means making every reasonable effort to maintain exposures to radiation as far below the dose limits in these regulations as is practical, consistent with the purpose for which the licensed or registered activity is undertaken, taking into account the state of technology, the economics of improvements in relation to 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.
15. "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 control of the licensee. "Background radiation" does not include sources of radiation from radioactive materials regulated by the Agency.

16. "Becquerel" (Bq) means the SI unit of activity. One becquerel is equal to 1 disintegration or transformation per second (dps or tps).
17. "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 these regulations, "radiobioassay" is an equivalent term.
18. "Brachytherapy" means a method of radiation therapy in which sealed sources are utilized to deliver a radiation dose at a distance of up to a few centimeters, by surface, intracavitary, or interstitial application.
19. "Byproduct material" means:
  - a. 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;
  - b. 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;
  - c. Any discrete source of radium-226 that is produced, extracted, or converted after extraction, for use for a commercial, medical, or research activity;
  - d. Any material that has been made radioactive by use of a particle accelerator; and is produced, extracted, or converted after extraction, for use for a commercial, medical, or research activity; and
  - e. Any discrete source of naturally occurring radioactive material, other than source material, that 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 is extracted or converted after extraction for use in a commercial, medical, or research activity.

20. "Calendar quarter" means not less than 12 consecutive weeks nor more than 14 consecutive weeks. The first calendar quarter of each year shall begin in January and subsequent calendar quarters shall be so arranged such that no day is included in more than one calendar quarter and no day in any one year is omitted from inclusion within a calendar quarter. No licensee or registrant shall change the method observed by him of determining calendar quarters for purposes of these regulations except at the beginning of a year.
21. "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.
22. "CFR" means Code of Federal Regulations”
23. "Chelating agent" means amine polycarboxylic acids, hydroxycarboxylic acids, gluconic acid, and polycarboxylic acids.
24. "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.
25. "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. "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 ( $H_{E,50} = \sum w_T H_{T,50}$ ).
26. “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.
27. "Controlled area" means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee or registrant for any reason.
28. “Critical Group” means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.
29. "Curie" means a unit of quantity of radioactivity. One curie (Ci) is that quantity of radioactive material which decays at the rate of  $3.7E+10$  transformations per

second (tps). Commonly used submultiples of the curie are the millicurie and the microcurie. One millicurie (mCi) = 0.001 curie =  $3.7E+7$  tps. One microcurie ( $\mu$ Ci) = 0.000001 curie =  $3.7E+4$  tps (See 1.1.16 for SI equivalent becquerel).

30. "Decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits:
  - a. Release of the property for unrestricted use and termination of the license; or
  - b. Release of the property under restricted conditions and termination of the license.
31. "Deep dose equivalent" ( $H_d$ ), which applies to external whole body exposure, means the dose equivalent at a tissue depth of 1 centimeter ( $1000 \text{ mg/cm}^2$ ).
32. "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.
33. "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.
34. "Distinguishable from background" means that the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurements technology, survey, and statistical techniques.
35. "Dose" is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, total organ dose equivalent, or total effective dose equivalent. For purposes of these regulations, "radiation dose" is an equivalent term.
36. "Dose Commitment" means the total radiation dose to a part of the body that will result from retention in the body of radioactive material. For purposes of estimating the dose commitment, it is assumed that from the time of intake the period of exposure to retained material will not exceed 50 years.
37. "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 the sievert (Sv).
38. "Dose limits" means the permissible upper bounds of radiation doses established in accordance with these regulations. For purposes of these regulations, "limits" is an equivalent term.

39. "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 ( $H_E = \sum w_T H_T$ ).
40. "Embryo/fetus" means the developing human organism from conception until the time of birth.
41. "Entrance or access point" means any opening through which an individual or extremity of an individual could gain access to radiation areas or to sources of radiation. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.
42. "Explosive material" means any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.
43. "Exposure" means being exposed to ionizing radiation or to radioactive material.
44. "Exposure" means the quotient of  $dQ$  by  $dm$  where " $dQ$ " is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in a volume element of air having mass " $dm$ " are completely stopped in air. The SI unit of exposure is the coulomb per kilogram (C/kg). The special unit of exposure is the roentgen (R) (See 1.1.15 for SI equivalent coulomb per kilogram).<sup>2</sup>
45. "Exposure rate" means the exposure per unit of time, such as roentgen per minute and milliroentgen per hour.
46. "External dose" means that portion of the dose equivalent received from any source of radiation outside the body.
47. "Extremity" means hand, elbow, arm below the elbow, foot, knee, and leg below the knee.
48. "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.
49. "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 or levels, or concentrations or quantities of radioactive material, in the

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<sup>2</sup> "When not underlined as above or indicated as 'exposure' (x), the term 'exposure' has a more general meaning in these regulations."

general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

50. "Gray" (Gy) means the SI unit of absorbed dose. One gray is equal to an absorbed dose of 1 joule per kilogram (100 rads).
51. "Hazardous waste" means those wastes designated as hazardous by the U.S. Environmental Protection Agency regulations in 40 CFR Part 261.
52. "Healing arts" means the professional disciplines authorized by the laws of this state to use sources of radiation in the diagnosis or treatment of human or animal diseases.
53. "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 millisievert) in 1 hour at 30 centimeters from any source of radiation or 30 centimeters from any surface that the radiation penetrates.
54. "Human use" means the internal or external administration of radiation or radioactive material to human beings.
55. "Individual" means any human being.
56. "Individual monitoring" means the assessment of:
  - a. Dose equivalent: (a) by the use of individual monitoring devices, or (b) by the use of survey data; or
  - b. Committed effective dose equivalent: (a) by bioassay, or (b) 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 Subchapter 4).
57. "Individual monitoring devices" (individual monitoring equipment) means devices designed to be worn by a single individual for the assessment of dose equivalent such as film badges, thermoluminescence dosimeters (TLDs), optically stimulated luminescence dosimeters (OSLs), pocket ionization chambers, and personal ("lapel") air sampling devices
58. "Inspection" means an official examination or observation including, but not limited to, tests, surveys, and monitoring to determine compliance with rules, regulations, orders, requirements, and conditions of the Agency.
59. "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.

60. "Internal dose" means that portion of the dose equivalent received from radioactive material taken into the body
61. "Lens dose equivalent" (LDE) applies to 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<sup>2</sup>).
62. "License" means a license issued by the Agency in accordance with the regulations adopted by the Agency.
63. "Licensed material" means radioactive material received, possessed, used, transferred or disposed of under a general or specific license issued by the Agency.
64. "Licensee" means any person who is licensed by the Agency in accordance with these regulations and the Act.
65. "Licensing State" means any State with regulations equivalent to the Suggested State Regulations for Control of Radiation relating to, and an effective program for, the regulatory control of NARM and which has been granted final designation by the Conference of Radiation Control Program Directors, Inc.
66. "Limits" See "Dose limits".
67. "Lost or missing source of radiation" means a source of radiation 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.
68. "Lot Tolerance Percent Defective" means the poorest quality in an individual inspection lot that should be accepted, expressed in percent defective.
69. "Major processor" means a user processing, handling, or manufacturing radioactive material exceeding Type A quantities as unsealed sources or material, or exceeding 4 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 Subchapter 13 (10 CFR 71.4) of these regulations.
70. "Member of the public" means any individual except when that individual is receiving an occupational dose.
71. "Minor" means an individual less than 18 years of age.
72. "Monitoring" means the measurement of radiation, radioactive material concentrations, surface area concentrations or quantities of radioactive material and the use of the results of these measurements to evaluate potential exposures



and doses. For purposes of these regulations, "radiation monitoring" and "radiation protection monitoring" are equivalent terms.

73. "NARM" means any naturally occurring or accelerator-produced radioactive material. It does not include byproduct, source, or special nuclear material.
74. "Nationally tracked source" means a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in Appendix G to Subchapter 4 of these regulations. In this context a sealed source is defined as radioactive material that is sealed in a capsule or closely bonded, in a solid form and which is not exempt from regulatory control. It does not mean material encapsulated solely for disposal, or nuclear material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet. Category 1 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 1 threshold. Category 2 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 2 threshold but less than the Category 1 threshold.
75. "Natural radioactivity" means radioactivity of naturally occurring nuclides.
76. "Nuclear Regulatory Commission" (NRC) means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.
77. "Occupational dose" means the dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation and/or radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee, registrant, or other person. Occupational dose does not include doses from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released in accordance with Subchapter 7 (10 CFR 35.75) of these regulations, from voluntary participation in medical research programs, or as a member of the public.
78. "Offshore Waters" means that area of land and water, beyond Agreement States' Submerged Lands Act jurisdiction, on or above the U.S. Outer Continental Shelf.
79. "Package" means the packaging together with its radioactive contents as presented for transport.
80. "Particle accelerator" See "Accelerator".
81. "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 agency of the foregoing, other than the NRC and federal government agencies licensed or exempted by the NRC.
82. "Personnel monitoring equipment" See "Individual monitoring devices".

83. "Pharmacist" means an individual licensed by this State to compound and dispense drugs, prescriptions, and poisons.
84. "Physician" means an individual licensed by this State to dispense drugs in the practice of medicine.
85. "Principal activities" 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 licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.
86. "Public dose" means the dose received by a member of the public from exposure to radiation and/or radioactive material released by a licensee, or to any other source of radiation under the control of the licensee or registrant. Public dose does not include occupational dose or doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released in accordance with Subchapter 7 (10 CFR 35.75) of these regulations, or from voluntary participation in medical research programs.
87. "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.
88. "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 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.
89. "Quality factor" (Q) means the modifying factor, listed in Tables I and II of 1.1.15, that is used to derive dose equivalent from absorbed dose.
90. "Rad" means the special unit of absorbed dose. One rad is equal to an absorbed dose of 100 ergs per gram or 0.01 joule per kilogram (0.01 gray).
91. "Radiation" means gamma rays and x-rays, alpha and beta particles, high speed electrons, neutrons, high speed protons and other atomic particles and

electromagnetic radiation consisting of associated and interacting electric and magnetic waves and ultrasonic waves.

92. "Radiation area" means any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 millisievert) in 1 hour at 30 centimeters from the source of radiation or from any surface that the radiation penetrates.
93. "Radiation dose" See "Dose".
94. "Radiation machine" means any device capable of producing radiation except, those devices with radioactive material as the only source of radiation.
95. "Radiation safety officer" means an individual who has the knowledge to apply appropriate radiation protection regulations and has the responsibility for the overall radiation safety program at the facility.
96. "Radioactive material" means any solid, liquid, or gas which emits radiation spontaneously.
97. "Radioactivity" means the transformation of unstable atomic nuclei by the emission of radiation.
98. "Radiobioassay" See "Bioassay".
99. "Registrant" means any person who is registered with the Agency and is legally obligated to register with the Agency pursuant to these regulations and the Act.
100. "Registration" means registration with the Agency in accordance with the regulations adopted by the Agency.
101. "Regulations of the U.S. Department of Transportation" means the regulations in 49 CFR Parts 100-189.
102. "Residual radioactivity" means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee(s) control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of Subchapter 4 of these regulations.
103. "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).

104. "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.
105. "Restricted area" means an area, access to which is limited by the licensee or registrant for the purpose of protecting individuals against undue risks from exposure to sources of radiation. 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.
106. "Roentgen" means the special unit of exposure. One roentgen (R) equals  $2.58 \times 10^{-4}$  coulomb per kilogram of air (see "Exposure" and 1.1.15).
107. "Sealed source" means any radioactive material that is encased in a capsule designed to prevent leakage or escape of the radioactive material.
108. "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 ( $7 \text{ mg/cm}^2$ ).
109. "SI" means the abbreviation for the International System of Units
110. "Sievert" (Sv) 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 sievert = 100 rems).
111. "Site area emergency" means events may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by offsite response organizations to protect persons offsite.
112. "Site boundary" means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee or registrant.
113. "Source material" means:
  - a. Uranium or thorium, or any combination thereof, in any physical or chemical form; or
  - b. Ores that contain by weight one-twentieth of 1 percent (0.05 percent) or more of uranium, thorium or any combination of uranium and thorium. Source material does not include special nuclear material.
114. "Source material milling" means any activity that results in the production of byproduct material as defined by definition (2) of byproduct material.

115. "Source of radiation" means any radioactive material or any device or equipment emitting, or capable of producing, radiation.
116. "Special form radioactive material" means radioactive material that satisfies the following conditions:
- a. It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;
  - b. The piece or capsule has at least one dimension not less than 5 millimeters (0.2 inch); and
  - c. 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 designed in accordance with the Nuclear Regulatory Commission requirements in effect on March 31, 1996, and constructed prior to April 1, 1998, may continue to be used. A special form encapsulation either designed or constructed after April 1, 1998, must meet requirements of this definition applicable at the time of its design or construction.
117. "Special nuclear material" means:
- a. 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
  - b. Any material artificially enriched by any of the foregoing but does not include source material.
118. "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:

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

119. "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, calculations, and measurements of levels of radiation or concentrations of radioactive material present.
120. "Test" means the process of verifying compliance with an applicable regulation.
121. "These regulations" mean all sections of the Mississippi State Department of Health Regulations for Control of Radiation, Subpart 78 -Radiation.
122. "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.
123. "Total organ dose equivalent" (TODE) means the sum of the deep dose equivalent and the committed dose equivalent to the organ receiving the highest dose as described in Subchapter 4 (10 CFR 20.2104) of these regulations.
124. "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).
125. "Unrefined and unprocessed ore" means ore in its natural form prior to any processing, such as grinding, roasting, beneficiating, or refining.
126. "Unrestricted area" means any area access to which is neither limited nor controlled by the licensee or registrant for purposes of protection of individuals from exposure to radiation and radioactive material. For purposes of these regulations, "uncontrolled area" is an equivalent term.
127. "Very 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 an absorbed dose in excess of 500 rads (5 grays) in 1 hour at

1 meter from a source of radiation or from any surface that the radiation penetrates.<sup>3</sup>

128. "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 radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in paragraphs (b.), (c.), (d.) and (e.) of the definition of byproduct material set forth in this section.
129. "Waste handling licensees" mean persons licensed to receive and store radioactive wastes prior to disposal and/or persons licensed to dispose of radioactive waste.
130. "Week" means 7 consecutive days starting on Sunday.
131. "Whole body" means, for purposes of external exposure, head, trunk including male gonads, arms above the elbow, or legs above the knee.
132. "Worker" means an individual engaged in work under a license or registration issued by the Agency and controlled by a licensee or registrant, but does not include the licensee or registrant.
133. "Working level" (WL) means any combination of short-lived radon daughters in 1 liter of air that will result in the ultimate emission of  $1.3E+5$  MeV of potential alpha particle energy. The short-lived radon daughters are -- for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212.
134. "Working level month" (WLM) means an exposure to 1 working level for 170 hours (2,000 working hours per year divided by 12 months per year is approximately equal to 170 hours per month).
135. "Year" means the period of time beginning in January used to determine compliance with the provisions of these regulations. The licensee or registrant may change the starting date of the year used to determine compliance by the licensee or registrant provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

*SOURCE: Miss. Code Ann. §45-14-11*

#### Rule 1.1.3 Exemptions.

1. The Agency may, upon application or upon its own initiative, grant such exemptions or exceptions from the requirements of these regulations as it

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<sup>3</sup> "Very 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 an absorbed dose in excess of 500 rads (5 grays) in 1 hour at 1 meter from a source of radiation or from any surface that the radiation penetrates.

determines are authorized by law and will not result in undue hazard to public health and safety or property.

2. U.S. Department of Energy Contractors and U.S. Nuclear Regulatory Commission Contractors. Any U.S. Department of Energy contractor or subcontractor and any U.S. Nuclear Regulatory Commission contractor or subcontractor of the following categories operating within this State is exempt from these regulations to the extent that such contractor or subcontractor under his contract receives, possesses, uses, transfers, or acquires sources of radiation:
  - a. prime contractors performing work for the U.S. Department of Energy at U.S. Government-owned or -controlled sites, including the transportation of sources of radiation to or from such sites and the performance of contract services during temporary interruptions of such transportation;
  - b. prime contractors of the U.S. Department of Energy performing research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof;
  - c. prime contractors of the U.S. Department of Energy using or operating nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel; and
  - d. any other prime contractor or subcontractor of the U.S. Department of Energy or of the U.S. Nuclear Regulatory Commission when the State and the U.S. Nuclear Regulatory Commission jointly determine:
    - i. that the exemption of the prime contractor or subcontractor is authorized by law; and
    - ii. that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.4 Records. Each licensee and registrant shall maintain records showing the receipt, transfer, and disposal of all sources of radiation. Additional record requirements are specified elsewhere in these regulations.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.5 Inspections.

1. Each licensee and registrant shall afford the Agency at all reasonable times opportunity to inspect sources of radiation and the premises and facilities wherein such sources of radiation are used or stored.



2. Each licensee and registrant shall make available to the Agency for inspection, upon reasonable notice, records maintained pursuant to these regulations.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.6 Tests. Each licensee and registrant shall perform upon instructions from the Agency, or shall permit the Agency to perform, such reasonable tests as the Agency deems appropriate or necessary including, but not limited to, tests of:

1. sources of radiation;
2. facilities wherein sources of radiation are used or stored;
3. radiation detection and monitoring instruments; and
4. other equipment and devices used in connection with utilization or storage of licensed or registered sources of radiation.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.7 Reports. Notwithstanding any other requirements for notification:

1. Immediate Report. Each licensee shall notify the Agency as soon as possible but not later than 4 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.).
2. Twenty-Four Hour Report. Each licensee shall notify the Agency within 24 hours after the discovery of any of the following events involving licensed material:
  - a. 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 Subchapter 4 of these regulations 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.

- b. 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.
  - c. 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 Subchapter 4 of these regulations for the material; and
    - ii. the damage affects the integrity of the licensed material or its container.
3. Twenty-Four Hour Report. Each licensee or registrant shall notify the Agency within 24 hours after the discovery of an event in which equipment is disabled or fails to function as designed when:
- a. 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;
  - b. The equipment is required to be available and operable when it is disabled or fails to function; and
  - c. No redundant equipment is available and operable to perform the required safety function.
4. Preparation and Submission of Reports. Reports made by licensees or registrants in response to the requirements of this section must be made as follows:
- a. Licensees or registrants shall make reports required by 1.1.7(1), (2), and (3) by telephone to the Agency. To the extent that the information is available at the time of notification, the information provided in these reports must include:
    - i. the caller's name and call back telephone number;
    - ii. a description of the event, including the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;
    - iii. the exact location of the event;
    - iv. the date and time of the event;

- v. the isotopes, quantities, and chemical and physical form of the licensed material involved; and
  - vi. any personnel radiation exposure data available.
- b. **Written Report.** Each licensee or registrant who makes a report required by 1.1.7(1), (2), or (3) 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. The reports must include the following:
- i. a description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;
  - ii. the exact location of the event;
  - iii. the isotopes, quantities and chemical and physical form of the licensed material involved;
  - iv. date and time of the event;
  - v. corrective actions taken or planned and the results of any evaluations or assessments; and
  - vi. the extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

*SOURCE: Miss. Code Ann. §45-14-11*

**Rule 1.1.8 Additional Requirements.** The Agency may, by rule, regulation, or order, impose upon any licensee or registrant such requirements in addition to those established in these regulations as it deems appropriate or necessary to minimize danger to public health and safety or property.

*SOURCE: Miss. Code Ann. §45-14-11*

**Rule 1.1.9 Enforcement Requirements Violations.** An injunction or other court order may be obtained prohibiting any violation of any provision of the Act or any regulation or order issued thereunder. Any person who willfully violates any provision of the Act or any regulation or order issued thereunder may be guilty of a misdemeanor and, upon conviction, may be punished by fine or imprisonment or both, as provided by Section 45-14-37 of the Act.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.10 Enforcement Requirements Impounding. Sources of radiation shall be subject to impounding pursuant to Section 45-14-23 of the Act.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.11 Enforcement Requirements Prohibited Uses.

1. A hand-held fluoroscopic screen shall not be used with x-ray equipment unless it has been listed in the Registry of Sealed Sources and Devices maintained by the Agency or accepted for certification by the U.S. Food and Drug Administration, Center for Devices and Radiological Health.
2. A shoe-fitting fluoroscopic device shall not be used.
3. Sources of radiation shall not be used to expose any individual solely for training or demonstration purposes.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.12 Deliberate Misconduct.

1. Any licensee, certificate holder, quality assurance program approval holder, or registrant; applicant for a license, certificate, quality assurance program approval, or registration; employee of a licensee, certificate holder, quality assurance program approval holder, registrant or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee, certificate holder, quality assurance program approval holder, or registrant or applicant, who knowingly provides to any licensee, certificate holder, quality assurance program approval holder, registrant, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's, certificate holder's, quality assurance program approval holder's, registrant's or applicant's activities in these regulations, may not:
  - a. Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, certificate holder, quality assurance program approval holder, registrant, or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license, certificate, approval or registration issued by the Agency; or
  - b. Deliberately submit to the Agency, a licensee, certificate holder, quality assurance program approval holder, registrant, an applicant, or a licensee's, certificate holder's, quality assurance program approval holder's registrant's or applicant's, contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the Agency.

2. A person who violates 1.1.12(1)(a) or (1)(b) of this section may be subject to enforcement action in accordance with the procedures in 1.1.17 and Chapter 45-14-37 of the Act.
3. For the purposes of 1.1.12(1)(a) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:
  - a. Would cause a licensee, certificate holder, quality assurance program approval holder, registrant or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license or registration issued by the Agency; or
  - b. Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, certificate holder, quality assurance program approval holder, registrant, applicant, contractor, or subcontractor.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.13 Interpretations. Except as specifically authorized by the Agency in writing, no interpretation of these regulations by an officer or employee of the Agency other than a written interpretation by the legal counsel will be recognized to be binding upon the Agency.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.14 Communications. All communications and reports concerning these regulations, and applications filed thereunder, should be addressed to the Division of Radiological Health at its office located at 3150 Lawson Street, P.O. Box 1700, Jackson, Mississippi, 39215-1700.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.15 Units of Exposure and Dose.

1. As used in these regulations, the unit of Exposure is the coulomb per kilogram (C/kg) of air. One roentgen is equal to  $2.58 \times 10^{-4}$  coulomb per kilogram of air.
2. As used in these regulations, the units of dose are:
  - a. Gray (Gy) is the SI unit of absorbed dose. One gray is equal to an absorbed dose of 1 joule per kilogram (100 rads).
  - b. Rad is the special unit of absorbed dose. One rad is equal to an absorbed dose of 100 ergs per gram or 0.01 joule per kilogram (0.01 gray).

- c. Rem is 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).
  - d. Sievert is 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 sievert = 100 rems).
3. As used in these regulations, the quality factors for converting absorbed dose to dose equivalent are shown in Table I.

**TABLE I**  
**QUALITY FACTORS AND ABSORBED DOSE EQUIVALENCIES**

Equal to TYPE OF RADIATION Equivalent <sup>a</sup>	Quality Factor (Q)	Absorbed Dose a Unit Dose
X-ray, gamma, or beta radiation and high-speed electrons	1	1
Alpha particles, multiple-charged particles, fission fragments and heavy particles of unknown charge	20	0.05
Neutrons of unknown energy	10	0.1
High-energy protons	10	0.1

<sup>a</sup>Absorbed dose in rad equal to 1 rem or the absorbed dose in gray equal to 1 sievert.

- 4 If it is more convenient to measure the neutron fluence rate than to determine the neutron dose equivalent rate in rem per hour or sievert per hour, as provided in 1.1.15(3), 1 rem (0.01 sievert) of neutron radiation of unknown energies may, for purposes of these regulations, be assumed to result from a total fluence of 25 million neutrons per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee or registrant may use the fluence rate per unit dose equivalent or the appropriate Q value from Table II to convert a measured tissue dose in rad or gray to dose equivalent in rem or sievert.

**TABLE II**

**MEAN QUALITY FACTORS, Q, AND FLUENCE PER UNIT DOSE EQUIVALENT FOR MONOENERGETIC NEUTRONS**

	Neutron Energy (MeV)	Quality Factor <sup>a</sup> (Q)	Fluence per Unit Dose Equivalent <sup>b</sup> (neutrons cm-2rem-1)	Fluence per Unit Dose Equivalent <sup>b</sup> (neutrons cm-2Sv-1)
(thermal)	2.5E-8	2	980E+6	980E+8
	1E-7	2	980E+6	980E+8
	1E-6	2	810E+6	810E+8
	1E-5	2	810E+6	810E+8
	1E-4	2	840E+6	840E+8
	1E-3	2	980E+6	980E+8
	1E-2	2.5	1010E+6	1010E+8
	1E-1	7.5	170E+6	170E+8
	5E-1	11	39E+6	39E+8
	1	11	27E+6	27E+8
	2.5	9	29E+6	29E+8
	5	8	23E+6	23E+8
	7	7	24E+6	24E+8
	10	6.5	24E+6	24E+8
	14	7.5	17E+6	17E+8
	20	8	16E+6	16E+8
	40	7	14E+6	14E+8
	60	5.5	16E+6	16E+8
	1E+2	4	20E+6	20E+8
	2E+2	3.5	19E+6	19E+8
	3E+2	3.5	16E+6	16E+8
	4E+2	3.5	14E+6	14E+8

<sup>a</sup>Value of quality factor (Q) at the point where the dose equivalent is maximum in a 30-centimeter diameter cylinder tissue-equivalent phantom.

<sup>b</sup>Monoenergetic neutrons incident normally on a 30-centimeter diameter cylinder tissue-equivalent phantom.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.16 Units of Activity. For purposes of these regulations, activity is expressed in the special unit of curie (Ci), or in the SI unit of becquerel (Bq) or their multiples, or disintegrations or transformations per unit of time.

1. One becquerel (Bq) = 1 disintegration or transformation per second (dps or tps).

2. One curie (Ci) =  $3.7E+10$  disintegrations or transformations per second (dps or tps) =  $3.7E+10$  becquerel (Bq) =  $2.22E+12$  disintegrations or transformations per minute (dpm or tpm).

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.17 Hearings and Judicial Review. In any proceedings under these regulations for granting, denying, suspending, revoking, or amending any license or registration, or for determining compliance with rules and regulations of the Agency, the Agency shall afford an opportunity for a hearing upon the request of any person whose interest may be affected by the proceeding, and shall admit any such person as a party to such a hearing. Any order or decision of the Agency regarding the granting, denying, suspending, revoking or amending any license or registration as provided by these regulations, shall be subject to review by writ of certiorari to the Circuit Court of Hinds County, Mississippi, at the instance of any party in interest. The filing of the appeal shall, in all cases, be with a bond, with security for all costs, as approved by the judge or clerk of the court, and shall operate as a stay of any such order or decision until the court directs otherwise. The court may review all the facts and, in disposing of the issue before it, may modify, affirm or reverse the order or decision of the Agency in whole or in part.

*SOURCE: Miss. Code Ann. §45-14-11*

Rule 1.1.18 Fees. The Agency is authorized to charge and collect fees in accordance with the categories established in Section 45-14-31 (Schedule of Fees) of the Mississippi Code of 1972, Annotated. For all categories not listed in the above, the Board of Health is authorized in accordance with Section 41-3-15 of the Mississippi Code of 1972, Annotated to charge and collect reasonable fees for radioactive material licenses, general licenses, x-ray registrations, x-ray services, reciprocity licenses and registrations, accelerators, neutron generators, nuclear reactors, and naturally occurring radioactive materials (NORM). The fees shall not exceed the estimated cost to the Agency for performing licensing, registration, inspection, and other regulatory duties.

1. Scope and Purpose
  - a. It is the purpose of these regulations to establish a fee for funding the monitoring, investigation, and other activities required to be conducted for the maintenance of a safe and healthful environment by the Mississippi State Department of Health in accordance with the Mississippi Radiation Protection Law of 1976 (Act). Fees are required for all licenses, registrations, and variances authorized by the Act.
2. Application Fees
  - a. Each applicant or amendment thereto for which a fee is prescribed shall be accompanied by a remittance in the full amount of the fee. No application or amendment thereto shall be accepted or processed prior to payment of



the full amount specified. No license, registration, or variance shall be issued, unless otherwise authorized by the administrative authority, until such check or draft has been accepted by the bank or drawee and the department's account has been credited with the amount of the fee in full.

- b. Payment of the prescribed annual fee does not automatically renew the license or registration, or approval for which the fee is paid. License renewal applications must be filed in accordance with Rule 1.2.6 and/or Subchapter 3 (10 CFR 30.37).

### 3. Annual Fees

- a. All activities for which an annual fee is provided shall be subject to the payment of such fee by the due date indicated on the invoice upon written application to, and approval of, the administrative authority, may be paid in installments over a period not to exceed six months, according to a payment schedule established by the administrative authority.

### 4. Reciprocal Agreements—Licenses and Registrants

- a. Persons operating within Mississippi under the provision of Rule 1.2.10 and/or Subchapter 3 (10 CFR 150.20) shall submit to the Mississippi State Department of Health Division of Radiological Health the annual fee of the applicable category before the first entry into the state. The fee will allow reciprocal recognition of the license or registration for one year from the date of receipt.

### 5. Determination of Fee

- a. The fee for each applicable category is listed in Appendix A.
- b. In the case of licenses that authorize more than one activity, the total fee will be for the activity assigned the higher fee.
- c. Licenses that are amended and that result in a change in the Appendix A category to a more costly license shall be assessed the entire fee for that type of license effective with the amendment.
- d. Electronic products that are in storage are subject to the same initial application fee and annual fee unless the X-ray unit is rendered permanently incapable of producing radiation and this fact is documented in writing to the Mississippi State Department of Health Division of Radiological Health.
- e. Electronic products that are no longer possessed by the registrant (e.g., sold, donated, or transferred) shall not be subject to the annual fee, provided written documentation is received by the invoice due date, which

includes the name address, and telephone number to whom possession was transferred.

6. Methods of Payment

- a. All payments made by check, draft, or money order shall be payable to the Mississippi State Department of Health, and mailed to the Department at the address provided on the invoice.
- b. Cash is not an acceptable form of payment.

7. Late Payment Fee

- a. Payments not received within 90 days of the due date will be charged a late payment fee. Any late payment fee shall be calculated from the due date indicated on the invoice.
- b. Payments not received by the department after 90 days from the due date will be assessed a 5 percent late fee on the original assessed fee as invoiced on the second billing.
- c. Payments not received by the department after 180 days from the due date will be assessed an additional 5 percent late fee on the original assessed fee as invoiced on the third and final billing.

8. Failure to Pay

- a. Failure to pay the prescribed application fee or annual fee as provided herein, within 180 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement action under the Act including, but not limited to, revocation or suspension of the applicable license, registration, or variance.

9. Effective Date

- a. The schedule of fees prescribed herein shall be effective on July 1, 2016.

10. Multiple Locations

- a. Those persons possessing licenses or registrations that name multiple locations where sources of radiation are stored, used, or otherwise possessed, shall be subject to an additional fee of 10 percent of the annual fee for each such location within the state of Mississippi, not to exceed an amount equal to the annual fee.

*SOURCE: Miss. Code Ann. §45-14-31*

<b>License Category 1</b>	<b>Application/Annual Fee</b>
Industrial Radiography	\$3500
Broad Scope Medical	\$3500
Nuclear Pharmacy	\$3500
NORM Decontamination	\$3500
General License Distribution	\$3500
Broad Scope Industrial	\$3500
Waste Compaction/transfer	\$3500
Waste Repackaging	\$3500
<b>License Category 2</b>	
Broad Scope Educational	\$1800
Environmental Tracer Studies	\$1800
Research & Development	\$1800
Educational Research & Development	\$1800
Medical Therapeutic	\$1800
Teletherapy	\$1800
Gamma-Knife/Stereotactic Radio Surgery	\$1800
Waste Receipt/Transfer	\$1800
<b>Specific License Fees</b>	
Civil Defense	\$575
Other Specific	\$690
Well logging	\$2875
Radioactive markers/collars	\$400
Irradiator (self-shielded)	\$1035
Irradiator (Panoramic pool or source exposed)	\$5750
Fixed In-Plant Gauges	\$1100
Pipe wall thickness Gauges	\$1100
Portable densitometer gauge	\$1100
Portable Industrial Gauge (Troxler)	\$690
Gauge Services (Repair, Installation, Removal, etc.)	\$1100
Medical Nuclear Medicine (Diagnostic only)	\$1265
Medical Eye Applicator/Bone Mineral Analyzer	\$575
Medical Mobile Nuclear Services	\$2300
Medical Satellite Facility	\$690
Gas Chromatograph	\$345
NORM Removal (Pipe cleaning)	\$1150
Waste Disposal	\$400000

**Specific License Fees (continued)**

Waste Incineration	\$6900
Nuclear Laundry	\$4600
Licenses that authorize the possession, use and/or processing of source material for extraction of metals other than uranium or thorium. (greater than or equal to 150 kilograms)	\$11,000.00
Licenses that authorize the possession, use and/or processing of source material for extraction of metals other than uranium or thorium. (less than 150 kilograms)	\$5,000.00
Reciprocal License Fee	Same as Fees Above
Each Additional Storage and/or Use Area	10% of Licensing Fee

**General Licenses**

Gauges/certain measuring	\$170.00
Gas Chromatographs	\$115.00
Static Eliminators/ion generating	\$115.00
Source material/Depleted Uranium	\$115.00
In Vitro/clinical	\$115.00
All other General Licenses	\$115.00

**Registrations**

	REGISTRATION
X-Ray Fees	FEE
Industrial/non-healing arts	\$100/tube
Educational	\$85/tube
Healing Arts/Veterinary	\$100/tube
X-Ray Industrial Radiography	\$690.00
X-Ray Services	\$345.00
Accelerators	\$860.00
Therapeutic X-Ray	\$500.00
Neutron Generators	\$600.00

**Nuclear Reactor**

Possessing a Nuclear Regulatory Commission license or permit authorizing a nuclear reactor in the State of Mississippi for commercial production of electrical energy utilizing special nuclear material sufficient to form a critical mass, shall pay an annual fee of \$126730.00 for each such reactor so licensed or permitted.	\$126730.00
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*SOURCE: Miss. Code Ann. §45-14-11*

### **Subchapter 3     Rules of General Applicability to Domestic Licensing of Byproduct Material**

Adoption by reference of the following sections in [10 Code of Federal Regulations Part 30](#), as they currently exist and as amended from time to time: 30.1, 30.2, 30.3, 30.4, 30.7, 30.9, 30.10, 30.11, 30.12, 30.13, 30.14, 30.15, 30.18, 30.19, 30.20, 30.21, 30.31, 30.32, 30.33, 30.34, 30.35, 30.36, 30.37, 30.38, 30.39, 30.41, 30.50, 30.51, 30.52, 30.53, 30.61, 30.62, 30.70, 30.71, and 30.72 and appendix A through appendix E to Part 30, with the following exceptions and additions:

1. Not adopted by reference is 10 Code of Federal Regulations 30.21(c), 30.34(d), 30.34(e)(1), 30.34(e)(3), and 30.41(b)(6).
2. Requirements in 10 Code of Federal Regulations Part 30 that apply to "byproduct material" also apply to naturally occurring (NORM) or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States Nuclear Regulatory Commission", "NRC regional office", or "administrator of the appropriate regional office" appear in 10 Code of Federal Regulations Part 30, substitute the words "Mississippi State Department of Health" except when used in 10 Code of Federal Regulations 30.12, 30.21(c), 30.34(h)(1), and 30.50(c)(1).
4. 10 Code of Federal Regulations 30.7 employee protection also applies to violations of Mississippi State Department of Health Regulations for the Control of Radiation Subchapter 10.
5. "Act" includes Mississippi Radiation Protection Law of 1976.
6. Mississippi State Department of Health form number 707 E , "Application for Radioactive Material License" (Medical Uses) or form number 844 E "Application for Radioactive Material License" (Other Uses), must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations Part 30.
7. Mississippi State Department of Health form number 935, "Notice to Employees", must be posted instead of United States Nuclear Regulatory Commission form 3 that is specified in 10 Code of Federal Regulations Part 30.
8. Mississippi State Department of Health radioactive material license form number 843 must be used instead of nuclear regulatory commission form 244 that is specified in 10 Code of Federal Regulations Part 30.
9. Mississippi State Department of Health form number 1061, "Certificate of Disposition of Radioactive Materials", must be used instead of NRC form 314 as specified in 10 Code of Federal Regulations Part 30.

10. For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

## Subchapter 4 Standards for Protection Against Radiation

Adoption by reference the following sections in [10 Code of Federal Regulations Part 20](#), as they currently exist and as amended from time to time: 20.1001, 20.1002, 20.1003, 20.1004, 20.1005, 20.1008, 20.1101, 20.1201, 20.1202, 20.1203, 20.1204, 20.1206, 20.1207, 20.1208, 20.1301, 20.1302, 20.1401, 20.1402, 20.1403, 20.1404, 20.1405, 20.1406, 20.1501, 20.1502, 20.1601, 20.1602, 20.1701, 20.1702, 20.1703, 20.1704, 20.1705, 20.1801, 20.1802, 20.1901, 20.1902, 20.1903, 20.1904, 20.1905, 20.1906, 20.2001, 20.2002, 20.2003, 20.2004, 20.2005, 20.2006, 20.2007, 20.2008, 20.2101, 20.2102, 20.2103, 20.2104, 20.2105, 20.2106, 20.2107, 20.2108, 20.2110, 20.2201, 20.2202, 20.2203, 20.2204, 20.2205, 20.2206, 20.2207, 20.2301, and 20.2302, Appendix A through C to Part 20, Appendix E to Part 20, and Appendix G to Part 20, with the following exceptions:

1. Not adopted by reference are 20.1406 (b), 20.1905(g), 20.2203(c), and 20.2206(a)(1), (a)(3), (a)(4), and (a)(5).
2. All of the requirements in Subchapter 4 apply to both licensees and registrants. A reference in 10 CFR Part 20 to "license" includes "registration", a reference to "licensee" includes "registrant", a reference to "licensed" includes "registered", a reference to "licensed material(s)" includes "registered source of radiation", and a reference to "licensed radioactive material" includes "registered source of radiation". "Registrant" means any person who is registered with the department and is legally obligated to register with the department pursuant to Regulations for Control of Radiation in Mississippi and Mississippi Code Annotated § 45-14-13. "Registration" means the notification of the Mississippi State Department of Health of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.2.5.
3. Where the words "NRC", "commission", "administrator of the appropriate NRC regional office", "administrator of the nearest commission regional office", or "NRC regional office" appear in 10 CFR Part 20, substitute the words " Mississippi State Department of Health".
4. Requirements in 10 CFR Part 20 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
5. "Act" includes the Mississippi Radiation Protection Law of 1976.
6. Mississippi State Department of Health form number 933, "cumulative occupational exposure history", must be used instead of NRC form 4 as specified in 10 CFR 20.
7. Mississippi State Department of Health form number 934, "occupational radiation exposure for a monitoring period", must be used instead of NRC form 5 as specified in 10 CFR 20.

8. NRC form 748 shall not be used as described in 10 CFR 20.
9. The words "in the Federal Register and" shall be omitted from 10 CFR 20.1405(b).

*SOURCE: Miss. Code Ann. §45-14-11*



## **Subchapter 5 Radiation Safety Requirements for Industrial Radiographic Operations**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 34](#), as they currently exist and as amended from time to time: 34.1, 34.3, 34.11, 34.13, 34.20, 34.21, 34.23, 34.25, 34.27, 34.29, 34.31, 34.33, 34.35, 34.41, 34.42, 34.43, 34.45, 34.46, 34.47, 34.49, 34.51, 34.53, 34.61, 34.63, 34.65, 34.67, 34.69, 34.71, 34.73, 34.75, 34.79, 34.81, 34.83, 34.85, 34.87, 34.89, 34.101, and 34.111 and Appendix A to Part 34, with the following exceptions:

1. All of the requirements in Subchapter 5 apply to both licensees and registrants. A reference in 10 Code of Federal Regulations Part 34 to "license" includes "registration", a reference to "licensee" includes "registrant", a reference to "licensed" includes "registered", and a reference to "licensed material" includes "registered source of radiation". "Registrant" means any person who is registered with the Mississippi State Department of Health and is legally obligated to register with the department pursuant to Section 45-14-13 of the Mississippi Code of 1972, Annotated. "Registration" means the notification of the Mississippi State Department of Health of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.2.5.
2. Where the words "NRC", "commission", "Nuclear Regulatory Commission", "United States Nuclear Regulatory Commission", "NRC Regional Administrator", "NRC regional office", "administrator of the appropriate Nuclear Regulatory Commission's regional office", or "NRC's Office of Nuclear Material Safety and Safeguards, Division of Industrial and Medical Nuclear Safety" appear in 10 Code of Federal Regulations Part 34, substitute the words "Mississippi State Department of Health".
3. Requirements in 10 Code of Federal Regulations Part 34 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
4. Mississippi State Department of Health form number 844E "Application for Radioactive Material License", or form number 802 "Application for Ionizing Radiation" must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations Part 34.
5. For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 7 Medical Use of Byproduct Material**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 35](#), as they currently exist and as amended from time to time: 35.1, 35.2, 35.5, 35.6, 35.7, 35.10, 35.11, 35.12, 35.13, 35.14, 35.15, 35.18, 35.19, 35.24, 35.26, 35.27, 35.40, 35.41, 35.49, 35.50, 35.51, 35.55, 35.57, 35.59, 35.60, 35.61, 35.63, 35.65, 35.67, 35.69, 35.70, 35.75, 35.80, 35.92, 35.100, 35.190, 35.200, 35.204, 35.290, 35.300, 35.310, 35.315, 35.390, 35.392, 35.394, 35.396, 35.400, 35.404, 35.406, 35.410, 35.415, 35.432, 35.433, 35.457, 35.490, 35.491, 35.500, 35.590, 35.600, 35.604, 35.605, 35.610, 35.615, 35.630, 35.632, 35.633, 35.635, 35.642, 35.643, 35.645, 35.647, 35.652, 35.655, 35.657, 35.690, 35.1000, 35.2024, 35.2026, 35.2040, 35.2041, 35.2060, 35.2061, 35.2063, 35.2067, 35.2070, 35.2075, 35.2080, 35.2092, 35.2204, 35.2310, 35.2404, 35.2406, 35.2432, 35.2433, 35.2605, 35.2610, 35.2630, 35.2632, 35.2642, 35.2643, 35.2645, 35.2647, 35.2652, 35.2655, 35.3045, 35.3047, and 35.3067, with the following exceptions:

1. Not adopted by reference are 35.11(c)(1) and 35.13(2)(1).
2. Requirements in 10 CFR Part 35 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "NRC regional office", or "director, office of nuclear material safety and safeguards" appear in 10 CFR Part 35, substitute the words "Mississippi State Department of Health".
4. "Act" includes the Mississippi Radiation Protection Law of 1976.
5. Mississippi State Department of Health form number 707 E , "Application for Radioactive Material License" (Medical Uses) or form number 844 E "Application for Radioactive Material License" (Other Uses), must be used instead of NRC form 313 as specified in 10 CFR Part 35.
6. For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 10            Notices, Instructions, and Reports to Workers - Inspections**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 19](#), as they currently exist and as amended from time to time: 19.1, 19.2, 19.3, 19.5, 19.11, 19.12, 19.13, 19.14, 19.15, 19.16, 19.17, 19.18, 19.20, 19.31, and 19.32, with the following exceptions:

1.        Not adopted by reference is 10 Code of Federal Regulations 19.14(a).
2.        All of the requirements in Subchapter 10 apply to both licensees and registrants. A reference in 10 Code of Federal Regulations Part 19 to "license" includes "registration", a reference to "licensee" includes "registrant", a reference to "licensed" includes "registered", and a reference to "licensed radioactive material" includes "registered source of radiation". "Registrant" means any person who is registered with the Mississippi State Department of Health and is legally obligated to register with the department pursuant to Section 45-14-13 of the Mississippi Code of 1972, Annotated. "Registration" means the notification of the Mississippi State Department of Health of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.2.5.
3.        Where the words "NRC", "commission", "nuclear regulatory commission", "United States Nuclear Regulatory Commission", "administrator of the appropriate commission regional office", "administrator of the appropriate regional office", "regional office administrator", "executive director for operations", "regional administrator of the appropriate United States Nuclear Regulatory Commission regional office", or "agency" appear in 10 Code of Federal Regulations Part 19, substitute the words "Mississippi State Department of Health".
4.        "Act" includes Mississippi Radiation Protection Law of 1976.
5.        Mississippi State Department of Health form number 935, "Notice to Employees", must be posted in place of United States Nuclear Regulatory Commission form 3 that is specified in 10 Code of Federal Regulations 19.
6.        Where 10 Code of Federal Regulations Part 19 specifies contacting the United States Nuclear Regulatory Commission, contact the Division of Radiological Health, Mississippi State Department of Health.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 12            Licenses and Radiation Safety Requirements for Irradiators**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 36](#), as they currently exist and as amended from time to time: 36.1, 36.2, 36.11, 36.13, 36.15, 36.17, 36.19, 36.21, 36.23, 36.25, 36.27, 36.29, 36.31, 36.33, 36.35, 36.37, 36.39, 36.41, 36.51, 36.53, 36.55, 36.57, 36.59, 36.61, 36.63, 36.65, 36.67, 36.69, 36.81, and 36.83, with the following exceptions:

1.        Requirements in 10 Code of Federal Regulations 36 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
2.        Where the words "NRC", "commission", or "NRC regional office" appear in 10 Code of Federal Regulations Part 36, substitute the words "Mississippi State Department of Health".
3.        "Act" includes Mississippi Radiation Protection Law of 1976.
4.        Mississippi State Department of Health form number 844E "Application for Radioactive Material License" must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations Part 39.
5.        For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

### **Subchapter 13            Packaging and Transportation of Radioactive Materials**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 71](#), as they currently exist and as amended from time to time: 71.0, 71.3, 71.4, 71.5, 71.7, 71.8, 71.9, 71.10, 71.12, 71.13, 71.14, 71.15, 71.17, 71.20, 71.21, 71.22, 71.23, 71.47, 71.81, 71.83, 71.85, 71.87, 71.88, 71.89, 71.91, 71.93, 71.95, 71.97, 71.101, 71.103, 71.105, 71.127, 71.129, 71.131, 71.133, 71.135, and 71.137 and appendix A to part 71, with the following exceptions:

1. Not adopted by reference are 10 Code of Federal Regulations 71.0(d), 71.14(b), and 71.101(c)(2), (d), and (e).
2. Requirements in 10 Code of Federal Regulations Part 71 that apply to "licensed material" or "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States Nuclear Regulatory Commission", or "administrator of the appropriate regional office" appear in 10 Code of Federal Regulations Part 71, substitute the words "Mississippi State Department of Health" except when used in 10 Code of Federal Regulations 71.5(b), 71.10, 71.17(b), (c)(3), and (e), 71.85(c), 71.88(a)(4), 71.93(c), 71.95, 71.97(c), (c)(3)(iii), and (f), and 71.101(c)(1).
4. 10 Code of Federal Regulations 71.9 employee protection also applies to violations of Mississippi State Department of Health Regulations for Control of Radiation in Mississippi Subchapter 10.
5. Mississippi State Department of Health form number 935, "notice to employees", must be posted instead of United States nuclear regulatory commission form 3 that is specified in 10 Code of Federal Regulations Part 71.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 14            Licenses and Radiation Safety Requirements for Well Logging**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 39](#), as they currently exist and as amended from time to time: 39.1, 39.2, 39.11, 39.13, 39.15, 39.17, 39.31, 39.33, 39.35, 39.37, 39.39, 39.41, 39.43, 39.45, 39.47, 39.49, 39.51, 39.53, 39.55, 39.61, 39.63, 39.65, 39.67, 39.69, 39.71, 39.73, 39.75, 39.77, and 39.91, with the following exceptions:

1. All of the requirements in Subchapter 14 apply to both licensees and registrants. A reference in 10 Code of Federal Regulations Part 39 to "license" includes "registration", a reference to "licensee" includes "registrant", a reference to "licensed" includes "registered", and a reference to "licensed material" includes "registered source of radiation". "Registrant" means any person who is registered with the Mississippi State Department of Health and is legally obligated to register with the department pursuant to Section 45-14-13 of the Mississippi Code of 1972, Annotated. "Registration" means the notification of the Mississippi State Department of Health of possession of a source of radiation and the furnishing of information with respect thereto, in accordance with Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.2.5.
2. Where the words "NRC", "commission", or "NRC regional office" appear in 10 Code of Federal Regulations Part 39, substitute the words "Mississippi State Department of Health".
3. Requirements in 10 Code of Federal Regulations Part 39 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
4. Mississippi State Department of Health form number 844E "Application for Radioactive Material License", or form number 802 "Application for Ionizing Radiation" must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations Part 39.
5. For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 16 Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 37](#), as they currently exist and as amended from time to time: 37.1, 37.3, 37.5, 37.11, 37.21, 37.23, 37.25, 37.27, 37.29, 37.31, 37.33, 37.41, 37.43, 37.45, 37.47, 37.49, 37.51, 37.53, 37.55, 37.57, 37.71, 37.73, 37.75, 37.77, 37.79, 37.81, 37.101, 37.103, 37.105, with the following exceptions:

1. Not incorporated by reference is 10 CFR 37.11(b) and 37.43(d)(9).
2. Where the word "NRC" appears in 10 CFR 37.31(d), 37.43(c)(3)(iii), 37.57(a), 37.57(c), 37.77 [with the exception of "the NRC's Web site" in 37.77(a)(1)], and 37.81(g), substitute the words " Division of Radiological Health, Mississippi State Department of Health".
3. Where the word "Commission" appears in 10 CFR 37.5 (definitions of "byproduct material" and "person"), 37.11(a), 37.43(a)(3), 37.43(c)(1)(ii), 37.101, 37.103, and 37.105, substitute the words " Division of Radiological Health, Mississippi State Department of Health".
4. Where the words "NRC regional office" appear in 10 CFR 37.41(a)(3) and 37.81, substitute the words " Director, Division of Radiological Health, Mississippi State Department of Health, 3150 Lawson Street, Jackson, Mississippi 39213".
5. Where the words "appropriate NRC regional office listed in § 30.6(a)(2) of this chapter" appear in 10 CFR 37.45(b), substitute the words " Director, Division of Radiological Health, Mississippi State Department of Health, 3150 Lawson Street, Jackson, Mississippi 39213".
6. Where the words "NRC's Operational Center (301-816-5100)" appear in 10 CFR 37.57(a), 37.57(b), and 37.81, substitute the words "Division of Radiological Health, Mississippi State Department of Health (601) 987-6893".
7. Where the words "NRC's Operational Center" appear in 10 CFR 37.81, substitute the words " Division of Radiological Health, Mississippi State Department of Health (601) 987-6893".
8. Where the words "NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001. The notification to the NRC may be made by email to RAMQC\_SHIPMENTS@nrc.gov or by fax to 301-816-5151" appear in 10 CFR 37.77(a)(1), substitute the words " Director, Division of Radiological Health, Mississippi State Department of Health, 3150 Lawson Street, Jackson, Mississippi 39213, (fax) 601-987-6887".

9. Where the words "NRC's Director of Nuclear Security, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" appear in 10 CFR 37.77(c)(1), substitute the words " Director, Division of Radiological Health, Mississippi State Department of Health, 3150 Lawson Street, Jackson, Mississippi 39213".
10. Where the words "NRC's Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" appear in 10 CFR 37.77(c)(2) and 37.77(d), substitute the words " Director, Division of Radiological Health, Mississippi State Department of Health, 3150 Lawson Street, Jackson, Mississippi 39213".
11. Where the words "Director, Division of Security Policy, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" appear in 10 CFR 37.81(g), substitute the words " Director, Division of Radiological Health, Mississippi State Department of Health, 3150 Lawson Street, Jackson, Mississippi 39213".
12. Requirements in 10 CFR Part 37 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
13. "Act" includes Mississippi Radiation Protection Law of 1976.

*SOURCE: Miss. Code Ann. §45-14-11*



## **Subchapter 17            Reciprocal Recognition of Licenses and Registrations**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 150](#), as they currently exist and as amended from time to time: 10 Code of Federal Regulations 150.1, 150.2, 150.3, 150.11, 150.20, 150.31, and 150.32 are adopted by reference as they exist as they exist in its most current revision, with the following exceptions:

1. Not adopted by reference is 10 Code of Federal Regulations 150.3 definition of foreign obligations.
2. Requirements in 10 Code of Federal Regulations 150 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "regional administrator", "United States Nuclear Regulatory Commission", "region", or "regional administrator of the United States Nuclear Regulatory Commission regional office" appear in 10 Code of Federal Regulations Part 150, substitute the words "Mississippi State Department of Health" except when used in section 150.5.
4. "Act" includes Mississippi Radiation Protection Law of 1976.
5. Mississippi State Department of Health form number 1043, "Notice of Intent" radioactive material (and radiation source registration) reciprocity request, must be used instead of nuclear regulatory commission form 241 as specified in 10 Code of Federal Regulations 150.
6. Where the words "non-agreement states", "areas of exclusive federal jurisdiction within agreement states", or "offshore waters" are used in 10 Code of Federal Regulations 150.20(a)(1)(i), (ii), (iii), (b), (b)(3), and (b)(4) substitute the words "state of Mississippi".
7. Where the words "agreement states license" are used in 10 Code of Federal Regulations 150.20 also add the words "nuclear regulatory commission license". Where the words "license issued by an agreement state" are used in 10 Code of Federal Regulations 150.20 also add the words "license issued by the nuclear regulatory commission". Where the words "license from an agreement state" are used in 10 Code of Federal Regulations 150.20 also add the words "license from the nuclear regulatory commission".
8. The words "for the first time in a calendar year" are stricken from 10 Code of Federal Regulations 150.20(b)(1).
9. For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 18            Domestic Licensing of Source Materials**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 40](#), as they currently exist and as amended from time to time: 40.1, 40.2, 40.3, 40.4, 40.7, 40.9, 40.10, 40.11, 40.12, 40.13, 40.14, 40.20, 40.21, 40.22, 40.25, 40.26, 40.31, 40.32, 40.34, 40.35, 40.36, 40.41, 40.42, 40.43, 40.44, 40.45, 40.46, 40.51, 40.60, 40.61, 40.62, 40.63, 40.65, and 40.71 and appendix A to Part 40, with the following exceptions:

1. Not adopted by reference are 10 Code of Federal Regulations 40.12(b); 40.31(j), (k), and (l); and 40.32(d) and (g) and those portions of paragraph (e) which apply to uranium enrichment and uranium hexafluoride facilities, 40.41(d),(e)(1), (e)(3), and (g); and 40.51(b)(6); and appendix A, criterion 11A through F and criterion 12.
2. Requirements in 10 Code of Federal Regulations Part 40 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States Nuclear Regulatory Commission", "NRC regional administrator", or "administrator of the appropriate regional office" appear in 10 Code of Federal Regulations part 40, substitute the words "Mississippi State Department of Health" except when used in 10 Code of Federal Regulations 40.11.
4. 10 Code of Federal Regulations Part 40 employee protection also applies to violations of Mississippi State Department of Health Regulations for the Control of Radiation Subchapter 10.
5. "Act" includes Mississippi Radiation Protection Law of 1976.
6. Mississippi State Department of Health form number 935, "Notice to Employees", must be posted instead of United States Nuclear Regulatory Commission form 3 that is specified in 10 Code of Federal Regulations Part 40.
7. Mississippi State Department of Health radioactive material license form number 843 must be used instead of Nuclear Regulatory Commission form 244 that is specified in 10 Code of Federal Regulations Part 40.
8. Mississippi State Department of Health form number 844 E "Application for Radioactive Material License" must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations Part 40.
9. Mississippi State Department of Health form number 1061, "Certificate of Disposition of Radioactive Materials", must be used instead of NRC form 314 as specified in 10 Code of Federal Regulations Part 40.
10. For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 19            Domestic Licensing of Special Nuclear Material**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 71](#), as they currently exist and as amended from time to time: 70.1, 70.2, 70.3, 70.4, 70.7, 70.9, 70.10, 70.11, 70.12, 70.17, 70.18, 70.19, 70.20, 70.21, 70.22, 70.23, 70.25, 70.31, 70.32, 70.33, 70.34, 70.35, 70.36, 70.38, 70.39, 70.41, 70.42, 70.50, 70.51, 70.56, and 70.81, with the following exceptions:

1. The following are not adopted by reference: 10 Code of Federal Regulations 70.1(c), (d), and (e); 70.20a; 70.20b; 70.21(a)(1), (c), (f), (g), and (h); 70.22(b), (c), (f), (g), (h), (i), (j), (k), (l), (m), and (n); 70.23(a)(6), (a)(7), (a)(8), (a)(9), (a)(10), (a)(11), (a)(12), and (b); 70.23a; 70.25(a)(1); 70.31(c), (d), and (e); 70.32(a)(1), (a)(4), (a)(5), (a)(6), (a)(7), (b)(1), (b)(3), (b)(4), (c), (d), (e), (f), (g), (h), (i), (j), and (k); 70.42(b)(6); and 70.51(c).
2. Requirements in 10 Code of Federal Regulations Part 70 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "nuclear regulatory commission", "United States Nuclear Regulatory Commission", "NRC regional administrator", "NRC regional office", "administrator of the appropriate nuclear regulatory commission's regional office", "administrator of the appropriate regional office", or "nuclear regulatory commission's office of nuclear material safety and safeguards, division of industrial and medical nuclear safety" appear in 10 Code of Federal Regulations Part 70, substitute the words "Mississippi State Department of Health".
4. 10 Code of Federal Regulations 70.7 employee protection also applies to violations of Mississippi State Department of Health Regulations for Control of Radiation in Mississippi Subchapter 10.
5. "Act" includes the Mississippi Radiation Protection Law of 1976.
6. Mississippi State Department of Health form number 844 E "Application for Radioactive Material License" (Other Uses), must be used instead of NRC form 313 as specified in 10 CFR Part 70.
7. Mississippi State Department of Health form number 935, "notice to employees", must be posted instead of United States nuclear regulatory commission form 3 that is specified in 10 Code of Federal Regulations Part 71.
8. For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 20            General Domestic Licenses for Byproduct Material**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 31](#), as they currently exist and as amended from time to time: 31.1, 31.2, 31.3, 31.5, 31.6, 31.7, 31.8, 31.9, 31.10, 31.11, and 31.12, with the following exceptions:

1.        Not adopted by reference are 10 Code of Federal Regulations 31.3(b) and (c) and 31.6(a).
2.        Requirements in 10 Code of Federal Regulations 31 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3.        Where the words "NRC", "commission", "nuclear regulatory commission", "United States Nuclear Regulatory Commission", or "director of nuclear material safety and safeguards" appear in 10 Code of Federal Regulations part 31, substitute the words "Mississippi State Department of Health" except when used in 10 Code of Federal Regulations 31.8(c)(2) and 31.11(d)(2).
4.        Mississippi State Department of Health radioactive material license form number 843 must be used instead of Nuclear Regulatory Commission form 244 that is specified in 10 Code of Federal Regulations Part 31.
5.        References in 10 Code of Federal Regulations 31 to specific licenses issued by an agreement state also include specific licenses issued by the United States Nuclear Regulatory Commission.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 21            Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 31](#), as they currently exist and as amended from time to time: 32.1, 32.2, 32.3, 32.13, 32.17, 32.24, 32.51, 32.51(a), 32.52, 32.53, 32.54, 32.55, 32.56, 32.57, 32.58, 32.59, 32.61, 32.62, 32.71, 32.72, 32.74, 32.101, 32.102, 32.103, 32.110, 32.201, 32.210, and 32.301, with the following exceptions:

1. Not adopted by reference is 10 Code of Federal Regulations 32.1(c)(1).
2. Requirements in 10 Code of Federal Regulations 32 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
3. Where the words "NRC", "commission", "NRC regional office", or "director of nuclear material safety and safeguards" appear in 10 Code of Federal Regulations Part 32, substitute the words "Mississippi State Department of Health" except when used in 32.51(a)(3)(iii), 32.54(a), 32.58, 32.71(d), 32.72(b)(5), and 32.74(a)(3).
4. Mississippi State Department of Health form number 844 E "Application for Radioactive Material License" must be used instead of NRC form 313 as specified in 10 Code of Federal Regulations Part 32.
5. For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*

## **Subchapter 22            Specific Domestic Licenses of Broad Scope for Byproduct Material**

Adoption by reference the following sections in [10 Code of Federal Regulations Part 33](#), as they currently exist and as amended from time to time: 10 CFR 33.1, 33.11, 33.12, 33.13, 33.14, 33.15, 33.16, 33.17, and 33.100, with the following exceptions:

1.        Requirements in 10 Code of Federal Regulations 33 that apply to "byproduct material" also apply to naturally occurring or accelerator-produced radioactive material.
2.        Where the word "commission" appears in 10 Code of Federal Regulations Part 33, substitute the words "Mississippi State Department of Health".
3.        "Act" includes the Mississippi Radiation Protection Law of 1976.
4.        Mississippi State Department of Health form number 844 E "Application for Radioactive Material License", must be used instead of NRC form 313 as specified in 10 CFR Part 33.
5.        For references to 10 Code of Federal Regulations Parts 170 and 171, see Mississippi State Department of Health Regulations for the Control of Radiation in Mississippi Rule 1.1.18 for applicable fee.

*SOURCE: Miss. Code Ann. §45-14-11*