CHAPTER 28

RADIATION PROTECTION PROGRAMS

Authority

N.J.S.A. 13:1B-1 et seq., 13:1D-1 et seq., and 26:2D-1 et seq.

Source and Effective Date

Effective: May 9, 2013.
See: 45 N.J.R. 1400(a).

Chapter Expiration Date

Chapter 28, Radiation Protection Programs, expires on May 9, 2020.

Chapter Historical Note

Chapter 28, Bureau of Radiation Protection, was filed and became effective prior to September 1, 1969.

Subchapter 19, Excessive Exposure to Ionizing Radiation, was adopted as R.1972 d.102, effective July 17, 1972. See: 4 N.J.R. 4(c).

Subchapter 25, Radiation Laboratory Fee Schedule, was adopted as R.1978 d.47, effective February 8, 1978. See: 9 N.J.R. 560(a), 10 N.J.R. 101(b).

Subchapter 24, Nuclear Medicine Technology, was adopted as R.1978 d.101, effective March 20, 1978. See: 9 N.J.R. 213(b), 10 N.J.R. 146(c).

Subchapter 21, Analytical X-Ray Installations, was adopted as R.1979 d.64, effective May 1, 1979. See: 10 N.J.R. 321(a), 11 N.J.R. 123(a).

Subchapter 41, Mercury Vapor Lamps, was adopted as R.1981 d.464, effective December 7, 1981. See: 13 N.J.R. 9(b), 13 N.J.R. 887(c).

Subchapter 1, General Provisions, and Subchapter 2, Use of Sources of Radiation and Special Exemptions, were repealed and Subchapter 1, General Provisions, and Subchapter 2, Use of Sources of Ionizing Radiation and Special Exemptions, were adopted as new rules by R.1983 d.592, effective December 19, 1983. See: 15 N.J.R. 391(a), 15 N.J.R. 2160(a).

Subchapter 42, Radio Frequency Radiation, was adopted as R.1984 d.337, effective August 6, 1984. See: 16 N.J.R. 7(a), 16 N.J.R. 2120(a).

Pursuant to Executive Order No. 66(1978), Subchapter 21, Analytical X-Ray Installations, was readopted as R.1984 d.353, effective August 6, 1984. See: 16 N.J.R. 1310(a), 16 N.J.R. 2276(a).

Subchapter 19, Medical Exposure to Ionizing Radiation by Radiologic Technologists, was adopted as R.1984 d.349, effective August 20, 1984. See: 16 N.J.R. 797(a), 16 N.J.R. 2271(a).

Pursuant to Executive Order No. 66(1978), Subchapter 24, Nuclear Medicine Technology, expired February 14, 1985.

Subchapter 24, Nuclear Medicine Technology, was adopted as new rules by R.1985 d.140, effective March 18, 1985. See: 17 N.J.R. 22(a), 17 N.J.R. 699(a).

Pursuant to Executive Order No. 66(1978), Subchapter 12, Transportation, was readopted as R.1985 d.387, effective August 5, 1985. See: 17 N.J.R. 1369(a), 17 N.J.R. 1884(a).

Subchapter 14, Therapeutic Installations, was repealed and Subchapter 14, Therapeutic Installations, was adopted as new rules by R.1987 d.258, effective July 6, 1987. See: 18 N.J.R. 1157(a), 19 N.J.R. 1196(c).

Subchapter 3, Registration: Radiation Protection Fee Schedule, was repealed and Subchapter 3, Registration of Ionizing Radiation-Producing Machines and Radioactive Materials, was adopted as new rules by R.1987 d.485, effective November 16, 1987. See: 19 N.J.R. 836(a), 19 N.J.R. 2167(a).

Subchapter 4, Licensing, was repealed and Subchapter 4, Licensing of Naturally Occurring and Accelerator Produced Radioactive Materials, was adopted as new rules by R.1987 d.483, effective November 16, 1987. See: 19 N.J.R. 1041(a), 19 N.J.R. 2171(a).

Subchapter 5, Controlled Areas, was repealed and Subchapter 5, Controlled Areas, was adopted as new rules by R.1987 d.484, effective November 16, 1987. See: 19 N.J.R. 839(a), 19 N.J.R. 2180(a).

Subchapter 25, Radiation Laboratory Fee Schedule, was repealed and Subchapter 25, Radiation Laboratory Fee Schedule, was adopted as new rules by R.1989 d.349, effective July 3, 1989. See: 21 N.J.R. 826(a), 21 N.J.R. 1904(a).

Pursuant to Executive Order No. 66(1978), Chapter 28, Bureau of Radiation Protection, was readopted as R.1990 d.427, effective July 30, 1990. See: 22 N.J.R. 890(a), 22 N.J.R. 2570(a).

Subchapter 16, Dental Radiographic Installations, was adopted as R.1990 d.538, effective November 5, 1990. See: 22 N.J.R. 894(a), 22 N.J.R. 3367(a).

Subchapter 27, Certification of Radon Testers and Mitigators, was adopted as R.1990 d.559, effective November 19, 1990 (operative January 13, 1991). See: 21 N.J.R. 3369(a), 22 N.J.R. 3516(a).

Subchapter 20, Particle Accelerators for Industrial and Research Use, was adopted as R.1992 d.52, effective February 3, 1992. See: 23 N.J.R. 1401(c), 24 N.J.R. 416(a).

Subchapter 15, Medical Diagnostic X-Ray Installations, was repealed and Subchapter 15, Medical Diagnostic X-Ray Installations, was adopted as new rules by R.1993 d.510, effective October 18, 1993. See: 25 N.J.R. 7(a), 25 N.J.R. 1039(a), 25 N.J.R. 4770(a), 25 N.J.R. 5148(a).

Subchapter 48, Fees for the Registration of Nonionizing Radiation Producing Sources, was adopted as R.1995 d.6, effective January 3, 1995. See: 25 N.J.R. 5422(a), 26 N.J.R. 793(b), 27 N.J.R. 99(a).

Pursuant to Executive Order No. 66(1978), Chapter 28, Bureau of Radiation Protection, was readopted as R.1995 d.457, effective July 28, 1995, and Subchapter 12, Transportation, was repealed by R.1995 d.457, effective August 21, 1995. See: 26 N.J.R. 4942(a), 27 N.J.R. 3157(b).

Pursuant to Executive Order No. 66(1978), Chapter 28, Bureau of Radiation Protection, was readopted as R.2000 d.120, effective February 25, 2000. As a part of R.2000 d.120, Chapter 28, Bureau of Radiation Protection, was renamed Radiation Protection Programs; and Subchapter 25, Radiation Laboratory Fee Schedule, was repealed, effective March 20, 2000. See: 31 N.J.R. 3007(a), 32 N.J.R. 1016(a).

Subchapter 24, Nuclear Medicine Technology, was repealed and Subchapter 24, Nuclear Medicine Technology, was adopted as new rules by R.2000 d.171, effective April 17, 2000. See: 31 N.J.R. 3012(a), 32 N.J.R. 1388(a).

Subchapter 12, Remediation Standards for Radioactive Materials, was adopted as R.2000 d.314, effective August 7, 2000. See: 31 N.J.R. 1723(a), 32 N.J.R. 2866(a).

Subchapter 22, Quality Assurance Programs for Medical Diagnostic X-ray Installations, was adopted as R.2001 d.37, effective January 16, 2001. See: 32 N.J.R. 1459(a), 33 N.J.R. 292(b).

Chapter 28, Radiation Protection Programs, was readopted as R.2005 d.239, effective June 21, 2005. See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).

Subchapter 19, Medical Exposure to Ionizing Radiation by Radiologic Technologists, was repealed and Subchapter 19, Radiologic Technology, was adopted as new rules by R.2008 d.234, effective August 18, 2008. See: 39 N.J.R. 4024(a), 40 N.J.R. 4790(b).

Chapter 28, Radiation Protection Programs, was amended by R.2008 d.281, effective September 15, 2008, operative upon publication of notice in the New Jersey Register by the Department of Environmental Protection that the U.S. Nuclear Regulatory Commission and the State of New Jersey have entered into an Agreement for the State to regulate source, certain special nuclear, and by-product material. See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b).

Subchapter 3, Registration of Ionizing Radiation-Producing Machines and Radioactive Materials, was renamed Registration of Ionizing Radiation-Producing Machines; Subchapter 4, Licensing of Naturally

Occurring or Accelerator Produced Radioactive Materials, was renamed Licensing of Diffuse Naturally Occurring or Diffuse Accelerator Produced Radioactive Materials; Subchapter 5, Controlled Areas, was renamed Controlled Areas for Registrants; Subchapter 6, Dose Limits, was repealed and Subchapter 6, Standards For Protection Against Radiation, was adopted as new rules; Subchapter 7, Radiation Surveys and Personnel Monitoring, was renamed Radiation Surveys and Personnel Monitoring for Registrants; Subchapter 8, Records, was renamed Records for Registrants; Subchapter 9, Radioactive Contamination Control, was repealed; Subchapter 10, Labeling, Posting, and Controls, was renamed Labeling, Posting, and Controls for Registrants; Subchapter 11, Disposal of Radioactive Materials, was repealed; Subchapter 13, Reports of Thefts and Radiation Incidents, was renamed Reports of Thefts and Radiation Incidents for Registrants; Subchapter 17, Industrial and Nonmedical Radiography, was renamed Industrial and Nonmedical X-Ray Radiography; and Subchapter 50, Notices, Instructions and Reports To Workers: Inspection and Investigations, Subchapter 51, Rules of General Applicability to Domestic Licensing of Byproduct Material, Subchapter 52, General Domestic Licenses for Byproduct Material, Subchapter 53, Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material, Subchapter 54, Specific Domestic Licenses of Broad Scope for Byproduct Material, Subchapter 55, Medical Use of Byproduct Material, Subchapter 56, Licenses and Radiation Safety Requirements for Irradiators, Subchapter 57, Licenses and Radiation Safety Requirements for Well Logging, Subchapter 58, Domestic Licensing of Source Material, Subchapter 59, Licensing Requirements for Land Disposal of Radioactive Waste, Subchapter 60, Domestic Licensing of Special Nuclear Material, Subchapter 61, Packaging and Transportation of Radioactive Material, Subchapter 62, Exemptions and Continued NRC Regulatory Authority in Agreement States and in Offshore Waters Under Section 274 (42 U.S.C. §2021), Subchapter 63, Licenses For Industrial Radiography Using Sealed Sources and Radiation Safety Requirements For Such Industrial Radiographic Operations, and Subchapter 64, Radioactive Materials License Fees were adopted as new rules, by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009). See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).

In accordance with N.J.S.A. 52:14B-5.1d, the expiration date of Chapter 28, Radiation Protection Programs, was extended by gubernatorial directive from June 21, 2010 to June 21, 2011. See: 42 N.J.R. 468(a).

In accordance with N.J.S.A. 52:14B-5.1b, Chapter 28, Radiation Protection Programs, was scheduled to expire on June 21, 2013. See: 43 N.J.R. 1203(a).

Chapter 28, Radiation Protection Programs, was readopted, effective May 9, 2013. See: Source and Effective Date.

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SUBCHAPTER 1. GENERAL PROVISIONS

7:28-1.1 Purpose and scope

(a) The purpose of this chapter is to prohibit and prevent the use or presence of unnecessary radiation in such manner as to be, or tend to be, injurious or dangerous to the health of the people or the industrial or agriculture potentials of the State, or to the ecology of the State and its wildlife.

(b) This chapter applies to all persons and persons licensed or registered by the Department to receive, possess, use, transfer, install, handle, transport, store, or dispose of ionizing radiation producing machines, non-ionizing radiation producing sources, diffuse technologically enhanced naturally occurring radioactive materials, diffuse accelerator-produced radioactive materials, by-product, source, or certain special nuclear material or to operate a production or utilization facility under N.J.A.C. 7:28-51 through 60. The limits in this chapter do not apply to doses due to background radiation, to exposure of patients to radiation for the purpose of medical diagnosis or therapy, to exposure from individuals administered radioactive material and released under N.J.A.C. 7:28-55.1, or to exposure from voluntary participation in medical research programs.

(c) The rules in this chapter establish standards for protection against ionizing radiation resulting from activities conducted under registrations or licenses issued by the Department.

(d) It is the purpose of the rules in this chapter to control the receipt, possession, use, transfer, and disposal of licensed material, ionizing radiation producing machines, or non-ionizing radiation producing sources by any licensee or registrant in such a manner that the total dose or exposure to an individual (including doses resulting from licensed and unlicensed radioactive material and from radiation sources other than background radiation) does not exceed the standards for protection against radiation prescribed in the rules in this chapter. However, nothing in this chapter shall be construed as limiting actions that may be necessary to protect health and safety.

Amended by R.2000 d.120, effective March 20, 2000.
See: 31 N.J.R. 3007(a), 32 N.J.R. 1016(a).
In (b), substituted a reference to the Radiation Protection Programs for a reference to the Bureau of Radiation Protection.
Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).
Deleted a reference to Radiation Protection Programs.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Rewrote (b); and added (c) and (d).

7:28-1.2 Construction

These rules shall be liberally construed to permit the Department and its various agencies to discharge their statutory functions.

Amended by R.2000 d.120, effective March 20, 2000.
See: 31 N.J.R. 3007(a), 32 N.J.R. 1016(a).
Substituted a reference to the Radiation Protection Programs for a reference to the Bureau of Radiation Protection.
Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).
Deleted a reference to Radiation Protection Programs.

7:28-1.3 Practice where rules do not govern

The Commission may rescind, amend or expand these rules from time to time, in accordance with N.J.S.A. 26:2D-7, Chapter 116, Public Laws of 1958, as amended.

7:28-1.4 Definitions

(a) The following words and terms, when used in this chapter, shall have the following meanings unless the context clearly indicates otherwise. Additional words and terms applicable to the chapter, incorporated from 10 CFR 20, are located at N.J.A.C. 7:28-6. Additional words and terms applicable to a specific subchapter only, will be found in that subchapter.

1. General Terms:

"Act" means the New Jersey Radiation Protection Act, Chapter 116, Public Laws of New Jersey 1958, as amended, cited as N.J.S.A. 26:2D-1 et seq.

"Agreement state" means any state with which the United States Nuclear Regulatory Commission has entered into an effective agreement under subsection 274b of the Atomic Energy Act of 1954, as amended.

"Annually" means occurring once per year at intervals of not less than 51 consecutive weeks nor more than 53 consecutive weeks.

"Area" means a bounded space such as a room, floor, building, plant or any designated geographical entity having physical or imaginary boundaries.

"Average dose rate" means an integrated or accumulated dose of radiation divided by the time over which the integration or accumulation took place or by a specified length of time.

"Commission" means the New Jersey Commission on Radiation Protection.

"Dead-man switch" means a switch which can be kept closed only when the operator applies continuous pressure.

"Department" means the New Jersey Department of Environmental Protection.

"Dose rate" means dose per unit time.

"Emergency exposure" means an exposure to radiation of an emergency worker during rescue or other emergency operations.

"Emergency worker" means a member of the owner's staff or of a public voluntary or governmental agency engaged in safety or other emergency operations.

"Exemption" means the administrative relief from the requirements of a substantive rule.

"Healing art" means the practice of any branch of medicine or surgery, any method of diagnosis of human ailment, disease, pain, injury, deformity, mental or physical condition.

"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 Department.

"Installation" means a radiation source, with its associated equipment, and the area in which it is housed.

"Instructed individual" means an individual who has received appropriate instructions as to the safe means and methods of performing work with or near radiation sources.

"Ionizing radiation" means any form of radiation which has the capability of ionizing the medium through which it is passing.

"Maximum permissible dose" means the maximum dose to which the body or a particular part of the body of a person shall be permitted to be exposed continuously or intermittently in a stated period of time.

"Nonionizing radiation" means any form of radiation which does not have the capability of ionizing the medium through which it is passing.

"Owner" means a person who has title to a radiation source or who possesses a radiation source as a lessee, bailee or pursuant to the terms of a license issued by the Department, by a Federal agency, or by any other state.

"Personnel-monitoring equipment" means devices designed to be worn or carried by an individual for the purpose of measuring the dose received; for example, film badges, pocket chambers, pocket dosimeters, and thermoluminescent dosimeters.

"Qualified individual" means an individual suited by training and experience to perform dependable radiation surveys and to determine the degree of radiation hazard.

"Radiation" includes any or all of the following: electromagnetic radiation including radiofrequency, microwave, infrared, visible, ultraviolet, x-ray, or gamma ray; sonic, infrasonic, or ultrasonic waves; and particle radiation including alphas, betas, high energy electrons, neutrons, protons, and other atomic or nuclear particles.

"Research and development" means theoretical analysis, exploration, or experimentation; or the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental production and testing of models, devices, equipment, materials and processes. "Research and development" does not include the internal or external administration of radioactive material, or of radiation, to human beings.

"Semi-annually" means occurring twice per year at intervals of not less than 25 consecutive weeks nor more than 27 consecutive weeks.

"Shielding" means any material introduced into the path of radiation to reduce the radiation level.

"Source of radiation" means a material, equipment or machine emitting or capable of emitting radiation.

"State" means the State of New Jersey.

"Unnecessary radiation" means the use of nonionizing or ionizing radiation in such a manner as to be, or tend to be, injurious or dangerous to the health of the people or the industrial or agricultural potentials of the State, as defined in the Radiation Protection Act.

"User" means any individual who personally utilizes or manipulates a source of radiation.

2. Ionizing radiation terms:

"Beam-monitoring device" means a device in the useful beam to indicate the relative output of a radiation-producing machine.

"Contamination" means radioactive contamination.

"Diagnostic-type protective tube housing" means x-ray tube housing so constructed that the leakage radiation at a distance of one meter from the target cannot exceed 100 milliroentgen in one hour when the tube is operated at any of its specified ratings.

"Diffuse" means a radionuclide that has become concentrated, but not for the purpose of use in commercial, medical, or research activities.

"Domestic sewage" means waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

"Domestic treatment works" or "DTW" means all publicly owned treatment works as well as any other treatment works processing primarily domestic sewage and pollutants together with any ground water, surface water, storm water or process wastewater that may be present.

"Human use" means the deliberate internal and external administration of radiation or radioactive material to human beings.

"Ionizing radiation-producing machine" means a machine or device capable of generating radiation, such as x-ray producing machines, particle accelerators, high-voltage rectifiers,

high-voltage projection equipment, electron microscopes and other types of high-voltage machines.

"Leakage radiation" means all radiation coming from within an ionizing radiation-producing machine except the useful beam.

"NARM" means any naturally occurring or accelerator produced radioactive material.

"NORM" means any naturally occurring radioactive material.

"Protective barrier" means a barrier of radiation-absorbing material used to reduce radiation exposure. The types of protective barriers are as follows:

1. "Primary protective barrier" means the material, excluding filters, intercepting the useful beam for protection purposes to reduce the radiation exposure so that it does not exceed two millirems per hour;

2. "Secondary protective barrier" means a barrier sufficient to attenuate the stray radiation to reduce radiation exposure so that it does not exceed two millirems per hour.

"Radioactive material" means a natural or artificially produced substance, solid, liquid or gas which emits ionizing radiation spontaneously.

"Radioactive materials registrant" means a person who is required to register radioactive byproduct material, source material or special nuclear material with the Department pursuant to this chapter.

"Radiographer" means any individual who is in attendance at a site where ionizing radiation-producing machines are being used and who uses or supervises their use in industrial radiographic operations and who is responsible to the owner for assuring compliance with the requirements of this chapter.

"Radiographer's assistant" means any individual who, under the personal supervision of a radiographer, uses ionizing radiation-producing machines, related handling tools, or survey instruments in industrial radiography.

"Radiography" means the examination of humans or animals, or of the structure of materials by non-destructive methods, utilizing ionizing radiation-producing machines. This term is not intended to apply to techniques such as electron microscopy or x-ray diffraction.

"Registrant" means a person who is required to register an ionizing radiation-producing machine source of radiation with the Department pursuant to this chapter.

"Roentgen" means the quantity of x or gamma radiation such that the associated corpuscular emission per .001293 grams of air produces, in air, ions carrying one electrostatic unit of quantity of electricity of either sign.

"Secondary protective barrier" means a barrier intended to attenuate ionizing radiation (other than the useful beam) to the required degree.

"Sewage sludge" means the solid, semi-solid, or liquid residue generated by the processes of a domestic treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and any material derived from sewage sludge.

"Shielded position" means the location within the radiographic-exposure device or storage container which by manufacturer's design, is the proper location for storage of the sealed source.

"Storage container" means a device in which radioactive materials or sources are transported or stored.

"Technologically enhanced naturally occurring radioactive materials" or "TENORM" means any naturally occurring radioactive materials whose radionuclide concentrations or potential for human exposure have been increased by any human activities.

"Total filtration" means the filtration produced by all materials inserted in the useful beam including the materials comprising the tube and its housing, any measured devices in the beam which act as a filter, and any material purposely placed in the beam as filters.

"Useful beam" means that part of the radiation beam which passes through the window, aperture cone or other collimating device of the tube housing.

"Water treatment facility" means an entity that applies a treatment device to drinking water for the purpose of reducing contaminants. The entity may be a community water system or non-community water system as defined by the EPA in 40 CFR 141.

"X-ray tube" means an electron tube which is designed for the conversion of electrical energy into x-ray energy.

3. Non-ionizing radiation terms:

"Electric field strength" means a field vector quantity that represents the force on an infinitesimal unit positive test charge at a point divided by that charge. The electric field strength is expressed in units of volts per meter (V/m).

"Far field" means a region associated with a radiating source or structure in which the field per unit solid angle is constant. In this region, the field has a predominantly plane wave character, that is, locally very uniform distributions of electric field strength and magnetic field strength in planes perpendicular to the direction of propagation. Generally, the far field region begins several wavelengths distant from the source.

"Fixed radio frequency device" means a device operating at a specific location for a period of 30 days or more.

"Magnetic field strength" means a field vector that is equal to the product of the magnetic flux density and the reciprocal of the permeability. Magnetic field strength is expressed in units of amperes per meter (A/m).

"Microwave oven" means an oven which is designed to heat, cook or dry food through the applications of radio frequency electromagnetic energy, and which is designed to operate at a frequency of 916 MHz or 2.45 GHz.

"Near field" means a region near a radiating source or structure in which the electric and magnetic fields do not have a substantially plane wave character, but vary considerably from point to point. The extent of the near field is only vaguely defined and depends on several factors the most important of which is the size of the radiating structure with respect to the wavelength of the emitted electromagnetic energy. In general, this distance extends to at least five wavelengths from the radiating device.

"Power density" means the rate of energy transported into a small sphere divided by the cross-sectional area of that sphere. Power density is expressed in units of watts per meter squared (W/m^2), or for convenience milliwatts per centimeter squared (mW/cm^2).

"Power density, plane wave equivalent" means a quantity that is associated with any electromagnetic wave that is equal in magnitude to the power density of a plane wave that has the same electric or magnetic field strength.

"Radiating device" means the antenna, leakage port, or any other part of a device that emits radio frequency electromagnetic energy.

"Radio frequency" means the frequency range of 300 kilohertz (kHz) to 100 gigahertz (GHz).

"Radio frequency device" means any stationary device, machine, equipment or installation which is capable of generating a radio frequency electromagnetic field. This does not include devices which are marketed as consumer products, including, but not limited to citizens band radios, remote controlled toys, remote controlled garage door openers, mobile radio transmitter under authorization of the Federal Communications Commission or any other device specifically exempted by the Commission on Radiation Protection as not presenting a potential hazard or harm to a worker or the public.

"Radio frequency protection guide (RFPG)" means the mean squared electric field strength, the mean squared magnetic field strength, and the equivalent plane wave power density which shall not be exceeded. The RFPG is an upper limit of exposure. Exposure to levels slightly in excess of the RFPG is not harmful, however, such exposure is not desirable. In all cases the exposure shall be reduced to values that are as low as reasonably achievable.

"Specific absorption rate (SAR)" means the time derivative of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dV) of a given density (ρ).

$$SAR = \frac{ddW}{dt\,dm} = \frac{ddW}{dt\rho dV}$$

The specific absorption rate is expressed in units of watts per kilogram (W/kg). In view of the proliferation of terms for describing the electromagnetic radiation conditions in biological materials and the discipline oriented interpretation of these terms, it is recommended that the name "specific absorption rate" be used for the quantity defined here, rather than such a name as "absorbed power density per unit mass".

Amended by R.1984 d.337, effective August 6, 1984.
See: 16 N.J.R. 7(a), 16 N.J.R. 2120(a).
"Fixed radio frequency device" added.
Amended by R.1985 d.502, effective October 7, 1985.
See: 17 N.J.R. 1626(a), 17 N.J.R. 2389(a).
Added definitions "shielded position" and "x-ray tube" in (b).
Amended by R.1992 d.52, effective February 3, 1992.
See: 23 N.J.R. 1401(c), 24 N.J.R. 416(a).
Added definitions "registrant" and "protective barrier"; deleted old definitions for "primary and secondary barriers" and replaced with new definitions.
Administrative Correction.
See: 25 N.J.R. 5665(a).
Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Rewrote the section.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Added new designation (a) to the introductory paragraph; rewrote the introductory paragraph of (a); recodified former (a) as (a)1; in (a)1, deleted definitions "Absorbed dose", "ALARA", "Background radiation", "Calendar quarter", "Controlled area", "Dose equivalent", "Occupational dose", "Person", "Radiation area", "State license", "State licensee" and "Survey", and added definitions "Annually" and "Semiannually"; recodified former (b) as (a)2; in (a)2, deleted definitions "Adult", "Airborne-radioactivity area", "Byproduct material", "Collective dose", "Committed dose equivalent", "Committed effective dose equivalent", "Curie", "Declared pregnant woman", "Deep-dose equivalent", "Dose or radiation dose", "Effective dose equivalent", "High radiation area", "License", "Licensee", "Medical radiographer", "Member of the public", "Minor", "Monitoring", "Public dose", "Rad", "Radiographic-exposure device", "Reference man", "Rem", "Residual", "Sanitary sewer system", "Sealed source", "Source material", "Special nuclear material in quantities not sufficient to form a critical mass", "Stochastic effects", "Total effective dose equivalent", "Unrefined and unprocessed ore", "Unrestricted area", "Very high radiation area", and "Weighting factor", and added definitions "Diffuse", "Domestic sewage", "Domestic treatment works" and "Sewage sludge", and in definition "Radioactive materials registrant", substituted "byproduct" for "by-product", in definition "Radiographer", substituted "radiation-producing machines" for "radiation sources", in definition "Radiographer's assistant", deleted "sources of ionizing radiation including" following "uses" and "radiographic-exposure devices, sealed sources or" following "machines,", in definition "Radiography", deleted "sealed sources or" following "utilizing", and in definition "Registrant", substituted "an ionizing radiation-producing" for "a"; and recodified former (c) as (a)3.

Authority

N.J.S.A. 13:1D-1 et seq., and specifically N.J.S.A. 26:2D-1 et seq.

7:28-1.5 Communications

(a) Communications concerning this chapter, or matters relating to radiation protection, may be addressed to the New Jersey Department of Environmental Protection, Radiation Protection and Release Prevention Element, PO Box 415, Trenton, New Jersey 08625-0415, Telephone: (609) 984-5636, Fax: (609) 633-2210. The physical location of the office is 25 Arctic Parkway, Ewing, New Jersey 08638. Applications and forms may be obtained from the website at http://www.state.nj.us/dep/rpp/index.htm.

(b) All emergency notification of incidents involving sources of radiation in this State shall be immediately reported to either one of the following agencies:

1. Radiation Protection and Release Prevention Element
New Jersey Department of Environmental Protection
25 Arctic Parkway
Ewing, NJ 08638
Telephone: (609) 984-5462
Hours: 8:00 A.M. to 5:00 P.M. daily, except Saturday, Sunday, and Holidays
After hours and weekends toll free: 1 (877) 927-6337 (1 (877) WARN-DEP)

2. Communications Officer
New Jersey State Police Office of Emergency Management
West Trenton, NJ 08628
Telephone: 609-882-2000
Hours: 24 hours, seven days.

Amended by R.2000 d.120, effective March 20, 2000.
See: 31 N.J.R. 3007(a), 32 N.J.R. 1016(a).
Rewrote the section.
Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).
Rewrote the section.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In (a), inserted ", Telephone: (609) 984-5636, Fax: (609) 633-2210" and inserted the last sentence; and in the last paragraph of (b)1, deleted ": (609) 292-7172 or" following "weekends".

SUBCHAPTER 2. USE OF SOURCES OF IONIZING RADIATION AND SPECIAL EXEMPTIONS

7:28-2.1 Authorized use of sources of ionizing radiation

(a) No person shall manufacture, use, operate, receive, possess, dispose, transfer, distribute or arrange for the distribution, sell, lease, install, transport or store sources of ionizing radiation in a manner other than prescribed in this chapter.

(b) No person shall cause, suffer, allow or permit any person to manufacture, use, operate, receive, possess, dispose, transfer, distribute or arrange for the distribution, sell, lease, install, transport or store sources of ionizing radiation in a manner other than prescribed in this chapter.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Inserted references to manufacture, distribution, sales, and leasing of sources of ionizing radiation throughout.

7:28-2.2 Supervision

(a) All sources of radiation, except those specifically exempted by other sections of this chapter, shall be under the supervision of at least one person who has demonstrated to the Department, or to any agency recognized by the Department, that the person's training and experience satisfies the Department requirements in the following areas of radiation protection:

1. Principles and practices of radiation protection;

2. X-ray and/or radioactivity measurements and monitoring techniques and instruments;

3. Mathematics and calculations basic to the use of radiation;

4. Biological effects of radiation; and

5. Any additional information, qualifications or experience as may be required by the Department.

(b) Any person applying to the Department for a State license, registration or certificate pursuant to this chapter, shall include in his application the name of at least one person who has satisfied the requirements of (a) above.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).

7:28-2.3 Instruction

(a) All persons working in or frequenting the vicinity of radiation-producing machines or radioactive material shall be instructed in the operation and/or use of the sources of radiation and the function and need of any applicable safeguards for the sources of radiation, in accordance with preestablished procedures that have been documented and are on file for review and inspection.

(b) All visitors to controlled areas shall be instructed or escorted to prevent unnecessary exposure to radiation. See N.J.A.C. 7:28-7.4(a)4 (Use of personnel monitoring equipment for visitors).

7:28-2.4 Unattended radiation sources

No person shall cause, suffer, allow or permit any source of radiation to remain unattended and accessible to unauthorized use.

7:28-2.5 Protective devices, systems or mechanisms

(a) No person shall operate a radiation-producing machine or utilize radioactive material whenever shielding for the source of radiation permits levels of radiation that exceed or have the potential to exceed the radiation limits specified

in N.J.A.C. 7:28-6.2 (Radiation levels outside controlled areas).

(b) No person shall operate a radiation-producing machine or utilize radioactive material whenever any device, system or mechanism designed for the protection against radiation required by this chapter has not been installed or is operating improperly.

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).

7:28-2.6 Intentional human irradiation

(a) Only persons licensed or otherwise permitted by law shall arrange for irradiation, application or administration of radiation to a human being or any part thereof, for the purpose of medical diagnosis or treatment.

(b) No provision in N.J.A.C. 7:28 regarding the treatment of human beings in the healing arts is intended to conflict with, supplant or supersede any requirement of the Medical Practices Act of New Jersey.

7:28-2.7 Exemptions for prevention or control of diseases

Rules contained in N.J.A.C. 7:28-6 or 7 and 7:28-13.2 (Reportable radiation incidents) shall not apply insofar as they relate to the intentional exposure of human beings to radiation for the purpose of diagnosis, treatment or investigation for the prevention or control of disease.

7:28-2.8 Special exemptions

The Department, upon application and a showing of hardship or compelling need, with the approval of the Commission, may grant an exemption from any requirement of these rules should it determine that such exemption will not result in any exposure to radiation in excess of the limits permitted by N.J.A.C. 7:28-6, Standards for Protection Against Radiation.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Substituted ", Dose Limits" for "Permissible Dose Rates, Radiation Levels and Concentrations" following the N.J.A.C. reference.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Substituted "Standards for Protection Against Radiation" for "Dose Limits".

7:28-2.9 Prohibited use

(a) Hand-held fluoroscopic screens shall not be used.

(b) Shoe-fitting fluoroscopic devices shall not be used.

7:28-2.10 Emergency precautions

(a) All owners of radioactive materials shall make a study of potential radiation hazards which may arise from radiation incidents, theft of radioactive materials, fires, floods, windstorms and other disasters within and near the installation with regard to the protection of the following:

1. Tenants and employees;
2. Emergency workers;
3. General public; and
4. Fire fighters and police.

(b) Such studies shall be made for radioactive materials on hand and shall be made in advance of the receipt of additional radioactive materials.

(c) An emergency operational plan, prepared from these studies, shall inform all persons concerned of their duties and responsibilities. This plan shall be made available to the Department on request.

7:28-2.11 Inspections

(a) All persons shall afford the Department an opportunity to inspect any source of radiation and the operation associated with the source of radiation as well as the facilities and premises where the source of radiation is being used or stored.

(b) Upon request of the Department all persons shall make available for inspection by the Department records kept pursuant to the rules in N.J.A.C. 7:28.

7:28-2.12 Tests

Upon request of the Department, all persons shall perform, and/or permit the Department to perform if it so desires, such tests as the Department deems appropriate or necessary for the administration of this chapter.

7:28-2.13 Violations

(a) The Department may obtain an injunction or other court order to prevent a violation of the provisions of:

1. The Act; or
2. A regulation or order issued pursuant to the Act.

(b) The Department may impose a civil penalty for a violation of:

1. Any provision of this chapter or order issued hereunder;
2. Any term, condition, or limitation of a license issued under this chapter; or
3. A revocation under N.J.A.C. 7:28-4.17, 51 through 60, or 63.

New Rule, R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).

SUBCHAPTER 3. REGISTRATION OF IONIZING RADIATION-PRODUCING MACHINES

7:28-3.1 Registration for possession of ionizing radiation-producing machines

(a) Any person, manufacturer, dealer or State, county or local government shall register with the Department every ionizing radiation-producing machine possessed within the State of New Jersey except as exempted by N.J.A.C. 7:28-3.2.

(b) Any person, manufacturer, dealer or State, county or local government shall apply for such registration within 30 days after taking possession, custody or control of ionizing radiation-producing machines on forms available from the Department.

(c) Any person, manufacturer, dealer or State, county or local government shall retain a copy of the registration at the facility for inspection by employees and the Department.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Registration for possession of ionizing radiation-producing machines and radioactive by-product material, source material and special nuclear material". In (a), deleted "all radioactive by-product material, source material, special nuclear material and" following "Department"; and in (b), deleted "radioactive by-product material, source material, special nuclear material and" preceding "ionizing".

7:28-3.2 Exemptions from registration for possession of ionizing radiation-producing machines

(a) Ionizing radiation-producing machines not being used in such a manner as to produce radiation, such as equipment in storage or on display, are exempt from registration. Machines that are operated while on display must meet the requirements of N.J.A.C. 7:28-3.1.

(b) Electrical equipment that is not primarily intended to produce radiation and that does not produce radiation greater than 0.5 millirem per hour at any readily accessible point five centimeters from its surface is exempt from registration. Production-testing facilities for such equipment shall not be exempt if any individual might receive a radiation dose exceeding the limits established in N.J.A.C. 7:28-6.2.

(c) Ionizing radiation-producing machines possessed, stored or used by agencies of the United States Government are exempt from registration.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Exemptions from registration for possession of ionizing radiation-producing machines and radioactive by-product material, source material and special nuclear material". Deleted (d) through (f).

7:28-3.3 Registration of ionizing radiation-producing machines

(a) Registration of ionizing radiation-producing machines shall pertain to each x-ray tube and its accompanying transformer, generator and control panel. If more than one x-ray tube operates off the same control panel, a separate registration is required for each tube.

(b) All registrations issued for ionizing radiation-producing machines shall expire on May 19 of each renewal year or shall expire one year from the date of initial application as determined by the Department. Registrations are renewable by the registrant for a period of one year upon payment of the fee provided in N.J.A.C. 7:28-3.12.

(c) Applications for new registrations for ionizing radiation producing machines will be accepted throughout the calendar year. The annual registration fee set forth in N.J.A.C. 7:28-3.12 shall be either prorated from the date the registration is issued until its expiration date on May 19 following the date of application, except that the Department may issue a registration for an additional year when an application is initially filed during the last three months of the registration year, or shall be assessed in full from the date of application until its expiration date one year later as determined by the Department.

7:28-3.4 Temporary registration of ionizing radiation-producing machines

(a) Any person, manufacturer, dealer or State, county or local government having temporary possession, custody or control of any ionizing radiation-producing machine for the purpose of replacing a registered machine that is out of service for a period longer than 60 days or for evaluation prior to purchase for a period longer than 60 days shall obtain a registration for temporary possession, custody or control of said machine.

(b) Application for temporary registration shall be submitted, on forms available from the Department, within 30 days after taking temporary possession, custody or control. No registration fee will be charged if the period of temporary possession, custody or control does not exceed 60 days. If the period exceeds 60 days, the annual registration fee for said machine set forth in N.J.A.C. 7:28-3.12 will be charged as of the date of application for the temporary registration.

(c) Within 30 days after relinquishment of temporary possession, custody or control of an ionizing radiation-producing machine, the registrant shall notify the Department in writing to terminate the temporary registration. The Department shall continue to charge a registration fee until a written notice of termination is received from the registrant.

7:28-3.5 (Reserved)

Amended by R.1991 d.417, effective August 5, 1991.
See: 22 N.J.R. 3300(a), 23 N.J.R. 2362(a).

(a) Added specific to a "specific" license; (c) deleted old text pertaining to fees and added new.
Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
In (b), inserted "radioactive materials" preceding reference to registrant throughout.
Repealed by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Registration of radioactive by-product material, source material and special nuclear material".

7:28-3.6 Transfer of registration for ionizing radiation-producing machines

Registrations for ionizing radiation-producing machines are not transferable.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Transfer of registration for possession of radioactive by-product material, source material, special nuclear material and ionizing radiation-producing machines". Deleted "possession of radioactive by-product material, source material, special nuclear material and" preceding "ionizing".

7:28-3.7 Amendments to registration of ionizing radiation-producing machines

(a) A registrant must notify the Department in writing within 30 days after any change in the following information on the application for registration of an ionizing radiation-producing machine:

1. Trade name;
2. X-ray tube capacity;
3. Type of housing;
4. Generator power;
5. Owner;
6. Co-owner;
7. Location of machine including address (number, street, city, zip code, county) and room number;
8. Machine category;
9. Manufacturer;
10. Control panel model number; and
11. Control console serial number.

7:28-3.8 (Reserved)

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Inserted "radioactive materials" preceding "registrant".
Repealed by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Amendments to registration of radioactive by-product material, source material or special nuclear material".

7:28-3.9 Sale, installation, relocation or disposal of ionizing radiation-producing machines

(a) Whenever a manufacturer or dealer sells, installs, relocates or disposes of an ionizing radiation-producing machine, said manufacturer, agent or dealer shall give written notification thereof to the Department within 30 days of such sale, installation, relocation or disposal. Said notification shall include the manufacturer, model and serial number of each component, name and address of the new owner(s), address of the relocated machine or details of the final disposition of the machine. Notification shall be submitted on a form available from the Department. The Department may accept the current form used by the United States Food and Drug Administration for Report of Assembly of a Diagnostic X-ray System if the Department determines that the information is complete and accurate.

(b) Whenever an owner sells, relocates or disposes of an ionizing radiation-producing machine, said owner shall:

1. Give written notification to the Department on forms available from the Department within 30 days of such sale, relocation or disposal;
2. Include the New Jersey registration number, manufacturer, model and serial number of each component;
3. Include the name and address of the new owner(s); and
4. Include the address of the relocated machine, or details of the final disposition of the machine; and
5. Be responsible for all fees until the written notification is received by the Department.

7:28-3.10 Denial of an application for registration, and suspension, modification, or revocation of registration of ionizing radiation-producing machines

(a) The Department, in addition to any penalties authorized by the Act, may deny an application for registration or suspend, modify or revoke a registration of ionizing radiation-producing machines by reason of amendments to the Act, adoption of rules, orders issued by the Department pursuant to said Act or if the applicant or registrant:

1. Fails to comply with any provisions of the Act or any rules promulgated pursuant thereto including the timely payment of registration fees;
2. Falsifies or makes misleading statements in the application for registration;
3. Falsifies or makes misleading statements in any documents which were utilized to obtain a registration;
4. Alters registration documents;
5. Falsifies required records;

6. Aids, abets, combines with, or conspires with any person for any purpose which will evade or be in violation of the provisions of the Act or any rules promulgated pursuant thereto; or

7. Allows a registration to be used by any person for any purpose which will evade or be in violation of the provisions of the Act or any rules promulgated pursuant thereto.

(b) Except as provided in N.J.S.A. 26:2D-12 in cases of emergency, no registration shall be denied, modified, suspended or revoked prior to a hearing conducted by the Office of Administrative Law pursuant to N.J.S.A. 52:14B-1 et seq., the Administrative Procedure Act, and N.J.A.C. 1:1-1 et seq., the Uniform Administrative Practice Rules, on the basis of a Notice of Intent filed by the Department stating the grounds for denial, suspension, modification or revocation of a registration.

(c) The Department may terminate a registration upon request submitted by the registrant to the Department in writing.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Inserted a reference to a radioactive materials registrant in (a) and (c).
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Denial of an application for registration, and suspension, modification, or revocation of registration of ionizing radiation-producing machines, radioactive by-product material, source material or special nuclear material". In the introductory paragraph of (a), deleted "radioactive by-product material, source material or special nuclear material" following "machines" and ", radioactive materials registrant" following "applicant"; and in (c), deleted "radioactive materials registrant or" preceding "registrant".

7:28-3.11 (Reserved)

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).
Repealed by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Table of radioactive materials and quantities exempt from registration".

7:28-3.12 Application and annual registration renewal fees for ionizing-radiation-producing machines

(a) On initial registration of each x-ray tube, each registrant shall pay an application fee of $40.00 plus the prorated portion of the applicable annual registration renewal fee set forth in (b), (c), (d) or (e) below for the remainder of the first year of registration.

(b) Each registrant of an ionizing-radiation-producing machine used in a dental facility shall pay:

1. The initial application and registration fees for each x-ray tube pursuant to (a) above, and

2. In each year after the expiration of the first year of registration established pursuant to (f) below, the annual registration renewal fee per x-ray tube as follows:

DENTAL FACILITIES

Machine Category and Description		Annual Registration Renewal Fee Per X-Ray Tube
01D	Dental Machine	$92

(c) Each registrant of an ionizing-radiation-producing machine used in a hospital facility shall pay:

1. The initial application and registration fees for each X-ray tube pursuant to (a) above; and

2. In each year after the expiration of the first year of registration establish pursuant to (f) below, the annual registration renewal fee per X-ray tube follows:

HOSPITAL FACILITIES

Machine Category and Description		Annual Registration Renewal Fee Per X-Ray Tube
01H	Dental Machine	$140.00
02H	Fixed Medical Radiographic Machine	208.00
03H	Mobile Medical Radiographic Machine	208.00
31H	Portable Medical Radiographic Machine (hand carried)	208.00
06H	Motor Vehicle Mounted Medical Radiographic Machine	208.00
04H	Fixed Medical Fluoroscopic Machine	163.00
05H	Mobile Medical Fluoroscopic Machine	163.00
32H	Portable Medical Fluoroscopic Machine (hand carried)	163.00
33H	Motor Vehicle Mounted Medical Fluroscopic Machine	163.00
07H	Fixed Medical Radiographic Fluoroscopic Machine	253.00
08H	Mobile Medical Radiographic Fluoroscopic Machine	253.00
34H	Portable Medical Radiographic Fluoroscopic Machine (hand carried)	253.00
35H	Motor Vehicle Mounted Medical Radiographic Fluoroscopic Machine	253.00
09H	CT Scan Machine	163.00
10H	Mammography Machine	298.00
36H	Motor Vehicle Mounted Mammography Machine	298.00
37H	Mobile Mammography Machine	298.00
44H	MQSA Mammography Machine	73.00
45H	MQSA Motor Vehicle Mounted Mammography Machine	73.00

Machine Category and Description		Annual Registration Renewal Fee Per X-Ray Tube
46H	MQSA Mobile Mammography Machine	73.00
11H	Medical Therapeutic Machine 60 kVp	253.00
12H	Medical Therapeutic Machine 61 kVp to 999 kVp	253.00
14H	Medical Therapeutic Machine 1 MeV and above	343.00
30H	Radiation Therapy Simulator Machine	208.00
38H	Biomedical (non-human) Research Machine	140.00
21H	Electron Microscope Machine	140.00
22H	Cabinet X-ray Machine	140.00
28H	Bone Densitometer Machine	118.00

(d) Each registrant of an ionizing-radiation-producing machine used in a non-hospital facility (including but not limited to doctors' offices, medical facilities, industrial facilities, schools, and government facilities) shall pay:

1. The initial application and registration fees for each X-ray tube pursuant to (a) above; and

2. In each year after the expiration of the first year of registration established pursuant to (f) below, the annual registration renewal fee per X-ray tube as follows:

NON-HOSPITAL FACILITIES

Machine Category and Description		Annual Registration Renewal Fee Per X-Ray Tube
01N	Dental Machine	$106.00
02N	Fixed Medical Radiographic Machine	140.00
03N	Mobile Medical Radiographic Machine	140.00
31N	Portable Medical Radiographic Machine (hand carried)	140.00
06N	Motor Vehicle Mounted Medical Radiographic Machine	140.00
04N	Fixed Medical Fluoroscopic Machine	118.00
05N	Mobile Medical Fluoroscopic Machine	118.00
32N	Portable Medical Fluoroscopic Machine (hand carried)	118.00
33N	Motor Vehicle Mounted Medical Fluoroscopic Machine	118.00
07N	Fixed Medical Radiographic Fluoroscopic Machine	163.00
08N	Mobile Medical Radiographic Fluoroscopic Machine	163.00
34N	Portable Medical Radiographic Fluoroscopic Machine (hand carried)	163.00
35N	Motor Vehicle Mounted Medical Radiographic Fluoroscopic Machine	163.00
09N	CT Scan Machine	118.00
10N	Mammography Machine	298.00
36N	Motor Vehicle Mounted Mammography Machine	298.00
37N	Mobile Mammography Machine	298.00
44N	MQSA Mammography Machine	73.00
45N	MQSA Motor Vehicle Mounted Mammography Machine	73.00
46N	MQSA Mobile Mammography Machine	73.00
11N	Medical Therapeutic Machine ≤60 kVp	118.00
12N	Medical Therapeutic Machine >61 kVp to 999 kVp	253.00
14N	Medical Therapeutic Machine 1 MeV and above	343.00
30N	Radiation Therapy Simulator Machine	208.00
38N	Biomedical (non-Human) Research Machine	140.00
17N	Industrial/Research Radiography Machine	151.00
39N	Portable Industrial Radiography Machine	151.00
40N	Shielded Room Radiography Machine	151.00
18N	Electron Beam Welder/Furnace Machine	129.00
19N	Analytical X-ray Machine ≤16 kVp	118.00
20N	Analytical X-ray Machine >16 kVp	118.00
21N	Electron Microscope Machine	106.00
22N	Cabinet X-ray Machine	106.00
23N	X-ray Baggage Machine	106.00
24N	Particle Accelerator Machine (non-medical use) ≤30 kVp	196.00
25N	Particle Accelerator Machine (non-medical use) >30 kVp	185.00
28N	Bone Densitometer Machine	95.00
41N	Machine not specifically listed above, ≤50 kVp	118.00
42N	Machine not specifically listed above, 51 kVp to 999 kVp	118.00
43N	Machine not specifically listed above, 1 MeV and above	140.00

(e) Each registrant of an ionizing-radiation-producing machine used in a veterinary facility shall pay:

1. The initial application and registration fees for each X-ray tube pursuant to (a) above, and

2. In each year after the expiration of the first year of registration established pursuant to (f) below, the annual registration renewal fee per X-ray tube as follows:

VETERINARY FACILITIES

Machine Source Category and Description		Annual Registration Renewal Fee Per X-Ray Tube
01V	Dental Machine	$ 86.00
02V	Fixed Medical Radiographic Machine	100.00
03V	Mobile Medical Radiographic Machine	100.00
31V	Portable Medical Radiographic Machine (hand carried)	100.00
04V	Fixed Medical Fluoroscopic Machine	91.00
05V	Mobile Medical Fluoroscopic Machine	91.00
32V	Portable Medical Fluoroscopic Machine (hand carried)	91.00
07V	Fixed medical Radiographic Fluoroscopic Machine	109.00
08V	Mobile Medical Radiographic Fluoroscopic Machine	109.00

(f) The expiration date of each year of registration shall be specified by the Department on the billing invoice sent to each registrant. The registration expiration date shall be based on the first letter of the registrant name as follows:

1. For a registrant whose name begins with A through F, the registration expiration date shall be August 31 of each calendar year;

2. For a registrant whose name begins with G through L, the registration expiration date shall be September 30 of each calendar year;

3. For a registrant whose name begins with M through R, the registration expiration date shall be October 31 of each calendar year; and

4. For a registrant whose name begins with S through Z, the registration expiration date shall be November 30 of each calendar year.

(g) Each registrant shall pay the initial registration application fee and annual registration renewal fee within 60 days of the date of the invoice billing issued by the Department. Any fee payment postmarked or handcarried to the Department after the invoice due date will be subject to a $25.00 per month late charge. If necessary, the Department will issue a second invoice. Late charges must be paid within 30 days of the second invoice. If a registrant fails to pay a fee by the original invoice due date, the registration of the ionizing-radiation-producing machine shall be deemed expired.

(h) When two or more X-ray tubes are operated from the same generator, the registrant shall pay an application fee and an annual registration renewal fee for each tube.

(i) Each registrant shall make payment only by check or money order made payable to "Treasurer, State of New Jersey." Each payment shall be accompanied by the invoice issued by the Department and shall be submitted to the address specified on the invoice: Department of Treasury, Division of Revenue, PO Box 417, Trenton, New Jersey 08646-0417.

(j) An application fee will not be charged for any machine registered pursuant to the Radiation Protection Code prior to November 16, 1987. However, the registrant shall pay the applicable annual registration renewal fee for any such machine.

Amended by R.1990 d.400, effective August 6, 1990.
See: 22 N.J.R. 1653(a), 22 N.J.R. 2302(a), 22 N.J.R. 2830(a).
Fees increased.
Repeal and New Rule, R.1995 d.49, effective January 17, 1995.
See: 26 N.J.R. 3797(a), 27 N.J.R. 336(a).
Formerly "Fees for initial registration application and annual registration of ionizing radiation-producing machines".
Amended by R.1999 d.369, effective October 18, 1999.
See: 31 N.J.R. 1130(a), 31 N.J.R. 3087(c).
In (c)2 and (d)2, inserted references to MQSA Mammography Machines, MQSA Motor Vehicle Mounted Mammography Machines and MQSA Mobile Mammography Machines.
Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).
In (i), amended the address.

7:28-3.13 (Reserved)

New Rule, R.1991 d.417, effective August 5, 1991.
See: 23 N.J.R. 3300(a), 23 N.J.R. 2362(a).
Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Rewrote (a); in (d), substituted "registration" for "license" following "annual" in the first sentence; added (h).
Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).
In (f), amended the address.
Repealed by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Fees for registration of radioactive by-product material, source material and special nuclear material".

SUBCHAPTER 4. LICENSING OF DIFFUSE NATURALLY OCCURRING OR DIFFUSE ACCELERATOR PRODUCED RADIOACTIVE MATERIALS

7:28-4.1 Scope and general provisions

(a) This subchapter shall apply to persons who manufacture, produce, transfer, distribute or arrange for the distribution, sell, lease, receive, acquire, own, possess or use any diffuse naturally occurring or diffuse accelerator produced radioactive materials, including TENORM, in this State.

(b) No person shall manufacture, produce, transfer, distribute or arrange for the distribution, sell, lease, receive, acquire, own, possess or use any diffuse naturally occurring or diffuse accelerator produced radioactive materials, including TENORM, in this State unless authorized by a specific license issued by the Department as provided by N.J.A.C. 7:28-4.7 and 4.8, a general license as provided in N.J.A.C.

7:28-4.5, or an exemption as provided in N.J.A.C. 7:28-4.3. Excepted from this provision are by-product, source and special nuclear materials.

(c) A person who sells, transfers, distributes or arranges for the distribution of a device containing diffuse naturally occurring or diffuse accelerator produced radioactive materials manufactured by another person, but which is sold, transferred or distributed under its own name, shall obtain a license in accordance with this subchapter.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Rewrote the section.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Inserted "diffuse" throughout; in (b), deleted "State" following "specific" and "general" and substituted "by-product" for "byproduct"; and in (c), deleted "State" preceding "license".

7:28-4.2 Recognition of licenses for diffuse NARM from other jurisdictions

(a) Any person who possesses a specific license or equivalent licensing document issued by a Federal agency or any other state is granted a general license in this State provided that the provisions of (b)1 through 4 below have been met.

(b) Any person who possesses a specific license or equivalent licensing document issued by a Federal agency or any other state may, pursuant to the general license in (a) above, transport, receive, possess, or use the radioactive materials specified in such license within this State for a period not in excess of 180 days in any period of 12 consecutive months without obtaining a specific license from the Department provided that:

1. The license does not limit the activity to specified installations or locations;

2. The licensee notifies the Department in writing at least three days prior to the time that such radioactive material is brought into this State. Such notification shall indicate the location, period, and type of proposed possession and use within this State, and shall be accompanied by a copy of the pertinent licensing document. If in a specific case the three-day period would impose an undue hardship on the user, he may, upon application to the Department, obtain permission to proceed sooner;

3. The licensee complies with all the terms and conditions of the license;

4. The licensee provides such other information as the Department may request; and

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

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
In (b), substituted "product" for "produce" preceding "distributed".
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Recognition of licenses from other jurisdictions". Rewrote the section.

7:28-4.3 Exemption from requirement for a license for manufacture, production, transfer, distribution or arrangement of distribution, sale, lease, receipt, acquisition, ownership, possession or use of all diffuse naturally occurring or diffuse accelerator produced radioactive materials

(a) A person shall be exempt from the requirement to obtain a license for the following activities:

1. The person is a plant or laboratory owned by or operated on behalf of a Federal agency;

2. The person is a common or contract carrier and is transporting or storing radioactive materials covered by N.J.A.C. 7:28-4.7 in the regular course of carriage for another, or storage incident thereto;

3. The person manufactures, produces, receives, possesses, uses, transfers, distributes or arranges for the distribution, sells, leases, owns or acquires products or materials containing diffuse naturally occurring or diffuse accelerator produced radioactive materials in concentrations not in excess of those exempted in (b) below;

4. The person owns or possesses naturally occurring radioactive materials, occurring in natural abundance and which are not technologically enhanced naturally occurring radioactive materials, whether intentionally or unintentionally;

5. The person who receives, owns, possesses, uses, processes, transfers, distributes, arranges for the distribution, sells or leases technologically enhanced naturally occurring radioactive materials (TENORM) if the TENORM contain any combination of Radium-226 and Radium-228 at concentrations less than five pCi/g (185 Bq/kg) (dry weight) above background and less than the quantity listed in (c) below;

6. The person owns property where radon gas is being expelled to the outside atmosphere as part of a radon remediation system installed in accordance with the provisions of N.J.A.C. 7:28-27;

7. The person owns a domestic treatment works where sewage sludge is present which may contain TENORM from the separation of liquids and solids which is the outcome of normal operations of the domestic treatment works;

8. The person is involved with the distribution, including custom blending, possession, and use of fertilizers containing TENORM; and

9. The person owns property where residual contamination remaining at the site was remediated under the Radiation Protection Act (N.J.S.A. 26:2D-1 et seq.) and/or the other authorities listed in the Soil Remediation Standards at N.J.A.C. 7:28-12.2(a). Such residual concentrations may be greater than the limits specified in (a)5 above, but be under restricted conditions imposed by the Department (such as engineering and institutional controls), and meet the dose criteria specified in N.J.A.C. 7:28-12.8.

(b) The following concentrations of diffuse naturally occurring radioactive materials, including TENORM, and diffuse accelerator-produced radioactive materials, when obtained from naturally occurring materials or when produced by an accelerator are exempt from the requirements for a license:

	Exempt Concentrations	
	Column 1	Column 2
	Gas	Liq. & solid
	concentration	concentration
Element (nuclide)	(uCi/ml)	(uCi/ml)***
Argon (Ar-37)	1×10^{-3}	—
Arsenic (As-73)	—	5×10^{-3}
(As-74)	—	5×10^{-4}
Barium (Ba-131)	—	2×10^{-3}
Beryllium (Be-7)	—	2×10^{-2}
Bismuth (Bi-206)	—	4×10^{-4}
(Bi-207)*	—	2×10^{-4}
Cadmium (Cd-109)	—	2×10^{-3}
Chromium (Cr-51)	—	2×10^{-2}
Cobalt (Co-56)*	—	1.2×10^{-4}
(Co-57)	—	5×10^{-3}
(Co-58)	—	1×10^{-3}
Dysprosium (Dy-159)*	—	4×10^{-3}
Fluorine (F-18)	2×10^{-6}	8×10^{-3}
Gallium (Ga-67)*	—	2×10^{-3}
Germanium (Ge-68)*	—	1.2×10^{-3}
(Ge-71)	—	2×10^{-2}
Gold (Au-196)	—	2×10^{-3}
(Au-199)	—	2×10^{-3}
Indium (In-111)*	—	1.2×10^{-3}
(In-113m)	—	1×10^{-2}
Iodine (I-123)*	4×10^{-7}	2×10^{-3}
(I-124)*	8×10^{-9}	4×10^{-5}
Iridium (Ir-190)	—	2×10^{-3}
(Ir-192)	—	4×10^{-4}
Iron (Fe-55)	—	8×10^{-3}
Krypton (Kr-85m)	1×10^{-6}	—
Lead (Pb-201)*	—	2×10^{-3}
(Pb-203)	—	4×10^{-3}
(Pb-210)*	—	2×10^{-7}
Manganese (Mn-52)	—	3×10^{-4}
(Mn-54)	—	1×10^{-3}
Mercury (Hg-197m)	—	2×10^{-3}
(Hg-197)	—	3×10^{-3}
Neptunium (Np-237)*	—	4×10^{-7}
Palladium (Pd-103)	—	3×10^{-3}
Platinum (Pt-191)	—	1×10^{-3}
(Pt-193m)	—	1×10^{-2}
(Pt-197m)	—	1×10^{-2}
Radium (Ra-226)*	—	1.2×10^{-6}
(Ra-228)	—	4×10^{-11}
Rhenium (Re-183)	—	6×10^{-3}
Rubidium (Rb-81)*	—	1×10^{-2}
(Rb-83)*	—	1.8×10^{-4}
(Rb-84)*	—	1.4×10^{-4}
Ruthenium (Ru-97)	—	4×10^{-4}
Samarium (Sm-153)	—	8×10^{-4}
Scandium (Sc-48)	—	3×10^{-4}
Silver (Ag-105)	—	1×10^{-3}
(Ag-111)	—	4×10^{-4}
Sodium (Na-22)*	—	1.2×10^{-4}
Tantalum (Ta-179)*	—	6×10^{-3}
Technetium (Tc-96)	—	1×10^{-3}
Thallium (Tl-200)	—	4×10^{-3}
(Tl-201)	—	3×10^{-3}
(Tl-202)	—	1×10^{-3}
**Thorium (Th-228)*	—	4×10^{-6}
(Th-230)*	—	2×10^{-6}
(Th-232)*	—	6×10^{-7}
(Th-234)*	—	1×10^{-4}
Thulium (Tm-170)	—	5×10^{-4}
Tungsten (Wolfram)	—	4×10^{-3}
(W-181)		
**Uranium (U-234)*	—	6×10^{-6}
(U-235)*	—	6×10^{-6}
(U-238)*	—	6×10^{-6}
Vanadium (V-48)	—	3×10^{-4}
Yttrium (Y-88)*	—	2×10^{-4}
(Y-92)	—	6×10^{-4}
Zinc (Zn-69m)	—	7×10^{-4}
Any other beta/gamma emitter with half-life < 3 years	1×10^{-10}	1×10^{-6}

*The values for those diffuse naturally occurring radioactive materials and diffuse accelerator produced radioactive materials, including TENORM, that are followed by a single asterisk(*) are based upon multiplying 20 times the most restrictive release concentrations specified in 10 CFR 20 Appendix B, Table 2, Columns 1 (air) and 2 (water).

**These concentrations do not apply to source material for thorium and uranium.

***uCi/g for solids

1. Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in this section, the value given is that of the parent isotope and takes into account the radioactivity of the daughters.

2. For purposes of N.J.A.C. 7:28-4.3(a)3, where a combination of isotopes is involved, the limit for the combination shall be computed as follows:

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

Example:

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

(c) If a person manufactures, produces, transfers, distributes or arranges for the distribution, sells, leases, receives, acquires, owns, possesses or uses diffuse naturally occurring radioactive materials or diffuse accelerator produced radioactive materials, including TENORM, in quantities less than those listed in N.J.A.C. 7:28-4.5(c), they are exempt from the requirement for a license.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Rewrote the section.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Exemption from requirement for a State license for manufacture, production, transfer, distribution or arrangement of distribution, sale, lease, receipt, acquisition, ownership, possession or use of all naturally occurring or accelerator produced radioactive materials". In the introductory paragraph of (a), deleted "State" preceding "license"; in (a)3, inserted "diffuse" twice, deleted the N.J.A.C. reference and inserted "below"; deleted former (a)4; recodified former (a)5 through (a)10 as (a)4 through (a)9; in (a)7, substituted "domestic treatment works" for "sanitary sewer system" twice and substituted "sewage sludge is" for "residuals are"; in (a)9, substituted "(a)5" for "(a)6" and updated the N.J.A.C. reference; in the introductory paragraph of (b), substituted "diffuse naturally occurring radioactive materials" for "NARM" and inserted "and diffuse accelerator-produced radioactive materials," and deleted "State" preceding "license"; in Column 2 of the "Exempt Concentrations" table in (b), substituted three asterisks for four asterisks following "(uCi/ml)"; in the first note following the "Exempt Concentrations" table in (b), substituted "diffuse naturally occurring radioactive materials and diffuse accelerator produced radioactive materials" for "NARM nuclides"; in the second note following the "Exempt Concentrations" table in (b), deleted "as defined by the NRC" following "material"; and in (c), substituted "diffuse naturally occurring radioactive materials or diffuse accelerator produced radioactive materials" for "NARM".

7:28-4.4 Types of licenses for manufacture, production, transfer, distribution or arrangement for distribution, sale, lease, receipt, acquisition, ownership, possession or use of all diffuse naturally occurring or diffuse accelerator produced radioactive materials

(a) General licenses described in N.J.A.C. 7:28-4.5 are effective without the filing of an application with the Department or the issuance of licensing documents to particular persons.

(b) Specific licenses are issued to named persons upon application filed pursuant to the requirements of this subchapter.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Types of licenses for manufacture, production, transfer, distribution or arrangement for distribution, sale, lease, receipt, acquisition, ownership, possession or use of all naturally occurring or accelerator produced radioactive materials". In (a), deleted "State" following "General"; and in (b), deleted "State" following "Specific".

7:28-4.5 General licenses for the transfer, distribution or arrangement for distribution, sale, lease, receipt, acquisition, ownership, possession or use of diffuse naturally occurring or diffuse accelerator produced radioactive materials and certain devices and equipment

(a) Any person who uses, transfers, distributes or arranges for the distribution, sells, leases, receives, acquires, owns or possesses the following devices and equipment incorporating diffuse naturally occurring or diffuse accelerator produced radioactive material, when manufactured, tested and labeled by the manufacturer in accordance with the specifications contained in a specific license issued by the Department, or a specific license of a Federal agency or any other state, shall be deemed to have a general license:

1. Devices designed for use as static eliminators and which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of Polonium 210 or 50 microcuries of Radium 226 per device;

2. Spark gap tubes and electronic tubes which contain radioactive material consisting of not more than one microcurie of Radium per tube;

3. Devices designed for ionizing of air and which contain, as a sealed source or sources, radioactive material consisting of a total of not more than 500 microcuries of Polonium 210 or 50 microcuries of Radium 226 per device.

(b) The devices described in (a) above shall not be transferred, abandoned or disposed of except by transfer to a person duly authorized to receive such device by a specific license issued by the Department, a Federal agency, or any other state.

(c) The following quantities of radioactive substances, when obtained from diffuse naturally occurring materials or diffuse accelerator produced radioactive materials, are generally licensed provided that no person shall at any one time possess or use more than a total of 10 such quantities:

Radioactive Material	Column A Not as a Sealed Source (microcuries)	Column B As a Sealed Source (microcuries)
Beryllium (Be-7)	50	50
Bismuth 207 (Bi-207)	1	10
Cadmium 109-Silver 109 (Cd 109 + Ag 109)	10	10
Cerium 141 (Ce-141)	1	10
Chromium 51 (Cr-51)	50	50
Cobalt 57 (Co-57)	20	20
Germanium 68 (Ge-68)	1	10
Iron 55 (Fe-55)	50	50
Manganese 52 (Mn-52)	1	10
Polonium 210 (Po-210)	0.1	1
Radium and daughters	0.1	1
Sodium 22 (Na-22)	10	10
Vanadium 48 (V-48)	1	10
Zinc 65 (Zn-65)	10	10
Beta and/or gamma emitting radioactive material not listed above	1	10

(d) There are no generally licensed quantities for alpha-emitting materials other than those set forth in N.J.A.C. 7:28-4.5(c).

(e) Any person who owns, receives, acquires, possesses or uses radioactive material when contained in a device designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition or for producing light or an ionized atmosphere, when such devices are manufactured in accordance with the specifications contained in a specific license authorizing distribution under a general license issued to the supplier by the Department, a Federal agency, or any other state, is deemed to have a general State license, provided that:

1. The device is labeled in accordance with the provisions of the specific license which authorizes the distribution of the devices;

2. The device bears a label containing the following or a substantially similar statement:

"This device contains radioactive material and has been manufactured for distribution as a generally licensed device pursuant to

_____
(identify appropriate section of the rules)

_____
(name of licensing agency and state)

License No. _____ by _____ (name of supplier)

This device shall not be transferred, abandoned or disposed of except by transfer to a person duly authorized to receive such device by a specific license issued by the Department, a Federal agency, or any other state.

Removal of this label is prohibited."; and

3. The devices requiring special installation shall be installed on the premises of the general licensee by a person authorized to install the devices under a specific license issued to the installer by the Department, a Federal agency, or any other state.

(f) Persons who transfer, distribute or arrange for the distribution, sell, lease, receive, acquire, own, possess or use items and quantities of radioactive materials set forth in (a) and (c) above pursuant to a general license shall not:

1. Effect an increase in the radioactivity of such scheduled items or quantities by adding other radioactive material thereto, by combining radioactive material from two or more such items or quantities, or by altering them in any other manner so as to increase the rate of radiation emission;

2. Administer or direct the administration of the scheduled items or quantities or any part thereof to a human being, either externally or internally, for any purpose, including, but not limited to, diagnostic, therapeutic and research purposes;

3. Add or direct the addition of the scheduled items or quantities or any part thereof to any food, beverage, cosmetic, drug or other product designed for ingestion or inhalation by, or application to, a human being; or

4. Include the scheduled items or quantities or any part thereof in any device, instrument, apparatus, including component parts and accessories intended for use in diagnosis, treatment or prevention of disease in human beings or animals or otherwise intended to affect the structure or any function of the body of human beings or animals.

(g) Persons who receive, acquire, possess or use a device pursuant to a general license specified in (a) above:

1. Shall not transfer, abandon or dispose of the device except by transfer to a person duly authorized to receive such device by a specific license issued by the Department, a Federal agency, or any other state;

2. Shall assure that all labels affixed to the device at the time of receipt and bearing the statement, "Removal of this label is prohibited", are maintained thereon and shall comply with the instructions contained in such labels;

3. Shall have the device tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at intervals not to exceed six months;

4. Shall have the tests required by N.J.A.C. 7:28-4.5(g)3 and all other services involving the radioactive material, its shielding and containment, performed by the supplier or other person duly authorized by a specific license issued by the Department, a Federal agency, or any other state to manufacture, install or service such devices;

5. Shall maintain records of all tests performed on the devices as required under N.J.A.C. 7:28-4.5(g)3, including the dates and results of the tests and the names and addresses of the persons conducting the tests;

6. Upon the occurrence of a failure of or damage to, or any indication of a possible failure of or damage to, the shielding or containment of the radioactive material or the on-off mechanism or indicator, shall immediately suspend operation of the device until it has been either:

i. Repaired by a supplier, manufacturer, or other person holding a specific license issued by the Department, a Federal agency, or any other state to manufacture, install or service such devices; or

ii. Disposed of by transfer to a person holding a specific license issued by the Department, a Federal agency, or any other state to receive the radioactive material contained in the device; and

7. Shall be exempt from the requirements of this subchapter, except the provisions of N.J.A.C. 7:28-4.4(a), 4.9, 4.14, 4.19, records of surveys, records of radioactive materials, and reports of theft, loss, or incidents pursuant to the requirements in N.J.A.C. 7:28-6, Standards for Protection Against Radiation.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Rewrote the section.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "General licenses for the transfer, distribution or arrangement for distribution, sale, lease, receipt, acquisition, ownership, possession or use of naturally occurring or accelerator produced radioactive materials and certain devices and equipment". In the introductory paragraph of (a), inserted "diffuse" twice and deleted "State" following "general"; in (b), deleted "State" following "specific"; in (c), inserted "diffuse" following "from" and substituted "diffuse accelerator produced radioactive materials" for "when produced by an accelerator"; in the introductory paragraph of (f), deleted "N.J.A.C. 7:28-4.5" preceding "(a)" and "State" preceding "license" and inserted "above"; in the introductory paragraph of (g); deleted "N.J.A.C. 7:28-4.5" preceding "(a)" and inserted "above"; and rewrote (g)3 and (g)7.

7:28-4.6 Application for and renewal of specific licenses for manufacture, transfer, distribution or arrangement for distribution, sale, lease, receipt, acquisition, ownership, possession or use of diffuse naturally occurring or diffuse accelerator produced radioactive materials

(a) Upon approval of an initial or renewal application, a specific license may be issued by the Department for a period of 10 years commencing on the date the license is issued.

(b) Application for specific licenses and renewals shall be filed with the Department, on forms available from the Department.

(c) All applications shall contain the following signature and certification:

1. "I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information, including fines and/or imprisonment."

2. The certification shall be signed by the highest ranking corporate, partnership, or governmental officer or official at the facility or the individual for which or for whom the specific license is requested.

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

(e) Information included in the specific license application will be incorporated in and made a part of the terms and conditions of such license by reference.

(f) All applicants for initial and renewal applications for specific licenses shall complete the application in its entirety with no reference to previously filed documents. The Department may accept photocopies of previous relevant applications.

(g) No initial or renewal specific licenses shall be issued unless the appropriate annual license fee required by N.J.A.C. 7:28-64.4 is paid.

(h) Except as provided in N.J.A.C. 7:28-4.19, applications and documents submitted to the Department will be made available for public inspection.

(i) Upon the request of the Department at any time after the filing of the original or renewal specific license application, and before the expiration of the license, the applicant shall submit further information to enable the Department to determine whether the application should be granted or denied or whether a license should be modified or revoked.

(j) All applications for a license or amendment shall be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.

(k) The Department may deny an application for a specific license if the applicant:

1. Fails to comply with any provisions of the Act or any rules promulgated thereunder;

2. Falsifies or makes misleading statements in the application for license; or

3. Falsifies or makes misleading statements in any documents which were utilized to obtain a license.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Application for and renewal of specific State licenses for manufacture, transfer, distribution or arrangement for distribution, sale, lease, receipt, acquisition, ownership, possession or use of naturally occurring or accelerator produced radioactive materials". Deleted

"State" following "specific" throughout; in (a), substituted "10" for five; in (d), deleted "State" preceding the second occurrence of "license"; deleted former (e); recodified former (f) through (*l*) as (e) through (k); in (g) and (h), updated the N.J.A.C. reference; and in (j), deleted "State" preceding "license" and "licensee".

7:28-4.7 General requirements for approval of an application for an initial specific license or renewal of a specific license for use of diffuse naturally occurring or diffuse accelerator produced materials

(a) If the Department determines that an applicant meets the requirements of this subchapter and the Act, it may issue an initial specific license or renew a specific license for non-human use of radioactive materials provided:

1. The applicant is qualified by reason of training and experience to use the radioactive material for the purpose requested in such manner as to protect health, minimize danger to life or property and prevent unnecessary radiation;

2. The applicant's proposed equipment, facilities and procedures are adequate to protect health, minimize danger to life or property and prevent unnecessary radiation; and

3. The applicant satisfies special requirements as may be applicable in N.J.A.C. 7:28-4.8.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
In (c), inserted "specific State" preceding "license" in 8 and 9.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "General requirements for approval of an application for an initial specific State license or renewal of a specific State license for use of naturally occurring or accelerator produced materials". In the introductory paragraph of (a), deleted "State" following both occurrences of "specific"; and deleted (b) and (c).

7:28-4.8 Special requirements for approval of an application for an initial specific license or renewal of a specific license for use of diffuse naturally occurring or diffuse accelerator produced radioactive materials

(a) If the Department determines that an applicant meets the requirements of this subchapter and the Act, an initial specific license or renewal of a specific license may be issued for use of multiple quantities or types of radioactive material provided:

1. The applicant satisfies the general requirements for approval of specific license applications in N.J.A.C. 7:28-4.7;

2. The applicant's staff has had substantial training and experience with a variety of radioisotopes for various research and development uses;

3. The applicant has established an isotope committee, composed of a radiological safety officer, a representative of management and one or more persons trained or experienced in the safe use of radioactive materials, which will review and approve or disapprove proposals for use of radioactive materials in the advance of purchase of such materials; and

4. The applicant has appointed a radiological safety officer who shall be responsible for rendering advice and assistance on radiological safety.

(b) If the Department determines that an applicant meets the requirements of this subchapter and the Act, an initial specific license or renewal of a specific license may be issued for use of multiple quantities or types of radioactive material in processing for distribution to other authorized persons provided:

1. The applicant satisfies the general requirements for approval of specific license application in N.J.A.C. 7:28-4.7;

2. The applicant's staff has had training and experience in the processing and distribution of a variety of radioisotopes; and

3. The applicant has appointed a radiological safety officer who shall be responsible for rendering advice and assistance on radiological safety.

(c) If the Department determines that an applicant meets the requirements of this subchapter and the Act, an initial specific license or renewal of a specific license may be issued to distribute certain devices to persons generally licensed under N.J.A.C. 7:28-4.5(a) and (e) provided:

1. The applicant satisfies the general requirements for approval of specific license applications in N.J.A.C. 7:28-4.7;

2. The applicant submits sufficient information relating to the design, manufacturer prototype testing, quality control procedures, labeling, proposed uses and potential hazards of the device to provide reasonable assurance that:

i. The radioactive material contained in the device cannot be easily removed from the device;

ii. No person possessing, using, transporting or exposed to the device will receive a radiation dose to a major portion of his body in excess of 0.1 rem in any one year under ordinary circumstances of use;

iii. The device can be safely operated by persons not having training in radiological protection; and

iv. The radioactive material within the device would not be accessible to unauthorized persons; and

3. In describing the label or labels and contents thereon to be affixed to the device, the applicant shall separately indicate those instructions and precautions which are necessary to assure safe operation of the device. Such instructions and precautions shall be contained on labels as described in N.J.A.C. 7:28-4.5(e).

(d) If the Department determines that an applicant meets the requirements of this subchapter and the Act, an initial specific license or renewal of a specific license will be issued to transfer, possess, or control products or materials containing exempt concentrations of radioactive material specified in N.J.A.C. 7:28-4.3(b) which the transferor has introduced into the product or material provided:

1. The applicant satisfies the general requirements for approval of specific license applications in N.J.A.C. 7:28-4.7;

2. The applicant submits:

i. A description of the product or material into which the radioactive material will be introduced;

ii. The intended use of the radioactive material and the product into which it is introduced;

iii. The method of introduction;

iv. The initial concentration of the radioactive material in the product or material;

v. The control methods to assure that no more than the specified concentration is introduced into the product or material;

vi. The estimated time interval between introduction and transfer of the product or material; and

vii. The estimated concentration of the radioisotope in the product or material at the time of proposed transfer by the applicant;

3. The applicant provides:

i. Reasonable assurance that the concentrations of the radioactive material at the time of transfer will not exceed the exempt concentrations listed in N.J.A.C. 7:28-4.3(b);

ii. That reconcentration of the radioactive material in concentrations exceeding those exempted under N.J.A.C. 7:28-4.3(b) is not likely;

iii. That the product or material is not likely to be inhaled or ingested; and

iv. That use of the lower concentration(s) is not feasible; and

4. Within 30 days subsequent to the end of the reporting period, each specific licensee shall file an annual report with the Department describing kinds and quantities of products transferred, the concentration of radioactive material contained and the quantity of radioactive material transferred during the reporting period which shall be the 12-month period ending June 30 of each calendar year.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Inserted "specific State" preceding "license(e)" throughout.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Special requirements for approval of an application for an initial specific State license or renewal of a specific State license for use of naturally occurring or accelerator produced radioactive materials". Deleted "State" following "specific" throughout; deleted former (a) through (c); recodified former (d) through (f) as (a) through (c); in the introductory paragraph of (a), deleted "in research and development" following "material"; in (c)2ii, substituted "0.1" for "0.5"; deleted former (g); recodified former (h) as (d); and deleted (i).

7:28-4.9 Terms and conditions of general and specific licenses

(a) Each license issued pursuant to this subchapter shall be subject to all the provisions of the Act, now or hereafter in effect, and to this chapter and orders of the Department.

(b) No license to possess or utilize radioactive material pursuant to this subchapter shall be transferred or assigned.

(c) Each person licensed by the Department pursuant to this subchapter shall confine his or her possession and use of radioactive material to the locations and purposes authorized by such license, and shall not use or permit the use of radioactive materials contrary to the applicable requirements of this chapter. Persons licensed under the provisions of this subchapter may transfer radioactive material within the State only to the persons licensed to receive such material or as otherwise authorized by the Department in writing.

(d) The Department may incorporate in any license at the time of issuance, or thereafter, all such additional requirements and conditions with respect to the licensee's manufacture, distribution or arrangement for the distribution, sale, lease, receipt, possession, use, ownership or transfer of radioactive material as it deems appropriate or necessary in order to assure compliance with this chapter and the Act.

(e) Each licensee authorized under N.J.A.C. 7:28-4.8(c) to distribute certain devices to generally licensed persons shall:

1. Report to the Department all transfers of such devices to persons in New Jersey generally licensed under N.J.A.C. 7:28-4.5(a) and (c). Such report shall identify each general licensee by name and address, the type and number of device(s) transferred, and the quantity and kind of radioactive material contained in each device. The report shall be submitted within 30 days after the end of each calendar quarter in which such a device is transferred to generally licensed persons; and

2. Furnish to each general licensee to whom such device is transferred a copy of N.J.A.C. 7:28-4.5(a), (e) and (g), 8.3 and 8.5, records of surveys and records of radioactive materials pursuant to the requirements in N.J.A.C. 7:28-6, Standards for Protection Against Radiation.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Inserted 'State" preceding "license(e)" in (b) and (e); rewrote (d).
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).

Section was "Terms and conditions of general and specific State licenses". Deleted "State" preceding "license" throughout; in (d), deleted "State" preceding "licensee's"; in the introductory paragraph of (e); updated the N.J.A.C. reference; rewrote (e)2; and deleted (f).

7:28-4.10 Expiration of specific license

Except as provided in N.J.A.C. 7:28-4.11, each specific license shall expire at 12:01 A.M. of the day, in the month and year stated in the license.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Expiration of specific State license". Deleted "State" preceding "license".

7:28-4.11 Status of specific licenses pending renewal

In any case in which a specific licensee has filed a complete application in proper form for renewal of a specific license not less than 30 days prior to expiration of the existing specific license, such specific license and all its existing conditions shall not expire until the Department has acted upon the application.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Inserted "specific State" preceding "license(e)" throughout.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Status of specific State licenses pending renewal". Deleted "State" following "specific" throughout.

7:28-4.12 Amendment of a specific license at request of licensee

(a) Applications for amendment of a specific license shall be filed in accordance with N.J.A.C. 7:28-4.6 and shall specify the amendment desired and the grounds for such amendment.

(b) The Department will evaluate only amendment applications submitted by personnel authorized by the licensee.

(c) The applicant for an amended specific license shall not engage in the activities for which an amendment has been requested until approval has been granted by the Department.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Amendment of a specific State license pending at request of licensee". In (a) and (c), deleted "State" following "specific"; and in (b), deleted "State" preceding "licensee".

7:28-4.13 Records

All persons licensed pursuant to this subchapter shall keep records in accordance with N.J.A.C. 7:28-6, Standards for Protection Against Radiation.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Updated the N.J.A.C. reference and inserted "Standards for Protection Against Radiation".

7:28-4.14 Inspections

(a) All licensees shall allow the Department or its agents to inspect radioactive material and the facilities and premises where radioactive material is used or stored.

(b) No person shall prevent, prohibit, obstruct, hinder, delay or interfere with personnel of this Department or its agents in performing their duties.

(c) Upon request by the Department, or its agents, licensees shall make available for inspection by the Department records kept pursuant to this chapter.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In (a) and (c), deleted "State" preceding "licensees".

7:28-4.15 Tests

(a) At the request of the Department or its agents, each licensee shall perform, or allow the Department to perform if the Department so desires, such tests as the Department deems appropriate or necessary for the administration of this subchapter, including tests of the following:

1. Radioactive material;

2. Facilities where radioactive material is utilized or stored;

3. Radiation detection and monitoring instruments; and

4. Equipment and devices used in connection with the utilization or storage of radioactive material.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In the introductory paragraph of (a), deleted "State" preceding "licensee".

7:28-4.16 Financial assurance and recordkeeping for decommissioning

(a) Except as set forth in (b) below, this section incorporates by reference 10 CFR 30.35 Financial assurance and recordkeeping for decommissioning, and the Appendices as referenced in 10 CFR 30.35.

(b) The following provisions of 10 CFR 30.35 are incorporated by reference with the specified changes:

1. "Unsealed byproduct material" and "byproduct material" shall mean "diffuse NARM";

2. "Commission," "Nuclear Regulatory Commission," "U.S. Nuclear Regulatory Commission," and "NRC," shall mean "Department of Environmental Protection";

3. 10 CFR 30.35(g), replace "Each person licensed under this part or parts 32 through 36 and 39" with "Each person licensed under this subchapter";

4. 10 CFR 30.35(g), replace "§30.34(b)," with "N.J.A.C. 7:28-4.9"; and

5. 10 CFR 30.35(g)(3)(iv), replace "10 CFR part 20, subpart E," with "N.J.A.C. 7:28-12".

New Rule, R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Former N.J.A.C. 7:28-4.16, Modification, revocation, suspension, and termination of general and specific licenses, recodified to N.J.A.C. 7:28-4.17.

7:28-4.17 Modification, revocation, suspension, and termination of general and specific licenses

(a) Each general license shall be subject to modification, suspension or revocation by reason of amendments to the Act, adoption of rules by the Commission or the Department, orders issued by the Department pursuant to authority of the Act, or for violation or failure to observe any of the terms and provisions of the Act, license or any rule of the Commission or the Department, or order of the Department.

(b) Each specific license shall be subject to modification, suspension or revocation by reason of:

1. Amendments to the Act;

2. Adoption of rules by the Commission;

3. Orders issued by the Department pursuant to the authority of the Act;

4. Conditions revealed by the application for a specific license or statement of fact or any report, records or inspection or other means which would warrant the Department to refuse to grant a specific license on an original application;

5. Violation of or failure to observe any of the terms and provisions of the Act or the license, or any rule of the Department or order of the Department;

6. Falsification or misleading statements in any license application;

7. Alteration of licensing document;

8. Falsification of required records; or

9. Failure to make timely payment of licensing fees.

(c) If a specific license is not to be renewed or if a licensee requests a termination of its license, the licensee shall furnish to the Department, prior to the expiration date of the license, close-out surveys, wipe tests and/or soil samples demonstrating that the facility meets the requirements of N.J.A.C. 7:28-12. The facility shall also provide a disposition certificate attesting to the disposal of radioactive material.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Rewrote (c).
Recodified from N.J.A.C. 7:28-4.16 and amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Modification, revocation, suspension, and termination of general and specific State licenses". Deleted "State" preceding "license" throughout; in (b)5, deleted "Commission or" preceding the first occurrence of "Department"; in (b)7 and (b)9, deleted "State" preceding "licensing"; and in (c), deleted "State" preceding both occurrences of "licensee". Former N.J.A.C. 7:28-4.17, Requests for an adjudicatory hearing, recodified to N.J.A.C. 7:28-4.18.

7:28-4.18 Requests for an adjudicatory hearing

(a) When the Department denies an initial application for or renewal of a specific license, or determines to modify, revoke, suspend or terminate a general or specific license, the Department shall send a notice of decision to the applicant or licensee by certified mail return receipt requested. The notice shall advise the applicant or licensee of the right to request a contested case hearing pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq. and the New Jersey Uniform Administrative Procedure Rules, N.J.A.C. 1:1. The notice shall include the following information:

1. Where and whom hearing requests should be sent;

2. The deadline by which hearing requests must be submitted;

3. The information that is required to be in the hearing request under (c) below; and

4. The requirements for requesting a stay under N.J.A.C. 7:28-4.19.

(b) All requests for a contested case hearing must be received by the Department within 30 calendar days of the date upon which the notice of decision was received.

(c) All requests for a contested case hearing shall be submitted in writing to the Department, at Office of Legal Affairs, ATTENTION: Adjudicatory Hearing Requests, Department of Environmental Protection, CN 402, Trenton, New Jersey 08625-0402. The request shall contain:

1. The name, address and telephone number of the person making such request;

2. A statement of the legal authority and jurisdiction under which the request for a hearing is made;

3. A brief and clear statement of specific facts describing the Department decision appealed from as well as the nature and scope of the interest of the requestor in such decision; and

4. A statement of all facts alleged to be at issue and their relevance to the Department decision for which a

hearing is requested. Any legal issues, associated with the alleged facts at issue, must also be included.

(d) The Department shall determine whether any request for a contested case hearing should be granted. In making such determination, the Department shall evaluate the request to determine whether a contested case, as defined by the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., exists and whether there are issues of fact which, if assumed to be true, might change the Department's decision. Where only issues of law are raised by a request for a hearing, the request will be denied. Denial by the Department of a request for a contested case hearing shall constitute the final decision of the Department for the purposes of judicial appeal.

Administrative Change in (c).
See: 23 N.J.R. 3325(b).
Recodified from N.J.A.C. 7:28-4.17 and amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In the introductory paragraph of (a) and in (a)4, updated the N.J.A.C. references; and in the introductory paragraph of (a), deleted "State" following both occurrences of "specific".

7:28-4.19 Requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested

(a) The Department may grant a stay of the effective date of a decision to deny, modify, revoke or suspend any State license. The applicant for such a stay must submit evidence that one of the following circumstances exist:

1. The granting of such stay is required as a constitutional or statutory right; or

2. The potential impact on public health, safety, welfare or the environment which might result from a decision to grant a stay is greatly outweighed by immediate, irreparable injury to the specific party requesting such stay.

(b) The decision to grant a contested case hearing request shall not automatically result in a stay of the Department action appealed from absent an express decision to stay such action by the Director. The burden shall be upon the party requesting a hearing to explicitly request a stay of action within the same document as well as to disclose reasons why such stay should be granted.

(c) Department decisions are effective, according to their terms, unless stayed by the Department in writing, upon receipt of written request pursuant to this section.

(d) Written requests for a stay of the effective date of the Department's decision must be made to the Department within 30 calendar days of the date upon which the notice of decision was received.

(e) Any stay that is granted by the Department shall be temporary and in no case shall it extend beyond the date of the Department's final decision of the contested case.

(f) Determinations made pursuant to this section shall be made in a writing mailed to the specific party making such request.

The following annotations apply to N.J.A.C. 7:28-4.19 prior to its repeal by R.2008 d.281:

Amended by R.1991 d.417, effective August 5, 1991.
See: 23 N.J.R. 3300(a), 23 N.J.R. 2362(a).
In (a), changed fees in all categories; substantial rewording in 1 through 8; added 9 through 18.
In (b), substituted old text with new text; added (b)1 and 2.
Added (c), (d), (e).
Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Rewrote the section.

The following annotations apply to N.J.A.C. 7:28-4.19 subsequent to its recodification from N.J.A.C. 7:28-4.18 by R.2008 d.281:

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Recodified from N.J.A.C. 7:28-4.18 by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Former N.J.A.C. 7:28-4.19, Specific State license fee schedule for the manufacture, production, transfer, distribution or arrangement for distribution, sale, lease, receipt, acquisition, ownership, possession or use of naturally occurring or accelerator produced radioactive material, repealed.

7:28-4.20 Confidentiality claims

(a) Any applicant required to submit any information pursuant to the Act or this chapter which in the applicant's opinion constitutes trade secrets, proprietary information or information related to national security, may assert a confidentiality claim by following the procedures set forth in this subchapter.

(b) Any applicant submitting any information to the Department and asserting a confidentiality claim covering any information contained therein shall submit two documents to the Department. One shall contain all the information required by the Act or this chapter including any information which the applicant alleges to be entitled to confidential treatment. The second shall be identical to the first except that it shall contain no information which the applicant alleges to be entitled to confidential treatment. The second can be a photocopy of the first, with the allegedly confidential material blacked out.

(c) The top of each page of the first submission containing the information which the applicant alleges to be entitled to confidential treatment shall display the heading "CONFIDENTIAL" in bold type, or stamp.

(d) All parts of the text of the first submission which the applicant alleges to be entitled to confidential treatment shall be underscored or highlighted in a clearly identifiable manner. This manner of marking confidential information shall be such that both the allegedly confidential information and the underscoring or highlighting is reproducible on photocopying machines.

(e) The first submission, containing the information which the applicant alleges to be entitled to confidential treatment,

shall be sealed in an envelope which shall display the word "CONFIDENTIAL" in bold type or stamp on both sides. This envelope, together with the second, non-confidential submission (which may or may not be enclosed in a separate envelope, at the option of the applicant), shall be enclosed in another envelope for transmittal to the Department. The outer envelope shall bear no marking indicating the confidential nature of the contents.

(f) To ensure proper delivery, the complete package should be sent by certified mail, return receipt requested, or by other means which will allow verification of receipt. Ordinary mail may be used, but the Department will assume no responsibility for packages until they are actually received.

7:28-4.21 Access to information; non-disclosure

(a) Until such time as a final confidentiality determination has been made, access to any information for which a confidentiality claim has been made will be limited to Department employees whose activities necessitate such access and as provided at N.J.A.C. 7:28-4.24 and 4.26.

(b) No disclosure of information for which a confidentiality claim has been asserted shall be made to any other persons except as provided in this subchapter.

(c) Nothing in this section shall be construed as prohibiting the incorporation of confidential information into cumulations of data subject to disclosure as public records, provided that such disclosure is not in a form that would foreseeably allow persons, not otherwise having knowledge of such confidential information, to deduce from it the confidential information or the identity of the owner or operator who supplied it to the Department.

7:28-4.22 Confidentiality determinations

(a) Information for which a confidentiality claim has been asserted will be treated by the Department as entitled to confidential treatment, unless the Department determines that the information is not entitled to confidential treatment as provided in this section and N.J.A.C. 7:28-4.23.

(b) The Department shall act upon a confidentiality claim and determine whether information is or is not entitled to confidential treatment whenever the Department:

1. Receives a request under N.J.S.A. 47:1A-1 et seq. to inspect or copy such information; or

2. Desires to determine whether information in its possession is entitled to confidential treatment; or

3. Desires for any reason in the public interest to disclose the information to persons not authorized by this subchapter to have access to confidential information.

(c) The Department shall make the initial determination whether information is or is not entitled to confidential treatment.

1. If the Department determines that information is not entitled to confidential treatment, it shall so notify the applicant who submitted the information.

2. The notice required under this subsection shall be sent by certified mail, return receipt requested and shall state the reasons for the Department's initial determination.

3. An applicant who wishes to contest a determination by the Department shall, within 30 days of notification of the determination, submit evidence to support the applicant's contention that the Department's initial determination was incorrect. The evidence may include, but need not be limited to, a statement indicating:

i. The period of time for which confidential treatment is desired by the applicant (for example, until a certain date, until the occurrence of a specified event, or permanently);

ii. The measures taken by the applicant to guard against undesired disclosure of the information to others;

iii. The extent to which the information has been disclosed to others, and the precautions taken in connection therewith; and

iv. The extent of which disclosure of the information would result in substantial damage to the applicant, including a description of the damage, an explanation of why the damage would be substantial, and an explanation of the causal relationship between disclosure and the damage.

4. Failure of an applicant to furnish timely comments or exceptions waives the applicant's confidentiality claim.

5. The applicant may assert a confidentiality claim to any information submitted to the Department by an applicant as part of its comments pursuant to (c)4 above.

6. The Department may extend the time limit for submitting comments pursuant to (c)4 above for good cause shown by the applicant and upon receipt of a request in writing.

(d) After receiving the evidence, the Department shall review its initial determination and make a final determination.

1. If, after review, the Department determines that the information is not entitled to confidential treatment, the Department shall so notify the applicant by certified mail, return receipt requested. The notice shall state the basis for the determination, that it constitutes final agency action concerning the confidentiality claim, and that the Department shall make the information available to the public on the 14th day following receipt by the applicant of the written notice.

2. If, after review, the determination is made that information is entitled to confidential treatment, the information shall not be disclosed, except as otherwise provided

by this subchapter. The applicant shall be notified of the Department's determination by certified mail, return receipt requested. The notice shall state the basis for the determination and that it constitutes final agency action.

7:28-4.23 Substantive criteria for use in confidentiality determinations

(a) When the applicant satisfies each of the following substantive criteria, the Department shall determine that the information for which a confidentiality claim has been asserted is confidential:

1. The applicant has asserted a confidentiality claim which has not expired by its terms, been waived or withdrawn;

2. The applicant has shown that reasonable measures have been taken to protect the confidentiality of the information and that the applicant intends to continue to take such measures;

3. The information is not, and has not been, available or otherwise disclosed to other persons without the applicant's consent (other than by subpoena or by discovery based on a showing of special need in a judicial or quasi-judicial proceeding, as long as the information has not become available to persons not involved in the proceeding);

4. No statute specifically requires disclosure of the information; and

5. The applicant has shown that disclosure of the information would be likely to cause substantial damage to its competitive position.

7:28-4.24 Disclosure of confidential information to other public agencies

(a) The Department may disclose confidential information to persons other than Department employees only as provided in this section or N.J.A.C. 7:28-4.25.

(b) The Department may disclose confidential information to any other State agency or to a Federal agency if:

1. The Department receives a written request for disclosure of the information from a duly authorized officer or employee of the other agency;

2. The request sets forth the official purpose for which the information is needed;

3. The Department notifies the other agency of the Department's determination that the information is entitled to confidential treatment, or of any unresolved confidentiality claim covering the information;

4. The other State or Federal agency has first furnished to the Department a written formal legal opinion from the agency's chief legal officer or counsel stating that under applicable law the agency has the authority to compel the person who submitted the information to the Department to disclose such information to the other agency; and

5. The other agency agrees not to disclose the information further unless:

i. The other agency has statutory authority both to compel production of the information and to make the proposed disclosure; or

ii. The other agency has obtained the consent of the affected owner or operator to the proposed disclosure; and

6. The other agency has adopted regulations or operates under statutory authority that will allow it to preserve confidential information from unauthorized disclosure.

(c) Except as otherwise provided at N.J.A.C. 7:28-4.25, the Department shall notify in writing the applicant who supplied the confidential information of:

1. Its disclosure to another agency;

2. The date on which disclosure was made;

3. The name of the agency to which disclosed; and

4. A description of the information disclosed.

7:28-4.25 Disclosure by consent

(a) The Department may disclose any confidential information to any person if it has obtained the written consent of the applicant to such disclosure.

(b) The giving of consent by an applicant to disclose shall not be deemed to waive a confidentiality claim with regard to further disclosures unless the authorized disclosure is of such a nature as to make the disclosed information accessible to the general public.

7:28-4.26 Disclosure based on imminent and substantial danger

(a) Upon a finding that disclosure of confidential information would serve to alleviate an imminent and substantial danger to public health and the environment, the Department may:

1. Prescribe and make known to the applicant such shorter comment period (N.J.A.C. 7:28-4.22(c)4), post-determination waiting period (N.J.A.C. 7:28-4.22(d)1), or both, as it finds necessary under the circumstances; or

2. Disclose confidential information to any person whose role in alleviating the danger to public health and the environment necessitates that disclosure. Any such disclosure shall be limited to information necessary to enable the person to whom it is disclosed to carry out the activities in alleviating the danger.

(b) Any disclosure made pursuant to this section shall not be deemed a waiver of a confidentiality claim, nor shall it of

itself be grounds for any determination that information is no longer entitled to confidential treatment.

7:28-4.27 Security procedures

(a) Submissions to the Department pursuant to the Act and this chapter will be opened only by persons authorized by the Department engaged in administering the Act and this chapter.

(b) Only those Department employees whose activities necessitate access to information for which a confidentiality claim has been made, shall open any envelope which is marked "CONFIDENTIAL".

(c) All submissions entitled to confidential treatment as determined at N.J.A.C. 7:28-4.22 shall be stored by the Department only in locked cabinets.

(d) Any record made or maintained by Department employees which contains confidential information shall contain appropriate indicators identifying the confidential information.

7:28-4.28 Wrongful access or disclosure; penalties

(a) A person shall not disclose, seek access to, obtain or have possession of any confidential information obtained pursuant to the Act or this chapter, except as authorized by this subchapter.

(b) Every Department employee who has custody or possession of confidential information shall take appropriate measures to safeguard such information and to protect against its improper disclosure.

(c) A Department employee shall not disclose, or use for his or her private gain or advantage, any information which came into his or her possession, or to which he or she gained access, by virtue of his or her official position of employment or contractual relationship with the Department.

(d) If the Department finds that any person has violated provisions of this subchapter, it may:

1. Commence a civil action in Superior Court for a restraining order and an injunction barring that person from further disclosing confidential information.

2. Pursue any other remedy available by law.

(e) In addition to any other penalty that may be sought by the Department, violation of this subchapter by a Department employee shall constitute grounds for dismissal, suspension, fine or other adverse personnel action.

(f) Use of any of the remedies specified under this section shall not preclude the use of any other remedy.

SUBCHAPTER 5. CONTROLLED AREAS FOR REGISTRANTS

7:28-5.1 Areas that registrants must control

Every area in which there is any reasonable possibility of an occupant receiving an exposure dose from radiation more than the dose specified in N.J.A.C. 7:28-6 for radiation levels outside a controlled area shall be set apart as a controlled area by any person having possession, custody or control of any ionizing radiation-producing machine.

Amended by R.2000 d.120, effective March 20, 2000.
See: 31 N.J.R. 3007(a), 32 N.J.R. 1016(a).
In (b), deleted N.J.A.C. reference.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Areas which must be controlled". In (a), substituted "Every" for "Except as provided in (b) below, every", deleted "and radioactive material" following "radiation" and deleted "and/or radioactive material" following "machine"; and deleted (b).

7:28-5.2 Limitations on controlled areas for registrants

No area within controlled areas shall be used for residential quarters although a room or rooms in residential buildings may be set apart as a controlled area.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Limitations on controlled areas".

7:28-5.3 Precautionary procedures

(a) Any person having possession, custody or control of any ionizing radiation-producing machine shall comply with the following precautionary procedures:

1. Area surveys shall be performed in controlled areas and in adjacent areas to insure that exposure levels to individuals conform to N.J.A.C. 7:28-6. The surveys shall be performed in accordance with N.J.A.C. 7:28-7, Radiation Surveys and Personnel Monitoring for Registrants.

2. All individuals entering a controlled area shall wear personnel monitoring equipment pursuant to the requirements for the use of personnel monitoring equipment in N.J.A.C. 7:28-7.

3. Proper and adequate instruction shall be given to all personnel working in controlled areas in the use of necessary safeguards and procedures, and they shall be supplied with such safety devices as may be required.

4. Adequate instructions or an escort shall be provided to all personnel frequenting or visiting controlled areas as shall be necessary to prevent unnecessary exposure.

5. The area shall be posted in accordance with N.J.A.C. 7:28-10.

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).

In (a), substituted "Radiation Surveys and Personnel Monitoring" for "pertaining to Radiation survey and personnel monitoring" in 1.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In the introductory paragraph of (a), deleted "and/or radioactive material" following "machine"; in (a)1, inserted "for Registrants"; deleted former (a)2 and (a)3; and recodified former (a)4 through (a)7 as (a)2 through (a)5.

7:28-5.4 (Reserved)

Repealed by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Termination of controlled areas".

SUBCHAPTER 6. STANDARDS FOR PROTECTION AGAINST RADIATION

7:28-6.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 20, Standards for Protection Against Radiation.

(b) The Department does not regulate nuclear reactors, special nuclear materials in quantities sufficient to form a critical mass, high-level waste disposal facilities, or byproduct material defined in Section 11e(2) of the Atomic Energy Act of 1954, as amended (42 U.S.C. §2014). Insofar as the incorporated rules refer to those facilities and/or materials previously referenced, those references are not incorporated, nor do any cross references include those facilities and/or materials.

(c) The following provisions of 10 CFR Part 20 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 20.1001, Purpose;

2. 10 CFR 20.1002, Scope;

3. 10 CFR 20.1003, Definitions, the following definitions are not incorporated by reference: "act," "Commission," "Department," and "sanitary sewerage system";

4. 10 CFR 20.1007, Communications;

5. 10 CFR 20.1009, Implementation collection requirements: OMB approval;

6. 10 CFR 20.1401, General provisions and scope;

7. 10 CFR 20.1402, Radiological criteria for unrestricted use;

8. 10 CFR 20.1403, Criteria for license termination under restricted conditions;

9. 10 CFR 20.1404, Alternate criteria for license termination;

10. 10 CFR 20.1405, Public notification and public participation;

11. 10 CFR 20.2301, Application for exemptions;

12. 10 CFR 20.2401, Violations; and

13. 10 CFR 20.2402, Criminal penalties.

(d) The following provisions of 10 CFR Part 20 are incorporated by reference with the specified changes:

1. "Nuclear Regulatory Commission," "NRC," "Commission," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 20 of the Code of Federal Regulations that are incorporated by reference, mean the New Jersey Department of Environmental Protection, except when specifically noted in this subchapter;

2. 10 CFR 20.1003, in the definition of "ALARA," replace "licensed activity" with "licensed or registered activity," and "and licensed materials" with ", licensed materials, and registered ionizing radiation producing machine sources";

3. 10 CFR 20.1003, in the definition of "background radiation," in the first sentence replace "or special nuclear material)" with "special nuclear material, or technologically enhanced naturally occurring radioactive material)," and replace in the last sentence "or special nuclear materials regulated by the Commission" with ", or special nuclear materials regulated by the State or the NRC, or diffuse NARM regulated by the State";

4. 10 CFR 20.1003, in the definition of "controlled area," replace "licensee" with "licensee or registrant";

5. 10 CFR 20.1003, in the definition of "declared pregnant woman," replace "licensee" with "licensee or registrant";

6. 10 CFR 20.1003, in the definition of "license," replace "parts 30 through 36, 39, 40, 50, 60, 61, 63, 70, or 72," with "N.J.A.C. 7:28-4, 51 through 60, or 63";

7. 10 CFR 20.1003, in the definition of "licensed material," replace "special nuclear material," with "special nuclear material in quantities not sufficient to form a critical mass, diffuse NARM";

8. 10 CFR 20.1003, in the definition of "occupational dose," replace "licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person," with "licensed and unlicensed, or registered or unregistered sources of radiation, whether in possession of the licensee or registrant or other person";

9. 10 CFR 20.1003, in the definition of "public dose," replace "under the control of a licensee," with "under the control of a licensee or registrant.";

10. 10 CFR 20.1003, in the definition of "survey," replace "or other sources of radiation." with ", other sources of radiation, or radiation from ionizing radiation-producing machines." After the last sentence in the definition of "survey," add "For registrants, the survey must be made under the supervision of a qualified individual.";

11. 10 CFR 20.1003, in the definition of "unrestricted area," replace "licensee" with "licensee or registrant";

12. 10 CFR 20.1006, delete "Except as specifically authorized by the Commission in writing, no" with "No," and replace "by the General Counsel" with "signed and approved by the Commissioner of the Department,";

13. 10 CFR 20.1201, replace "licensee" with "licensee or registrant," except in 10 CFR 20.1201(e);

14. 10 CFR 20.1207, replace entire section with "The licensee or registrant shall ensure that the annual occupational dose for minors does not exceed 10 percent of the annual dose limits specified for adult workers in 10 CFR 20.1201.";

15. 10 CFR 20.1208, replace "licensee" with "licensee or registrant";

16. 10 CFR 20.1301, replace "licensee" with "licensee or registrant;" and replace "sanitary sewer system" with "domestic treatment works";

17. 10 CFR 20.1301(a)(1), replace "licensed operation" with "licensed or registered operation";

18. 10 CFR 20.2001(a)(3), replace "within the limits of §20.1301; or" with "within the limits of §20.1301, provided prior permission in writing, in the form of a New Jersey Pollutant Discharge Elimination System permit, is obtained from the Department in accordance with N.J.A.C. 7:14A for discharges to ground or surface waters; or";

19. 10 CFR 20.2003, replace "sanitary sewerage" with "domestic treatment works";

20. Replace the text of 10 CFR 20.2201(a)(2) with "Reports must be made to the address and telephone numbers indicated in N.J.A.C. 7:28-1.5";

21. 10 CFR 20.2201(b)(2)(ii), replace "Administrator of the appropriate NRC Regional Office listed in Appendix D to part 20" with "Supervisor, Radioactive Materials Section of the Department";

22. Replace the text of 10 CFR 20.2202(d) with "Reports made by licensees in response to the requirements of this section must be made to the address and telephone numbers indicated in N.J.A.C. 7:28-1.5.";

23. 10 CFR 20.2203(b)(2), replace "Privacy Act Information" with "New Jersey Open Public Records Act, N.J.S.A. 47:1A-1 et seq.";

24. Replace the text of 10 CFR 20.2203(d) with "All licensees, who make reports under paragraph (a) of this section shall submit the report in writing either by mail or by hand delivery to the Supervisor, Radioactive Materials Section of the Department at the addresses indicated in N.J.A.C. 7:28-1.5";

25. 10 CFR 20.2204, replace "Administrator of the appropriate NRC Regional Office listed in Appendix D to part 20" with "Supervisor, Radioactive Materials Section of the Department";

26. 10 CFR 20.2206(c), replace the second sentence with "The licensee shall submit the report to the Supervisor, Radioactive Materials Section of the Department at the address indicated in N.J.A.C. 7:28-1.5."; and

27. Replace the language at 10 CFR 20.2402 with "Section 26:2D-22 of the Radiation Protection Act of 1958, as amended, provides for criminal sanctions for violation of any provision of the Act."

(e) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 7. RADIATION SURVEYS AND PERSONNEL MONITORING FOR REGISTRANTS

7:28-7.1 Surveys inside controlled areas

(a) The registrant shall ensure that controlled areas shall be surveyed by, or under the direction of, a qualified individual to determine if the installation is maintained and operations are conducted in compliance with this chapter.

(b) The registrant shall ensure that radiation levels shall be determined with the use of suitable instruments and methods.

(c) The registrant shall ensure that the record of a survey shall contain, but shall not be limited to the radiation levels, the time the radiation is produced, the workweek and the fraction of the workweek that any individual may be exposed to the radiation.

(d) The registrant shall ensure that subsequent surveys shall be conducted at such times and as frequently as may be necessary to assure that the controlled areas and operations remain in compliance with this chapter.

Amended by R.2005 d.156, effective May 16, 2005.
See: 36 N.J.R. 2336(a), 37 N.J.R. 1826(a).
Rewrote the section.
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Deleted "State licensee or" preceding "registrant" throughout; in (a), substituted "chapter" for "Chapter"; and former deleted (c) and (d); recodified former (e) and (f) as (c) and (d); in (c), deleted "and when required, the radioactive air concentrations and surface contaminations" from the end; and in (d), substituted "chapter" for "Chapter".

7:28-7.2 Surveys outside controlled areas

Surveys shall be made outside controlled areas at sufficient intervals and locations as may be necessary to insure compliance with N.J.A.C. 7:28-6.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Substituted "N.J.A.C. 7:28-6" for "Sections 6.2 (Radiation levels outside controlled areas) and 6.3 (Concentrations in effluents from controlled areas) of this Chapter".

7:28-7.3 Statement in lieu of actual survey

A written statement signed by a qualified individual and including his calculations and analysis of the dose rates in the vicinity of a radiation source may be acceptable in place of the survey required in N.J.A.C. 7:28-7.1, Surveys inside controlled areas.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Substituted "N.J.A.C. 7:28-7.1," for "Section 7.1 (" and deleted ") of this Chapter, except when radioactive-air contamination or surface contamination is involved" from the end.

7:28-7.4 Use of personnel-monitoring equipment

(a) Each owner shall supply appropriate personnel-monitoring equipment to and shall require that it be used by:

1. Each individual who enters a controlled area under such circumstances that he receives, or is likely to receive, a dose in excess of 25 millirems in any period of seven consecutive days;

2. Each individual under 18 years of age who enters a controlled area under such circumstances that he receives or is likely to receive a dose in excess of ten millirems in any period of seven consecutive days;

3. Each individual who enters a high radiation area; and

4. At least one visitor in a group of visitors entering a controlled area.

(b) All individuals required to wear personnel-monitoring equipment shall be instructed in its proper use and purpose. Records shall be kept in accordance with Section 8.1 (Personnel-monitoring records) of this Chapter.

(c) When an individual working on the premises of an owner, but not employed by him is wearing personnel-monitoring equipment provided by his employer, the owner of the radiation source shall not be required to provide additional personnel-monitoring equipment.

7:28-7.5 (Reserved)

Repealed by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
Section was "Requirements for bio-assays".

SUBCHAPTER 8. RECORDS FOR REGISTRANTS

7:28-8.1 Personnel-monitoring records

(a) Clear and legible records shall be maintained by the owner for calendar quarters on Form RH-26, or on a clear and legible form containing all the information required on RH-26. These records shall show the radiation exposures of all individuals who are required to wear personnel-monitoring equipment according to N.J.A.C. 7:28-7.4, Use of personnel-monitoring equipment.

(b) Each employee, at his or her request, shall be supplied by the owner with an annual statement of his or her radiation exposure record.

(c) At the request of an individual formerly employed by the owner, each owner shall furnish such individual a report of his exposure to radiation, including bio-assays, as shown in records maintained by the owner pursuant to subsection (a) of this Section. Such report shall be furnished within 30 days from the time the request is made or within 60 days from termination of employment, whichever is later. The report shall cover each calendar quarter of the individual's employment involving exposure to radiation.

(d) When an individual working on the premises of an owner, but not employed by him, is required by the owner to wear personnel-monitoring equipment, the owner of the radiation source shall furnish such individual's employer within 90 days a statement of the individual's radiation record and this shall be incorporated in the individual's exposure record.

(e) Each report or statement required by subsections (b) through (d) of this Section shall contain the following statement: "This report is furnished to you under the provisions of Subchapter 8 of the New Jersey Radiation Protection Code. You should preserve this report for future reference."

(f) The exposure records on each employee shall be preserved during the course of his employment and for at least ten years after termination of employment. Exposure records of other persons shall be preserved for at least ten years.

(g) These records or true copy of same shall be made available to the Department on request.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In (a), substituted "N.J.A.C. 7:28-7.4," for "Section 7.4 (" and deleted ") of this Chapter and any required bio-assays according to Section 7.5 (Requirements for bio-assays) of this Chapter" from the end; and in (b), inserted "or her" following "his" twice and deleted "and any bio-assays" from the end.

7:28-8.2 Records of surveys

(a) Records shall be maintained showing the results of such surveys as are required pursuant to N.J.A.C. 7:28-7, Radiation Surveys and Personnel Monitoring for Registrants.

results, commonly referred to as a sensitivity analysis; and

vii. An analysis of both continued use of existing structures and future use scenarios. Future use scenarios shall include, if applicable, the construction of buildings for either unrestricted use remedial actions or limited restricted use remedial actions, including excavations for basements and/or footings.

(g) Engineering controls or institutional controls may be incorporated as part of a petition for an alternative remediation standard provided that these controls will be durable and implemented for an appropriate period of time to achieve their intended purpose.

(h) Computer models acceptable to the Department may be used by the petitioner or licensee for an alternative remediation standard to confirm that the requirements of N.J.A.C. 7:28-12.9 or 12.10 have been and will continue to be met.

Administrative correction.
See: 37 N.J.R. 4245(a).
Recodified from N.J.A.C. 7:28-12.10 and amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In the introductory paragraph of (a), deleted "of soil" following "contamination"; inserted "or developed under N.J.A.C. 7:28-12.10" and "or licensee", and substituted the first occurrence of "remediation" for "soil" and the second occurrence of "remediation" for "soil cleanup"; in (a)2, deleted "and" from the end; in (a)3, substituted "; and" for a period at the end; added (a)4; in (b), substituted "remediation" for "soil" and "dose criterion" for "background dose value"; in the introductory paragraph of (c), substituted "remediation standards" for "soil concentrations" and "remediation" for "soil", and inserted "or 12.10"; in (d), substituted "remediation" for "soil" preceding "standard" and "standards"; in (e), inserted "or licensee"; in the introductory paragraph of (f) and in (h), substituted "remediation" for "soil", and inserted "or licensee" and "or 12.10"; in (f)2i, deleted "a resident or" following "or by" and inserted "or restricted use"; and in (f)2iii, substituted "Dose" for "Groundwater radionuclide concentration" and inserted "or to the time of peak dose, whichever is longer". Former N.J.A.C. 7:28-12.11, Requirements pertaining to engineering or institutional controls, recodified to N.J.A.C. 7:28-12.12.

7:28-12.12 Requirements pertaining to engineering or institutional controls

(a) All remediation proposals shall designate the intended use(s) of the property. Such intended use(s) shall be restricted as necessary to prevent future exposure, and shall otherwise be consistent with current and projected State and local zoning designations or land uses. For sites not remediated to the unrestricted use standards in N.J.A.C. 7:28-12.9 or 12.10, the Department shall define the nature and duration of all appropriate engineering or institutional controls necessary to meet the standards in N.J.A.C. 7:28-12.9, 12.10, or 12.11(a), based upon the particular conditions of the site.

(b) In order for any remediation under this subchapter requiring engineering controls or institutional controls to meet the standards in N.J.A.C. 7:28-12.9, 12.10, or 12.11(a), the person responsible for conducting the remediation, or licensee, shall, in addition to meeting the provisions of N.J.S.A. 58:10B-13:

1. Implement all necessary actions, as determined by the Department, to assure that such engineering or institutional controls are being implemented and maintained for an appropriate period of time; and

2. Provide sufficient financial assurance for the costs of implementing and maintaining the requisite active engineered or institutional controls for an appropriate period of time. Acceptable financial assurance mechanisms are set forth at 10 CFR 20.1403(c), incorporated herein by reference.

(c) A person responsible for conducting the remediation, or the licensee, shall conduct public outreach if the Department determines that outreach is needed, or when the Department determines that there is substantial public interest in activities concerning restricted release license termination.

1. The Department may determine that there is substantial public interest when it receives:

i. A petition containing the signatures of 25 or more people that live or work within 200 feet of the site, if contamination has not migrated from the site boundary;

ii. A petition containing the signatures of 25 or more people that live or work within 200 feet of the extent of contamination, if contamination has migrated from the site boundary; or

iii. A written request by a municipal official, such as a mayor or chairperson of an environmental commission, or a designated local health official.

2. When the Department determines that there is substantial public interest, the Department shall notify the person responsible for conducting the remediation or the licensee and post a summary of findings on the Department's web site at www.state.nj.us/dep; and

3. The person responsible for conducting the remediation or the licensee shall develop and implement enhanced public notice based on the expressed needs of the community and may include the following:

i. Publicizing and hosting an information session or public meeting;

ii. Publishing a notice containing basic information about the site in the local paper of record; or

iii. Establishing a local information repository.

4. The notifications required pursuant to this section are not intended to satisfy the public participation requirements applicable to sites subject to the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. and the National Contingency Plan, 40 CFR Part 300.

Recodified from N.J.A.C. 7:28-12.11 and amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).

In (a), inserted "or 12.10"; in (a) and the introductory paragraph of (b), substituted ", 12.10, or 12.11(a)" for "or 12.10(a)"; in the introductory paragraph of (b), inserted ", or licensee,"; in (b)2, inserted "sufficient financial assurance" and inserted the last sentence; and added (c). Former N.J.A.C. 7:28-12.12, Requirements pertaining to a change in land use, recodified to N.J.A.C. 7:28-12.13.

7:28-12.13 Requirements pertaining to a change in land use

(a) Any subsequent proposed use of a property that is different from the intended use (other than unrestricted use remedial actions) described in the original remediation proposal shall require a prior review and prior approval by the Department. To initiate this review, 90 calendar days prior to a proposed change in land use, the person or licensee proposing such use shall prepare and submit to the Department, at the Bureau of Environmental Radiation, PO Box 415, Trenton, NJ 08625-0415, and to each affected municipality, a brief written description of the new proposed use as compared to the intended use upon which the original remediation was based including all planned soil excavations, and any additional remedial actions to be implemented.

(b) If the Department determines that the proposed new use may cause the dose limitations of N.J.A.C. 7:28-12.8 to be exceeded, the person or licensee requesting the use change shall be required to prepare and submit to the Department's Bureau of Environmental Radiation, PO Box 415, Trenton, NJ 08625-0415, a dose assessment analysis, containing the information required under N.J.A.C. 7:28-12.11(f)2, (g), and (h), to ascertain whether the dose limitation requirements of N.J.A.C. 7:28-12.8 will be met for the proposed new use.

(c) In preparing the dose assessment analysis, the person or licensee may incorporate into the new use plan new remedial measures such as different radionuclide in soil concentrations, or radioactive contamination vertical extents, and/or new engineering or institutional controls, provided that for engineering or institutional controls, the person responsible for conducting the remediation or licensee provides for the cost of implementing and maintaining them as specified in N.J.A.C. 7:28-12.12(c)3.

Recodified from N.J.A.C. 7:28-12.12 and amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In (a), (b), and (c), inserted "or licensee" throughout; and in (b) and (c), updated the N.J.A.C. reference. Former N.J.A.C. 7:28-12.13, Requirements pertaining to the final status survey, recodified to N.J.A.C. 7:28-12.14.

7:28-12.14 Requirements pertaining to the final status survey

The final status survey is performed to demonstrate that a site meets the remediation standards. It shall be done in accordance with that version of the Department of Environmental Protection's Field Sampling Manual's section on Radiological Assessment, which is incorporated herein by reference, in effect at the time of the survey which may be obtained by calling the Bureau of Environmental Radiation at (609) 984-5400 or from the Radiation Protection Program's web site at http://www.state.nj.us/dep/rpp/index.htm. Chapter 12 of the Department's Field Sampling Procedures Manual follows the methodology provided in MARSSIM with some modifications.

Recodified from N.J.A.C. 7:28-12.13 by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).

7:28-12.15 Requirements pertaining to onsite burial or capping

(a) No owner or licensee shall bury or construct an engineered barrier (cap) over radioactive material onsite unless the requirements of N.J.A.C. 7:28-12.8 and 12.11 are met.

(b) Owners or licensees with sites that have been used for burial of radioactive materials or where radioactive material has been capped, shall not be allowed to convert these sites to other uses unless the requirements of N.J.A.C. 7:28-12.8 and 12.11 are met.

(c) The owner or licensee of any burial ground or capped material shall notify the Department in writing not less than 30 days in advance of any transfer of title to the property involved.

New Rule, R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).

APPENDIX A

Allowed Incremental Derived Concentration Guideline Levels (pCi/g) for the Gamma and Intake Pathways[1]

	Feet of Vertical Extent of Residual Radionuclides (VE)								
Nuclide	VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
Ra226 Unrestricted Use Standards	3	2	2	2	2	2	2	2	2
Ra226 Limited Restricted Use Standards	5	5	5	5	5	5	5	4	4

(c) Each owner shall supply appropriate personnel monitoring equipment and shall require that it be used by every individual who operates, makes "set-ups," or performs maintenance on an ionizing radiation-producing machine used in shielded room radiography.

(d) The enclosed room in which shielded room radiography is conducted shall be shielded so that no location on the exterior exceeds the radiation levels and limits established in N.J.A.C. 7:28-6. No industrial radiography shall be conducted in a shielded room until a radiation survey is first made to insure compliance with these radiation levels and limits. A record of this survey shall be maintained and a copy shall be available for inspection by the Department.

(e) No person shall enter an enclosed room in which shielded room radiography is performed until after a physical radiation survey is conducted to determine whether the ionizing radiation producing machine is off. A record shall be maintained of the date and exposure rate measured for each physical radiation survey and shall be made available for inspection by the Department.

(f) The radiation surveys required in (d) and (e) above shall be made with a radiation survey instrument measuring radiation at the energies and at the exposure rates to be encountered. This instrument shall have an operational check source test conducted prior to each use and shall be calibrated at intervals not to exceed one year and shall be recalibrated after each servicing other than a battery replacement. Records shall be maintained of each date of calibration and the daily operational check and shall be made available for inspection by the Department.

(g) Adequate methods shall be provided to restrict the access of personnel and the public to any and all shielded room radiography areas to prevent the exposure of any person to radiation in excess of the level limits of N.J.A.C. 7:28-5, 7:28-6 and 7:28-17. No person is permitted to remain within the enclosed room where shielded room radiography is being performed.

(h) All ionizing radiation-producing machines used in shielded room radiography and all objects exposed thereto shall be confined within an installation or structure designed or intended for radiography and in which radiography is regularly performed in accordance with the following requirements:

1. A reliable interlock or other mechanism shall be installed at each means of access to the shielded room which will turn off the source(s) of radiation if a person tries to enter or open the door to the shielded room.

2. A door-fastening mechanism shall be installed so that the door to the shielded room can be opened from the inside at all times in case of emergency.

3. A visible and audible signal alarm system shall be installed within the shielded room which will be actuated at a reasonable length of time before the power to the radiation source can be activated which enables persons in the vicinity of the shielded room to take appropriate protective actions.

4. One or more scram or emergency buttons shall be installed at a highly visible and easily accessible location or locations within the shielded room that will terminate the power to the source of radiation. This scram or emergency button shall be installed so that it shall require manual resetting before the power to the source of radiation can be reactivated.

5. Each source of radiation used in shielded room radiography shall be provided with a lock at the control panel to prevent unauthorized use of the source.

6. If more than one source of radiation is used in the same shielded room, all such sources of radiation shall meet the requirements of 1-5 above.

New Rule, R.1985 d.502, effective October 7, 1985.
See: 17 N.J.R. 1626(a), 17 N.J.R. 2389(a).
Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In (a), in the introductory paragraph of (b) and in (c), deleted ", radiographic-exposure device, or sealed source" following "machine"; in (a), deleted "7:28-" preceding "17.6" and substituted "this section" for "7:28-17.8; in (e), deleted "or the radiographic-exposure device or the sealed source is in the shielded or "off" position"; and in (h), deleted ", radiographic-exposure devices, or sealed sources".

SUBCHAPTER 18. MAJOR NUCLEAR FACILITIES

7:28-18.1 Scope

(a) The special requirements of this Subchapter shall apply to major nuclear facilities including nuclear reactors, nuclear fuel fabrication plants, nuclear fuel reprocessing plants, and nuclear waste handling or disposal facilities.

(b) These requirements are in addition to the requirements of other applicable Sections of this Chapter.

(c) The intent of this section is to insure that individuals outside of these facilities receive no radiation exposures from environmental or direct radiation that are in excess of the limits of N.J.A.C. 7:28-6.

Amended by R.2008 d.281, effective September 15, 2008 (operative September 30, 2009).
See: 40 N.J.R. 2309(a), 40 N.J.R. 5196(b), 41 N.J.R. 3415(a).
In (c), substituted "section" for "Section" and "N.J.A.C. 7:28-6" for "Sections 6.1 (Exposure of individuals in controlled areas) and 6.2 (Radiation levels outside controlled areas) of this Chapter".

7:28-18.2 Facility description and required monitoring program

(a) Any person desiring to construct a major nuclear facility within this State shall submit a general description of the proposed facility with a discussion of probable and max-

imum potential radioactive discharges. This description shall be submitted to the Department for evaluation, as early as possible, but not less than six months prior to the start of construction, and shall include the following:

1. A general description of the proposed facility;

2. The nature of and the proposed rates of discharge of radioactive contaminants to the environment and/or the nature of and amounts of radioactive materials subject to temporary or permanent storage;

3. The proposed methods of limiting the discharge of radioactive contaminants to the atmosphere;

4. The proposed methods of limiting the discharge of radioactive contaminants to ground or surface waters;

5. The proposed methods of disposal of radioactive or radioactively contaminated materials; and

6. Preliminary description of the proposed radiological monitoring program.

(b) As used in this section, the term "construction" includes pouring the foundation for, or the installation of, any portion of the permanent facility on the site, but does not include the following:

1. Site exploration, site excavation, preparation of the site for construction of the facility, including the driving of piles, and construction of roadways, railroad spurs, and transmission lines;

2. Procurement or manufacture of components of the facility; or

3. Construction of non-nuclear facilities (such as construction equipment storage sheds) for use in connection with the construction of the facility.

(c) Any person desiring to operate a major nuclear facility within this State shall develop an adequate program of radiological monitoring consistent with the hazard from actual or potential discharges. The proposed program shall be submitted to the Department for evaluation as to its adequacy as early as possible but at least six months prior to the start of operation. The proposed radiological monitoring program shall include revised statements of the information required in (a) and (b) above, and it shall also include:

1. An analysis of the ability of the in-facility effluent monitoring system to measure the quantities and kinds of radioactive materials discharged under normal and under accident conditions;

2. An analysis of the ability to predict the effect of such releases on environmental contamination and radiation levels; and

3. A description of the off-site environmental monitoring system, if any, with the kinds of instruments, their sensitivity, and use.

7:28-18.3 Operation

(a) The owner of an existing major nuclear facility shall submit the information required in N.J.A.C. 7:28-18.2(c) (Facility description and required monitoring program) within one month of March 1, 1969, if he has not already done the effective equivalent of this.

(b) Operation of a major nuclear facility and its monitoring program shall be consistent with all provisions of this Chapter.

7:28-18.4 Emergency plans

The owner of every major nuclear facility shall make emergency operational plans in accordance with N.J.A.C. 7:28-1.5 (Emergency precautions). These plans shall be submitted to the Department prior to the start of operation.

7:28-18.5 Radiation incidents

The owner of every major nuclear facility shall report any radiation incident in accordance with N.J.A.C. 7:28-13 (Reports of Theft and Radiation Incidents).

SUBCHAPTER 19. RADIOLOGIC TECHNOLOGY

7:28-19.1 Purpose, scope and applicability

(a) The purpose of this subchapter is to prohibit unnecessary ionizing radiation exposure and to prevent improper exposure of humans to ionizing radiation from radiologic technology, as set forth in the Radiologic Technologist Act.

(b) This subchapter:

1. Requires that all ionizing radiation-producing equipment be used in such a manner as to prevent unnecessary ionizing radiation exposure to humans;

2. Establishes educational and licensure requirements and delineates the scope of practice for persons engaged in the practice of radiologic technology;

3. Establishes responsibilities of licensed practitioners as related to radiologic technology, as well as owners and registrants of ionizing radiation-producing equipment used on humans;

4. Establishes standards for the approval and operation of schools of radiologic technology; and

5. Defines the practice of radiologist assistant as it pertains to fluoroscopic procedures.

(c) The following persons are not required to possess a radiologic technology license under this subchapter in order to perform the activities of a radiologic technologist, but are otherwise subject to the requirements of this subchapter unless specifically exempted:

1. A licensed practitioner as defined in N.J.A.C. 7:28-19.2, provided that the licensed practitioner is practicing within the scope of his or her license;

2. A dental hygienist registered by the New Jersey State Board of Dentistry, provided that the hygienist is practicing within the scope of his or her registration;

3. A person enrolled in and attending a school or college of medicine, osteopathy, podiatric medicine, chiropractic, dentistry or dental hygiene, who is acting within the school's curriculum, when the person is performing tasks within the scope of practice of a radiologic technologist and is under the direct supervision of either a licensed practitioner or a licensed radiologic technologist; and

4. A person who is:

i. Enrolled in and attending a Board-approved school of radiologic technology;

ii. Acting within the school's curriculum as approved in accordance with this subchapter and with the school's permission;

iii. Identified on the student list filed by the school with the Department;

iv. Acting in a clinical education center approved by the Board; and

v. Acting under the appropriate level of supervision as required by N.J.A.C. 7:28-19.12(b) and (c).

(d) This subchapter does not apply to the use of ionizing radiation in veterinary medicine or in radiological examinations of deceased humans.

(e) This subchapter does not establish educational and licensure requirements for nuclear medicine technologists, which are set forth at N.J.A.C. 7:28-24.

(f) This subchapter does not apply to the use of ionizing radiation-producing equipment, identified at N.J.A.C. 7:28-17, 20 and 21.

7:28-19.2 Definitions

In addition to the terms defined at N.J.A.C. 7:28-1 and N.J.S.A. 26:2D-1 et seq., the following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Board" means the Radiologic Technology Board of Examiners created pursuant to N.J.S.A. 26:2D-24 et seq.

"Chest radiologic technologist (LRT(C))" means a person licensed in accordance with this subchapter whose scope of practice of radiologic technology is limited to the chest area for diagnostic purposes, as set forth at N.J.A.C. 7:28-19.4(a) and (d).

"Clinical education center" means a medical or dental facility (such as an office, hospital or imaging center) where students engage in the practice of radiologic technology for clinical education purposes.

"Commission" means the Commission on Radiation Protection as established by the Radiation Protection Act, N.J.S.A. 26:2D-1 et seq.

"Commissioner" means the Commissioner of the New Jersey Department of Environmental Protection.

"Crime" means any crime as defined by the New Jersey Code of Criminal Justice (N.J.S.A. 2C:1-4(a)) or the equivalent under Federal law or the laws of any state.

"Delegated fluoroscopic procedures" are those procedures contained in the American Registry of Radiologic Technologists "Registered Radiologist Assistant Role Delineation" (January 2005), as supplemented or amended and incorporated herein by reference, that have been approved by the New Jersey State Board of Medical Examiners (BME) for the Radiologist Assistant to perform under the level of radiologist supervision specified by the BME. The Registered Radiologist Assistant Role Delineation is available at www.arrt.org.

"Dental radiologic technologist (LRT(D))" means a person licensed in accordance with this subchapter whose scope of practice of radiologic technology is limited to dental radiography for diagnostic purposes, as set forth at N.J.A.C. 7:28-19.4(a) and (e).

"Department" means the New Jersey Department of Environmental Protection.

"Diagnostic radiologic technologist (LRT(R))" means a person licensed in accordance with this subchapter whose scope of practice of radiologic technology includes all types of radiographic procedures for diagnostic purposes, as set forth at N.J.A.C. 7:28-19.4(a) and (b).

"Direct supervision" means being present in the room with the student to observe and supervise the radiological examination.

"Engage" means to perform or assist in the performance of an activity.

"Indirect supervision" means being immediately available in the room or adjacent to the room where the student is performing the radiographic procedure.

"Ionizing radiation" means any form of radiation that has the capability of ionizing the medium through which it is passes.

"Ionizing radiation-producing equipment" means a machine or device that produces ionizing radiation.

"JRCERT" means Joint Review Committee in Education for Radiologic Technology.

"License" means a written authorization applied for in accordance with this subchapter and issued by the Board authorizing the licensee to engage in a specific scope of practice of radiologic technology as set forth at N.J.A.C. 7:28-19.4.

"Licensed practitioner" means a person licensed by the State of New Jersey to practice medicine, dentistry, podiatric medicine, osteopathy or chiropractic. Licensed practitioners do not include dental hygienists, nurses, nurse practitioners, physician assistants or radiologist assistants.

"Limited license" means a license with a scope of practice that is limited pursuant to N.J.A.C. 7:28-19.4.

"Operate ionizing radiation-producing equipment" or "operating ionizing radiation-producing equipment" means the use or manipulation of ionizing radiation-producing equipment in any way that leads to or causes the application of radiation to humans or affects the amount or quality of radiation that is received by a human. The term "operate" or "operating" includes activating or terminating the radiation exposure, setting or adjusting technical factors, setting the mode of imaging, setting the camera rate, and setting or adjusting the size of the exposure field.

"Orthopedic radiologic technologist (LRT(O))" means a person licensed in accordance with this subchapter whose scope of practice of radiologic technology is limited to the spine and extremities for diagnostic purposes, as set forth at N.J.A.C. 7:28-19.4(a) and (f).

"Podiatric radiologic technologist (LRT(P))" means a person licensed in accordance with this subchapter whose scope of practice of radiologic technology is limited to the operation of x-ray machines on the foot, ankle and the distal third of the lower leg for diagnostic purposes, as set forth at N.J.A.C. 7:28-19.4(a) and (g).

"Position patients" or "positioning patients" means the placement and alignment of the x-ray tube, image receptor (to include cassette, film, digital detector, image intensifier) and the area of the patient to be exposed to ionizing radiation. For radiation therapy treatment procedures, "position patients" or

"positioning patients" means the placement and alignment of the ionizing radiation source and the area of the patient to be exposed to ionizing radiation.

"Probationary approval" means a reduction in approval status awarded by the Board to an existing school of radiologic technology that is not in full compliance with the requirements of this subchapter and N.J.S.A. 26:2D-24 et seq.

"Provisional approval" means approval awarded by the Board to a new school of radiologic technology which, upon review of the application, is found to not be in full compliance with the requirements of this subchapter and N.J.S.A. 26:2D-24 et seq., but has submitted a plan for future compliance acceptable to the Board.

"Radiation Protection Act" means N.J.S.A. 26:2D-1 et seq., as supplemented or amended.

"Radiation Technologist Act" means N.J.S.A. 26:2D-24 et seq., as supplemented or amended.

"Radiation therapist (LRT(T))" means a person licensed in accordance with this subchapter whose scope of practice of radiologic technology is limited to the use of ionizing radiation-producing equipment for therapy simulation and therapeutic purposes, as set forth at N.J.A.C. 7:28-19.4(a) and (c).

"Radiologic technologist" means a person who is licensed pursuant to this subchapter, which shall include chest radiologic technologist (LRT(C)), dental radiologic technologist (LRT(D)), diagnostic radiologic technologist (LRT(R)), radiation therapist (LRT(T)), podiatric radiologic technologist (LRT(P)), orthopedic radiologic technologist (LRT(O)), and urologic radiologic technologist (LRT(U)).

"Radiologic technology" means the application of ionizing radiation to humans for diagnostic, therapy simulation, or therapeutic purposes.

"Radiological examination" means a procedure that uses ionizing radiation on humans for diagnostic, therapy simulation, or therapeutic purposes.

"Radiologist" means a physician who is licensed by the New Jersey Board of Medical Examiners and is either board-certified by the American Board of Radiology or the American Osteopathic Board of Radiology or has satisfactorily completed a residency program in radiology approved by the Accreditation Council for Graduate Medical Education.

"Radiologist assistant" means a licensed diagnostic radiologic technologist who has completed additional education in a radiologist assistant program and attained national certification as a radiologist assistant and who may perform delegated fluoroscopic procedures, as provided at N.J.A.C. 7:28-19.16(a).

"Student" means any person who is currently enrolled in and attending a school of radiologic technology approved by the Board.

"Temporary license" means a license issued for a limited period of time in accordance with N.J.A.C. 7:29-19.8.

"Unnecessary ionizing radiation" means ionizing radiation that does not confer a diagnostic or therapeutic benefit or is excessive to achieve the medical or dental purpose.

"Urologic radiologic technologist (LRT(U))" means a person licensed in accordance with this subchapter whose scope of practice of radiologic technology is limited to the abdomen and pelvic area for urologic diagnostic purposes, as set forth at N.J.A.C. 7:28-19.4(a) and (h).

7:28-19.3 General provisions

(a) Except as provided at N.J.A.C. 7:28-19.1(c) through (f):

1. No person shall engage in any activity within a scope of practice of radiologic technology as defined in N.J.A.C. 7:28-19.4 unless that person possesses a valid license authorizing the person to engage in that scope of radiologic technology; and

2. No person shall operate ionizing radiation-producing equipment or position patients for mammographic procedures unless that person possesses a valid license in diagnostic radiologic technology and is in compliance with the radiologic technologist personnel requirements of the Mammography Quality Standards Act (42 U.S.C. §263b) and 21 CFR Part 900, as supplemented or amended, and incorporated herein by reference.

(b) No person shall operate ionizing radiation-producing equipment or cause, allow or permit the use of such equipment in such a manner as to expose humans to ionizing radiation, except as provided in this subchapter.

(c) No owner, licensed practitioner, or registrant of ionizing radiation-producing equipment shall cause, allow, or permit any person to engage in any activity within a scope of practice of radiologic technology as defined in N.J.A.C. 7:28-19.4, unless that person possesses a valid license authorizing the person to engage in that scope of radiologic technology.

(d) No person shall cause, allow, or permit a radiologic technologist to be in the primary beam, unless it is deemed essential for the specific examination by the licensed practitioner and the radiologic technologist is wearing protective garments over all body areas in the primary beam as required by N.J.A.C. 7:28-15.9.

(e) No owner, licensed practitioner, or registrant of ionizing radiation-producing equipment shall cause, allow, or permit any person to perform mammographic procedures unless that person complies with the requirements of this subchapter.

(f) No school of radiologic technology subject to this subchapter shall enroll students unless the school is approved by the Board.

(g) No school subject to this subchapter shall hold itself out to be an approved school of radiologic technology or claim in any way that completion of the school's curriculum will enable students to be eligible for New Jersey examination and/or New Jersey licensure, unless the school is approved by the Board.

(h) No person shall use or permit the use of ionizing radiation-producing equipment in such a manner as to expose humans to unnecessary ionizing radiation.

(i) A radiologic technologist shall carry his or her current radiologic technology license on his or her person at work, and display his or her radiologic technology license, upon request of the Department, employer or any patient.

(j) A radiologic technologist shall notify the Department of any conviction of a crime under Federal law or the law of any state within 30 calendar days of such conviction.

(k) Any conviction of a crime committed while not engaged in the practice of radiologic technology does not, in itself, constitute a lack of good moral character for the purposes of N.J.A.C. 7:28-19.6(a)2, 19.9(e) and 19.11(a)1.

(*l*) No person or organization shall provide training in the operation of ionizing radiation-producing equipment or patient positioning to persons other than those authorized to use such equipment as specified in this subchapter.

(m) No person licensed pursuant to this subchapter shall use ionizing radiation-producing equipment on humans for any purpose other than for medical diagnosis, dental diagnosis, therapy simulation, therapy or monitoring of dental treatment. All such use must be at the direction of a licensed practitioner who is practicing within the scope of his or her license.

(n) No radiologic technologist licensed pursuant to this subchapter shall prescribe a radiological examination.

(*o*) No radiologic technologist licensed pursuant to this subchapter shall render an interpretation of a radiological examination.

(p) The license of a radiologic technologist may be suspended for a fixed period, or may be revoked, or the technologist may be censured, reprimanded or otherwise disciplined in accordance with the provisions and procedures set forth in the Radiologic Technologist Act, if after due process, the Board finds that the technologist has committed an act of unethical conduct, as defined in N.J.A.C. 7:28-19.5, or has violated any provision of this chapter, the Radiation Protection Act or the Radiologic Technologist Act. A radiologic technologist may request a hearing in accordance with N.J.A.C. 7:28-19.17(b) if aggrieved by the Board's actions.

7:28-19.4 Scopes of practice

(a) Any person who possesses a valid license in radiologic technology shall exercise proper principles of radiation protection with regard to radiological examinations.

(b) Any person who possesses a valid license to practice diagnostic radiologic technology issued in accordance with this subchapter may engage in the following activities, which constitute the scope of practice of diagnostic radiologic technology:

1. Operate ionizing radiation-producing equipment for radiographic procedures;

2. Measure patients for radiographic procedures;

3. Position patients for radiographic procedures;

4. Set technique factors for radiographic procedures;

5. Set the source-to-image receptor distance for radiographic procedures;

6. Assist in fluoroscopic procedures using ionizing radiation-producing equipment provided that a licensed physician is physically in the room and directing the procedure; and

7. Administer contrast media and pharmaceuticals provided that the material and its administration comply with New Jersey State Board of Medical Examiners (BME) rule, N.J.A.C. 13:35-6.20.

(c) Any person who possesses a valid license to practice radiation therapy technology issued in accordance with this subchapter may engage in the following activities, which constitute the scope of practice of radiation therapy technology:

1. Operate ionizing radiation-producing equipment for therapy simulation and therapeutic procedures only;

2. Position patients and equipment for therapy simulation and treatment procedures;

3. Deliver the treatment dose prescribed by a licensed physician;

4. Record and certify the parameters of each treatment delivered in the patient record;

5. Select and position any required immobilization devices and beam modification devices;

6. Perform fluoroscopic procedures for therapy simulation while under the direction of a licensed physician who is on-site during the procedure; and

7. Assist in treatment planning procedures while under the supervision of a licensed physician or therapy physicist or medical dosimetrist.

(d) Any person who possesses a valid license to practice chest radiologic technology issued in accordance with this

(f) All other applications and associated fees specified in (a)1, 2 and 4 and (b) above shall be submitted to:

Department of Environmental Protection
Bureau of Radiological Health
25 Arctic Parkway
PO Box 415
Trenton, New Jersey 08625-0415

7:28-19.11 Minimum requirements for admission to a school of radiologic technology

(a) A school of radiologic technology approved by the Board pursuant to this subchapter shall only enroll a candidate who at the time of admission meets or exceeds the following minimum requirements:

1. Is of good moral character;

2. Has successfully completed a four-year course of study in a secondary school (high school) approved by the State Board of Education or passed an approved equivalency test; and

3. Meets the admission criteria of that school of radiologic technology.

(b) The school of radiologic technology shall ensure that each candidate for admission submits a formal application.

(c) Each school of radiologic technology shall keep on file for at least two years after a student graduates, withdraws or is dismissed the student's application and any document used to determine eligibility for admission to the school.

7:28-19.12 Requirements for students engaging in the scope of practice of radiologic technology

(a) Only students who meet the requirements of N.J.A.C. 7:28-19.1(c)4 are permitted to engage in the practice of radiologic technology.

(b) Any licensed practitioner, registered dental hygienist, or licensed radiologic technologist, who is acting within the scope of that license or registration, shall provide direct or indirect supervision to student technologists that includes:

1. The evaluation of the request for the radiological examination in relation to the student's knowledge and competency;

2. The evaluation of the condition of the patient in relation to the student's knowledge and competency; and

3. The evaluation and approval of all resultant radiological images and/or data.

(c) The school of radiologic technology and the clinical education center shall:

1. For students in schools of diagnostic radiologic technology, ensure that students are supervised in accordance with the following:

i. Prior to a Board-approved faculty member determining that a student is clinically competent in a given radiographic procedure, the student shall perform that procedure only under the direct supervision of a licensed diagnostic radiologic technologist.

ii. After clinical competency in a radiographic procedure has been determined by a Board-approved faculty member, the student may perform that procedure under indirect supervision of a licensed diagnostic radiologic technologist; and

iii. Any exposure that needs to be repeated shall be repeated under the direct supervision of a licensed diagnostic radiologic technologist;

2. For students in schools of radiation therapy technology, ensure that all therapy simulation and therapeutic procedures are performed under direct supervision of a licensed radiation therapist;

3. For students in schools of chest, orthopedic, podiatric, and urologic radiologic technology, ensure that all radiographic procedures are performed under direct supervision of a licensed practitioner, a licensed diagnostic radiologic technologist, or a person licensed in that specific category of radiologic technology;

4. For students in schools of dental radiologic technology, ensure that all procedures are performed under direct supervision of a licensed dentist, registered dental hygienist, a licensed diagnostic radiologic technologist, or a licensed dental radiologic technologist;

5. Ensure that students in schools of diagnostic radiologic technology do not initiate x-ray exposure during fluoroscopic procedures;

6. Ensure that students are not assigned to clinical education rotations in such a manner as to substitute for radiologic technologists;

7. Ensure that during clinical education activities the number of students assigned to a clinical education center and on site at any time does not exceed the Board-approved student capacity for that clinical education center;

8. Ensure that during clinical education activities students wear visible identification name badges that identify them as student radiologic technologists;

9. Ensure that during clinical education activities each student wears a personnel radiation-monitoring device;

10. Ensure that all activities involving clinical education are performed in accordance with the school's published policies and procedures, and the agreement between the school of radiologic technology and the clinical education center; and

11. Ensure that students are not:

i. In the primary beam;

ii. Permitted to remain in the x-ray room outside the control booth during an x-ray exposure unless the student is provided with a protective apron or shield that is at least 0.5 mm of lead equivalent; or

iii. Permitted to engage in any other practices likely to result in unnecessary exposure to ionizing radiation.

7:28-19.13 Requirements for schools of radiologic technology

(a) A school in diagnostic radiologic technology shall provide a course of study that is at least 24 months in length or its equivalent as determined by the Board. The educational curriculum shall include ethics and law in radiologic technology; medical terminology; patient care management; human anatomy and physiology; radiographic procedures; imaging and processing; imaging equipment; image analysis; radiation production and characteristics; radiation physics; radiation protection; radiation biology; radiologic pathology; computers in radiologic technology; pharmacology and drug administration; quality assurance; and shall provide for competency-based clinical education in accordance with the Board's accreditation standards. The curriculum shall be a JRCERT-recognized curriculum, provided that it does not conflict with this subchapter.

(b) A school of radiation therapy technology shall provide a course of study that is at least 24 months in length or its equivalent as determined by the Board. This course of study can be 12 months in length if the applicant has successfully completed a Board-approved or equivalent diagnostic radiologic technology program. The educational curriculum shall include ethics and law in radiation therapy; medical terminology; patient care management in radiation therapy; radiation protection; pathology; radiation physics; radiation therapy physics; medical imaging and processing; sectional anatomy; operational issues in radiation therapy; treatment planning, beam modification devices and dosimetry; simulation and therapy procedures and technique; quality management; and shall provide for competency-based clinical education. The curriculum shall be a JRCERT-recognized curriculum, provided that it does not conflict with this subchapter.

(c) A school of dental radiologic technology shall follow the Board's approved curriculum in dental radiologic technology, which is available from the Department by written request to the address listed at N.J.A.C. 7:28-19.10(f). In the alternative, the curriculum shall be the American Dental Association's or any nationally recognized published curriculum, provided that it does not conflict with this subchapter or the Board's approved curriculum.

(d) A school of podiatric radiologic technology shall follow the Board's approved curriculum in podiatric radiologic technology, which is available from the Department by written request to the address listed at N.J.A.C. 7:28-19.10(f). In the alternative, the curriculum shall be the American Podiatric Medical Assistants Association's or any nationally recognized published curriculum, provided that it does not conflict with this subchapter or the Board's approved curriculum.

(e) A school of chest, orthopedic, or urologic radiologic technology shall follow the Board's approved curriculum in that category of radiologic technology, which is available from the Department by written request to the address listed at N.J.A.C. 7:28-19.10(f). In the alternative, the curriculum shall be any nationally recognized published curriculum, provided that it does not conflict with this subchapter or the Board's approved curriculum.

(f) Each school of radiologic technology shall:

1. Comply with N.J.A.C. 7:28-19.11 and 12 and the Board's accreditation standards, which are available from the Department's Bureau of Radiological Health;

2. Prepare and maintain a current and accurate written course syllabus and other educational documents for each content area delineated in the program's Board approved curriculum. These documents shall include, but are not limited to, lesson plans, learning objectives, classroom schedules, and student evaluation instruments. These documents shall be on file at the school and shall be produced for review by the Department or its representative during an inspection, and shall be submitted to the Department upon request;

3. Employ and/or appoint only Board-approved program directors, clinical coordinators, clinical instructors and clinical supervisors;

4. Issue to each candidate prior to admission a current and dated course catalog, bulletin, or other written statement, which shall include, but not be limited to, a description of the curriculum as a whole, the requirements for admission, requirements for graduation, and information concerning amounts and terms of payment of any tuition and fees or expenses to be incurred. The information contained in these documents shall accurately reflect the program offered;

5. Issue to each enrolled student a current and dated catalog, handbook, or policy manual that includes all program and school policies, which shall include, but not be limited to, policies regarding conduct, dismissal, grading, and pregnancy as it relates to radiation protection. All policies and procedures shall accurately reflect the program offered;

6. Enroll only students who meet the school's requirements for admission;

7. Report in writing to the Department, within 30 calendar days of any student's matriculation date, the name and address of each new student enrolled and, within 30 calendar days of the date the student completes the course of study (as set forth on the certificate issued in accordance

with (f)15 below), the name and address of each student graduated;

8. Have and comply with an educational plan for didactic and laboratory instruction and clinical assignments, with objectives relating to the specific practice of radiologic technology;

9. Maintain current student records that accurately reflect the student's didactic and clinical progress;

10. Permanently maintain an official course transcript for each graduate;

11. Maintain all academic and clinical records for at least six months for each student who has left, withdrawn, or was dismissed from the program;

12. Ensure that it has adequate administrative, clerical, clinical, faculty, financial and physical resources to support all enrolled students;

13. Ensure that each student is provided with a personnel radiation-monitoring device during his or her period of attendance. Student exposure to radiation shall not exceed any of the occupational limits prescribed in N.J.A.C. 7:28-6.1. Within 30 calendar days of the school's receipt of any radiation dosimetry report, the school shall inform all students of their most recent exposure readings. In the event that a student receives an exposure of 50 millirem (mrem) (0.5 millisievert (mSv)) or greater on any monthly radiation dosimetry report, or 100 mrem (1.0 mSv) or greater on any bimonthly radiation dosimetry report, or 150 mrem (1.5 mSv) or greater on any quarterly report, or an exposure that exceeds any of the occupational limits in N.J.A.C. 7:28-6.1, the school shall begin an investigation to find the cause and prevent recurrence of the exposure. The investigation report shall be completed within 30 calendar days of the school's receipt of notification of the exposure. This investigation report shall include any action to be taken to reduce unnecessary radiation exposure. The investigation report shall be given to the student and shall be maintained in the student's file. If any of the occupational limits in N.J.A.C. 7:28-6.1 is exceeded, a copy of the investigation report must be submitted to the Department. Within 90 calendar days of departure from the school, the school shall provide each student with a complete record of his or her radiation exposure history;

14. For each student who has declared her pregnancy in writing, with an approximate date of conception, a school shall:

i. Provide instruction regarding radiation exposure and risks as they relate to the embryo-fetus and pregnancy;

ii. Provide program enrollment options to accommodate pregnancy while allowing the student to complete the curriculum. If the student elects to continue with her education within the radiologic technology program, the school shall ensure that a personnel radiation-monitoring device is worn at the waist level during the term of her pregnancy;

iii. If the student has the potential of engaging in fluoroscopic or portable radiographic procedures, provide to the student with and require her to wear two personnel radiation-monitoring devices. One device shall be worn at the neck level outside the protective apron and the other under the protective apron at the waist level;

iv. Limit the student's exposure, as registered on the personnel radiation-monitoring devices, in order that the exposure of the embryo-fetus does not exceed the most recent recommended limit published by the National Council on Radiation Protection and Measurements (NCRP), incorporated herein by reference. As of August 18, 2008, the recommended limit is contained in NCRP Report #116 entitled Limitation of Exposure to Ionizing Radiation, published in 1993. The publication can be obtained from NCRP by contacting them at 7910 Woodmont Ave., Suite 400, Bethesda, MD 20814 or at: www.ncrponline.org. This report recommends a monthly equivalent dose limit of 50 mrem (0.5 mSv) to the embryo-fetus (excluding medical and natural background radiation) once the pregnancy is known. The Deep Dose Equivalent value reported for the device worn at the student's waist will be considered the initial estimated dose received by the embryo-fetus;

v. Within seven calendar days of the school's receipt of a radiation dosimetry report, the school shall inform the pregnant student of her most recent exposure readings. If the Deep Dose Equivalent in any month is 50 mrem (0.5 mSv) or higher, the school and student shall consult with a medical physicist or health physicist, who is certified by the American Board of Radiology, American Board of Medical Physics, American Board of Health Physics or the equivalent as determined by the Commission; and

vi. Submit to the Department, with a copy to the student, a report of the consultation provided in (f)14v above, if required, including any recommendation(s), assignment modifications and the student's exposure history, within 21 calendar days of the school's receipt of the radiation dosimetry report;

15. Issue to each student who satisfactorily completes a course of study a dated certificate that specifies the particular course of study completed;

16. Inform the Department within 15 calendar days of any change that could adversely affect the school's ability to fulfill its ability to provide students with appropriate didactic and laboratory instruction and clinical assignments, or has altered how the school operates since its last review and approval by the Board. Such changes include, but are not limited to, a change in status or loss of any official or faculty member, change of curriculum, loss of a clinical affiliate, the sequencing of courses, length of the program or sponsorship of the program;

17. If the school's curriculum is in diagnostic radiologic technology or radiation therapy technology, have no more than two consecutive years in which the pass rate for students taking the American Registry of Radiologic Technologists (ARRT) examination for the first time is below 75 percent;

18. If the school's curriculum is in chest, dental, orthopedic, podiatric or urologic radiologic technology, have no more than two consecutive years in which both the first-time mean score and pass rate for the Board's examination are below 75 percent; and

19. Ensure that a student's total academic and clinical instruction does not exceed 40 hours per week.

(g) In addition to (f) above, schools of diagnostic radiologic technology and radiation therapy technology shall comply with the JRCERT Standards for an Accredited Educational Program in Radiologic Sciences (JRCERT Standards), incorporated herein by reference, as amended and supplemented. In case of conflict with this subchapter or the Board's accreditation standards, this subchapter and the Board's accreditation standards shall supersede the JRCERT Standards. Copies of the JRCERT Standards and the Board's accreditation standards may be obtained by contacting the Department's Bureau of Radiological Health at PO Box 415, Trenton, NJ 08625-0415 or the JRCERT at 20 N. Wacker Dr., Suite 2850, Chicago, IL, 60606 or www.jrcert.org.

7:28-19.14 School of radiologic technology: process for approval; provisional approval; probationary approval; termination of approval and other general provisions

(a) In order to be Board-approved, a school of radiologic technology shall submit to the Department a complete application, along with the appropriate fee as set forth in N.J.A.C. 7:28-19.10(b). The Department will forward all complete applications to the Board for its consideration. If the application is incomplete, the Department shall notify the school. The school will be provided an opportunity to complete the application within 90 calendar days of receipt of such notice. If after 90 days the application is still incomplete, it will be forwarded as an incomplete application for the Board's consideration. A complete application shall include:

1. The name, address and contact information of the school;

2. The name and credentials of the program director or directors;

3. The name and credentials of each instructor and the courses he or she teaches; and

4. A report or reports describing the school's policies and procedures in place to ensure that:

i. Only qualified applicants are admitted into the program, in accordance with N.J.A.C. 7:28-19.11;

ii. Clinical education is performed properly and under appropriate supervision, in accordance with N.J.A.C. 7:28-19.12; and

iii. The educational curriculum includes all Board required elements, in accordance with N.J.A.C. 7:27-19.13.

(b) After review of the school's application, the Board may either award approval or provisional approval to the school or deny the application.

1. The Board shall notify a school that has been awarded provisional approval each requirement that must be satisfied in order for the school to be awarded approval. Provisional approval shall be awarded only if the school agrees in writing to satisfy each requirement within a time period specified by the Board, and shall satisfy each requirement before non-provisional approval is awarded. The Board shall terminate the provisional approval of a school that fails to satisfy the requirements within the specified time period.

(c) A school whose application has been denied for any reason may submit a new application and fee in accordance with (a) above.

(d) A school of radiologic technology, including its clinical education centers, shall:

1. Permit one or more Board representatives or Department employees to conduct a site inspection. The Board may accept the findings from a site inspection performed by a national accreditation agency recognized by the Board, in lieu of an inspection by the Board or the Department;

2. Make available to the Board representative or Department employee such information, records, or persons that may be needed to determine compliance with the requirements of this subchapter; and

3. Demonstrate, to the satisfaction of the Board, that it complies with the requirements of this subchapter.

(e) In order to maintain approval, the school shall comply with the requirements of this subchapter and pay the appropriate annual fee as specified in N.J.A.C. 7:28-19.10(c). The annual fee is due by January 1st of each year or 30 calendar days after the date that the Board awards approval under (b) above.

(f) The Board may reduce the approval status of a school of radiologic technology to probationary approval for failure to comply with this subchapter, provided that the school agrees in writing to correct all items of noncompliance within a time period specified by the Board. The Board shall notify a school of radiologic technology of the reduction to probationary approval status and of the items of noncompliance resulting in such status.

(g) A school on probationary approval shall:

1. Correct, within a period of time as determined by the Board, all specified deficiencies;

2. Notify each enrolled student and applicant, within 15 calendar days of receipt of notification from the Board of probationary approval status, by certified mail of the school's probationary approval status; and

3. Submit to the Department, within 20 calendar days of receipt of notification of probationary approval status, a copy of the notice required in (g)2 above.

(h) A school of radiologic technology may have its approval, provisional approval, or probationary approval terminated by the Board, upon the approval of the Commission, for failure to comply with this subchapter. The Department shall issue an administrative order to a school of radiologic technology terminating the approval, which administrative order shall contain the findings that led to the termination and specify the effective date of the termination.

(i) The approval of a school of radiologic technology may be terminated by the Board if the school does not enroll students for a period of two consecutive years.

(j) A school of radiologic technology whose approval has been terminated may apply for approval as a school of radiologic technology in accordance with this section.

(k) Any Board-approved school that makes a substantial change to its approved program, including, but not limited to, a change in the level of terminal award (such as a certificate to an associate degree, or associate degree to bachelor degree), or a change in the owner or operator of the program, will be considered a new school and will be subject to the application procedure of this section and fee specified in N.J.A.C. 7:28-19.10(b). The school must notify the Board of any change, in accordance with N.J.A.C. 7:27-19.13(f)16.

(*l*) A school whose application for approval is denied may request a hearing as provided by N.J.A.C. 7:28-19.17(a) if aggrieved by the Board's actions.

(m) A Board-approved school whose approval is terminated or reduced to probationary may request a hearing as provided by N.J.A.C. 7:28-19.17(b) if aggrieved by the Board's actions.

7:28-19.15 List of approved schools

A list of approved schools of radiologic technology may be obtained by contacting the Department's Bureau of Radiological Health at PO Box 415, Trenton, NJ 08625-0415.

7:28-19.16 Radiologist assistants – schools and practice

(a) A diagnostic radiologic technologist who holds a valid license from the Board, has completed a radiologist assistant program that is recognized by the Board, and is certified by the American Registry of Radiologic Technologists as a radiologist assistant, is permitted to perform delegated fluoroscopic procedures, as defined in N.J.A.C. 7:28-19.2.

(b) The Board will recognize a radiologist assistant program in which the educational curriculum contains, at a minimum, the following content: patient assessment; management and education; pharmacology and clinical decision making in radiology; contrast media; pathophysiology; radiographic and fluoroscopic procedures; fluoroscopic unit operation and safety; radiation safety; radiation biology; health physics; image correlation to anatomy, physiology and pathology; clinical pathways related to radiology; quality of care review and audit; directed readings and research; medico-legal and professional standards and governmental standards; and clinical education, which includes testing to determine clinical competency. The curriculum may follow the American Society of Radiologic Technologists curriculum or any nationally recognized curriculum, provided that it does not conflict with this section.

(c) A radiologist assistant shall comply with all other State rules regarding his or her practice in New Jersey.

(d) A radiologist assistant student who is enrolled in and attending a Board-recognized school, who is acting within the school's curriculum and possesses a valid diagnostic radiologic technology license issued by the Board, is permitted to perform delegated fluoroscopic procedures in New Jersey under the appropriate supervision as prescribed in (g)6 below.

(e) No person shall perform delegated fluoroscopic procedures unless the person is a licensed practitioner who is acting within the scope of his or her license or meets the requirements of (a) or (d) above.

(f) No owner, licensed practitioner, or registrant of ionizing radiation-producing equipment shall cause, allow, or permit any person to perform delegated fluoroscopic procedures unless that person is a licensed practitioner who is acting within the scope of his or her license or meets the requirements of (a) or (d) above.

(g) Any school with a radiologist assistant program that assigns radiologist assistant students to a New Jersey facility for clinical education shall:

1. Be recognized by the Board;

2. Ensure that all assigned students possess and maintain a valid diagnostic radiologic technology license issued by the Board;

3. Develop and implement a log to track fluoroscopic procedures that are performed by each radiologist assistant student. This log shall include, but not be limited to, the name of the student, the procedure performed, the name of the supervisor responsible for the procedure, the type of supervision provided and the fluoroscopic time used. The school shall ensure that the log is reviewed at least weekly by the supervising radiologist. If a trend of unexplained

high use of fluoroscopic time is identified, the school shall ensure that corrective action by the supervising radiologist is implemented and recorded in the student's file;

4. Develop and implement an educational plan for competency based clinical education, which shall include, but not be limited to, didactic and laboratory instruction, clinical practice, clinical competency testing and remediation for failed competency evaluations. The school shall ensure that no person other than a radiologist determines clinical competency;

5. Prior to the start of the assignment, inform the Department of the location where the radiologist assistant student will be assigned for clinical education, the name of each supervising radiologist, and the length of the assignment;

6. Ensure that all assigned radiologist assistant students perform delegated fluoroscopic procedures as prescribed below under the appropriate level of supervision of a radiologist or a radiologist assistant who meets the requirements in (a) above:

i. Only a radiologist can determine whether a student is clinically competent to perform a delegated fluoroscopic procedure.

ii. Until a student is determined to be clinically competent in a given delegated fluoroscopic procedure, the student must perform that procedure under direct supervision by a supervising radiologist or radiologist assistant who meets the requirements in (a) above.

iii. After a student is determined to be clinically competent in a given delegated fluoroscopic procedure, the student may perform that procedure without direct supervision, provided that a radiologist or a radiologist assistant who meets the requirements in (a) above is on-site and immediately available to furnish assistance and direction throughout the performance of the procedure and provided that the level of supervision provided is consistent with the supervision required by the New Jersey State Board of Medical Examiners; and

7. Provide remedial instruction for any procedure that is performed by a radiologist assistant student and found to be unacceptable by the supervising radiologist or radiologist assistant who meets the requirements in (a) above. If the student's performance of the procedure is determined to be unacceptable after a student has been determined to be clinically competent, the school shall ensure that the student's performance of the procedure is directly supervised as required in (g)6ii above until a radiologist determines that the student is clinically competent to perform that procedure. All remedial instruction shall be documented in the student's file.

(h) No school shall assign a radiologist assistant student to a New Jersey facility for clinical education unless the school complies with (b) and (g) above.

7:28-19.17 Procedures for requesting and conducting adjudicatory hearings

(a) Subject to the limitation on third-party hearing rights specified in (f) below, an applicant for examination, license or Board-approval for a radiologic technology school, or any person who believes that he or she is aggrieved by any Board finding as it relates to such an application may contest the decision and request a contested case hearing. The request shall be made in writing to the Department at the address listed in (e) below within 20 calendar days from receipt of the Board's findings. The person requesting the hearing shall include the following information in each hearing request:

1. The name, address, and telephone number of the applicant and its authorized representative;

2. The date the applicant received the Board finding;

3. A copy of the finding and a list of all issues being appealed;

4. The defenses to each of the Board's findings of fact stated in short and plain terms;

5. An admission or denial of each of the Board's findings. If the person is without knowledge or information sufficient to form a belief as to the truth of a finding, the applicant shall so state and this shall have the effect of a denial. A denial shall fairly meet the substance of the findings denied. When the applicant intends in good faith to deny only a part or a qualification of a finding, the applicant shall specify so much of it as is true and material and deny only the remainder. The person may not generally deny all of the findings, but shall make all denials as specific denials of designated findings. For each finding the person denies, the person shall state the fact or facts as the applicant believes it or them to be;

6. Information supporting the request and specific reference to or copies of other written documents relied upon to support the request;

7. An estimate of the time required for the hearing (in days and/or hours); and

8. A request, if necessary, for a barrier-free hearing location for physically disable persons.

(b) Subject to the limitation on third-party hearing rights specified in (f) below, a licensed technologist, applicant for license renewal, or Board-approved school, or any person who believes that he or she is aggrieved by any Board finding or an administrative order issued pursuant to this subchapter may contest the finding or administrative order and request a contested case hearing. The person requesting the hearing shall submit an original request in writing to the Department at the address at (e) below within 20 calendar days after the violator's receipt of the administrative order. The person requesting the hearing shall include the following information in each hearing request:

1. The name, address, and telephone number of the person requesting the hearing and any authorized representative;

2. The date the person requesting the hearing received the Board's finding or administrative order being contested;

3. A copy of the Board's finding or administrative order and a list of all issues being appealed;

4. The person's defenses to each of the findings of fact, stated in short and plain terms;

5. An admission or denial of each of the findings of fact. If the person requesting the hearing is without knowledge or information sufficient to form a belief as to the truth of a finding, the person shall so state and this shall have the effect of a denial. A denial shall fairly meet the substance of the findings denied. When the person intends in good faith to deny only a part or a qualification of a finding, the person shall specify so much of it as is true and material and deny only the remainder. The person may not generally deny all of the findings of fact, but shall make all denials as specific denials of designated findings. For each finding of fact the person requesting the hearing denies, the person shall state the fact or facts as the violator believes it or them to be;

6. Information supporting the request and specific reference to or copies of other written documents relied upon to support the request;

7. An estimate of the time required for the hearing (in days and/or hours); and

8. A request, if necessary, for a barrier-free hearing location for physically disabled persons.

(c) The Department shall deny the hearing request if:

1. The applicant or person requesting the hearing fails to include all the information required by (a) or (b) above; or

2. The Department does not receive the request within 20 calendar days after the applicant or person requesting the hearing received the Board's finding or administrative order being contested.

(d) The Department shall conduct all adjudicatory hearings in accordance with the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1.

(e) The applicant or violator shall send the request for an adjudicatory hearing to:

The Office of Legal Affairs
New Jersey Department of Environmental Protection
401 East State Street, Fourth Floor
PO Box 402
Trenton, New Jersey 08625-0402
Attention: Hearing Request; and

New Jersey Department of Environmental Protection
Bureau of Radiological Health
25 Arctic Parkway
PO Box 415
Trenton, New Jersey 08625-0415
Attention: Hearing Request

(f) Nothing in this section shall be construed to provide a right to an adjudicatory hearing in contravention of N.J.S.A. 52:14B-3.1 through 3.3.

7:28-19.18 Severability

Each section of this subchapter is severable. In the event that any section, subsection or division, or application thereof, is held invalid in a court of law, the remainder of this subchapter shall continue in full force and effect.

SUBCHAPTER 20. PARTICLE ACCELERATORS FOR INDUSTRIAL AND RESEARCH USE

7:28-20.1 Scope

(a) This subchapter establishes requirements and procedures for the registration and use of all particle accelerators, with the exception of those regulated by N.J.A.C. 7:28-14 and 15.

(b) A person shall not operate or permit the operation of a particle accelerator unless the equipment and installation meet the applicable requirements of this subchapter.

(c) In addition to the requirements of this subchapter, all registrants of particle accelerators are subject to all other applicable requirements of N.J.A.C. 7:28-1 through 11 and 13.

7:28-20.2 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise:

"Direct supervision" means guidance and instruction by the qualified machine operator who is physically present, is watching the operation of the particle accelerator, and is available for immediate assistance.

"Electron microscope" means a machine that accelerates electrons for the purpose of producing highly magnified images of materials and material surfaces.

"kVp" means kilovolt peak.

"Particle accelerator" means any machine that accelerates charged particles (electrons, protons, deuterons, or other

charged particles, etc.) in a vacuum and discharges the resulting particulate or other radiation but which does not meet the specifications of machines currently regulated under N.J.A.C. 7:28-14 through 16; particle accelerators include, but are not limited to, machines used for research, irradiation, or other purposes; such machines include, but are not limited to, potential-drop accelerators, electron linear accelerators, cyclotrons, betatrons, microtrons, ion implant accelerators, and electron microscopes; particle accelerators do not include high voltage generators, televisions, video display terminals, cathode ray tubes or other similar devices whose primary purpose is not the production of a useful charged particle beam.

"Particle accelerator facility" means the location at which one or more particle accelerators are installed and are operated under the same administrative control.

"Particle accelerator safety officer" or "PASO" means the person who is appointed and authorized by the registrant to act on the registrant's behalf to implement and maintain the particle accelerator radiation protection program for the registrant's facility.

"Performance test" means a procedure which is performed to assure that an instrument continues to perform its intended function.

"Qualified machine operator" means a person who meets the requirements of N.J.A.C. 7:28-20.6(a).

"Radiation protection committee" means a group consisting of at least three individuals appointed by the registrant who identify radiation safety problems, initiate, recommend, or provide corrective action plans, and verify the implementation of corrective actions. One member of this committee shall be the particle accelerator safety officer and one member shall be a representative of management. The remaining members shall be appointed at the discretion of the registrant.

"Scattered radiation" means radiation that, during passage through matter, has changed in direction or in energy.

"Stray radiation" means the sum of leakage and scattered radiation.

7:28-20.3 Registration requirements

A person shall not possess, control, use or cause a particle accelerator or an electron microscope to be used unless it has been registered with the Department pursuant to N.J.A.C. 7:28-3, unless the particle accelerator or electron microscope is incapable of operating at more than five kVp and does not produce radiation greater than 0.5 millirem per hour at any readily accessible point five centimeters from its surface.

7:28–20.4 General requirements for a particle accelerator facility

(a) Particle accelerators not capable of operating at more than 30 kVp shall be exempt from the requirements of (b) through (f) below and N.J.A.C. 7:28–20.5 through 20.12 provided that the initial or repeat radiation protection survey does not yield radiation levels greater than 0.5 millirem per hour using maximum operating conditions of operation as measured five centimeters from any accessible surface.

(b) A registrant shall not permit a particle accelerator to be operated unless the person operating the particle accelerator has met the requirements of N.J.A.C. 7:28–20.6(a).

(c) A registrant shall not use a particle accelerator or cause it to be used unless the equipment, facilities, operating procedures and emergency procedures are adequate to minimize danger to property and to public health and safety.

(d) The registrant of a particle accelerator facility shall appoint a Particle Accelerator Safety Officer (PASO) who is authorized to act on behalf of the registrant to implement and maintain a radiation safety program for the particle accelerator facility. The PASO may be either a full-time employee of the registrant or a consultant hired by the registrant. The registrant shall hold the final responsibility for the safe operation of the facility in accordance with all pertinent provisions of this chapter.

(e) A particle accelerator safety officer shall meet at least one of the following five criteria:

1. Certification in health physics by the American Board of Health Physics or certification in therapy physics and/or radiological physics by the American Board of Radiology;

2. A bachelor's degree from an accredited college in biology, chemistry, radiation sciences, physics, engineering or mathematics and six years of professional technical experience in the field of radiological health or in a radiation protection activity. At least one year of the required health physics experience shall have been with a particle accelerator of a type similar to that with which the PASO will be working;

3. A master's degree in radiological health, radiation sciences, physics, chemistry, environmental sciences, engineering or a related field and at least five years of professional technical experience in the field of radiological health or in a radiation protection activity. At least one year of the required health physics experience shall have been with a particle accelerator of a type similar to that with which the PASO will be working;

4. A doctorate degree in radiological health, radiation sciences, physics, chemistry, environmental sciences, engineering or a related field plus four years of professional technical experience in the field of radiological health or in a radiation protection activity. At least one year of the required health physics experience shall have been with a particle accelerator of a type similar to that with which the PASO will be working; or

5. Ten years of professional technical experience in the field of radiological health or in a radiation protection activity. At least five years of the required health physics experience shall have been with a particle accelerator of a type similar to that with which the PASO will be working.

(f) A particle accelerator safety officer in a facility where the particle accelerators are only electron microscopes shall comply with the requirements set forth in (e) above or shall have received a bachelor's degree from an accredited college in a biological or physical science and shall have passed at least one course in radiation safety offered by an accredited college.

(g) The registrant of a particle accelerator shall appoint a radiation protection committee whose approval shall be required for implementation of procedures for the use of each particle accelerator. The PASO shall be a member of this committee.

7:28–20.5 Use of particle accelerators on humans

(a) A registrant shall not use a particle accelerator or cause it to be used for the intentional irradiation of humans without first sending to the Department a written request stating the registrant's reasons for this use of the particle accelerator and the manner in which it will be used, and obtaining written approval from the Department.

(b) A registrant shall not use a particle accelerator or cause it to be used for the intentional irradiation of humans unless the equipment meets the requirements of this subchapter and N.J.A.C. 7:28–14.

7:28–20.6 Training program on the safe use of each particle accelerator

(a) The registrant shall establish and maintain a training program on the safe use of each particle accelerator. The registrant shall not permit any person to operate the particle accelerator until that person has successfully completed the training program consisting of the 10 items set out below. The registrant shall ensure that the training program is conducted under the direction of the PASO or an individual with equivalent qualifications in conjunction with the qualified machine operator and that the program shall include all of the following:

1. Instruction in the types, characteristics, location, and levels of radiation produced by the particle accelerator;

2. Instruction in the units of radiation exposure, dose, dose equivalent, and quantity of radioactivity associated with the particle accelerator;

3. Instruction in the biological effects of ionizing radiation;

4. Instruction in the methods used to prevent radiation exposure at the particle accelerator facility, including, but not limited to, time, distance, shielding, interlock system, safety procedures and radiation monitoring equipment;

5. Instruction in the use and care of personnel monitoring equipment employed at the particle accelerator facility;

6. Instruction on the location and use of all operating controls for the particle accelerator;

7. Instruction on the requirements of this subchapter and N.J.A.C. 7:28–1 through 11 and 13;

8. Instruction in the facility's written operating and emergency procedures;

9. An examination testing the operator's knowledge of the requirements of (a)1 through 8 above. The examination shall be of sufficient depth to demonstrate that the operator has received instruction in each of the items listed above and has an understanding of the items at a level which permits the operator to use the particle accelerator in a manner consistent with the overriding goal of minimizing danger to public health and safety; and

10. At least 100 documented hours of on-the-job training under the direct supervision of a qualified machine operator and certified in writing by the PASO. The registrant shall maintain this documentation and certification for five years at the particle accelerator facility. These records shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request. If, in the opinion of the PASO, the requirement of 100 hours of on-the-job training is too stringent for a particular particle accelerator, then the PASO shall submit a report documenting the number of hours of on-the-job training needed to become a qualified operator to the Department for approval.

(b) The registrant shall require each operator to become requalified not less than once every three years by completing a refresher training course covering the requirements of (a)1 through 9 above. The registrant shall maintain a record of each individual's completion of the refresher training course for five years at the particle accelerator facility. These records shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

(c) A registrant may permit a person to function as an operator's assistant under the direct supervision of a qualified machine operator until that person has completed a training course covering the requirements of (a)1 through 10 above.

(d) The registrant shall maintain records of the operator's training program, including a copy of the examination, for at least five years at the particle accelerator facility. These records shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

(e) Prior to operation of any particle accelerator after February 3, 1992, the registrant shall document in writing the name of each individual who operated a particle accelerator prior to February 3, 1992 and whom the PASO and the Radiation Protection Committee have certified as the first qualified machine operator for each particle accelerator. The registrant shall maintain this documentation for five years at the particle accelerator facility and shall produce it for review by the Department during an inspection. After February 3, 1992, an individual is required to complete all items in (a) above in order to become a qualified machine operator.

(f) When a new particle accelerator facility commences operation or places into operation a newly invented particle accelerator, the PASO and the Radiation Protection Committee shall document in writing the name and qualifications of the individual whom they have certified as the first qualified machine operator. Any subsequent machine operator shall be subject to the provisions of (a) above.

7:28–20.7 Shielding design and radiation area survey requirements for a particle accelerator

(a) A person shall consult with an individual with qualifications equivalent to those specified in N.J.A.C. 7:28–20.4(e) with respect to the health physics considerations in the design of a particle accelerator installation. The original record of this consultation, including the shielding design, shall be maintained at the particle accelerator facility for the life of the unit and shall be produced for review by the Department during an inspection and a copy submitted to the Department along with the registration form. This section shall apply to those particle accelerators planned for installation after February 3, 1992.

(b) A registrant shall not install a particle accelerator unless such unit is designed and constructed with primary and/or secondary protective barriers as are necessary to comply with the permissible dose rates, radiation levels and concentrations specified in N.J.A.C. 7:28–6.

(c) A registrant shall ensure that a radiation survey of controlled areas and of adjacent areas is performed by the PASO or by a qualified individual under the supervision of the PASO to ensure that radiation exposure of individuals conforms to the requirements of N.J.A.C. 7:28–6, and an inspection is performed of the health physics aspects of the facility when the particle accelerator is first capable of producing radiation, but before the particle accelerator is used for any purpose other than installation or assembly of the particle accelerator, or the conducting of radiation surveys and health physics inspections.

(d) The registrant shall ensure that a written report of the radiation survey and health physics inspection is prepared by the PASO or by a qualified individual under the supervision of the PASO for review by the registrant. The registrant shall maintain these reports for the duration of the life of the machine at the particle accelerator facility.

(e) Prior to operation of the particle accelerator, the registrant shall implement or cause to be implemented the recommendations listed in the radiation survey and health physics report, including any special limitations which are necessary to comply with the requirements of this chapter. The registrant shall ensure that a follow-up radiation area survey of controlled areas and of adjacent areas is performed by the PASO or by a qualified individual under the supervision of the PASO and a follow-up health physics inspection is conducted to ensure that the recommendations as implemented meet the requirements of this chapter. The registrant shall ensure that a written report of the follow-up radiation survey and the follow-up health physics inspection is prepared by the PASO or under the supervision of the PASO for review by the registrant.

(f) The registrant shall submit a copy of the radiation survey and health physics inspection report required by (d) and (e) above to the Department within 30 days of the date of the survey and health physics inspection report, and shall maintain the original radiation survey and health physics inspection report for the duration of the life of the machine at the particle accelerator facility. The radiation survey and health physics inspection reports shall be produced for review by the Department upon request.

(g) The requirements of (c) above shall be followed when changes have been made in shielding, operation, equipment, or occupancy of adjacent areas which could affect radiation exposure of any individual and at intervals not to exceed one year.

(h) The registrant shall maintain at least two radiation survey instruments suitable for measuring all levels and energies of radiation capable of being produced by the particle accelerator. At least one of these radiation survey instruments shall be calibrated, operable, and easily accessible at the facility for use at all times.

(i) A registrant shall not use or cause a radiation survey instrument to be used unless:

1. A performance test is conducted on the survey instrument prior to each day's use;

2. The survey instrument is calibrated at intervals not exceeding one year using a nationally recognized calibration criteria;

3. The survey instrument is recalibrated each time it is serviced or repaired. If the service involved only a battery replacement, the survey instrument does not have to be recalibrated; and

4. The calibration procedure has been performed by a qualified individual using nationally recognized calibration procedures which conform to those of the National Institute of Standards and Technology. These procedures shall identify the calibration source used. Results of each calibration of the survey instrument shall be maintained at the particle accelerator facility for five years. The record of these results shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).
In (h), substituted "least" for "last" in the second sentence.

7:28–20.8 Particle accelerator controls and interlock systems

(a) A registrant shall not operate or cause a particle accelerator to be operated unless each personnel entrance into a particle accelerator's high radiation area or exclusion area has been provided with the safety features listed below:

1. Clearly identified and easily discernible instrumentation, readouts and controls pertinent to the production of radiation;

2. A clearly identifiable switch on the accelerator control console which requires a positive, intentional action on the part of the operator for routine use in turning the particle accelerator beam on and off;

3. A personnel safety interlock system designed with a personnel safety interlock circuit. The personnel safety interlock system shall include a visual search procedure to clear personnel from the controlled area and high radiation areas prior to the production of radiation;

4. Personnel safety interlocks on all entrances into a controlled area and other high radiation areas that automatically terminate the production of radiation upon entry;

5. Circuitry such that when a safety interlock has been tripped, it shall only be possible to resume operation of the particle accelerator by manually resetting the controls, first at the position where the interlock has been tripped, and thereafter at the main control console;

6. Circuitry such that each personnel safety interlock shall allow its individual operation independent of all other interlocks;

7. Safety interlocks designed with fail-safe characteristics so that any defect or component failure in the interlock system prevents the production of radiation; and

8. A clearly identifiable emergency radiation cut-off switch shall be located in all high radiation areas and at the control console. Each cut-off switch shall include a manual reset switch so that the particle accelerator cannot be restarted from the accelerator control console without resetting the cut-off switch.

(b) A registrant shall not cause or allow a person to bypass intentionally an interlock which permits the production of radiation, unless such bypass fulfills all of the following conditions:

1. It is authorized for and limited to a specified time period by the radiation protection committee or PASO in writing prior to the by-pass;

2. It is recorded in a permanent log;

3. It is accompanied by the posting of a prominent notice at the particle accelerator control console and at each personnel entrance being bypassed; and

4. It is terminated as soon as the need for the by-pass no longer exists as determined by the PASO.

7:28–20.9 Warning devices

(a) A particle accelerator shall not be operated unless the registrant has equipped all locations designated as high radiation areas and all entrances to such locations with clearly observable warning lights that operate when, and only when, radiation is being produced, and which shall be labeled to indicate that, when lit, radiation is being produced. The warning lights shall be included in the electrical circuitry of the particle accelerator such that when a warning light is not lit radiation cannot be produced in any area where personnel may be present.

(b) A particle accelerator shall not be operated unless the registrant has provided in each high radiation area audible and visual warning devices which shall be interlocked and activated for at least 30 seconds prior to production of radiation by the particle accelerator. Such warning devices shall be clearly discernible and labeled as to their function. The audible warning device alarm may be terminated once the high radiation area has been secured. Particle accelerator facilities designed and approved for human exposure are excluded from this requirement.

(c) A particle accelerator shall not be operated unless the registrant has identified barriers, temporary or otherwise, and pathways leading to high radiation areas in accordance with the labeling, posting and control requirements of N.J.A.C. 7:28–10.

7:28–20.10 Operating procedures

(a) A registrant shall not operate or permit the operation of a particle accelerator unless all of the following requirements have been met:

1. The particle accelerator is equipped with a means (such as, but not limited to, a locked console or a locked room) to prevent its unauthorized use;

2. The safety interlock system is not used to turn off the particle accelerator beam except in an emergency or for testing the operation of the interlock;

3. The operation of all safety and warning devices, including interlocks, is tested by the qualified machine operator and the test results recorded at intervals not to exceed 30 days and such testing is verified in writing by the PASO at intervals not to exceed 90 days; each safety and warning device shall be listed separately in a log in which the test results are recorded, and the log shall be maintained for five years at the particle accelerator facility and shall be produced for review by the Department during an inspection;

4. Electrical circuit diagrams accurately reflecting the current status of the particle accelerator and the associated interlock systems are available to the operator and for inspection by the Department. The electrical circuit diagrams shall be reviewed and/or revised at intervals not to exceed one year by the qualified machine operator and the PASO shall verify in writing at intervals not to exceed one year that the review and/or revision was performed; the registrant shall maintain a record of such review for five years at the particle accelerator facility, and the record shall be produced for review by the Department during an inspection;

5. A copy of the current operating and emergency procedures is prepared under the direction of the PASO and maintained at the particle accelerator control panel. These operating and emergency procedures shall be reviewed and/or revised under the direction of the PASO at intervals not to exceed one year. The registrant shall maintain a record of such review with the current operating and emergency procedures at the accelerator facility for the life of the particle accelerator. This record shall be produced for review by the Department during an inspection; and

6. The written operating and emergency procedures address the methods used to prevent radiation exposure at the particle accelerator facility. The procedures shall include, but not be limited to, the following topics:

i. The location and operation of the interlock systems;

ii. The safety procedures that apply to each particle accelerator;

iii. The types and use of personnel monitoring equipment;

iv. The procedures and personnel requirements for changing the target;

v. The handling and disposal procedures for disposing of a target;

vi. The procedures for surveys and wipe tests; and

vii. The emergency procedures regarding personnel and machine operations applicable to each particle accelerator.

7:28–20.11 Radiation area and personnel monitoring requirements

(a) The registrant shall identify in writing all types of radiation that will be produced, both primary and secondary, by the particle accelerator and the monitoring equipment selected to measure all the corresponding types and energies of radiation levels. The registrant shall maintain these records at the particle accelerator facility for five years. These records shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

(b) The registrant shall continuously monitor the radiation levels in or at the entrance to all high radiation areas. The area monitoring devices shall have fail-safe characteristics and shall be capable of providing a remote and local readout with visual and/or audible alarms at the accelerator control panel, any entrance to high radiation areas, as well as at other appropriate locations determined by the PASO so that a person entering the high radiation area or present therein becomes aware of the existence of the hazard.

(c) The registrant shall have all area monitors calibrated at intervals not to exceed 12 months and after each servicing and repair according to written procedures established by the PASO. The calibration procedures and records shall be maintained for five years at the particle accelerator facility. These procedures and records shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

(d) If the PASO has identified airborne particulate radiation as a primary or secondary product of a particle accelerator as required pursuant to (a) above, then surveys shall be performed by the PASO or other qualified individual under the supervision of the PASO at least once in each quarter of the calendar year to determine that the amount of airborne particulate radioactivity present in controlled areas is in compliance with N.J.A.C. 7:28–6. Where survey results indicate noncompliance with N.J.A.C. 7:28–6, use of the particle accelerator shall be immediately discontinued and remedial measures to bring the particle accelerator into compliance with N.J.A.C. 7:28–6 shall be taken. Use of the particle accelerator is prohibited until such time as new surveys show that compliance with N.J.A.C. 7:28–6 has been achieved. The results of the surveys shall be maintained for five years at the particle accelerator facility. Survey results shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

(e) If the PASO has identified removable contamination as a primary or secondary product of a particular accelerator as required pursuant to (a) above, then wipe tests shall be performed by the PASO or other qualified individual under the supervision of the PASO upon initial use of the particle accelerator and, thereafter, at least every six months to determine the degree of removable contamination in the target area and other pertinent areas to ensure compliance with N.J.A.C. 7:28–9. Where wipe test results indicate noncompliance with N.J.A.C. 7:28–9, use of the particle accelerator shall be immediately discontinued and remedial measures to bring the particle accelerator into compliance with N.J.A.C. 7:28–9 shall be taken. Use of the particle accelerator is prohibited until such time as new wipe tests show that compliance with N.J.A.C. 7:28–9 has been achieved. The results of the wipe tests shall be maintained for five years at the particle accelerator facility. Wipe test results shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

(f) Surveys shall be made by the PASO or other qualified individual under the supervision of the PASO upon initial use of the particle accelerator and, thereafter, not less than once annually, to determine the levels of radiation resulting from activation of the target and other pertinent areas to determine compliance with N.J.A.C. 7:28–6 and 9. Where test results indicate noncompliance with N.J.A.C. 7:28–6 and 9, use of the particle accelerator shall be immediately discontinued and remedial measures to bring the particle accelerator into compliance with N.J.A.C. 7:28–6 and 9 shall be taken. Use of the particle accelerator is prohibited until such time as test results show that compliance with N.J.A.C. 7:28–6 and 9 has been achieved. The results of the surveys shall be maintained for five years at the particle accelerator facility. Surveys shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

(g) The PASO shall develop procedures for performing surveys and wipe tests required by (d), (e) and (f) above. These procedures shall be in writing and shall be kept at the particle accelerator facility. These procedures shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request. The survey and wipe test procedures shall contain, but shall not be limited to, the instrumentation to be used in conducting surveys and wipe tests, the method of performing the survey and wipe test (for example, points on the equipment from where wipe samples will be taken and method of obtaining the wipe sample), and method of calculation of survey and wipe test results.

(h) The registrant shall supply all individuals with and shall require these individuals to use and wear appropriate personnel monitoring equipment as listed below when entering the area which has been defined as a high radiation area while the particle accelerator is in operation:

1. Direct reading dosimeters capable of measuring doses from zero to one roentgen measured in milliroentgen increments and provided with an audible indicator discernible above the ambient noise level; the direct reading dosimeter shall be read daily and doses shall be recorded in a log book; and

2. Portable radiation survey instruments capable of measuring the maximum radiation levels anticipated to be present at the facility and provided with an audible indicator discernible above the ambient noise level.

(i) The registrant shall ensure that the PASO assigns appropriate personnel monitoring equipment to each individual who works with the particle accelerator and that the use of such personnel monitoring equipment meets the requirements of N.J.A.C. 7:28–7.

(j) The registrant shall immediately confirm the radiation level measured by a personnel monitoring device if a direct reading dosimeter indicates exposure greater than 200 milliroentgens.

(k) The registrant shall maintain the personnel monitoring reports and the daily log records of the direct reading dosimeter values at the particle accelerator facility to insure compliance with N.J.A.C. 7:28–8. These records and logs shall be produced for review by the Department during an inspection and shall be submitted to the Department upon request.

7:28–20.12 Ventilation systems

The registrant of a particle accelerator shall ensure that the maximum permissible average concentration of radioactive materials in air and water shall be as specified in N.J.A.C. 7:28–6 and the concentration of radioactive materials in effluents from the controlled areas shall meet the requirements of N.J.A.C. 7:28–11.

7:28–20.13 Electron microscopes

(a) Electron microscopes shall be exempt from the requirements of N.J.A.C. 7:28–20.4 through 7:28–20.12 except for the following requirements:

1. The registrant shall not use or cause an electron microscope to be used unless a radiation protection survey has been performed by an individual under the supervision of the PASO as defined in N.J.A.C. 7:28–20.4 to ensure compliance with N.J.A.C. 7:28–5 and 7 before the electron microscope is put into operation; the registrant shall submit a copy of the survey report to the Department within 30 days of the date of the survey and shall maintain the original survey report at the electron microscope facility; the survey report shall be produced for review by the Department during an inspection;

2. The electron microscope shall be be resurveyed after every repair, modification, or relocation that would affect radiation exposure; the registrant shall submit a copy of the survey report to the Department within 30 days of the date of the resurvey and shall maintain the resurvey report at the electron microscope facility; the resurvey shall be produced for review by the Department during an inspection;

3. The registrant shall ensure that the electron microscope operating parameter indicators and controls pertinent to the production of radiation are clearly identified and easily discernible; the electron microscope shall be provided with a clearly visible label bearing the conventional radiation symbol and the words CAUTION: THIS EQUIPMENT PRODUCES X-RAYS WHEN ENERGIZED or other words having equivalent meaning affixed on the column;

4. The registrant shall provide each electron microscope operator with appropriate personnel monitoring equipment as required by N.J.A.C. 7:28–7 and require that the device be worn by each individual during operation of the electron microscope.

i. The registrant shall ensure that the personnel monitoring reports received from the personnel monitoring device processor contain the information required in N.J.A.C. 7:28–8; and

ii. The personnel monitoring reports received from the personnel monitoring device processor shall be maintained for inspection by the employee and the Department pursuant to the requirements of N.J.A.C. 7:28–8.

(b) Electron microscopes incapable of operating at 30 kVp or above shall be exempt from the requirements of (a)4 above provided the initial or repeat radiation protection survey does not yield radiation levels using maximum conditions of operation as measured at five centimeters from any accessible surface greater than 0.5 millirem per hour.

(c) The registrant shall provide a means to secure the electron microscope to prevent unauthorized use when not in operation. Such means may include, but are not limited to, a locked console or locked room.

SUBCHAPTER 21. ANALYTICAL X-RAY INSTALLATIONS

7:28–21.1 Scope

(a) This subchapter applies to installations using analytical x-ray equipment and establishes requirements for their use.

(b) The provisions of this subchapter are in addition to, and not in substitution for, the other applicable provisions of this chapter.

7:28–21.2 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"Analytical x-ray equipment" means any device or combination of devices used to determine the microscopic structure or composition of material utilizing x-rays, including but not limited to x-ray diffraction, x-ray spectroscopy, x-ray fluorescence, or fluorescence x-ray spectroscopy equipment.

"Enclosed beam x-ray system" means analytical x-ray equipment in which all possible x-ray paths are fully enclosed according to the requirements of N.J.A.C. 7:28–21.5, so that any part of the body cannot enter the enclosure.

"Fail-safe characteristics" means that all failures of warning and safety systems that can reasonably be anticipated will cause the equipment to fail in a mode such that personnel are safe from exposure to radiation.

"Open beam x-ray system" means analytical x-ray equipment other than enclosed beam x-ray system.

"Safety interlock" means a device or system of devices intended to prevent either the generation of x-rays or the emergence of the primary beam from the tube housing.

"X-ray accessory apparatus" means any portion of an analytical x-ray installation which is external to the x-ray tube housing and into which an x-ray beam is directed for making x-ray measurements or for other uses.

7:28–21.3 General equipment requirements

(a) No person shall cause, suffer, allow or permit the possession or use of any analytical x-ray equipment unless it is equipped with the following:

1. A clearly visible label bearing the conventional radiation symbol and the words: "CAUTION: THIS EQUIPMENT PRODUCES X-RAYS WHEN ENERGIZED—TO BE OPERATED ONLY BY AUTHORIZED PERSONNEL" or other words having similar meaning which shall be attached near any switch which energizes an x-ray tube.

2. A clearly visible label bearing the conventional radiation symbol and the words: "CAUTION: HIGH INTENSITY X-RAY BEAM" or other words having similar meaning which shall be located in a conspicuous location near the x-ray tube housing.

3. A clearly visible warning light with fail-safe characteristics labeled with the words: "X-RAY ON" or other words having similar meaning which shall be located near any switch that energizes an x-ray tube and shall be illuminated only when the tube is energized. The provisions of this paragraph shall be effective February 1, 1980.

4. A clearly visible warning light or indicator with fail-safe characteristics which shall indicate when the x-ray tube is producing x-rays or the port of the radioactive source is open. The warning light or indicator shall be located in a conspicuous position near the x-ray tube, and shall be clearly visible to any person aligning or adjusting the x-ray accessory equipment. The provisions of this paragraph shall be effective February 1, 1980.

5. A clearly visible label bearing the conventional radiation symbol and the words: "CAUTION: THIS EQUIPMENT CONTAINS RADIOACTIVE MATERIAL—TO BE OPERATED ONLY BY QUALIFIED PERSONNEL" or other words having similar meaning which shall be attached to any switch which energizes analytical x-ray equipment which contains a radioactive source.

6. A clearly visible label which shall be attached to each radiation source housing that contains a radioactive source. The label shall include the following information:

i. The conventional radiation symbol; and

ii. The type of radioactive material; and

iii. The activity in curies or millicuries; and

iv. The date of measurement of activity.

(b) No person shall cause, suffer, allow or permit the possession or use of any analytical x-ray equipment unless such operation is in accordance with the following procedures and within the following dose rates:

1. Written operating and alignment procedures provided by the manufacturer of the x-ray system, or by the person in charge of use of the system if the radiation source housing and x-ray accessory apparatus are not compatible components supplied by the same manufacturer.

2. Written operating procedures shall be such that a qualified operator following instructions will not receive in any one hour a dose equivalent in excess of 37.5 mrem to the hands and forearms or 2.5 mrem to the whole body, gonads, blood-forming organs or lens of the eye.

3. Alignment procedures shall be such that a qualified worker aware of the radiation hazards will not receive in any one hour a dose equivalent in excess of 37.5 mrem to the hands and forearms or 2.5 mrem to the whole body, gonads, blood-forming organs, or lens of the eye while following these instructions. If either of these dose rates is likely to be exceeded, a definite warning shall be included in the alignment instructions.

4. The dose due to unwanted radiation from components such as high voltage rectifiers shall not exceed 10 mrem in a week in any accessible region 5 cm from the outside surface of the generator cabinet. Where an individual may be in the vicinity of the equipment while it is operating for as long as 40 hours per week, the dose rate shall not exceed 0.25 mrem/hr.

5. The x-ray accessory apparatus shall include a beam trap or other barrier with sufficient shielding so that the dose rate due to the transmitted primary beam does not exceed 0.25 mrem/hr under normal operating conditions. In the presence of scattered radiation this requirement

shall be considered met for x-ray tube sources if the inherent shielding of the trap or barrier is at least equivalent to the thickness of lead specified in the following table for the maximum rated anode current and potential. In the case of isotope sources, the required barrier thickness shall be determined by a qualified expert.

Thickness of lead Required for a Primary Beam Barrier Located 5 cm from the Focal Spot

Anode Current (ma)	Thickness of lead (mm) 50kVp	70kVp	100kVp
20	1.5	5.6	7.7
40	1.6	5.8	7.9
80	1.6	5.9	
160	1.7		

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).
In (b), substituted "the" for "that" in the third sentence of 5.

7:28–21.4 Additional equipment requirements for open beam x-ray systems

(a) No person shall cause, suffer, allow or permit the possession or use of any open beam analytical x-ray equipment unless it is equipped with the following in addition to the requirements of section 3 of this subchapter:

1. A clearly visible warning light or indicator which shall be located near each individual x-ray tube shutter and shall indicate when the shutter is open.

2. A suitable barrier to clearly delineate the boundary between the radiation area and the controlled area.

3. A system barrier surrounding each radiation area with sufficient inherent shielding so that the dose equivalent received by individuals in the surrounding controlled area does not exceed five mrem in any one hour or 100 mrem in any five consecutive days.

4. A beam shutter for each port of the radiation source housing. Such beam shutter shall be interlocked with the x-ray accessory apparatus coupling, or collimator, in such a way that the port will be open only when the collimator or coupling is in place. Shutters at unused ports shall be secured to prevent casual opening.

5. A guard or interlock which prevents entry of any part of the body into the primary beam path.

6. The provisions of paragraphs 3, 4 and 5 of this subsection shall apply to new open beam analytical x-ray equipment after February 1, 1980. Open beam analytical x-ray equipment in use prior to February 1, 1980 shall be exempt from the provisions of paragraphs 3, 4 and 5 unless such equipment is sold, leased, loaned or otherwise transferred from one user to another whether gratuitously or for consideration.

(b) No person shall cause, suffer, allow or permit the possession or use of any open beam analytical x-ray equipment unless it is operated in accordance with the following procedures and within the following dose rates:

1. The x-ray generator, the control panel and all other parts of the analytical x-ray system, except the x-ray tube housing, shall be so constructed that with all the shutters closed, the stray radiation measured at a distance of five centimeters from its surface is not capable of producing a dose in excess of 0.25 millirem in one hour at any specified tube rating.

2. The x-ray tube housing shall be so constructed that with all shutters closed, the leakage radiation measured at a distance of 5 centimeters from its surface is not capable of producing a dose in excess of 2.5 millirem in one hour at any specified tube rating.

3. Radiation exposure levels in the vicinity of controls and adjustments of the x-ray accessory apparatus used during routine operation shall not exceed 37.5 mrem/hr to the hands or 2.5 mrem/hr to the whole body, gonads, blood-forming organs, or lens of the eye.

7:28–21.5 Additional equipment requirements for enclosed beam X-ray systems

(a) No person shall cause, suffer, allow or permit the possession or use of any enclosed beam analytical x-ray equipment unless it is equipped with the following:

1. A sufficient number of safety interlocks so that the opening of any section of the enclosure during normal operation, or routine alignment, or routine maintenance will prevent either the generation of x-rays or the emergence of the primary beam from any x-ray tube housing port.

2. A chamber or coupled chambers to enclose the radiation source, sample, detector and analyzing crystal. Any such chamber shall be constructed so that it can not be entered by any part of the body during normal operation. The provisions of this paragraph shall be effective February 1, 1980.

3. A sample chamber closure which shall be interlocked with either the x-ray tube high voltage supply or with a shutter in the primary beam so that no x-ray beam can enter the sample chamber while it is open. Such interlock shall be of fail-safe design. The provisions of this paragraph shall be effective February 1, 1980.

(b) No person shall cause, suffer, allow or permit the possession or use of any enclosed beam analytical x-ray equipment unless it is constructed in such manner as to limit the leakage x-rays at a distance of 5 centimeters from any accessible surface during normal operation to less than 0.25 millirem in one hour at any specified tube rating.

7:28–21.6 Operating procedures

(a) No person shall cause, suffer, allow or permit the possession or use of any analytical x-ray equipment unless it is operated in accordance with the following procedures:

1. All safety devices, including but not limited to, warning lights, warning indicators, and safety interlocks as required by this subchapter shall be maintained in a fully functional operating condition. These safety devices shall be tested for proper functioning as recommended by the manufacturer or once every six months and records kept of all such testing.

2. All safety devices, including but not limited to, warning lights, warning indicators, and safety interlocks originally provided at the time of the installation of the analytical x-ray equipment, but not otherwise specified by this subchapter, shall be maintained in a fully functional operating condition. An exemption may be made, subject to the approval by the Department, when the operational procedures prohibit the normal functioning of these safety devices. Records of these exemptions shall be kept.

3. In addition to and not in substitution for the applicable requirements of subchapter 7 (Radiation Surveys and Personnel Monitoring) of this chapter, all personnel operating, repairing and aligning analytical x-ray equipment shall be provided with appropriate finger or wrist personnel monitoring equipment. The reported dose equivalent shall be recorded on Form BRP–26, "Current Occupational External Radiation Exposure," or on a clear and legible form containing all the information required on BRP–26. This reported dose equivalent shall be clearly identified as resulting from exposure to analytical x-rays.

4. A radiation survey shall be made before a new installation is placed in routine operation and whenever changes are made that could adversely affect radiation protection, as required by subchapter 7 (Radiation Surveys and Personnel Monitoring). Records shall be maintained showing the results of such surveys as required by subchapter 8 (Records) of this chapter.

7:28–21.7 Analytical x-ray equipment with a high voltage supply that cannot operate at potentials above 16 kilovolts

(a) No person shall use an analytical x-ray unit with a high voltage supply that cannot operate at potentials above 16 kilovolts or cause it to be used unless the following requirements are met:

1. The analytical x-ray unit is registered with the Department pursuant to N.J.A.C. 7:28–3.1;

2. The registrant has had a qualified individual perform a radiation safety survey of the analytical x-ray unit and has had the qualified individual prepare and submit a report of the results of the survey to the registrant. The survey shall be performed when the analytical x-ray unit is first capable of producing radiation and before the analytical x-ray unit is used for any purpose other than installation, assembly, or the conducting of radiation surveys; and

3. The registrant shall submit a copy of the radiation survey report to the Department within 30 days after the date of the survey, and shall maintain the radiation survey report at the analytical x-ray facility for review by the Department during an inspection. The registrant shall retain the radiation survey report in compliance with N.J.A.C. 7:28–8.

(b) The registrant shall not use an analytical x-ray unit with a high voltage supply that cannot operate at potentials above 16 kilovolts or cause it to be used when the unit has been moved to a location different from that identified in the initial radiation survey report or after any modifications have been made in the equipment that may compromise radiation shielding integrity, unless the following conditions are met:

1. The registrant has had a qualified individual perform a radiation safety survey of the analytical x-ray unit and has had the qualified individual prepare and submit a report of the results of the survey to the registrant. The survey shall be performed when the analytical x-ray unit is first capable of producing radiation and before the analytical x-ray unit is used for any purpose other than installation, assembly, or the conducting of radiation surveys; and

2. The registrant shall submit a copy of the radiation survey report to the Department within 30 days after the date of the survey, and shall maintain the radiation survey report at the analytical x-ray facility for review by the Department during an inspection. The registrant shall retain the radiation survey report in compliance with N.J.A.C. 7:28–8.

(c) If the results of the radiation survey required by (a)2 and (b)1 above reveal that there are no radiation levels above 0.1 mR/hr when measured at all locations five centimeters from any accessible surface of the specific analytical x-ray unit, then this analytical x-ray unit is exempt from the requirements of N.J.A.C. 7:28–21.3, 21.4, 21.5 and 21.6(a)3.

New Rule, R.1990 d.427, effective August 20, 1990.
See: 22 N.J.R. 890(a), 22 N.J.R. 2570(a).

SUBCHAPTER 22. QUALITY ASSURANCE PROGRAMS FOR MEDICAL DIAGNOSTIC X–RAY INSTALLATIONS

7:28–22.1 Purpose, scope and applicability

(a) The purpose of this subchapter is to increase protection to the public and radiation workers from unnecessary

exposure to radiation and to reduce the occurrence of misdiagnosis caused by faulty equipment and operator error.

(b) This subchapter establishes requirements for the development and implementation of quality assurance programs to ensure that registrants of diagnostic x-ray equipment who perform diagnostic x-ray procedures in the healing arts achieve consistent high quality imaging and improve diagnosis while reducing unnecessary radiation to the patients and workers. This subchapter further establishes certain responsibilities of registrants of radiation sources used in the practice of diagnostic radiology. This subchapter also establishes the qualifications and training requirements for medical physicists, medical physicist assistants and qualified individuals designing or implementing quality assurance programs in accordance with this subchapter. Certification requirements and associated fees are also established for medical physicists and medical physicist assistants.

(c) All registrants of medical diagnostic x-ray imaging equipment and computed tomography equipment, which is used for performing diagnostic radiography, fluoroscopy, x-ray bone densitometry, or computed tomography in the healing arts, are required to develop and continually implement quality assurance programs. Such equipment includes, but is not limited to, equipment used in performing diagnostic radiology procedures in hospital, medical, podiatric, chiropractic, industrial, school, and government facilities.

(d) The provisions of this subchapter are not applicable to diagnostic radiographic mammography equipment that must comply with the Federal Mammography Quality Standards Act, 42 U.S.C.A. § 263(b), or N.J.A.C. 7:28–15.4.

7:28–22.2 Definitions

The words and terms listed below, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

"CT" means computed tomography.

"Dedicated interventional special procedure suite" means a room dedicated to the performance of fluoroscopic interventional special procedures. These procedures include, but are not limited to, angioplasty, angiography, cardiac catheterization, etc.

"Immediate supervision" means in-room supervision.

"Initially" means no later than the date of the required implementation of the quality assurance program specified in N.J.A.C. 7:28–22.14 or within 60 days of the date the x-ray machine is acquired.

"QA" means quality assurance.

"QC" means quality control.

"Qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment" means an individual who meets the qualifications for a "qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment" in N.J.A.C. 7:28–22.12(b).

"Qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging" means an individual who meets the qualifications for a "qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging" in N.J.A.C. 7:28–22.12(a).

"Qualified medical physicist assistant in fluoroscopy" means an individual who meets the qualifications for a "qualified medical physicist assistant in fluoroscopy" in N.J.A.C. 7:28–22.12(d).

"Qualified medical physicist assistant in radiography" means an individual who meets the qualifications for a "qualified medical physicist assistant in radiography" in N.J.A.C. 7:28–22.12(c).

"Registrant" means a person who is required to register a source of radiation with the Department pursuant to this chapter.

7:28–22.3 General provisions

(a) No person shall perform or permit the performance of a diagnostic x-ray procedure in the healing arts using radiographic, fluoroscopic, x-ray bone densitometry, or computed tomography (CT) equipment unless the registrant has developed and continues to implement a quality assurance program in accordance with the compliance schedule in N.J.A.C. 7:28–22.14 and that satisfies the requirements of this subchapter.

(b) Subject to (c) below, the quality assurance program shall contain the following elements:

1. A quality assurance program manual as specified in N.J.A.C. 7:28–22.4;

2. Quality control tests as specified in N.J.A.C. 7:28–22.5, 22.6 or 22.7 (as appropriate for the diagnostic x-ray equipment);

3. An initial and annual (not to exceed 14 months) Medical Physicist's QC Survey as specified in N.J.A.C. 7:28–22.8, 22.9, or 22.10; and

4. A corrective action plan as required by N.J.A.C. 7:28–22.4(a)4.

(c) Registrants of x-ray bone densitometer equipment are required only to implement and continue to carry out the quality assurance programs for such equipment which are required by N.J.A.C. 7:28–22.11.

(d) The Department has prepared compliance guidance documents, listed below, which may be used by the registrants in developing and implementing quality assurance programs required by this subchapter. The compliance guidance documents are listed below:

1. Compliance Guidance for a Medical Diagnostic X-ray Quality Assurance Program Manual;

2. Compliance Guidance for Radiographic Quality Control;

3. Compliance Guidance for Fluoroscopic Quality Control; and

4. Compliance Guidance for Computed Tomography Quality Control.

(e) The compliance guidance documents listed in (d) above are available from the Department, and may be obtained by contacting the Department at The Bureau of Radiological Health, PO Box 415, Trenton, NJ 08625–0415 and can be obtained from the Radiation Protection Program web page at "http://www.state.nj.us/ dep/rpp."

(f) A registrant or an organization representing a group of registrants may request approval from the Department of an alternative quality assurance program to be used by that specific registrant or a specified list of registrants. The application must fully document the provisions of the alternative quality assurance program and identify how the alternative program differs from the requirements in this subchapter. The applicant must demonstrate that the alternative program will be equally effective in achieving consistent high quality imaging and improving diagnosis while reducing unnecessary radiation to the patients and workers as the quality assurance program required by this subchapter. The applicant may request that a specific quality control test or other quality assurance provision be excluded from the applicant's quality assurance program if performing the test or provision is not possible or is inappropriate because of the nature of the applicant's equipment or practice.

(g) The Department, with approval of the Commission on Radiation Protection, may approve, or approve with conditions, a request for an alternative quality assurance program. To be approved, the alternative program must be equally effective in achieving consistent high quality imaging while reducing unnecessary radiation to the patients and the workers as the quality assurance program required by this subchapter.

(h) The Department may deny a request for an alternative quality assurance program should it determine that the alternative program would not be equally effective in achieving consistent high quality imaging and improving diagnosis while reducing unnecessary radiation to the patients and the workers as the quality assurance program required by this subchapter.

(i) Any registrant who receives approval from the Department for an alternative quality assurance program shall comply with the terms of approval.

(j) Any registrant may use forms that differ from any forms contained in the compliance guidance documents referenced in (d) above without approval, provided the form or procedure is sufficient to demonstrate compliance with the regulatory provision.

(k) Any registrant who submits an application for an alternative quality assurance program shall comply with the quality assurance program requirements of this subchapter until such time as the application for an alternative quality assurance program is approved by the Department.

(*l*) No person shall engage in the use or employment of dishonesty, fraud, deception, misrepresentation, false promise or false pretense while engaged in activities relating to this subchapter.

(m) No person shall falsify or make misleading statements on any record or report required by this subchapter.

(n) No person shall make misleading or false statements to a representative of the Department or Commission.

(*o*) No person shall falsify any records, nor destroy nor steal any property or records, relating to quality assurance as required by this subchapter.

7:28–22.4 Quality assurance program manual

(a) The registrant of any diagnostic medical x-ray equipment used in the healing arts shall develop and continuously implement a quality assurance program that includes a quality assurance program manual that contains the following elements:

1. A list of clearly identified individuals and assigned responsibilities for maintaining the quality assurance program and for performing the quality control tests;

2. Quality control (QC) measures which shall include:

i. QC tests to be performed and the frequency of each test;

ii. A list of equipment to be tested;

iii. Acceptability limits for each test performed;

iv. A description of each QC test procedure;

v. Sample forms for each QC test performed;

vi. Processor and solutions maintenance; and

vii. An Annual Medical Physicist's QC Survey;

3. Policies and procedures which shall include:

i. A policy for holding patients and for presence of individuals in room during radiation exposure;

ii. A policy for pregnant patients and employees;

iii. A policy for gonadal shielding;

iv. A description of the orientation program for operators of radiographic, fluoroscopic and CT equipment including the duration and content of that program;

v. Procedures for proper use and maintenance of equipment;

vi. Policies and employee responsibilities concerning personnel radiation monitoring;

vii. A policy for releasing films;

viii. A policy for labeling films (that is, patient's statistics, facility information);

ix. A commitment to perform a Radiation Safety Survey of the Environs in accordance with N.J.A.C. 7:28–15.10 on newly installed x-ray equipment within 60 days of installation and an initial Medical Physicist's QC Survey as required by N.J.A.C. 7:28–22.8(a), 22.9(a), or 22.10(a) as appropriate for the type of x-ray equipment;

x. A policy for using technique charts; and

xi. A policy and rules on radiation safety as required by N.J.A.C. 7:28–15.9(a)8;

4. A plan for taking corrective actions which shall include:

i. Measures to be taken when the x-ray equipment is determined to need repair, service or calibration; and

ii. Measures to be taken when the processor is determined to need repair or service.

5. Recordkeeping which shall include:

i. Records for the most recent one year of the QC tests performed by the registrant;

ii. Records of the initial Medical Physicist's QC Survey plus the two most recent QC Surveys;

iii. Records of corrective actions for the most recent two years; and

iv. Personnel monitoring records;

6. Reference manuals (if any) and their location; and

7. A provision describing how the registrant and the qualified medical physicist will review the QA program annually.

(b) The Department has prepared a Compliance Guidance for a Medical Diagnostic X-ray Quality Assurance Program Manual, referenced at N.J.A.C. 7:28–22.3(d)1, which may be used by the registrants in developing and implementing the quality assurance program required by this subchapter. The compliance guidance document listed in N.J.A.C. 7:28–22.3(d)1 is available from the Department, and may be obtained by contacting the Department at the Bureau of Radiological Health, PO Box 415, Trenton, NJ 08625–0415 and can be obtained from the Radiation Protection Program web page at "http://www.state.nj.us/dep/rpp."

7:28–22.5 Quality assurance program for medical diagnostic radiographic equipment

(a) The registrant of any medical diagnostic radiographic equipment used in the healing arts shall develop and continuously implement a quality assurance program that includes the following elements:

1. A quality assurance program manual that satisfies the requirements of N.J.A.C. 7:28–22.4;

2. Quality control tests, procedures, frequencies and standards, including, but not limited to, those identified in Table 1, Radiographic Quality Control Requirements below;

3. An initial and annual thereafter (not to exceed 14 months) Medical Physicist's QC Survey as specified in N.J.A.C. 7:28–22.8(a); and

4. A corrective action plan required by N.J.A.C. 7:28–22.4(a)4.

TABLE 1
Radiographic Quality Control Requirements
(To be performed by appropriately trained facility personnel)

Item	Required Test or Procedure	Frequency	Standard
1.	Equipment Warm-up Procedure	Daily, each day x-rays are taken	Warm up tube; ensure equipment is working properly
2.	Processor Quality Control (Sensitometry/Densitometry)	Daily, each day x-rays are taken	Medium Density ±0.15 Optical Density (OD), Density Difference ±0.15 OD, Base + Fog + 0.03 OD of operating levels
3.	Laser Film Printer Quality Control	Weekly	As specified in N.J.A.C. 7:28-22.6 Table 2, Fluoroscopic Quality Control Requirements
4.	Darkroom Cleanliness	Weekly	Free from dust and dirt
5.	Processor Maintenance and Chemical Solutions	Initially and every 2 months (more frequently if needed)	Manufacturers' specifications

Item	Required Test or Procedure	Frequency	Standard
6.	Equipment Visual Checklist	Initially and quarterly	All tests passed
7.	Film and Chemical Shelf Life	Initially and quarterly	Use film and chemicals with earliest expiration date first
8.	Light Field/X-ray Field Alignment	Initially, quarterly and after service	Not to exceed 2% of Source to Image Distance (SID)
9.	Repeat Analysis	Semiannually (review rejected films immediately for corrective action)	No standard, but goal should be <5%
10.	Artifact Evaluation	Examine every film for artifacts, in-depth evaluation semiannually	No significant artifacts
11.	Analysis of Fixer Retention	Initially and semiannually	≤5 micrograms/sq. centimeter or ≤0.05 grams/sq. meter
12.	Darkroom Fog	Initially, semiannually and after service	≤0.05 Optical Density Difference
13.	Screen–Film Contact/Cassette Integrity/Screen Cleanliness	Initially and annually or as needed	No areas of poor contact >2 cm. in diameter
14.	Lead Aprons, Gloves, Gonadal and Thyroid Shield Integrity Check	Initially and annually	No breaks in protective garments
15.	Medical Physicist's QC Survey	Initially and annually	As required in N.J.A.C. 7:28–22.8
16.	Quality Assurance Program Review	Initially and annually	As required in N.J.A.C. 7:28–22.4(a)7

(b) The Department has prepared compliance guidance documents, listed in N.J.A.C. 7:28–22.3(d)1 and 2, which may be used by the registrants in developing and implementing the quality assurance programs required by this subchapter. The compliance guidance documents are available from the Department, and may be obtained by contacting the Department at the Bureau of Radiological Health, PO Box 415, Trenton, NJ 08625–0415 and can be obtained from the Radiation Protection Program web page at "http:// www. state.nj.us/ dep/rpp."

(c) The registrant shall ensure that individuals performing manual processing of films in medical diagnostic radiography shall use the time/temperature method. An example of the time/ temperature method is described in the compliance guidance documents listed in N.J.A.C. 7:28–22.3(d)2.

(d) The registrant shall ensure that individuals performing quality control tests described in Table 1, Radiographic Quality Control Requirements, above have an appropriate level of training to perform the tests competently.

(e) If any of the test results from item 2 in Table 1, Radiographic Quality Control Requirements, above indicate that the x-ray processing does not meet the standards in Table 1, the registrant shall immediately initiate steps to bring the processing into compliance. Films shall not be processed until the processing meets the standards required in Table 1.

(f) If any of the test results from item 3 in Table 1, Radiographic Quality Control Requirements, above indicate that the laser film printer does not meet the standards in Table 1, the registrant shall immediately initiate steps to repair the laser film printer to meet the standards. Films shall not be processed until the processing meets the standards.

(g) If any of the test results from items 6, 8, 10, 11, 12, 13, 14, and 15 in Table 1, Radiographic Quality Control Requirements, above indicate that the x-ray equipment does not meet the standards in Table 1, the registrant shall immediately initiate corrective actions to meet the standards. All corrective actions shall be completed within 30 days.

(h) No person shall use or permit the use of film or processing chemicals beyond the expiration dates on the containers.

(i) The registrant shall ensure that records of each corrective action, repair and service are maintained for at least two years.

(j) The registrant shall ensure that test records for items 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, and 14 in Table 1, Radiographic Quality Control Requirements, above are maintained for at least one year.

(k) The registrant shall ensure that the initial Medical Physicist's QC Survey is permanently maintained, and that the records of the annual Medical Physicist's QC Survey are maintained for at least two years.

(*l*) The registrant shall ensure that the records of the quality assurance program review are maintained for at least two years.

7:28–22.6 Quality assurance program for medical diagnostic fluoroscopic equipment

(a) The registrant of any medical diagnostic fluoroscopic equipment used in the healing arts shall develop and continuously implement a quality assurance program that includes the following elements:

1. A quality assurance program manual that satisfies the requirements of N.J.A.C. 7:28–22.4;

2. Quality control tests, procedures, frequencies and standards, including but not limited to, those identified in Table 2, Fluoroscopic Quality Control Requirements, below;

3. An initial and annual thereafter (not to exceed 14 months) Medical Physicist's QC Survey as specified in N.J.A.C. 7:28–22.9(a); and

4. A corrective action plan required by N.J.A.C. 7:28–22.4(a)4.

TABLE 2
Fluoroscopic Quality Control Requirements
(To be performed by appropriately trained facility personnel)

Item	Required Test or Procedure	Frequency	Standard
1.	Equipment Warm-up Procedure	Daily, each day fluoroscopy is performed	Tube warm-up and ensure equipment is working properly Fluoro phantom image is comparable to facility standard
2.	Laser Film Printer Quality Control	Weekly	Recommended control limits *OD = Optical Density SMPTE Test Pattern — Inverted gray scale 0% patch 2.45 ± 0.15 OD* — 0% patch 2.50 + 0.15 OD 10% patch 2.10 ± 0.15 OD — 10% patch 2.25 ± 0.15 OD 40% patch 1.15 ± 0.15 OD — 40% patch 1.35 ± 0.15 OD 90% patch 0.30 ± 0.08 OD — 90% patch 0.30 ± 0.08 OD *The 5% patch should just be visible inside of the 0% patch. The 95% patch should be visible inside the 100% patch.
3.	For spot film and radiography, items 2, 4, 5, 7, 9 and11 QC tests as specified in Table 1, Radiographic Quality Control Requirements	As specified in Table 1, Radiographic Quality Control Requirements	As specified in N.J.A.C. 7:28–22. 5 Table 1, Radiographic Quality Control Requirements
4.	Phantom Images (Fluoro Video Monitor)	Monthly	kVp ± 5%, MA ± 10% high & low contrast depends on phantom used
5.	Equipment Visual Checklist	Initially and quarterly	All tests passed
6.	Lead Aprons. Gloves, Gonadal and Thyroid Shield Integrity Check	Initially and annually	No breaks in protective garments
7.	Medical Physicist's QC Survey	Initially and annually	As required in N.J.A.C. 7:28–22.9
8.	Quality Assurance Program Review	Initially and annually	As required in N.J.A.C. 7:28–22.4(a)7

(b) The Department has prepared compliance guidance documents, listed in N.J.A.C. 7:28–22.3(d)1 and 3, which may be used by the registrants in developing and implementing the quality assurance programs required by this subchapter. The compliance guidance documents are available from the Department, and may be obtained by contacting the Department at the Bureau of Radiological Health, PO Box 415, Trenton, NJ 08625–0415 and can be obtained from the Radiation Protection Program web page at "http:// www. state.nj.us/ dep/rpp."

(c) The registrant shall ensure that individuals performing quality control tests described in Table 2, Fluoroscopic Quality Control Requirements, above have an appropriate level of training to perform the tests competently.

(d) If any of the test results from item 2 in Table 2, Fluoroscopic Quality Control Requirements, above indicate that the laser film printer does not meet the standards in Table 2, the registrant shall immediately initiate steps to repair the laser film printer to meet the standards. Films shall not be processed until the processing meets the standards.

(e) If any of the test results from item 3 in Table 2, Fluoroscopic Quality Control Requirements, above indicate that the x-ray equipment or processing does not meet the standards in Table 2, the registrant shall immediately initiate steps to bring the fluoroscopic equipment and processing into compliance. If processor sensitometry/densitometry does not meet the standards, films shall not be processed until the processing meets the sensitometry/ densitometry standards.

(f) If any of the test results from items 4 through 6 in Table 2, Fluoroscopic Quality Control Requirements, above indicate that the fluoroscopic equipment does not meet the standards in Table 2, the registrant shall immediately initiate steps to repair the fluoroscopic equipment to meet the standards. All such repairs shall be completed within 30 days.

(g) No person shall use or permit the use of film or processing chemicals beyond the expiration dates on the containers.

(h) The registrant shall ensure that records of each corrective action, repair and service are maintained for at least two years.

(i) The registrant shall ensure that test records for items 2 through 6 in Table 2, Fluoroscopic Quality Control Requirements, above are maintained for at least one year.

(j) The registrant shall ensure that the initial Medical Physicist's Fluoroscopic QC Survey is permanently maintained and the records of the annual Medical Physicist's Fluoroscopic QC Survey are maintained for at least two years.

(k) The registrant shall ensure that the records of the quality assurance program review are maintained for at least two years.

7:28–22.7 Quality assurance program for diagnostic computed tomography equipment

(a) The registrant of any diagnostic computed tomography (CT) equipment used in the healing arts shall develop and continuously implement a quality assurance program that includes the following elements:

1. A quality assurance program manual that satisfies the requirements of N.J.A.C. 7:28–22.4;

2. Quality control tests, procedures, frequencies and standards including, but not limited to, those identified in Table 3, Computed Tomography Quality Control Requirements, below;

3. An initial and annual thereafter (not to exceed 14 months) Medical Physicist's Computed Tomography QC Survey as specified in N.J.A.C. 7:28–22.10(a); and

4. A corrective action plan required by N.J.A.C. 7:28–22.4(a)4.

TABLE 3
Computed Tomography Quality Control Requirements
(To be performed by a licensed radiologic technologist, a qualified medical physicist, or a trained service technician)

Item	Required Test or Procedure	Frequency	Standard
1.	Equipment Function: Indicators, Mechanical, and other Safety Checks. Warm-up	Daily, each day x-rays are taken	Must work properly
2.	For film processing, items 2, 5, 7, and 11 QC tests as specified in Table 1, Radiographic Quality Control Requirements	As specified in Table 1, Radiographic Quality Control Requirements	As specified in N.J.A.C. 7:28–22.5 Table 1, Radiographic Quality Control Requirements
3.	CT Number for Water	Daily	CT equipment or phantom manufacturers' specifications
4.	Field Uniformity	Daily	CT equipment or phantom manufacturers' specifications
5.	Laser Film Printer Quality Control	Weekly	Recommended control limits *OD = Optical Density SMPTE Test Pattern / Inverted gray scale 0% patch 2.45 ± 0.15 OD* / 0% patch 2.50 + 0.15 OD 10% patch 2.10 ± 0.15 OD / 10% patch 2.25 ± 0.15 OD 40% patch 1.15 ± 0.15 OD / 40% patch 1.35 ± 0.15 OD 90% patch 0.30 ± 0.08 OD / 90% patch 0.30 ± 0.08 OD *The 5% patch should just be visible inside of the 0% patch. The 95% patch should be visible inside the 100% patch.
6.	Low Contrast Resolution	Initially and Monthly	CT equipment or phantom manufacturers' specifications
7.	High Contrast Spatial Resolution	Initially and Monthly	CT equipment or phantom manufacturers' specifications
8.	Noise	Initially and Monthly	CT equipment or phantom manufacturers' specifications
9.	Table Position Indicator Accuracy	Initially and Monthly	± 2 mm
10.	Scan Increment Accuracy	Initially and Monthly	± 1 mm
11.	Scan Localization Light Accuracy	Initially and Monthly	± 5 mm
12.	Medical Physicist's QC Survey	Initially and annually	As required in N.J.A.C. 7:28–22.10
13.	Quality Assurance Program Review	Initially and annually	As required in N.J.A.C. 7:28–22.4(a)7

(b) The Department has prepared compliance guidance documents, listed in N.J.A.C. 7:28–22.3(c)1 and 4, which may be used by the registrants in developing and implementing the quality assurance programs required by this subchapter. The compliance guidance documents are available from the Department, and may be obtained by contacting the Department at the Bureau of Radiological Health, PO Box 415, Trenton, NJ 08625–0415 and can be obtained from the Radiation Protection Program web page at "http:// www. state.nj.us /dep/rpp."

(c) The registrant shall ensure that individual performing quality control tests described in Table 3, Computed Tomography Quality Control Requirements, above is either a licensed radiologic technologist, a qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment, or a trained service technician.

(d) If any of the test results from item 2 in Table 3, Computed Tomography Quality Control Requirements, above indicate that the x-ray processing does not meet the standards in Table 3, the registrant shall immediately initiate steps to bring the processing into compliance. Films shall not be processed until the processing meets these standards.

(e) If any of the test results from items 3, 4, 6, 7, and 8 in Table 3, Computed Tomography Quality Control Requirements, above indicate that the computed tomography equipment does not meet the standards in Table 3, the registrant shall immediately initiate steps to repair the computed tomography equipment to meet the standards. All corrective actions shall be completed within 30 days.

(f) If any of the test results from item 5 in Table 3, Computed Tomography Quality Control Requirements, above indicate that the laser film printer does not meet the standards in Table 3, the registrant shall immediately initiate steps to repair the laser film printer to meet the standards. Films shall not be processed until the processing meets the standards.

(g) If any of the test results from items 9, 10, and 11 in Table 3, Computed Tomography Quality Control Requirements, above indicate that the computed tomography equipment does not meet the standards in Table 3, the registrant shall immediately initiate steps to repair the computed tomography equipment to meet the standards. All corrective actions shall be completed within 15 days.

(h) No person shall use or permit the use of film or processing chemicals beyond the expiration dates on the containers.

(i) The registrant shall ensure that records of each corrective action, repair and service are maintained for at least two years.

(j) The registrant shall ensure that test records for items 2 through 11 in Table 3, Computed Tomography Quality Control Requirements, above are maintained for at least one year.

(k) The registrant shall ensure that the initial Medical Physicist's Computed Tomography QC Survey is permanently maintained and the records of the annual Medical Physicist's Computed Tomography QC Survey are maintained for at least two years.

(*l*) The registrant shall ensure that the records of the quality assurance program review are maintained for at least two years.

7:28–22.8 Medical Physicist's Radiographic QC Survey

(a) The registrant of any medical diagnostic radiographic equipment used in the healing arts shall develop and continuously implement a quality assurance program. Such a program shall include an initial and thereafter an annual (not to exceed 14 months) Medical Physicist's Radiographic QC Survey performed by a qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging. The Medical Physicist's Radiographic QC Survey shall include the elements identified in the Table 4, Medical Physicist's Radiographic QC Survey, below.

TABLE 4
Medical Physicist's Radiographic QC Survey

Item	Test	Standard
1.	Radiographic Unit Assembly Evaluation	As required at N.J.A.C. 7:28–15.3
2.	Collimation Assessment	As required at N.J.A.C. 7:28–15.3
3.	Collimator Illumination	As required at N.J.A.C. 7:28–15.3
4.	Half Value Layer	As required at N.J.A.C. 7:28–15.3
5.	mA Exposure Linearity	As required at N.J.A.C. 7:28–15.3
6.	kVp Accuracy/Reproducibility	As required at N.J.A.C. 7:28–15.3
7.	Timer Accuracy/Reproducibility	As required at N.J.A.C. 7:28–15.3
8.	Automatic Exposure Control, Reproducibility, Tracking, Density Control	As required at N.J.A.C. 7:28–15.3
9.	Entrance Skin Exposure (ESE) Measurement	Determine ESE for common exam and compare with National Evaluation of X-ray Trends (NEXT) data available in the Compliance Guidance Documents referenced at N.J.A.C. 7:28–22.3(c)2
10.	Image Quality Evaluation (Recommendation)	Established standard for phantom test tool used
11.	Review Facility/Technologist QC Test Records	Review QC tests for proper procedure and corrective action
12.	Physicist Report and Recommendations	Communicate results and recommendations to registrant

(b) A qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging may delegate the performance testing required for the Medical Physicist's Radiographic QC Survey in (a) above to a qualified medical physicist assistant in radiography who holds a valid certificate issued by the Department, except that the qualified medical physicist for the supervision of a quality assurance programs for diagnostic x-ray imaging may not delegate items 10 through 12 in Table 4, Medical Physicist's Radiographic QC Survey, below.

(c) The qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging shall be fully responsible for the Medical Physicist's Radiographic QC Survey and all of its measurements, conclusions and recommendations.

(d) Prior to delegating any performance testing permitted in (b) above, the qualified medical physicist shall provide adequate training and instruction to the qualified medical physicist assistant in the specific test procedures to be delegated. This training and instruction shall be in addition to the minimum level of training and instruction required for the qualified medical physicist assistant in radiography to obtain the certificate from the Department in accordance with N.J.A.C. 7:28–22.13(c).

(e) All Medical Physicist's Radiographic QC Survey reports shall be signed by the qualified medical physicist for the supervision of quality assurance programs for medical diagnostic imaging, and also by the qualified medical physicist assistant in radiography. The Medical Physicist's Radiographic QC Survey report shall identify which tests, if any, were performed by the qualified medical physicist assistant in radiography.

(f) For the Radiographic QC Survey:

1. If any of the Radiographic QC Survey test results from items 1 through 8 in Table 4, Medical Physicist's Radiographic QC Survey, above indicate that the x-ray equipment does not meet the standards in Table 4, the registrant shall immediately initiate corrective actions to meet the standards. All corrective actions shall be completed within 30 days.

2. For item 9 in Table 4, Medical Physicist's Radiographic QC Survey, above the medical physicist shall determine the entrance skin exposure (ESE) for the common examination performed using the equipment and compare the test results for the ESE with the most recent relevant National Evaluation of X-ray Trends (NEXT) data available in the compliance guidance documents referenced in N.J.A.C. 7:28–22.3(d)2.

3. For item 10 in Table 4, Medical Physicist's Radiographic QC Survey, above the medical physicist should compare the phantom test tool image with the manufacturer's specifications.

4. For item 11 in Table 4, Medical Physicist's Radiographic QC Survey, above the medical physicist shall review the completed QC test records that have been performed properly by the registrant for the previous year to ensure the tests were performed and corrective actions taken.

5. For item 12 in Table 4, Medical Physicist's Radiographic QC Survey, above the medical physicist shall prepare a report that reviews the overall quality assurance program being carried out by the registrant and contains:

i. Raw data, results and recommendations of the medical physicist's equipment tests performed in accordance with items 1 through 10 in Table 4, Medical Physicist's Radiographic QC Survey, above; and

ii. Results and recommendations of the medical physicist's review performed in accordance with item 11 in Table 4, Medical Physicist's Radiographic QC Survey, above.

7:28–22.9 Medical Physicist's Fluoroscopic QC Survey

(a) The registrant of any medical diagnostic fluoroscopic equipment used in the healing arts shall develop and continuously implement a quality assurance program. Such a program shall include an initial and thereafter an annual (not to exceed 14 months) Medical Physicist's Fluoroscopic QC Survey performed by a qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging. The Medical Physicist's Fluoroscopic QC Survey shall include the elements identified in Table 5, Medical Physicist's Fluoroscopic QC Survey, below. If the standard for any test in Table 5 refers to a manufacturer's specification and no such specification exists, then that standard does not apply.

TABLE 5
Medical Physicist's Fluoroscopic QC Survey

Item	Test	Standard
1.	Fluoroscopic Unit Assembly Evaluation	As required at N.J.A.C. 7:28–15.5
2.	Entrance Exposure Rate to Image Intensifier	Fluoroscopic equipment manufacturers' specifications
3.	Patient Entrance Exposure Rate	Fluoroscopic equipment manufacturers' specifications
4.	Maximum Exposure Rate	As required at N.J.A.C. 7:28–15.5
5.	High Contrast Resolution/Low Contrast for Fluoroscopy Video Monitor	Fluoroscopic equipment manufacturers' specifications
6.	Spot Film Automatic Exposure Control (AEC) System Performance	Fluoroscopic equipment manufacturers' specifications
7.	High Contrast Resolution/Low Contrast for Fluoroscopy Image Recording System (that is, spot film device, cine system, videotape system, etc.)	Fluoroscopic equipment manufacturers' specifications
8.	Half-Value Layer	Fluoroscopic equipment manufacturers' specifications
9.	Kilovoltage	Fluoroscopic equipment manufacturers' specifications
10.	Fluoroscopic and Spot Film Collimation Assessment	As required at N.J.A.C. 7:28–15.5
11.	Review of Facility and Technologist QC Test	Review QC tests for proper procedure and corrective action
12.	Physicist Report and Recommendations	Communicate results and recommendations to registrant

(b) A qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging may delegate the performance testing required for the Medical Physicist's Fluoroscopic QC Survey in (a) above to a qualified medical physicist assistant in fluoroscopy who holds a valid certificate issued by the Department except as provided below:

1. The qualified medical physicist for the supervision of a quality assurance programs for diagnostic x-ray imaging may not delegate items 8, 11, and 12 in Table 5, Medical Physicist's Fluoroscopic QC Survey, above; and

2. The qualified medical physicist for the supervision of quality assurance program for diagnostic x-ray imaging may not delegate any items in Table 5, Medical Physicist's Fluoroscopic QC Survey, above if the fluoroscopic equipment is digital or located in a dedicated interventional special procedure suite.

(c) Not withstanding (b) above, the qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging shall be fully responsible for the Medical Physicist's Fluoroscopic QC Survey and all of its measurements, conclusions and recommendations.

(d) Prior to delegating any performance testing permitted in (b) above, the qualified medical physicist shall provide adequate training and instruction to the qualified medical physicist assistant in fluoroscopy in the type of equipment and the specific test procedures to be delegated. This training and instruction shall be in addition to the minimum level of training and instruction required for the qualified medical physicist assistant in fluoroscopy to obtain the certificate from the Department in accordance with N.J.A.C. 7:28–22.13(d).

(e) All Medical Physicist's Fluoroscopic QC Survey reports shall be signed by the qualified medical physicist for the supervision of quality assurance programs for medical diagnostic imaging, and also by the qualified medical physicist assistant in fluoroscopy. The Medical Physicist's Fluoroscopic QC Survey report shall identify which tests, if any, were performed by the qualified medical physicist assistant.

(f) For the Fluoroscopic QC Survey:

1. If any of the Fluoroscopic QC survey test results from items 1 through 10 in Table 5, Medical Physicist's Fluoroscopic QC Survey, above indicate that the x-ray equipment does not meet the standards established in

Table 5, the registrant shall immediately initiate corrective actions to meet the standards. All corrective actions shall be completed within 30 days.

2. For item 11 in Table 5, Medical Physicist's Fluoroscopic QC Survey, above, the medical physicist shall review the completed QC test records that have been performed by the registrant for the previous year to ensure the tests were performed properly and corrective actions taken.

3. For item 12 in Table 5, Medical Physicist's Fluoroscopic QC Survey, above, the medical physicist shall prepare a report that reviews the overall quality assurance program being carried out by the registrant and contains:

i. Raw data, results and recommendations of the medical physicist's equipment tests performed in accordance with items 1 through 11 in Table 5, Medical Physicist's Fluoroscopic QC Survey, above; and

ii. Results and recommendations of the medical physicist's review performed in accordance with item 12 in Table 5, Medical Physicist's Fluoroscopic QC Survey, above.

7:28–22.10 Medical Physicist's Computed Tomography QC Survey

(a) The registrant of any medical diagnostic computed tomography equipment used in the healing arts shall develop and continuously implement a quality assurance program. Such a program shall include an initial and thereafter an annual (not to exceed 14 months) Medical Physicist's Computed Tomography QC Survey performed by a qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment. The Medical Physicist's Computed Tomography QC Survey shall include the elements identified in the Table 6, Medical Physicist's Computed Tomography QC Survey, below. If the standard for any test in Table 6 refers to a manufacturer's specification and no such specification exists, then that standard does not apply.

TABLE 6
Medical Physicist's Computed Tomography QC Survey

Item	Test	Standard
1.	Scan Increment Accuracy	±1 mm
2.	Scan Localization Light Accuracy	±5 mm
3.	Patient Dose (Multiple Scan Average Dose—MSAD or Computed Tomography Dose Index—CTDI)	CT equipment manufacturers' specifications and scan protocol or phantom manufacturers' specifications
4.	Pre–Patient Collimation Accuracy	Manufacturers' specifications
5.	Contrast Scale	CT equipment or phantom manufacturers' specifications
6.	CT Number for Water	CT equipment or phantom manufacturers' specifications
7.	Slice Thickness	CT equipment or phantom manufacturers' specifications
8.	Field Uniformity	CT equipment or phantom manufacturers' specifications
9.	Low Contrast Resolution	CT equipment or phantom manufacturers' specifications
10.	High Contrast Resolution	CT equipment or phantom manufacturers' specifications
11.	Noise	CT equipment or phantom manufacturers' specifications
12.	Scan Protocol Review	Ensure that both the adult and pediatric scan protocols are separate and unique
13.	Review of Facility and Technologist QC Tests	Review QC tests for proper procedure and corrective action
14.	Physicist Report and Recommendations	Communicate results and recommendations to registrant

(b) A qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment may not delegate any items in Table 6, Medical Physicist's Computed Tomography QC Survey, above.

(c) The qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment shall be fully responsible for the Medical Physicist's Computed Tomography QC Survey and all of its measurements, conclusions and recommendations.

(d) All Medical Physicist's Computed Tomography QC Survey reports shall be signed by the qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment.

(e) For the Computed Tomographic QC Survey

1. If any of the Computed Tomographic QC Survey test results from items 1 through 4 in Table 6, Medical Physicist's Computed Tomography QC Survey, above indicate that the CT equipment does not meet the standards established in Table 6, the registrant shall immediately initiate corrective actions to meet the standards. All corrective actions shall be completed within 15 days.

2. If any of the Computed Tomographic QC Survey test results from items 5 through 11 in Table 6, Medical Physicist's Computed Tomography QC Survey, above indicate that the CT equipment does not meet the standards established in Table 6, the registrant shall immediately initiate corrective actions to meet the standards. All corrective actions shall be completed within 30 days.

3. For item 12 in Table 6, Medical Physicist's Computed Tomography QC Survey, above, the medical physicist shall ensure that both the adult and pediatric scan protocols are separate and unique.

4. For item 13 in Table 6, Medical Physicist's Computed Tomography QC Survey, above, the medical physicist shall review the completed QC test records that have been performed by the registrant for the previous year to ensure the tests were performed properly and corrective actions taken.

5. For item 14 in Table 6, Medical Physicist's Computed Tomography QC Survey, below, the medical physicist shall prepare a report that reviews the overall quality assurance program being carried out by the registrant and contains:

i. Raw data, results and recommendations of the medical physicist's equipment tests performed in accordance with items 1 through 12 in Table 6, Medical Physicist's Computed Tomography QC Survey, above; and

ii. Results and recommendations of the medical physicist's review performed in accordance with item 14 in Table 6, Medical Physicist's Computed Tomography QC Survey, above.

7:28–22.11 Quality assurance for x-ray bone densitometer equipment

(a) The registrant of any x-ray bone densitometer shall continuously carry out a quality assurance program consistent with the equipment manufacturer's recommendations.

(b) The registrant shall ensure that the items listed below describing the operation and calibration of the equipment are maintained at the facility:

1. A copy of the manufacturer's specific quality assurance program recommendations and the operating manual;

2. Documentation of the quality assurance program and quality control tests for the x-ray bone densitometer;

3. Instructions on the use of the phantom(s), or testing appropriate for the system and allowable variations for the indicated parameters; and

4. A radiation safety manual as required in N.J.A.C. 7:28–15.9(a)8.

(c) The registrant shall ensure that the manufacturer's recommended test procedures and frequencies for the x-ray bone densitometer are followed and the test results are recorded.

(d) The registrant shall ensure that the records of tests required by (c) above are maintained for at least one year.

7:28–22.12 Qualifications of medical physicists and medical physicist assistants

(a) Only a person who holds a valid certificate issued by the Department in accordance with N.J.A.C. 7:28–22.13(a) and meets at least one of the following criteria may perform the duties of a "qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging" as required in this subchapter:

1. Certification by one of the following agencies in the specialty listed:

i. The American Board of Radiology in Diagnostic Radiological Physics or Radiological Physics;

ii. The American Board of Medical Physics in Diagnostic Imaging Physics;

iii. Certification issued by the Fellowship in the Canadian College of Physicists in Medicine that is equivalent to (a)1i or ii above; or

iv. Certification by other national certifying boards, which may be recognized by the Commission, where the person seeking recognition as a qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging has petitioned the Commission in writing and where the Commission has issued a written determination that the certification in question meets the criteria of a qualified medical physicist pursuant to this section;

2. A master's or doctorate degree from an accredited college in radiological health, radiation sciences, physics, chemistry, environmental sciences, engineering or a related field and at least three years of professional, clinical and technical experience in the field of radiological physics, including the performance of quality control tests of diagnostic x-ray imaging, that was obtained under the supervision of an individual who meets the requirements of this section, except the requirement to hold a certificate issued by the Department; or

3. Any individual who does not meet at least one of the foregoing criteria may petition the Commission for recognition as a qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging. The individual shall submit a written petition to the Commission that contains sufficient information on his or her educational, professional, clinical, technical, employment and/or any other relevant experience. The Commission may approve any such petition based on its determination that the individual demonstrates competence to act as a qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging.

(b) Only a person who holds a valid certificate issued by the Department in accordance with N.J.A.C. 7:28–22.13(a) and meets at least one of the following criteria may perform the duties of a "qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment" as required in this subchapter:

1. Certification by one of the following agencies in the specialty listed:

i. The American Board of Radiology in Diagnostic Radiological Physics or Radiological Physics;

ii. The American Board of Medical Physics in Diagnostic Imaging Physics;

iii. Certification issued by the Fellowship in the Canadian College of Physicists in Medicine that is equivalent to (b)1i or ii above; or

iv. Certification by other national certifying boards, which may be recognized by the Commission, where the person seeking recognition as a qualified medical physicist for the supervision of quality assurance programs for computed tomography x-ray equipment has petitioned the Commission in writing and where the Commission has issued a written determination that the certification in question meets the criteria of a qualified medical physicist pursuant to this section;

2. A master's or doctorate degree from an accredited college in radiological health, radiation sciences, physics, chemistry, environmental sciences, engineering or a related field and at least three years of professional, clinical and technical experience in the field of radiological physics, including the performance testing of computed tomography equipment that was obtained under the supervision of an individual who meets the requirements of this section, except the requirement to hold a certificate issued by the Department; or

3. Any individual who does not meet at least one of the foregoing criteria may petition the Commission for recognition as a qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment. The individual shall submit a written petition to the Commission that contains sufficient information on his or her educational, professional, clinical, technical, employment and/or any other relevant experience. The Commission may approve any such petition based on its determination that the individual demonstrates competence to act as a qualified medical physicist for the supervision of quality assurance programs for computed tomography equipment.

(c) Only a person who holds a valid certificate issued by the Department in accordance with N.J.A.C. 7:28–22.13(a), meets one of the criteria contained in (c)1 through 5 below and also meets the criterion in (c)6 below may perform the duties of a "qualified medical physicist assistant in radiography":

1. Is currently ARRT certified in general radiography or holds a current New Jersey license as a diagnostic radiologic technologist and has five years of experience as a practicing diagnostic technologist, one year of which shall include performing quality control tests on radiographic equipment;

2. Is currently ARRT certified in both general radiography and in quality management with three years of experience as a practicing diagnostic radiologic technologist;

3. Has a bachelors degree from an accredited college or university in biology, chemistry, radiation sciences, physics, engineering or mathematics and four years of technical experience performing quality control tests on radiographic equipment in the field of radiological health;

4. Has a master's degree or a doctorate degree from an accredited college or university in radiological health, radiation sciences, physics, chemistry, environmental sciences, engineering or a related field and two years of technical experience performing quality control tests on radiographic equipment in the field of radiological health; or

5. Any individual who does not meet at least one of the foregoing criterion may petition the Commission for recognition as a qualified medical physicist assistant in radiography. The individual shall submit a written petition to the Commission that contains sufficient information on his or her educational, professional, clinical, technical, employment and/or any other relevant experience. The Commission may approve any such petition based on its determination that the individual demonstrates competence to act as a qualified medical physicist assistant in radiography.

6. In addition to the criteria in (a)1 through 5 above, the individual shall document to the satisfaction of the Department, that the individual has received, at a minimum, training and instruction on performing QC tests and has performed quality control tests 1 through 9 of Table 4, Medical Physicist's Radiographic QC Survey, in N.J.A.C. 7:28–22.8 on at least five radiographic units while under the immediate supervision of a qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging.

(d) Only a person who holds a valid certificate issued by the Department in accordance with N.J.A.C. 7:28–22.13(a), meets one of the criteria contained in (d)1 through 5 below and also meets the criterion in (d)6 below may perform the duties of a "qualified medical physicist assistant in fluoroscopy":

1. Is currently ARRT certified in general radiography or holds a current New Jersey license as a diagnostic radiologic technologist and has five years of experience as a practicing diagnostic technologist, one year of which shall include performing quality control tests in fluoroscopy;

2. Is currently ARRT certified in both general radiography and in quality management with three years of experience as a practicing diagnostic radiologic technologist;

3. Has a bachelors degree from an accredited college or university in biology, chemistry, radiation sciences, physics, engineering or mathematics and four years of technical experience performing quality control tests on fluoroscopic equipment in the field of radiological health;

4. Has a master's degree or a doctorate degree from an accredited college or university in radiological health, radiation sciences, physics, chemistry, environmental sciences, engineering or a related field and two years of technical experience performing quality control tests on fluoroscopic equipment in the field of radiological health; or

5. Any individual who does not meet at least one of he foregoing criterion may petition the Commission for recognition as a qualified medical physicist assistant in fluoroscopy. The individual shall submit a written petition to the Commission that contains sufficient information on his or her educational, professional, clinical, technical, employment and/or any other relevant experience. The Commission may approve any such petition based on its determination that the individual demonstrates competence to act as a qualified medical physicist assistant in fluoroscopy.

6. In addition to the criteria in (d)1 through 5 above, the individual shall document to the satisfaction of the Department, that the individual has received, at a minimum, training and instruction on performing QC tests and has performed quality control tests 1 through 7, 9 and 10 of Table 5, Medical Physicist's Fluoroscopic QC Survey in N.J.A.C. 7:28–22.9 on at least five fluoroscopic units while under the immediate supervision of a qualified medical physicist for the supervision of quality assurance programs for diagnostic x-ray imaging.

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).
In (d), substituted " control tests 1 through 7, 9 and 10 of Table 5" for "control tests 1 through 6 and 9 of Table 5" in 6.

7:28–22.13 Certification and decertification of qualified medical physicists and qualified medical physicist assistants

(a) The Department may issue a certificate valid for up to two years to persons who submit an application to the Department documenting to the satisfaction of the Department that the person meets the qualifications specified in N.J.A.C. 7:28–22.12(a), (b), (c) or (d).

(b) No person shall perform any QC test that is part of the Medical Physicist's Radiographic, Fluoroscopic or Computed Tomography QC Survey without a current certificate issued by the Department, pursuant to this subchapter.

(c) Each certificate shall expire on December 31 of the first odd numbered year following the year of issuance. A certificate may be renewed for a biennial term commencing January 1 of every even numbered year and expiring on December 31 of the following year.

(d) Any person who was issued a certificate pursuant to (a) above, shall display the certificate upon request.

(e) In order to maintain a current certificate, a person shall renew his or her certificate by submitting a completed renewal application to the Department at least 30 days prior to the date of expiration.

(f) A person who wishes to renew an expired certificate shall submit a renewal application to the Department. Such certificate shall be renewed for a period extending from the date of renewal to midnight, December 31 of the next odd number year.

(g) Any person who submits an application for a certificate or certificate renewal to the Department shall include as an integral part of said application, an application fee as follows:

1. Initial certification fee:
   i. $50.00 for one category;
   ii. $25.00 for each additional category;
2. Renewal fee:
   i. $25.00 for each category.

(h) The fees accompanying the application or biennial renewal application shall be in the form of a check or money order made payable to the Treasurer, State of New Jersey. Fees are non-refundable. Applications for certification are available from the Bureau of Radiological Health, PO Box 415, Trenton, NJ 08625–0415.

(i) A person certified by this subchapter shall inform the Department of any change in the address of record within 30 days of such change.

(j) The Department, in addition to any penalties authorized by the Act, may deny an application for a certificate and may revoke or suspend a certificate if the person has:

1. Violated any provision of this chapter;

2. Disregarded the safety, health and welfare of the public in the performance of his or her professional duties;

3. Developed or implemented a QA/QC program or performed a Medical Physicist's QC Survey that is not in conformance with standards in this subchapter; or

4. Affixed his or her signature to any QA/QC program, report or QC survey, which was not prepared by him or her.

7:28–22.14 Compliance schedule

(a) Registrants required to develop and implement quality assurance programs in accordance with N.J.A.C. 7:28–22.3 shall comply with the following schedule:

1. All out-of-State registrants and registrants whose x-ray equipment is registered in Essex and Gloucester counties shall have quality assurance programs fully implemented, including a completed initial Medical Physicist QC Survey, by February 28, 2001.

2. Registrants whose x-ray equipment is registered in Bergen County shall have quality assurance programs fully implemented, including a completed initial Medical Physicist QC Survey, by March 31, 2001.

3. Registrants whose x-ray equipment is registered in Hudson, Somerset, and Burlington counties shall have quality assurance programs fully implemented, including a completed initial Medical Physicist QC Survey, by April 30, 2001.

4. Registrants whose x-ray equipment is registered in Union, Mercer and Cape May counties shall have quality assurance programs fully implemented, including a completed initial Medical Physicist QC Survey, by June 30, 2001.

5. Registrants whose x-ray equipment is registered in Morris and Ocean counties shall have quality assurance programs fully implemented, including a completed initial Medical Physicist QC Survey, by July 31, 2001.

6. Registrants whose x-ray equipment is registered in Passaic and Camden counties shall have quality assurance programs fully implemented, including a completed initial Medical Physicist QC Survey, by August 31, 2001.

7. Registrants whose x-ray equipment is registered in Sussex, Monmouth, Salem, and Cumberland counties shall have quality assurance programs fully implemented, including a completed initial Medical Physicist QC Survey, by October 31, 2001.

8. Registrants whose x-ray equipment is registered in Middlesex, Warren, Hunterdon, and Atlantic counties shall have quality assurance programs fully implemented, including a completed initial Medical Physicist QC Survey, by November 30, 2001.

7:28–22.15 Severability

If any provision, or part thereof, of this subchapter, or the application thereof to any person or circumstance, is held invalid, such invalidity shall not affect the remainder of, or other provisions or applications of, this subchapter which can be given effect without the invalid provision, portion or application. To this end, the provisions of this subchapter are declared to be severable.

SUBCHAPTER 23. (RESERVED)

SUBCHAPTER 24. NUCLEAR MEDICINE TECHNOLOGY

7:28–24.1 Purpose, scope and applicability

(a) This subchapter establishes educational and licensure requirements, as well as delineating the scope of practice, for persons engaged in the practice of nuclear medicine technology. This subchapter further establishes certain responsibilities of authorized medical users, owners, and registrants of radiation sources used in the practice of nuclear medicine technology. This subchapter also establishes standards for the operation of, and the Department's approval of, educational programs in nuclear medicine technology.

(b) This subchapter shall not be interpreted as precluding persons specializing in nuclear medicine physics, computer science, or engineering from manipulating data under the supervision of an authorized medical user.

(c) The following are exempt from the requirement to possess a nuclear medicine technology license:

1. Authorized medical users;

2. Hospital residents, hospital interns or hospital fellows specializing in nuclear medicine, who are under the direction of an authorized medical user;

3. Hospital residents, hospital interns or hospital fellows involved in nuclear medicine procedures but not specializing therein, provided that they are acting under the direct supervision of either an authorized medical user or a licensed nuclear medicine technologist who is under the direction of an authorized medical user;

4. Students enrolled in and attending a school or college of medicine or osteopathy, who are acting within the school's curriculum, provided that students are under the direct supervision of either an authorized medical user or a licensed nuclear medicine technologist who is under the direction of an authorized medical user; and

5. Students enrolled in and attending a school of nuclear medicine technology, who are acting within the school's approved curriculum, provided that such students are identified on the student list filed by the school with the Department, and are acting in a clinical affiliation approved by the Department, upon the recommendation of the Commission, and are under the direct or immediate supervision of either an authorized medical user or a licensed nuclear medicine technologist who is under the direction of an authorized medical user.

(d) The requirements of this subchapter shall not apply to a licensed radiopharmacy operating within the scope of its Department radioactive materials license, New Jersey Board of Pharmacy license, and Nuclear Regulatory Commission license.

(e) The provisions of this subchapter do not apply to the therapeutic use of sealed sources of ionizing radiation.

7:28–24.2 Definitions

(a) The following words and terms, when used in this subchapter, shall have the following meanings unless the context clearly indicates otherwise.

"Authorized medical user" means a licensed physician who is identified as an authorized user on a Department radioactive materials license that authorizes the medical use of naturally occurring or accelerator produced radioactive materials or on a Nuclear Regulatory Commission license that authorizes the medical use of by-product materials.

"Diagnostic dose" means a radionuclide or radiopharmaceutical which is intended for diagnostic purposes.

"Direct supervision" means guidance, direction and instruction by an authorized medical user or license nuclear medicine technologist who is personally aware of, and maintains independent professional responsibility for, the procedure intended for a given patient, and is present in the facility and is available for immediate assistance.

"Immediate supervision" means in-room presence for instruction, direction and guidance by an authorized medical user or a licensed nuclear medicine technologist, who is available to assume control of the given procedure.

"Initial application" means the first application submitted by an individual to the Department for a license to practice nuclear medicine technology.

"Licensed nuclear medicine technologist" (LNMT) means a person who possesses a valid license issued by the Department to engage in the practice of nuclear medicine technology.

"Licensed physician" means an individual who holds a plenary license to practice medicine issued by the New Jersey State Board of Medical Examiners.

"Practice of nuclear medicine technology" means preparing radiopharmaceuticals for administration to humans, administering radiopharmaceuticals to humans, positioning of patients for examinations which require the administration of radiopharmaceuticals to humans, setting technical factors for examinations which require the administration of radiopharmaceuticals to humans, operating imaging and/or measuring equipment for examinations which require the administration of radiopharmaceuticals to humans, or acquiring and manipulating patient data, other than demographic and clinical data, with or without the use of computers for procedures requiring the administration of radiopharmaceuticals.

4. Has passed, more than three years prior to the application for a license, a nuclear medicine technology examination approved by the Commission, and has legally engaged in the practice of nuclear medicine technology for at least 1,000 hours during the three years preceding the application for a license in a manner consistent with this chapter.

(b) The Department may deny a license application if the applicant has committed any act or omission specified at N.J.A.C. 7:28–24.9(a).

7:28–24.6 Temporary, conditional and restricted licenses

(a) The Department may issue a temporary license to any person who has graduated from a nuclear medicine technology educational program approved by the Department pursuant to N.J.A.C. 7:28–24.11. A temporary license shall be issued only if the Department finds that its issuance will not violate the purposes of the Act or tend to endanger public health and safety.

(b) A temporary license shall expire 60 calendar days after the date of graduation. A single 30 calendar day extension may be granted provided that the applicant has taken an approved licensing examination and is awaiting the results of the examination.

(c) The Department, at its discretion, may issue a conditional or restricted license including, but not limited to, a condition or restriction limiting the scope of practice of a licensed nuclear medicine technologist.

(d) No person who possesses a conditional or restricted license shall practice outside of the conditions or restrictions as listed on the license.

7:28–24.7 License expiration and license renewal

(a) No nuclear medicine technologist shall practice without a valid New Jersey nuclear medicine technology license.

(b) A nuclear medicine technologist shall inform the Department of any change in the address of record within 30 calendar days of the change.

(c) In order to maintain a valid license, a nuclear medicine technologist shall renew his or her license biennially by submitting a renewal application for a nuclear medicine technology license and the required renewal fee specified in N.J.A.C. 7:28–24.8.

(d) Each license expires on December 31 of the first even numbered year following the year of its issuance. A license may be renewed for a biennial term commencing January 1 of every odd numbered year and expiring on December 31 of the following year.

(e) A nuclear medicine technologist who possesses an expired license may renew the license, provided that the license has not been expired for more than three years. An individual who wishes to renew an expired license shall submit a renewal application and the current renewal fee to the Department. Such licenses shall be renewed for a period extending from date of renewal to midnight, December 31 of the next even numbered year.

(f) A nuclear medicine technologist who possesses a license which has been expired for more than three years may not have that license renewed, but may apply for a new license through re-examination and other applicable requirements for initial license applications at N.J.A.C. 7:28–24.4 or, if applicable, at N.J.A.C. 7:28–24.5.

7:28–24.8 Fees

(a) Any person who submits an application for an examination, license, or license renewal to the Department shall include as an integral part of the application a service fee as follows:

1. Examination application fee: $75.00;
2. Initial license application fee: $40.00;
3. Biennial license renewal fee: $40.00.

(b) All fees shall be in the form of a check or money order made payable to the Treasurer, State of New Jersey.

1. The fees submitted to the Department are not refundable.

2. All examination and initial license applications and associated fees shall be mailed to:

State of New Jersey
Department of Environmental Protection
Bureau of Radiological Health
PO Box 415
Trenton, New Jersey 08625–0415

3. All biennial license renewal applications and associated fees shall be mailed to:

State of New Jersey
Department of Treasury
Division of Revenue
PO Box 417
Trenton, New Jersey 08646–0417

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).
In (b), amended the zip code in 3.

7:28–24.9 Examination application or license application denial, license revocation and suspension

(a) The Department, in addition to any penalties authorized by the Act, may deny any examination or license application, and may revoke or suspend a nuclear medicine technology license, when the applicant or licensed nuclear medicine technologist has:

1. Violated any of the provisions contained in N.J.A.C. 7:28–24.3(b), (c), (d), (f), (h), (i), (j), (k) or (*l*);

2. Been convicted of, any crime which relates, or could relate, adversely to the practice of nuclear medicine technology. For the purpose of this section, a plea of guilty, non vult, no contest, or any other such disposition of alleged criminal activity shall be deemed a conviction;

3. Has been admitted to a pretrial intervention program or the substantial equivalent thereof based upon alleged conduct which relates, or could relate, adversely to the practice of nuclear medicine technology;

4. Has had his or her certification, registration, or license to practice nuclear medicine technology revoked or suspended by any other state or certifying agency for reasons consistent with this chapter; or

5. Is incapable, for medical or any other good cause, of discharging the functions of a licensee in a manner consistent with the health, safety and welfare of the public.

(b) Any revocation or suspension issued pursuant to this section shall be in accordance with the following:

1. Revocation or suspension of a nuclear medicine technologist's license shall be initiated by the Department through issuance of a Notice of Revocation or Notice of Suspension. The Notice shall include the findings of the Department upon which the revocation or suspension is based. The Notice shall also include the date upon which the revocation or suspension shall become effective. The Notice may be accompanied by an Order requiring compliance with the Radiation Protection Act, N.J.S.A. 26:2D–1 et seq. or any rule promulgated pursuant thereto. Within 20 days of delivery of the Notice, an individual whose license is to be revoked or suspended may deliver to the Commissioner a written request for an administrative hearing, pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B–1 et seq. and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1, to contest such revocation or suspension. The individual's request for an administrative hearing shall include a written statement of all issues of fact or law contained within the Notice which are disputed by the individual.

2. If the Commissioner determines the matter to be a contested case, he shall refer the matter to the Office of Administrative Law for hearing before an administrative law judge, pursuant to the Administrative Procedure Act and the Uniform Administrative Procedure Rules. Upon review of the record of the administrative hearing in contested cases the Commissioner may affirm, modify or reject the initial decision of the administrative law judge and/or the findings of the Department. If the Commissioner finds that the charges in a contested case have not been proven, he shall order them dismissed. If the Department's findings are found to be true, the Commissioner may, in his or her discretion, issue an order suspending or revoking the license of the individual. In uncontested cases, the revocation or suspension of the individual's license shall be effective as of the date specified in the Notice of Revocation or Notice of Suspension.

(c) This subchapter shall not in any way affect or abridge the powers of the Department to issue emergency orders pursuant to N.J.S.A. 26:2D–12 or to bring an action in Superior Court, pursuant to N.J.S.A. 26:2D–13.

7:28–24.10 School of nuclear medicine technology: standards for approval

(a) A school of nuclear medicine technology shall be approved by the Department if:

1. The curriculum includes the following minimum content areas or prerequisites:

i. Basic anatomy, physiology, and pathology;

ii. Intravenous injections, both direct and peripheral, and other methods shall include, but not limited to, into existing urinary catheters (indwelling and other), into existing nasogastric tubes or other gastric or intestinal feeding tubes, into existing central intravenous lines, through existing spinal needles placed into the subarachnoid space;

iii. Radiation physics and nuclear medicine physics;

iv. Radionuclide chemistry and pharmacology to include adverse reactions to radiopharmaceuticals and other pharmaceuticals used in nuclear medicine;

v. Statistics;

vi. Nuclear medicine departmental organization and function;

vii. Nuclear instrumentation;

viii. Radiation biology;

ix. Radionuclide therapy;

x. Radiation safety and radiation protection standards and codes;

xi. Laboratory procedures and techniques;

xii. Clinical application of radionuclides, for both diagnostic and therapeutic purposes;

xiii. Records and administrative procedures;

xiv. Methods of patient care;

xv. Medical law and ethics;

xvi. Computer applications;

xvii. Quality assurance; and

xviii. State and Federal regulations;

2. The curriculum includes a valid plan for well-structured competency-based clinical education; and

7:28–41.2 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings unless the context clearly indicates otherwise.

"Mercury vapor lamp" means any mercury vapor or metal halide lamp incorporating a high-pressure arc discharge tube that has a fill consisting primarily of mercury and that is contained within an outer envelope (it does not include the tungsten filament self-ballasted mercury vapor or metal halide lamp).

"New facility" means any building for which a certificate of occupancy has been issued subsequent to the effective date of this subchapter.

"Non-self-extinguishing mercury vapor lamp" means a mercury vapor lamp which does not comply with the requirements for a self-extinguishing mercury vapor lamp, hereinafter defined.

"Outer envelope" means the lamp element, usually glass, surrounding a high-pressure arc discharge tube, that, when intact, attenuates the emission of ultraviolet radiation.

"Self-extinguishing mercury vapor lamp" means a mercury vapor lamp which shall cease operation within a cumulative operating time not to exceed 15 minutes following breakage or removal of at least three square centimeters of contiguous surface of the outer envelope. Self-extinguishing lamps manufactured prior to September 7, 1981 shall cease operation within a cumulative operating time not to exceed 15 minutes following complete breakage or removal of the outer envelope.

"Shortwave ultraviolet radiation" means radiation with wavelengths shorter than 320 nanometers.

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).

7:28–41.3 General requirements for indoor installations

(a) No person shall cause, suffer, allow or permit the installation or use of a mercury vapor lamp in any indoor area which may be occupied by people unless the following requirements are met:

1. The mercury vapor lamp is of the self-extinguishing type; or

2. The mercury vapor lamp is of the non-extinguishing type provided it is installed within a totally enclosed lighting fixture with a protective shield which protects the lamp from damage and absorbs shortwave ultraviolet radiation.

(b) The provisions of this section shall be fully met within one year after the effective date of this chapter.

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).

7:28–41.4 General requirements for outdoor installations

(a) No person shall cause, suffer, allow or permit the installation or use of a mercury vapor lamp in any outdoor area where people are likely to remain in the area of illumination for periods in excess of 15 minutes unless the following requirements are met:

1. The mercury vapor lamp is of the self-extinguishing type; or

2. The mercury vapor lamp may be of the non-self-extinguishing type provided it is installed within a totally enclosed lighting fixture with a protective shield which protects the lamp from damage and absorbs shortwave ultraviolet radiation.

(b) The Department may exempt certain outdoor mercury vapor lamp installations from the provisions of (a) above, provided the Department has determined that sufficient precautions have been taken to minimize the possibility of over-exposure to shortwave ultraviolet radiation.

(c) The provisions of this section shall be met within one year after the effective date of this subchapter.

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).

SUBCHAPTER 42. RADIO FREQUENCY RADIATION

7:28–42.1 Scope

(a) This subchapter governs exposure to radio frequency radiation from fixed radio frequency devices.

(b) This subchapter shall not apply to the intentional exposure of patients to radiation for the purpose of diagnosis, treatment or investigation for the prevention or control of disease.

Amended by R.1987 d.206, effective May 4, 1987.
See: 18 N.J.R. 1166(a), 19 N.J.R. 770(a).
Deleted non-occupational from (a).

7:28–42.2 Purpose

The purpose of this subchapter is to define safety requirements for the use of radio frequency devices that radiate in the frequency range from 300 kHz to 100 GHz in order to prevent possible harmful effects in human beings from exposure to such radiation.

Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(b).

7:28–42.3 Radio Frequency Protection Guides (RFPG)

(a) Radio frequency devices, excluding microwave ovens, shall be maintained as follows:

1. No person shall cause, suffer, allow or permit the use of a radio frequency device which exposes or may expose any worker or member of the public to radio frequency radiation which is in excess of the applicable Radio Frequency Protection Guide in N.J.A.C. 7:28–42.4.

2. At frequencies between 300 kHz and 100 GHz, the RFPG in N.J.A.C. 7:28–42.4 may be exceeded if the exposure conditions can be shown by laboratory procedures to produce specific absorption rates (SARs) below 0.4 W/kg as averaged over any one gram of tissue.

(b) Microwave ovens shall be maintained as follows:

1. No person shall cause, suffer, allow or permit the use of a microwave oven manufactured after October 6, 1971 that radiates in excess of 5mW/cm^2 at any point 5 cm or greater from any external surface of the oven.

2. No person shall cause, suffer, allow or permit the use of a microwave oven manufactured before October 6, 1971 that radiates in excess of 10mW/cm^2 at any point 5 cm or greater from any external surface of the oven.

3. Measurements shall be made with the microwave oven operating at its maximum output and with a container of 275 ±15 ml of tap water at an initial temperature of 20 ±5°C placed on the carrying surface provided by the manufacturer.

i. The container shall be a low form 600 ml beaker having an inside diameter of approximately 8.5 cm and made of electrically non-conductive material such as glass or plastic.

Administrative correction to (a)1 and (b)1 and 2.
See: 24 N.J.R. 4526(a).

7:28–42.4 Radio Frequency Protection Guides (RFPG) for whole body exposure

Frequency Range	Maximum Allowed Mean Squared Electric Field Strength (V/m)^2	Maximum Allowed Mean Squared Magnetic Field Strength (A/m)^2	Equivalent Plane Wave Power Density (mW/cm^2)
300 kHz–3 MHz	400,000	2.5	100
3 MHz–30 MHz	4,000 (900/f2)	0.025 (900/f2)	900/f^2
30 MHz–300 MHz	4,000	0.025	1.0
300 MHz–1.5 GHz	4,000 (f/300)	0.025 (f/300)	f/300
1.5 GHz–100 GHz	20,000	0.125	5.0

Note 1. f—frequency (MHz)

Note 2. For near field exposure, both the mean squared electric and magnetic field strengths shall be determined.

Note 3. For frequencies below 300 MHz, both the mean squared electric and magnetic field strengths shall be determined.

Note 4. At frequencies above 300 MHz, either the mean squared electric or magnetic field strengths shall be determined.

Note 5. The applicable RFPG shall be averaged over any 0.1 hour interval.

Note 6. Measurement to determine adherence to the RFPG shall be made at distances 5 cm or greater from any object.

Note 7. Where electromagnetic fields are present at more than one frequency or for broadband fields, the fraction of the RFPG incurred within each frequency interval shall be determined and the sum of all such fractions shall not exceed unity.

Administrative Correction at "Frequency Range" and at "Maximum Allowed Mean Squared Magnetic Field Strength".
See: 24 N.J.R. 4371(a).

SUBCHAPTERS 43 THROUGH 47. (RESERVED)

SUBCHAPTER 48. FEES FOR THE REGISTRATION OF NONIONIZING RADIATION PRODUCING SOURCES

7:28–48.1 Scope, purpose and general provisions

(a) This subchapter establishes initial registration fees and annual renewal fees for all radiofrequency and microwave heaters, sealers and industrial ovens, and imposes reporting requirements on the owners of these sources. The fees collected by the Department will support a program that will assure the compliance of the regulated sources with the applicable provisions of N.J.A.C. 7:28–42.

(b) Each owner of a nonionizing radiation producing source that is subject to this subchapter is responsible for ensuring compliance with all requirements of this subchapter. If there is more than one owner of a nonionizing radiation producing source, each owner is jointly and severally liable for complying with all the requirements of this subchapter.

(c) If an owner fails to comply with any of the Department's requests made pursuant to this subchapter, the Department may assess a penalty in accordance with N.J.S.A. 26:2D–13.

7:28–48.2 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise.

(e) The registration of an owner who fails to submit an annual renewal fee within 60 calendar days after the owner's receipt of the bill shall be considered expired.

1. Any owner whose registration has expired pursuant to this subsection shall, upon a written request transmitted to the Department within 30 calendar days of the expiration of the registration, be afforded the opportunity for a hearing thereon in the manner provided for contested cases pursuant to the Administrative Procedure Act, N.J.S.A. 52:14B-1 et seq., and the Uniform Administrative Procedure Rules, N.J.A.C. 1:1.

2. Requests for hearings shall be sent to the Office of Legal Affairs, ATTENTION: Adjudicatory Hearing Requests, Department of Environmental Protection, PO Box 402, Trenton, NJ 08625-0402.

(f) An owner who allows the registration of a source to expire by failing to remit the annual renewal fee within 60 calendar days after the owner's receipt of the bill shall be required to file a new registration form along with the appropriate initial registration fee listed in (b) above.

(g) Fees submitted to the Department are not refundable.

Administrative Correction.
See: 27 N.J.R. 498(b).
Amended by R.2005 d.239, effective July 18, 2005.
See: 37 N.J.R. 8(a), 37 N.J.R. 2675(a).
Amended the addresses throughout.

7:28-48.8 Sale of a nonionizing radiation producing source or transfer of a controlling interest; termination of registration upon sale of nonionizing radiation producing source or upon transfer of controlling interest

(a) A person who sells or otherwise transfers either a nonionizing radiation producing source, or a controlling interest in the owner of such a source, shall notify the Department in writing at least 30 calendar days before the sale or transfer occurs. The transferor shall include the following information in the notice:

1. The name and address of the transferee; and

2. The date of the proposed sale or transfer.

(b) Unless the procedures set forth in either (c) or (d) below are followed, the registration of a nonionizing radiation producing source shall terminate upon the sale of the source or upon the transfer of a controlling interest in the person who owns the source.

(c) The registration of a nonionizing radiation producing source shall not terminate upon the sale of the source or upon the transfer of a controlling interest under (b) above, and shall be transferred to the transferee, if the transferee certifies to the Department in writing that it will assume all of the transferor's liabilities in connection with:

1. Any deficiencies in the operation of source that would result in a violation of any of the provisions of N.J.A.C. 7:28-42; and

2. All penalties arising in connection with the source from occurrences or circumstances existing before the date of the sale or transfer.

(d) The registration of a nonionizing radiation producing source shall not terminate upon the sale of the source or upon the transfer of a controlling interest under (b) above, if the transferor takes the actions required of the transferor under the following procedure:

1. The transferor shall notify the Department in writing of the proposed sale or transfer, prior to the sale or transfer in accordance with (a) above;

2. The Department may, in its discretion, perform an onsite audit of the nonionizing radiation producing source. If the Department performs such an audit, it shall be completed within 90 calendar days after receipt of notice under (d)1 above;

3. Within 45 calendar days after the deadline for completion of the audit in (d)2 above, based on the audit and/or a review of Department records, the Department shall either:

i. Issue to the transferor a notice stating that there are no deficiencies in the operations of the nonionizing radiation producing source and that no violations exist; or

ii. Issue to the transferor a report of all deficiencies and one or more notices of prosecutions or administrative orders; and

4. The transferor corrects all deficiencies and pays all the penalties noted in (d)3 above.

(e) If the registration of a nonionizing radiation producing source continues pursuant to the procedures set forth in either (c) or (d) above, the transferee shall operate its nonionizing radiation producing source in compliance with this subchapter and all applicable provisions of this chapter.

(f) If the registration of a nonionizing radiation producing source terminates pursuant to (b) above, the transferee shall submit an initial registration form and the appropriate initial registration fee within 30 calendar days after it takes possession of the nonionizing radiation producing source or assumes a controlling interest in the owner of such a source, unless it is the intent of the transferee to dispose of the source. If the transferee operates the nonionizing radiation producing source before it submits the completed initial registration form, the transferee shall be in violation of N.J.A.C. 7:28-48.3.

7:28-48.9 Disposal of a nonionizing radiation producing source

(a) Whenever an owner disposes of a nonionizing radiation producing source, as listed in N.J.A.C. 7:28-48.3(a) and (b), the owner shall give written notification to the Department within 30 calendar days after such disposal. The owner shall provide to the Department a complete description of the final disposition of the source.

(b) The registration of a nonionizing radiation producing source shall terminate upon the disposal of the source.

7:28-48.10 Exemption from registration and payment of initial registration fee and annual renewal fee

(a) An owner of a nonionizing radiation producing source is exempt from registration and payment of initial registration and annual renewal fees if:

1. The source is not operational, and does not emit nonionizing radiation;

2. (Reserved)

3. (Reserved)

4. The source is used for display purposes only, and does not emit nonionizing radiation;

5. The source is possessed, used or stored by the United States Government; or

6. The source is a microwave oven used to cook food for customers' consumption in locations such as, but not limited to, restaurants, canteens, and other eating establishments, or a microwave oven purchased by a consumer for use in the home.

SUBCHAPTER 49. (RESERVED)

SUBCHAPTER 50. NOTICES, INSTRUCTIONS AND REPORTS TO WORKERS: INSPECTION AND INVESTIGATIONS

7:28-50.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 19, Notices, Instructions and Reports to Workers: Inspection and Investigations.

(b) The following provisions of 10 CFR Part 19 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 19.5, Communications; and

2. 10 CFR 19.8, Information collection requirements: OMB approval.

(c) The following provisions of 10 CFR Part 19 are incorporated by reference with the specified changes:

1. At 10 CFR 19.2, Scope, delete references to 10 CFR Parts 50, 60, 63, 72 and 76;

2. At 10 CFR 19.3, Definitions, "Commission" shall mean the New Jersey Department of Environmental Protection;

3. "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 19 of the Code of Federal Regulations that are incorporated by reference, mean the New Jersey Department of Environmental Protection, except when specifically noted in this subchapter;

4. 10 CFR 19.4, delete "Except as specifically authorized by the Commission in writing, no" with "No," and replace "by the General Counsel" with "signed and approved by the Commissioner of the Department,";

5. 10 CFR 19.11(a)(1), replace "Part 20" with "N.J.A.C. 7:28-6";

6. 10 CFR 19.13(b), replace "§20.2106 of 10 CFR Part 20" with "N.J.A.C. 7:28-6";

7. 10 CFR 19.13(c)(1)(i), replace "§20.2106" with "N.J.A.C. 7:28-6";

8. 10 CFR 19.13(c)(1)(i), replace "§20.1502" with "N.J.A.C. 7:28-6";

9. 10 CFR 19.13(d), replace "§§20.2202, 20.2203, 20.2204, or 20.2206 of this Chapter" with "N.J.A.C. 7:28-6";

10. 10 CFR 19.17(a), replace all references to "Executive Director for Operations" with "Chief, Bureau of Environmental Radiation of the Department";

11. 10 CFR 19.17(a) and (b), replace all references to "Administrator of the appropriate Regional Office" with "Supervisor, Radioactive Materials Section";

12. 10 CFR 19.18(b), replace "Office of the General Counsel" with "Office of the Attorney General of New Jersey";

13. 10 CFR 19.20, delete references to 10 CFR Parts 50, 60, 63, 72 and 76; and

14. 10 CFR 19.32, add "Allegations of discrimination are to be reported to the Division on Civil Rights, Department of Law and Public Safety, 140 East Front Street, P.O. Box 089, Trenton, New Jersey, 08625-089."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to

Employees" shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at: www.nj.gov/dep/rpp/rms/rmsdown.htm, or by requesting a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license from the Department and the NRC for radioactive materials shall post both the NRC's Form 3, "Notice to Employees," and the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 51. RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL

7:28-51.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 30, Rules of General Applicability to Domestic Licensing of Byproduct Material.

(b) The following provisions of 10 CFR Part 30 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 30.4, Definitions, the following definitions are not incorporated by reference: "act," "byproduct material," "curie," "decommission," "department" and "Department of Energy," "effective dose equivalent," "government agency," "license," "medical use," "person," "source material" and "special nuclear material";

2. 10 CFR 30.6, Communications;

3. 10 CFR 30.8, Information collection requirements: OMB approval;

4. 10 CFR 30.21(c), Radioactive drug: Capsules containing carbon-14 urea for "in vivo" diagnostic use for humans;

5. 10 CFR 30.34(d), (e)(1) and (e)(3), Terms and conditions of licenses;

6. 10 CFR 30.41(a)(6), Transfer of byproduct material; and

7. 10 CFR 30.55, Tritium reports.

(c) The following provisions of 10 CFR Part 30 are incorporated by reference with the specified changes:

1. 10 CFR 30.4, Definitions, "Commission" shall mean the New Jersey Department of Environmental Protection;

2. "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 30 of the Code of Federal Regulations that are incorporated by reference, mean the New Jersey Department of Environmental Protection, except when specifically noted in this subchapter;

3. 10 CFR 30.5, delete "Except as specifically authorized by the Commission in writing, no" with "No," and replace "by the General Counsel" with "signed and approved by the Commissioner of the Department,";

4. 10 CFR 30.9(b), replace all references to "Administrator of the appropriate Regional Office" with "Supervisor, Radioactive Materials Section";

5. 10 CFR 30.10(b), replace "10 CFR part 2, subpart B" with "N.J.S.A. 26:2D-13";

6. 10 CFR 30.12, replace "when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law" with "when the Department and the Commission on Radiation Protection determine that the exemption of the prime contractor or subcontractor is in accordance with N.J.A.C. 7:28-2.8";

7. 10 CFR 30.14(c), add "the Department" after "holding a specific license issued by";

8. 10 CFR 30.14(c), "Commission" shall mean the U.S. Nuclear Regulatory Commission;

9. 10 CFR 30.15(a), delete "20 and" and add "and N.J.A.C. 7:28-6" after "of this Chapter";

10. 10 CFR 30.16, delete "20 and" and add "and N.J.A.C. 7:28-6" after "of this Chapter";

11. 10 CFR 30.19(a), delete "20 and" and add "and N.J.A.C. 7:28-6" after "of this Chapter";

12. 10 CFR 30.20(a), delete "20 and" and add "and N.J.A.C. 7:28-6" after "of this Chapter";

13. 10 CFR 30.32(a), replace the first sentence with "Application for specific licenses and renewals from the State shall be filed with Department on forms available from the Department";

14. 10 CFR 30.32(e), replace all references to 10 CFR Part 170 with N.J.A.C. 7:28-64;

15. 10 CFR 30.33(a)(5), replace "Director Office of Federal and State Materials and Environmental Management Program," with "Manager, Bureau of Environmental Radiation";

16. 10 CFR 30.35(c)(5), replace "10 CFR Part 20, Appendix G" with "N.J.A.C. 7:28-6";

17. 10 CFR 30.35(c)(5), replace "10 CFR Part 20" with "N.J.A.C. 7:28-12";

18. 10 CFR 30.35(g)(3)(i), replace "10 CFR 20.1003" with "N.J.A.C. 7:28-6";

19. 10 CFR 30.35(g)(3)(iii), replace "10 CFR 20.2108" with "N.J.A.C. 7:28-6";

20. 10 CFR 30.35(g)(3)(iv), replace "10 CFR Part 20, subpart E" with "N.J.A.C. 7:28-12";

21. 10 CFR 30.35(g)(3)(iv), replace "10 CFR 20.2002" with "N.J.A.C. 7:28-6";

22. 10 CFR 30.36(j)(2), replace "10 CFR Part 20, subpart E" with "N.J.A.C. 7:28-12";

23. 10 CFR 30.36(k)(3)(i), replace "10 CFR Part 20, Subpart E" with "N.J.A.C. 7:28-12";

24. 10 CFR 30.36(k)(3)(ii), replace "10 CFR Part 20, subpart E" with "N.J.A.C. 7:28-12";

25. 10 CFR 30.37(a), replace the wording of (a) with "Application for renewal of a specific State license shall be filed with the Department on forms available from the Department";

26. 10 CFR 30.38, Change the title of the section from "Application for amendment of licenses" to "Amendment of licenses." Replace "Applications for amendment of a license shall be filed on Form NRC-313 in accordance with 30.32" with "Requests to amend a license shall be shall be submitted in letter form to the Department";

27. 10 CFR 30.50(b)(1)(ii), replace "appendix B of §§20.1001-20.2401 of 10 CFR Part 20" with "N.J.A.C. 7:28-6.1";

28. 10 CFR 30.50(b)(4)(i), replace "appendix B of §§20.1001-20.2401 of 10 CFR Part 20" with "N.J.A.C. 7:28-6.1";

29. 10 C.F.R 30.50(c)(2), replace "appropriate NRC Regional office listed in appendix D to part 20 of this Chapter" with "Department";

30. 10 CFR 30.51(d), replace "appropriate NRC Regional Office" with "Department";

31. 10 CFR 30.51(d)(1), replace "§§20.2002 (including burials authorized before January 28, 1981), 20.2003, 20.2004, 20.2005" with "N.J.A.C. 7:28-6";

32. 10 CFR 30.51(d)(2), replace "§20.2103(b)(4)" with N.J.A.C. 7:28-6";

33. 10 CFR 30.51(e)(1), replace "§§20.2002 (including burials authorized before January 28, 1981), 20.2003, 20.2004, 20.2005" with "N.J.A.C. 7:28-6";

34. 10 CFR 30.51(e)(2), replace "§20.2103(b)(4)" with N.J.A.C. 7:28-6"; and

35. 10 CFR 30, Appendix B to Part 30—Quantities of Licensed Material Requiring Labeling, end Note, replace "§20.303" with "N.J.A.C. 7:28-6."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to Employees" shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at: www.nj.gov/dep/rpp/rms/rmsdown.htm, or by requesting a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license from the Department and the NRC for radioactive materials shall post both the NRC's Form 3, "Notice to Employees" and the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 52. GENERAL DOMESTIC LICENSES FOR BYPRODUCT MATERIAL

7:28-52.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 31, General Domestic Licenses for Byproduct Material.

(b) The following provisions of 10 CFR Part 31 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR Part 31.4, Information collection requirements: OMB approval.

(c) The following provisions of 10 CFR Part 31 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 31 of the Code of Federal Regulations that are incorporated by reference, means the Department, except when specifically noted in this subchapter;

2. 10 CFR 31.2, delete "20," and add "and N.J.A.C. 7:28-6" after "of this chapter";

3. 10 CFR 31.5(c)(5), replace "§20.1402" with "N.J.A.C. 7:28-12";

4. 10 CFR 31.5(c)(9)(i), replace "20.2201, and 20.2202" with "and N.J.A.C. 7:28-6";

5. 10 CFR 31.5(c)(10), replace "§§20.2201, and 20.2202 of this chapter" with "N.J.A.C. 7:28-6";

6. 10 CFR 31.5(c)(10), delete "20," and add "and N.J.A.C. 7:28-6" after "of this chapter";

7. 10 CFR 31.5(c)(13)(ii), after "fee required by" replace "Section 170.31" with "N.J.A.C. 7:28-64";

8. 10 CFR 31.5(c)(13)(iv), the terms "NRC" and "Commission" mean the U.S. Nuclear Regulatory Commission;

9. 10 CFR 31.5(c)(14), replace "Director of Nuclear Material Safety and Safeguards, ATTN: GLTS, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001" with "Department";

10. 10 CFR 31.7(b), delete "20," and add "N.J.A.C. 7:28-6" after "of this chapter";

11. 10 CFR 31.7(b), replace "§§20.2201, and 20.2202" with "N.J.A.C. 7:28-6";

12. 10 CFR 31.8(c), delete "20," and add ", as well as N.J.A.C. 7:28-6" after the second "of this chapter";

13. 10 CFR 31.10(b)(1), replace "§20.2001" with "N.J.A.C. 7:28-6";

14. 10 CFR 31.10(b)(3), delete "20," and add "and N.J.A.C. 7:28-6,";

15. 10 CFR 31.10(b)(3), replace "§§20.2001, 20.2201, and 20.2202 of this chapter" with "N.J.A.C. 7:28-6";

16. 10 CFR 31.11(c)(5), replace "§20.2001" with "N.J.A.C. 7:28-6";

17. 10 CFR 31.11(e), add "radioactive materials" prior to "registrant";

18. 10 CFR 31.11(f), delete "20," and add "and N.J.A.C. 7:28-6" after "of this chapter"; and

19. 10 CFR 31.11(f), replace "§§20.2001, 20.2201, and 20.2202" with "N.J.A.C. 7:28-6."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to Employees," shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at www.nj.gov/dep/rpp/rms/rmsdown.htm, or by requesting a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license for radioactive materials from both the Department and the NRC shall post both the NRC's Form 3, "Notice to Employees," and the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 53. SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL

7:28-53.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 32, Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material.

(b) The following provisions of 10 CFR Part 32 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 32.8, Information collection requirements: OMB approval;

2. 10 CFR 32.11, Introduction of byproduct material in exempt concentrations into products or materials, and transfer of ownership or possession: Requirements for license;

3. 10 CFR 32.12, Same: Records and material transfer reports;

4. 10 CFR 32.14, Certain items containing byproduct material; requirements for license to apply or initially transfer;

5. 10 CFR 32.15, Same: Quality assurance, prohibition of transfer, and labeling;

6. 10 CFR 32.16, Certain items containing byproduct material: Records and reports of transfer;

7. 10 CFR 32.18, Manufacture, distribution and transfer of exempt quantities of byproduct material: Requirements for license;

8. 10 CFR 32.19, Same: Conditions of licenses;

9. 10 CFR 32.20, Same: Records and material transfer reports;

10. 10 CFR 32.21, Radioactive drug: Manufacture, preparation or transfer for commercial distribution of capsules containing carbon-14 urea each for "in vivo" diagnostic use for humans to persons exempt from licensing; Requirements for a license;

11. 10 CFR 32.21a, Same: Conditions of license;

12. 10 CFR 32.22, Self-luminous products containing tritium, krypton-85 or promethium 147: Requirements for license to manufacture, process, produce, or initially transfer;

13. 10 CFR 32.23, Same: Safety criteria;

14. 10 CFR 32.25, Conditions of licenses issued under Part 32.22: Quality control, labeling, and reports of transfer;

15. 10 CFR 32.26, Gas and aerosol detectors containing byproduct material: Requirements for license to manufacture, process, produce, or initially transfer;

16. 10 CFR 32.27, Same: Safety criteria;

17. 10 CFR 32.28, Same: Table of organ doses;

18. 10 CFR 32.29, Conditions of licenses issued under 32.26: Quality control, labeling, and reports of transfer;

19. 10 CFR 32.40, Schedule A-Prototype tests for automobile lock illuminators; and

20. 10 CFR 32.210, Registration of product information.

(c) The following provisions of 10 CFR Part 32 are incorporated by reference with the specified changes:

1. 10 CFR 32.52(a), replace "Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001," with "New Jersey Department of Environmental Protection, Radioactive Materials Section, P.O. Box 415, Trenton, New Jersey 08625-0415";

2. 10 CFR 32.56, replace "Director of Nuclear Material Safety and Safeguards," with "Department";

3. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 32 of the Code of Federal Regulations that are incorporated by reference, mean the Department, except when specifically noted in this subchapter;

4. 10 CFR 32.2, in the definition of "nationally tracked source," replace "part 20 of this Chapter" with "10 CFR part 20 as incorporated by reference in N.J.A.C. 7:28-6";

5. 10 CFR 32.51(a)(2)(ii), replace "§20.1201(a) of this chapter" with "N.J.A.C. 7:28-6";

6. 10 CFR 32.51(a)(4), replace "§20.1901 of this chapter" with "N.J.A.C. 7:28-6";

7. 10 CFR 32.51(a)(5), replace "§20.1901 of this chapter" with "N.J.A.C. 7:28-6";

8. 10 CFR 32.51(c), replace "§20.1201(a) of this chapter" with "N.J.A.C. 7:28-6";

9. 10 CFR 32.51a(a)(2), add "and" between "31.2," and "30.51";

10. 10 CFR 32.51a(a)(2), delete "20.2201, and 20.2202" and add "and N.J.A.C. 7:28-6" after "of this chapter";

11. 10 CFR 32.51a(b)(1), add "and" between "31.2" and "30.51" in both locations;

12. 10 CFR 32.51a(b)(1), delete "20.2201, and 20.2202" from both locations and add "and N.J.A.C. 7:28-6" after "of this chapter" in both locations;

13. 10 CFR 32.54(a), replace "§20.1901 of this chapter" with "N.J.A.C. 7:28-6";

14. 10 CFR 32.61(d), replace "§20.1901(a) of this chapter" with "N.J.A.C. 7:28-6";

15. 10 CFR 32.71(c)(2), replace "§20.1901(a) of this chapter" with "N.J.A.C. 7:28-6"; and

16. 10 CFR 32.71(e), replace "§20.2001" with "N.J.A.C. 7:29-6."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to Employees" shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at: www.nj.gov/dep/rpp/rms/rmsdown.htm, or by requesting a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license from the Department and the NRC for radioactive materials shall post both the NRC's Form 3, "Notice to Employees," and the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 54. SPECIFIC DOMESTIC LICENSES OF BROAD SCOPE FOR BYPRODUCT MATERIAL

7:28-54.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 33, Specific Domestic Licenses of Broad Scope for Byproduct Material.

(b) The following provisions of 10 CFR Part 33 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 33.8, Information collection requirements: OMB approval.

(c) The following provisions of 10 CFR Part 33 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 33 of the Code of Federal Regulations that are incorporated by reference, mean the Department; and

2. 10 CFR 33.12, replace with "Application for specific licenses from the State and renewals shall be filed with Department on forms available from the Department."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to Employees," shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at: www.nj.gov/dep/rpp/rms/rmsdown.htm, or by requesting a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license from the Department and the NRC for radioactive materials shall post both the NRC's Form 3, "Notice to Employees," and the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 55. MEDICAL USE OF BYPRODUCT MATERIAL

7:28-55.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 35, Medical Use of Byproduct Material.

(b) The following provisions of 10 CFR Part 35 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 35.8, Information collection requirements: OMB approval; and

2. 10 CFR 35.63(b)(2)(i).

(c) The following provisions of 10 CFR Part 35 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 35 of the Code of Federal Regulations, that are incorporated by reference, means the Department, except when specifically noted in this subchapter;

2. 10 CFR 35.1, delete "20," and add "and N.J.A.C. 7:28-6" after "of this chapter";

3. 10 CFR 35.12(b)(1), replace "Filing an original and one copy of NRC Form 313, "Application for Material License," with "Filing an original application for a specific license from the State with the Department on forms available from the Department,";

4. 10 C.F.R 35.12(c), delete the wording "amendment or";

5. 10 CFR 35.12(c)(1), delete the wording "and one copy" and "either";

6. 10 CFR 35.12(c)(1)(i), delete the wording "NRC Form 313, 'Application for Material License,'; or" and replace with "an initial application or renewal application form available from the Department";

7. 10 CFR 35.12(c)(1)(ii), delete wording "or renewal";

8. 10 CFR 35.12(d), create new wording for (d) to state "A request for an amendment must be made by submitting a letter requesting the amendment with relevant supporting documentation as required by 35.610, 35.642, 35.643, and 35.645, as applicable";

9. 10 CFR 35.12(d), change existing citation to 35.12(e);

10. 10 CFR 35.12(e), change existing citation to 35.12(f);

11. 10 CFR 35.18(a)(1), delete the wording "NRC Form 313 'Application for Material License,' and replace with "an original application for a specific license from the State";

12. 10 CFR 35.24(a), replace "§20.1101 of this chapter" with "N.J.A.C. 7:28-6";

13. 10 CFR 35.61(a), replace "10 CFR Part 20" with "N.J.A.C. 7:28-6";

14. 10 CFR 35.70(a), replace "Part 20 of this chapter" with "N.J.A.C. 7:28-6";

15. 10 CFR 35.80(a)(4), replace "Part 20 of this chapter" with "N.J.A.C. 7:28-6";

16. 10 CFR 35.310(a)(2)(i), replace "§20.1301(a)(1) of this chapter" with "N.J.A.C. 7:28-6";

17. 10 CFR 35.310(a)(2)(ii), replace "§20.1301(c) of this chapter" with "N.J.A.C. 7:28-6";

18. 10 CFR 35.410(a)(4)(i), replace "§20.1301(a)(1) of this chapter" with "N.J.A.C. 7:28-6";

19. 10 CFR 35.410(a)(4)(ii), replace "§20.1301(c) of this chapter" with "N.J.A.C. 7:28-6";

20. 10 CFR 35.652(a), replace "§20.1501 of this chapter" with "N.J.A.C. 7:28-6";

21. 10 CFR 35.3045(c), replace "NRC Operations Center" with "Department";

22. 10 CFR 35.3047(c), replace "NRC Operations Center" with "Department";

23. 10 CFR 35.3047(d), replace "appropriate NRC Regional Office listed in §30.6 of this chapter" with "Department"; and

24. 10 CFR 35.3067, replace "appropriate NRC Regional Office listed in §30.6 of this chapter" with "Department" and delete ", with a copy to the Director, Office of Nuclear Material Safety and Safeguards."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to Employees" shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at: www.nj.gov/dep/rpp/rms/rmsdown.htm, or by requesting a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license from the Department and the NRC for radioactive materials shall post both the NRC's Form 3, "Notice to Employees" and the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 56. LICENSES AND RADIATION SAFETY REQUIREMENTS FOR IRRADIATORS

7:28-56.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 36, Licenses and Radiation Safety Requirements for Irradiators.

(b) The following provisions of 10 CFR Part 36 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 36.8, Information collection requirements: OMB approval.

(c) The following provisions of 10 CFR Part 36 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 36 of the Code of Federal Regulations that are incorporated by reference, means the Department, except when specifically noted in this subchapter;

2. 10 CFR 36.1(a), delete "20," and add "N.J.A.C. 7:28-6" after "of this chapter";

3. 10 CFR 36.11, replace "Form NRC 313, 'Application for Material License,'" with "forms available from the Department," delete "and one copy," and replace "appropriate NRC Regional Office listed in appendix D to part 20 of this chapter" with "Department";

4. 10 CFR 36.17, replace "Commission" with "Department, with approval of the Commission on Radiation Protection," and replace "by law and will not endanger life or property or the common defense and security and are otherwise in the public interest" with "in accordance with the provisions of N.J.A.C. 7:28-2.8";

5. 10 CFR 36.23(g), replace "10 CFR 20.1902" in both locations with "N.J.A.C. 7:28-6";

6. 10 CFR 36.55(a), replace "10 CFR 20.1501(c)" with "N.J.A.C. 7:28-6";

7. 10 CFR 36.57(d), replace "10 CFR part 20, table 2, column 2 or table 3 of appendix B" with "as incorporated by reference in N.J.A.C. 7:28-6"; and

8. 10 CFR 36.59(c), replace "table 2, column 2, appendix B to part 20" with "as incorporated by reference in N.J.A.C. 7:28-6."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to Employees" shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at: www.nj.gov/dep/rpp/rms/rmsdown.htm, or by requesting a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license from the Department and the NRC for radioactive materials shall post both the NRC's Form 3, "Notice to Employees" and the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 57. LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING

7:28-57.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 39, Licenses and Radiation Safety Requirements for Well Logging.

(b) The following provisions of 10 CFR Part 39 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 39.8, Information collection requirements: OMB approval.

(c) The following provisions of 10 CFR Part 39 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 39 of the Code of Federal Regulations that are incorporated by reference, means the Department, except when specifically noted in this subchapter;

2. 10 CFR 39.1(a), delete "20," and add "and N.J.A.C. 7:28-6" after "of this chapter";

3. 10 CFR 39.11, replace "Form NRC 313, "Application for Material License." with "forms available from the Department" and replace "appropriate NRC Regional Office listed in appendix D of part 20 of this chapter" with "Department";

4. 10 CFR 39.15(a)(5)(iii)(B), replace "§20.1901(a)" with "N.J.A.C. 7:28-6";

5. 10 CFR 39.31(a)(1), replace "§20.1901(a)" with "N.J.A.C. 7:28-6";

6. 10 CFR 39.31(a)(2), replace "§20.1901(a)" with "N.J.A.C. 7:28-6";

7. 10 CFR 39.33(a), replace "part 20 of this chapter" with "N.J.A.C. 7:28-6";

8. 10 CFR 39.35(d)(2), replace "appropriate NRC Regional Office listed in appendix D of part 20 of this chapter" with "Department";

9. 10 CFR 39.61(a)(2)(i), delete "20," and add "and N.J.A.C. 7:28-6" after "of this chapter";

10. 10 CFR 39.61(b)(1), delete "parts 19 and 20 of this chapter" and add "part 19 of this chapter and N.J.A.C. 7:28-6";

11. 10 CFR 39.63(h), replace "§20.1906 of this chapter" with "N.J.A.C. 7:28-6";

12. 10 CFR 39.71(b), replace "§20.1003 of this chapter" with "N.J.A.C. 7:28-6";

13. 10 CFR 39.73(a), replace "19, 20, and 39" with "N.J.A.C. 7:28-6, 50 and 57";

14. 10 CFR 39.75(d), replace "§71.5" with "N.J.A.C. 7:28-61";

15. 10 CFR 39.75(e), add ", or NRC" after "Agreement State";

16. 10 CFR 39.77(a), replace "NRC Regional Office by telephone" with "Department by telephone as per N.J.A.C. 7:28-1.5";

17. 10 CFR 39.77(b), replace "§§20.2201-20.2202, §20.2203 and §30.50" with "N.J.A.C. 7:28-6 and N.J.A.C. 7:28-51"; and

18. 10 CFR 39.91, add "with the approval of the Commission on Radiation Protection," after "initiative," and replace "and will not endanger life or property or the common defense and security and are otherwise in the public interest" with "in accordance with the provisions of N.J.A.C. 7:28-2.8."

(d) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(e) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 58. DOMESTIC LICENSING OF SOURCE MATERIAL

7:28-58.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 40, Domestic Licensing of Source Material.

(b) The following provisions of 10 CFR Part 40 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 40.2a, Coverage of inactive tailings sites;

2. 10 CFR 40.4, Definitions. The following definitions in 10 CFR 40.4 are not incorporated by reference: "Commission," "decommission," and "license";

3. 10 CFR 40.5, Communications;

4. 10 CFR 40.8, Information collection requirements: OMB approval;

5. 10 CFR 40.12(b), Carriers;

6. 10 CFR 40.20(b) and (c), Types of licenses;

7. 10 CFR 40.23, General license for carriers of transient shipments of natural uranium other than in the form of ore or ore residue;

8. 10 CFR 40.26, General license for possession and storage of byproduct material as defined in this part;

9. 10 CFR 40.27, General license for custody and long-term care of residual radioactive material disposal sites;

10. 10 CFR 40.28, General license for custody and long-term care of uranium or thorium byproduct materials disposal sites;

11. 10 CFR 40.31(c), (f) through (h), (j), (k), (l), Application for specific licenses;

12. 10 CFR Part 40.32(d), (e), (g), General requirements for issuance of specific licenses;

13. 10 CFR 40.33, Issuance of a license for a uranium enrichment facility;

14. 10 CFR 40.35(f), Conditions of specific licenses issued pursuant to §40.34;

15. 10 CFR 40.38, Ineligibility of certain applicants;

16. 10 CFR 40.41(d), (e)(1), (e)(3), and (g), Terms and conditions of licenses;

17. 10 CFR 40.51(b)(6), Transfer of source or byproduct material;

18. 10 CFR 40.64, Reports;

19. 10 CFR 40.65, Effluent monitoring reporting requirements;

20. 10 CFR 40.66, Requirements for advance notice of export shipments of natural uranium;

21. 10 CFR 40.67, Requirement for advance notice for importation of natural uranium from countries that are not party to the Convention on the Physical Protection of Nuclear Material; and

22. 10 CFR 40 Appendix A, Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material from Ores Processed Primarily for Their Source Material Content.

(c) The following provisions of 10 CFR Part 40 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 40 of the Code of Federal Regulations that are incorporated by reference, means the Department, except when specifically noted in this subchapter;

2. "Registrant" as used in the provisions of Part 40 of the Code of Federal Regulations that are incorporated by reference, means a "radioactive materials registrant" except when specifically noted;

3. 10 CFR 40.6, delete "Except as specifically authorized by the Commission in writing, no" with "No," and replace "by the General Counsel" with "signed and approved by the Commissioner of the Department,";

4. 10 CFR 40.9(b), replace "Administrator of the appropriate Regional Office" with "Department";

5. 10 CFR 40.14(a), replace "Commission" with "Department, with approval of the Commission on Radiation Protection," and replace "by law and will not endanger life or property or the common defense and security and are otherwise in the public interest" with "in accordance with the provisions of N.J.A.C. 7:28-2.8";

6. 10 CFR 40.21, delete "or byproduct material";

7. 10 CFR 40.22(b), replace "parts 19, 20, and 21, of this chapter" with "part 21 of this chapter and N.J.A.C. 7:28-6 and N.J.A.C. 7:28-50";

8. 10 CFR 40.25(c)(1), replace "NRC Form 244, "Registration Certificate—Use of Depleted Uranium Under General License" with "forms available from the Department";

9. 10 CFR 40.25(c)(2), replace "Director, Division of Industrial and Medical Nuclear Safety, with a copy to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D of part 20 of this chapter" with "Department";

10. 10 CFR 40.25(d)(4), replace "Director, Division of Industrial and Medical Nuclear Safety, with a copy to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D of part 20 of this chapter" with "Department";

11. 10 CFR 40.25(e), delete "parts 19, 20, and 21, of this chapter" with "part 21 of this chapter and N.J.A.C. 7:28-6 and N.J.A.C. 7:28-50";

12. 10 CFR 40.31(a), replace "NRC Form 313, 'Application for Material License,' in accordance with the instructions in §40.5 of this chapter" with "forms available from the Department";

13. 10 CFR 40.31(e), replace "§170.31" with "N.J.A.C. 7:28-64";

14. 10 CFR 40.34(a)(2), replace "§20.1201(a)" with "N.J.A.C. 7:28-6";

15. 10 CFR 40.25(c)(1), (c)(2), and (d)(3), add "or Department equivalent" after "'Registration Certificate-Use of Depleted Uranium Under General License,'";

16. 10 CFR 40.35(d)(1) and (d)(2), add "or Department equivalent" after "'Registration Certificate-Use of Depleted Uranium Under General License,'";

17. 10 CFR 40.35(e)(1), replace "Director, Office of Nuclear Material Safety and Safeguards" with "Department";

18. 10 CFR 40.31(c), replace "regulations contained in parts 2 and 9 of this chapter" with "the Open Public Records Act (N.J.S.A. 47:1A-1 et seq.)";

19. 10 CFR 40.31(e), replace "part 170" with "Subchapter 64" and "§170.31" with "Subchapter 64";

20. 10 CFR 40.36(e)(2), replace "part 30" with "Subchapter 51";

21. 10 CFR 40.36(f)(3)(i), replace "10 CFR 20.1003" with "N.J.A.C. 7:28-6";

22. 10 CFR 40.36(f)(3)(iii), replace "10 CFR 20.2108" with "N.J.A.C. 7:28-6";

23. 10 CFR 40.36(f)(3)(iv), replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12" and replace "10 CFR 20.2002" with "N.J.A.C. 7:28-6";

24. 10 CFR 40.41(c), replace "part 71" with "N.J.A.C. 7:28-61";

25. 10 CFR 40.41(f)(1), replace "appropriate NRC Regional Administrator" with "Department";

26. 10 CFR 40.42(j)(2), replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12";

27. 10 CFR 40.42(k)(3)(i), replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12";

28. 10 CFR 40.42(k)(3)(ii), replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12";

29. 10 CFR 40.43(a), add "or Department equivalent" after "NRC Form 313";

30. 10 CFR 40.44, add "or Department equivalent" after "NRC Form 313";

31. 10 CFR 40.60(b)(1)(ii), replace "appendix B of §§20.1001-20.2401 of 10 CFR part 20" with "N.J.A.C. 7:28-6";

32. 10 CFR 40.60(b)(4)(i), replace "appendix B of §§20.1001-20.2401 of 10 CFR part 20" with "N.J.A.C. 7:28-6";

33. 10 CFR 40.60(c)(2), replace "NRC's Document Control Desk" with "Department" and replace "appropriate NRC regional office listed in appendix D to part 20 of this chapter" with "Department";

34. 10 CFR 40.61(d)(1), replace "§20.2002, (including burials authorized before January 28, 1981), 20.2003, 20.2004, 20.2005" with "N.J.A.C. 7:28-6";

35. 10 CFR 40.61(d)(2), replace "§20.2103(b)(4)" with "N.J.A.C. 7:28-6";

36. 10 CFR 40.61(e)(1), replace "§20.2002, 20.2003, 20.2004, 20.2005" with "N.J.A.C. 7:28-6"; and

37. 10 CFR 40.61(e)(2), replace "§20.2103(b)(4)" with "N.J.A.C. 7:28-6."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to Employees" shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at: www.nj.gov/dep/rpp/rms/rmsdown.htm, or by requesting a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license from the Department and the NRC for radioactive materials shall post both the NRC's Form 3, "Notice to Employees" and the

Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 59. LICENSING REQUIREMENTS FOR LAND DISPOSAL OF RADIOACTIVE WASTE

7:28-59.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 61, Licensing Requirements for Land Disposal of Radioactive Waste.

(b) The following provisions of 10 CFR Part 61 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 61.4, Communications;

2. 10 CFR 61.8, Information collection requirements: OMB approval;

3. 10 CFR 61.16, Other information; and

4. 10 CFR 61.23(i) and (j), Standards for issuance of a license.

(c) The following provisions of 10 CFR Part 61 are incorporated by reference with the specified changes:

1. "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 61 of the Code of Federal Regulations, that are incorporated by reference, means the Department, except when specifically noted in this subchapter;

2. 10 CFR 61.1(a), replace "part 20 of this chapter" with "N.J.A.C. 7:28-6";

3. 10 CFR 61.1(b), replace "part 150 of this chapter" with "N.J.A.C. 7:28-62";

4. 10 CFR 61.1(b)(2), replace "part 40 of this chapter" with "N.J.A.C. 7:28-58";

5. 10 CFR 61.1(b)(3), replace "part 20 of this chapter" with "N.J.A.C. 7:28-6";

6. 10 CFR 61.5, delete "Except as specifically authorized by the Commission in writing, no" with "No," and replace "by the General Counsel" with "signed and approved by the Commissioner of the Department,";

7. 10 CFR 61.6, replace "Commission" with "Department, with approval of the Commission on Radiation Protection," and replace "by law and will not endanger life or property or the common defense and security and are otherwise in the public interest" with "in accordance with the provisions of N.J.A.C. 7:28-2.8";

8. 10 CFR 61.7(c)(4), replace "Department" with "Department of Energy";

9. 10 CFR 61.12(k), replace "part 20 of this chapter" with "N.J.A.C. 7:28-6";

10. 10 CFR 61.13(c), replace "part 20 of this chapter" with "N.J.A.C. 7:28-6";

11. 10 CFR 61.20(c), replace "part 170 of this chapter" with "N.J.A.C. 7:28-64";

12. 10 CFR 61.23(d), replace "part 20 of this chapter" with "N.J.A.C. 7:28-6";

13. 10 CFR 61.24(k)(1), replace "NRC Regional Administrator" with "Supervisor of the Radioactive Materials Section";

14. 10 CFR 61.43, replace "part 20 of this chapter" with "N.J.A.C. 7:28-6";

15. 10 CFR 61.52(a)(6), replace "§§20.1301 and 20.1302 of this chapter" with "N.J.A.C. 7:28-6";

16. 10 CFR 61.71, 10 CFR 61.72(a), 10 CFR 61.73(a), 10 CFR 61.73(b), and 10 CFR 61.73(c), replace "Director" with "Manager of the Bureau of Environmental Radiation";

17. 10 CFR 61.80(i)(1), delete "to the Director, Office of Federal and State Materials and Environmental Management Programs," and replace "with a copy to the appropriate NRC Regional Office shown in appendix D to part 20 of this chapter" with "to the Department";

18. 10 CFR 61.80(g), replace "§§30.55, 40.64" with "N.J.A.C. 7:28-51, N.J.A.C. 7:28-58 and §§";

19. 10 CFR 61.80(j), replace "§70.52 of this chapter" with "N.J.A.C. 7:28-60";

20. 10 CFR 61.80(k), replace "§§30.41, 40.51, and 70.42 of this chapter" with "N.J.A.C. 7:28-51, 58, and 60"; and

21. 10 CFR 61.80(l)(1)(i), replace "in 10 CFR part 20, appendix G" with "as is incorporated by reference in N.J.A.C. 7:28-6."

(d) For those facilities whose radioactive materials are licensed solely by the Department, NRC Form 3, "Notice to Employees" shall mean the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation," available from the Department via the Department's website at: www.nj.gov/dep/rpp/rms/rmsdown.htm, or by re-

questing a copy by telephone during business hours at (609) 984-5462.

(e) Those facilities which possess a license from the Department and the NRC for radioactive materials shall post both the NRC's Form 3, "Notice to Employees" and the Department's Form RPP-14, "Notice to Employees, Standards for Protection Against Radiation."

(f) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(g) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 60. DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

7:28-60.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 70, Domestic Licensing of Special Nuclear Material.

(b) The following provisions of 10 CFR Part 70 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 70.1(c) through (e), Purpose;

2. 10 CFR 70.4, definition of "Commission";

3. 10 CFR 70.5, Communications;

4. 10 CFR 70.8, Information collection requirements: OMB approval;

5. 10 CFR 70.13, Department of Defense;

6. 10 CFR 70.14, Foreign military aircraft;

7. 10 CFR 70.20a, General license to possess special nuclear material for transport;

8. 10 CFR 70.20b, General license for carriers of transient shipments of formula quantities of strategic special nuclear material, special nuclear material of moderate strategic significance, special nuclear material of low strategic significance, and irradiated reactor fuel;

9. 10 CFR 70.21(a)1, (c), and (f) through (h), Filing;

10. 10 CFR 70.22(b), (c), and (f) through (n), Contents of application;

11. 10 CFR 70.23(a)(6) through (12), and (b), Requirements for the approval of applications;

12. 10 CFR 70.23a, Hearing required for uranium enrichment facility;

13. 10 CFR 70.24, Criticality accident requirements;

14. 10 CFR 70.25(a), Financial assurance and recordkeeping for decommissioning;

15. 10 CFR 70.31(c) through (e), Issuance of licenses;

16. 10 CFR 70.32(a)(1), (4) through (7), (b)(1), (3), (4), and (c) through (k), Conditions of licenses;

17. 10 CFR 70.37, Disclaimer of warranties;

18. 10 CFR 70.40, Ineligibility of certain applicants;

19. 10 CFR 70.42(b)(6), Transfer of special nuclear material;

20. 10 CFR 70.44, Creditor regulations;

21. 10 CFR 70.51(c), Records requirements;

22. 10 CFR 70.52, Reports of accidental criticality;

23. 10 CFR 70.55(c), Inspections;

24. 10 CFR 70.56(d), Tests;

25. 10 CFR 70.59, Effluent monitoring reporting requirements;

26. 10 CFR 70.60, Applicability;

27. 10 CFR 70.61, Performance requirements;

28. 10 CFR 70.62, Safety program and integrated safety analysis;

29. 10 CFR 70.64, Requirements for new facilities or new processes at existing facilities;

30. 10 CFR 70.65, Additional content of applications;

31. 10 CFR 70.66, Additional requirements for approval of license application;

32. 10 CFR 70.72, Facility changes and change process;

33. 10 CFR 70.74, Additional reporting requirements;

34. 10 CFR 70.76, Backfitting; and

35. 10 CFR 70.82, Suspension and operation in war or national emergency.

(c) The following provisions of 10 CFR Part 70 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 70 of the Code of Federal Regulations that are incorporated by reference, mean the Department;

2. 10 CFR 70.4, in definition of "person," replace "Department" with "Department of Energy";

3. 10 CFR 70.11, replace "Department" with "Department of Energy";

4. 10 CFR 70.17(a), replace "Commission" with "Department, with approval of the Commission on Radiation Protection," and replace "by law and will not endanger life or property or the common defense and security and are otherwise in the public interest" with "in compliance with N.J.A.C. 7:28-2.8";

5. 10 CFR 70.19(c), delete "20," and add "and N.J.A.C. 7:28-6";

6. 10 CFR 70.21(d), replace "regulations contained in part 2 of this chapter" with "Open Public Records Act (N.J.S.A. 47:1A-1 et seq.)";

7. 10 CFR 70.25(g)(3)(i), replace "10 CFR 20.1003" with "N.J.A.C. 7:28-6";

8. 10 CFR 70.25(g)(3)(iii), replace "10 CFR 20.2108" with "N.J.A.C. 7:28-6," replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12" and replace "10 CFR 20.2002" with "N.J.A.C. 7:28-6";

9. 10 CFR 70.25(g)(3)(iv) replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12" and replace "10 CFR 20.2002" with "N.J.A.C. 7:28-6";

10. 10 CFR 70.38(j)(2), replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12";

11. 10 CFR 70.38(k)(3)(i), replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12";

12. 10 CFR 70.38(k)(3)(ii), replace "10 CFR part 20, subpart E" with "N.J.A.C. 7:28-12";

13. 10 CFR 70.42(b)(1), replace "Department" with "Department of Energy";

14. 10 CFR 70.50(b)(1)(ii), replace "Appendix B of §§20.1001-20.2401 of 10 CFR part 20" with "N.J.A.C. 7:28-6";

15. 10 CFR 70.50(b)(4)(i), replace "appendix B of §§20.2001-20.2401 of 10 CFR part 20" with "N.J.A.C. 7:28-6";

16. 10 CFR 70.50(c)(2), delete "to the NRC's Document Control Desk," and replace "with a copy to the appropriate NRC regional office listed in appendix D to part 20 of this chapter" with "to the Department";

17. 10 CFR 70.51(a)(1), replace "10 CFR 20.2002, (including burials authorized before January 28, 1981), 20.2003, 20.2004, 20.2005" with "N.J.A.C. 7:28-6";

18. 10 CFR 70.51(a)(2), replace "10 CFR 20.2103(b)(4)" with "N.J.A.C. 7:28-6";

19. 10 CFR 70.51(b)(1), replace "10 CFR 20.2002, (including burials authorized before January 28, 1981), 20.2003, 20.2004, 20.2005" with "N.J.A.C. 7:28-6";

20. 10 CFR 70.51(b)(2), replace "10 CFR 20.2103(b)(4)" with "N.J.A.C. 7:28-6"; and

21. 10 CFR 70.56, replace "(b) facilities wherein special nuclear material is utilized, produced or stored," with "and."

(d) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(e) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 61. PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL

7:28-61.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 71, Packaging and Transportation of Radioactive Material.

(b) The following provisions of 10 CFR Part 71 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference.

1. 10 CFR 71.6, Information collection requirements: OMB approval;

2. 10 CFR 71.10, Public inspection of application;

3. 10 CFR 71.14(b), Exemptions for low-level materials;

4. 10 CFR 71.19, Previously approved package;

5. 10 CFR 71.31, Contents of application;

6. 10 CFR 71.33, Package description;

7. 10 CFR 71.35, Package evaluation;

8. 10 CFR 71.37, Quality assurance;

9. 10 CFR 71.38, Renewal of a certificate of compliance or quality assurance program approval;

10. 10 CFR 71.39, Requirement for additional information;

11. 10 CFR 71.41, Demonstration of compliance;

12. 10 CFR 71.43, General standards for all packages;

13. 10 CFR 71.45, Lifting and tie-down standards for all packages;

14. 10 CFR 71.51, Additional requirements for Type B packages;

15. 10 CFR 71.55, General requirements for fissile material packages;

16. 10 CFR 71.59, Standards for arrays of fissile material packages;

17. 10 CFR 71.61, Special requirements for Type B packages containing more than 10^5A_2;

18. 10 CFR 71.63, Special requirement for plutonium shipments;

19. 10 CFR 71.64, Special requirements for plutonium air shipments;

20. 10 CFR 71.65, Additional requirements;

21. 10 CFR 71.71, Normal conditions of transport;

22. 10 CFR 71.73, Hypothetical accident conditions;

23. 10 CFR 71.74, Accident conditions for air transport of plutonium;

24. 10 CFR 71.75, Qualification of special form radioactive material;

25. 10 CFR 71.77, Qualification of LSA-III Material;

26. 10 CFR 71.101(c)(2), (d) through (e), Quality assurance requirements;

27. 10 CFR 71.107, Package design control;

28. 10 CFR 71.109, Procurement document control;

29. 10 CFR 71.111, Instructions, procedures and drawings;

30. 10 CFR 71.113, Document control;

31. 10 CFR 71.115, Control of purchased material, equipment and services;

32. 10 CFR 71.117, Identification and control of materials, parts and components;

33. 10 CFR 71.119, Control of special processes;

34. 10 CFR 71.121, Internal inspection;

35. 10 CFR 71.123, Test control; and

36. 10 CFR 71.125, Control of measuring and test equipment.

(c) The following provisions of 10 CFR 71 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 71 of the Code of Federal Regulations that are incorporated by reference, means the Department, except at:

i. 10 CFR 71.0(a)2 and (d)1;

ii. 10 CFR 71.4, definitions for "Certificate Holder," "Certificate of Compliance(CoC)" and "Package (3) Type B Package";

iii. 10 CFR 71.85(c), Preliminary determinations;

iv. 10 CFR 71.88(a)4, Air transport of plutonium;

v. 10 CFR 71.93(c), Inspections and tests;

vi. 10 CFR 71.95(a)(1) and (a)(2);

vii. 10 CFR 71.97(c)(1), (c)(3)(iii), and (f), Advance notification of shipment of irradiated reactor fuel and nuclear waste; and

viii. 10 CFR 71.101(f), Quality assurance requirements;

2. 10 CFR 71.0(b), replace "parts of this chapter (e.g., 10 CFR parts 20, 21, 30, 40, 70 and 73)," with "State Regulations (e.g. N.J.A.C. 7:28-6, 51, 58, and 60)" and add "U.S. Nuclear Regulatory Commission (NRC)" into the list of other agencies;

3. 10 CFR 71.1(a), replace rule text with "Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent to the Department as specified in N.J.A.C. 7:28-1.5.";

4. 10 CFR 71.2, delete "Except as specifically authorized by the Commission in writing, no" with "No," and replace "by the General Counsel" with "signed and approved by the Commissioner of the Department,";

5. 10 CFR 71.5(b), replace "Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, D.C., 20555-0001" with "the Department in accordance with N.J.A.C. 7:28-1.5";

6. 10 CFR 71.7(b), replace "Administrator of the appropriate Regional Office" with "Department";

7. 10 CFR 71.9(c), replace "Commission licensee, certificate holder, applicant for a Commission license or a CoC" with "Department licensee, NRC certificate holder, applicant for a Department license or NRC CoC";

8. 10 CFR 71.9(e)(1), replace "Each licensee, certificate holder, and applicant for a license or CoC must prominently post the current revision of NRC Form 3, 'Notice to Employees,' referenced in §19.11(c) of this chapter" with "Each licensee, certificate holder, and applicant for a license or CoC must prominently post the current revision of Department Form RPP-14, 'Notice to Employees, Standards for Protection Against Radiation,' referenced in Subchapter 50";

9. 10 CFR 71.9(e)2, replace with "Copies of Department Form RPP–14 may be obtained from the Department in accordance with N.J.A.C. 7:28-1.5.";

10. 10 CFR 71.12, replace "Commission" with "Department, with approval of the Commission on Radiation Protection," and replace "by law and will not endanger life or property nor the common defense and security" with "in accordance with the provisions of N.J.A.C. 7:28-2.8";

11. 10 CFR 71.13, replace "10 CFR part 35" with "N.J.A.C. 7:28-55";

12. 10 CFR 71.47(b)(4), replace "10 CFR 20.1502" with "N.J.A.C. 7:28-6";

13. 10 CFR 71.89, replace "10 CFR 20.1906" with "N.J.A.C. 7:28-6";

14. 10 CFR 71.95(c), replace "§71.1(a)" with "N.J.A.C. 7:28-1.5" and replace "to: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards" with "to the Department";

15. 10 CFR 71.101(c)1, replace "§71.1(a)" with "N.J.A.C. 7:28-1.5" and replace "to: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards" with "to the Department"; and

16. 10 CFR 71.101(f), replace "NRC, in accordance with §71.1" with "Department, in accordance with N.J.A.C. 7:28-1.5."

(d) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(e) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 62. EXEMPTIONS AND CONTINUED NRC REGULATORY AUTHORITY IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER SECTION 274 (42 U.S.C. §2021)

7:28-62.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 150, Exemptions and Continued Regulatory Authority in Agreement States and in offshore waters under Section 274 [42 U.S.C. §2021].

(b) The following provisions of 10 CFR Part 150 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 150.3, Definition of "Commission";

2. 10 CFR 150.4, Communications;

3. 10 CFR 150.7, Persons in offshore waters not exempt;

4. 10 CFR 150.8, Information collection requirements: OMB approval;

5. 10 CFR 150.10, Persons exempt;

6. 10 CFR 150.14, Commission regulatory authority for physical protection;

7. 10 CFR 150.15, Persons not exempt;

8. 10 CFR Part 150.15a, Continued Commission authority pertaining to byproduct material;

9. 10 CFR Part 150.16, Submission to Commission of nuclear material transfer reports;

10. 10 CFR Part 150.17, Submission to Commission of source material reports;

11. 10 CFR Part 150.17a, Compliance with requirements of US/IAEA safeguards agreement;

12. 10 CFR Part 150.19, Submission to Commission of tritium reports;

13. 10 CFR Part 150.21, Transportation of special nuclear material by aircraft;

14. 10 CFR 150.31, Requirements for Agreement State regulation of byproduct material; and

15. 10 CFR 150.32, Funds for reclamation or maintenance of byproduct material.

(c) The following provisions of 10 CFR Part 150 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 150 of the Code of Federal Regulations that are incorporated by reference, mean the Department; and

2. 10 CFR 150.20(b), references to specific sections of 10 CFR part 30, refer to N.J.A.C. 7:28-51, sections of 10 CFR part 40, refer to N.J.A.C. 7:28-58, and sections of 10 CFR part 70, refer to N.J.A.C. 7:28-60. Replace "parts 19, 20, and 71" with "N.J.A.C. 7:28-6, 50, and 61", and replace "part 34" with "N.J.A.C. 7:28-63."

(d) The incorporation by reference of 10 CFR 150.20(b) shall not include the ability to issue general licenses to operate in areas of exclusive Federal jurisdiction and offshore waters, but only to Agreement State and NRC licensees that wish to operate within New Jersey's jurisdiction in accordance with N.J.A.C. 7:28-50.1(d).

(e) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(f) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 63. LICENSES FOR INDUSTRIAL RADIOGRAPHY USING SEALED SOURCES AND RADIATION SAFETY REQUIREMENTS FOR SUCH INDUSTRIAL RADIOGRAPHIC OPERATIONS

7:28-63.1 Incorporation by reference

(a) Except as set forth in (b) and (c) below, this subchapter incorporates by reference 10 CFR Part 34, Licenses for Industrial Radiography Using Sealed Sources and Radiation Safety Requirements for Such Industrial Radiographic Operations.

(b) The following provisions of 10 CFR Part 34 are not incorporated by reference. If there is a cross reference to a Federal citation specifically entirely excluded from incorporation, then the cross referenced citation is not incorporated by virtue of the cross reference:

1. 10 CFR 34.8, Information collection requirements: OMB approval.

(c) The following provisions of 10 CFR Part 34 are incorporated by reference with the specified changes:

1. "Commission," "Nuclear Regulatory Commission," "NRC," and "U.S. Nuclear Regulatory Commission," as used in the provisions of Part 34 of the Code of Federal Regulations that are incorporated by reference, mean the Department, except in 10 CFR 34.41(c), and 34.27(a) and (c)(1);

2. 10 CFR 34.1, replace "parts 19, 20, 21, 30, 71, 150, 170, and 171" with "10 CFR Part 21 and N.J.A.C. 7:28-6, 50, 51, 61, 62 and 64";

3. 10 CFR 34.11, replace "on NRC Form 313, 'Application for Material License,' in accordance with the provisions of §30.32 of this chapter," with "an original application for a specific State license";

4. 10 CFR 34.13(a), replace "§30.33 of this chapter" with "N.J.A.C. 7:28-51";

5. 10 CFR 34.25(a), replace "10 CFR part 20" with "N.J.A.C. 7:28-6";

6. 10 CFR 34.27(d), replace "Director of Nuclear Material Safety and Safeguards" with "Manager, Bureau of Environmental Radiation";

7. 10 CFR 34.27(d), replace "Administrator of the appropriate Nuclear Regulatory Commission's Regional Office listed in appendix D of 10 CFR part 20 of this chapter 'Standards for Protection Against Radiation'" with "Manager, Bureau of Environmental Radiation";

8. 10 CFR 34.33(a)(1), replace "§20.1601(a)(1) of this chapter" with "N.J.A.C. 7:28-6";

9. 10 CFR 34.35(b), replace "10 CFR part 71" with "N.J.A.C. 7:28-61";

10. 10 CFR 34.42(c)(1), replace "10 CFR part 20 of this chapter" and "10 CFR part 20" with "N.J.A.C. 7:28-6" in both instances;

11. 10 CFR 34.42(c)(4), replace "§20.2203 of this chapter" with "N.J.A.C. 7:28-6";

12. 10 CFR 34.43(a)(1), replace "Director, Office of Nuclear Material Safety and Safeguards, by an appropriate method listed in §30.6(a)" with "Manager, Bureau of Environmental Radiation, by an appropriate method listed in N.J.A.C. 7:28-51";

13. 10 CFR 34.43(b)(1), replace "in §§30.7, 30.9, and 30.10" with "N.J.A.C. 7:28-51", replace "10 CFR parts 19 and 20" with "N.J.A.C. 7:28-6 and 50", and replace "10 CFR 71" with "N.J.A.C. 7:28-61";

14. 10 CFR 34.43(c)(1), replace "in §§30.7, 30.9, and 30.10" with "N.J.A.C. 7:28-51", replace "10 CFR parts 19 and 20" with "N.J.A.C. 7:28-6 and 50", and replace "10 CFR part 71" with "N.J.A.C. 7:28-61";

15. 10 CFR 34.45(a)(1), replace "10 CFR part 20" with "N.J.A.C. 7:28-6";

16. 10 CFR 34.51, replace "10 CFR part 20" with "N.J.A.C. 7:28-6";

17. 10 CFR 34.53, replace "§20.1902" with "N.J.A.C. 7:28-6" and replace "§20.1903" with "N.J.A.C. 7:28-6";

18. 10 CFR 34.89(b)(2), replace "19, 20," with "and N.J.A.C. 7:28-6, 50, and 63";

19. 10 CFR 34.89(b)(11), replace "§71.5" with "N.J.A.C. 7:28-61";

20. 10 CFR 34.89(b)(12), and replace "§150.20" with "N.J.A.C. 7:28-62";

21. 10 CFR 34.101(a), replace "§30.50 and under other sections of this chapter, such as §21.21, each licensee shall send a written report to the NRC's Office of Nuclear Material Safety and Safeguards, Division of Industrial and Medical Nuclear Safety, by an appropriate method listed in §30.6(a) of this chapter" with "N.J.A.C. 7:28-51 and under other sections of this subchapter or Federal rule such as 10

CFR §21.21, each licensee shall send a written report to the Manager, Bureau of Environmental Radiation, by an appropriate method listed in N.J.A.C. 7:28-51";

22. 10 CFR 34.101(b), replace "10 CFR 20.2203" with "N.J.A.C. 7:28-6";

23. 10 CFR 34.101(c), replace "appropriate NRC regional office listed in §30.6(a)(2) of this chapter" with "Department"; and

24. 10 CFR 34.111, replace "Commission" with "Department, with approval of the Commission on Radiation Protection," and replace "by law and will not endanger life or property or the common defense and security and are otherwise in the public interest" with "in accordance with the provisions of N.J.A.C. 7:28-2.8."

(d) Reports that are to be submitted to the Department pursuant to this subchapter shall be submitted to the address at N.J.A.C. 7:28-1.5.

(e) Requests for adjudicatory hearings shall be made in accordance with N.J.A.C. 7:28-4.17, and requirements governing requests for stay of the effective date of the Department decision for which an adjudicatory hearing is requested are set forth at N.J.A.C. 7:28-4.18.

SUBCHAPTER 64. RADIOACTIVE MATERIALS LICENSE FEES

7:28-64.1 Purpose and applicability

(a) This subchapter establishes fees for registration and licensing of radioactive materials. Annual license fees for radioactive materials are set forth in Tables 1 and 2 at N.J.A.C. 7:28-64.2.

(b) Fees will be effective on September 30, 2009.

(c) Fees for NRC licenses that are transferred to New Jersey will be prorated to July 2010, when the Department will again issue invoices for annual fees.

Administrative change.
See: 41 N.J.R. 3798(c).

7:28-64.2 Schedule of fees

(a) Except as set forth in (b) and (c) below, this section incorporates by reference the table in 10 CFR 171.16 entitled "Schedule of materials annual fees and fees for government agencies licensed by NRC."

(b) The Department does not regulate nuclear reactors, special nuclear materials in quantities sufficient to form a critical mass, high-level waste disposal facilities, or byproduct material defined in Section 11e(2) of the Atomic Energy Act of 1954, as amended (42 U.S.C. §2014).

(c) Insofar as the incorporated rules refer to the facilities and/or materials in (b) above, they do not apply. The following provisions of the table identified in (a) above are incorporated by reference with the specified changes:

1. Delete column 2, labeled "Annual fees";

2. Delete row labeled 2.A.(5);

3. Row labeled 3.A, replace "parts 30 and 33 of this chapter" with "N.J.A.C. 7:28-51 and 54";

4. Row labeled 3.C., replace "§§32.72 and/or 32.74 of this chapter" with "N.J.A.C. 7:28-53";

5. Row labeled 3.C., delete "This category does not apply to licenses issued to nonprofit educational institutions whose processing or manufacturing is exempt under 171.11(a)(1). The licenses are covered by fee under Category 3.D.";

6. Row labeled 3.J., replace "Subpart B of part 32 of this chapter" with "N.J.A.C. 7:28-53," and replace "part 31 of this chapter" with "N.J.A.C. 7:28-52";

7. Row labeled 3.K, replace "Subpart B of part 32 of this chapter" with "N.J.A.C. 7:28-53," and replace "part 31 of this chapter" with "N.J.A.C. 7:28-52";

8. Row labeled 3.L., replace "parts 30 and 33 of this chapter" with "N.J.A.C. 7:28-51 and 54";

9. Row labeled 3.M., replace "part 30 of this chapter" with "N.J.A.C. 7:28-51";

10. Row labeled 3.O., replace "part 40 of this chapter" with "N.J.A.C. 7:28-58";

11. Row labeled 3.R., replace "10 CFR 31.12" with "N.J.A.C. 7:28-52";

12. Row labeled 3.R.2., replace "10 CFR 31.12(a)(4), or (5)" with "N.J.A.C. 7:28-52";

13. Row labeled 7.A., replace "parts 30, 35, 40, and 70 of this chapter" with "N.J.A.C. 7:28-51, 55, 58, and 60";

14. Row labeled 7.B., replace "parts 30, 33, 35, 40, and 70" with "N.J.A.C. 7:28-51, 54, 55, 58, and 60";

15. Row labeled 7.C., replace "parts 30, 35, 40, and 70 of this chapter" with "N.J.A.C. 7:28-51, 55, 58, and 60"; and

16. Row labeled 14.A., replace "parts 30, 40, 70, 72, and 76 of this chapter" with "N.J.A.C. 7:28-51, 58, and 60."

(d) Fees for source, byproduct, and certain special nuclear materials are established in Table 1, Schedule of Source, Special Nuclear, and Byproduct Material Annual Fees, and are matched to the NRC categories, incorporated by reference in (a) and (b) above.

(e) Other specified fees, including fees for diffuse NARM, are established in Table 2, Schedule of Radioactive Materials Annual Fees.

(f) If, by amendment or otherwise, a license changes to another fee category, the fee for the new category will take effect on the anniversary date of the license.

(g) The fee for any category for which a fee is not provided at Table 1 below shall be calculated in accordance with N.J.A.C. 7:28-64.3(d) and 64.4(d).

Table 1
Schedule of Source, Special Nuclear, and Byproduct Material Annual Fees

FEE CATEGORY	LICENSE TYPE	ANNUAL FEE ($)
1.	Special Nuclear Material	
A.-B.	(Reserved.)	
C.	Licenses for possession and use of special nuclear material in sealed sources contained in devices used in industrial measuring systems, including x-ray fluorescence analyzers	1,700
D.	All other special nuclear material except a) licenses authorizing special nuclear material in unsealed form in combination that would constitute a critical quantity, as defined in N.J.A.C. 7:28-62; b) U-235 or plutonium for fuel fabrication activities; c) spent fuel and reactor-related greater than Class C (GTCC) waste at an independent spent fuel storage installation (ISFSI); d) special nuclear material in sealed sources contained in devices used in industrial measuring systems, including x-ray fluorescence analyzers; or e) licenses or certificates for the operation of a uranium enrichment facility.	4,360
E.	(Reserved.)	
2.	Source Material	
A.	(Reserved.)	
B.	Licenses that authorize only the possession, use and/or installation of source material for shielding.	585
C.	All other source material licenses	10,020
3.	Byproduct material	
A.	Licenses of broad scope for possession and use of byproduct material issued under N.J.A.C. 7:28-51 and 54 for processing or manufacturing of items containing byproduct material for commercial distribution.	22,030
B.	Other licenses for possession and use of byproduct material issued under N.J.A.C. 7:28-51 for processing or manufacturing of items containing byproduct material for commercial distribution. This category also includes licenses for repair, assembly, and disassembly of products containing radium-226.	6,350
C.	Licenses issued under N.J.A.C. 7:28-53 authorizing the processing or manufacturing and distribution or redistribution of radiopharmaceuticals, generators, reagent kits and/or sources and devices containing byproduct material. This category also includes the possession and use of source material for shielding authorized under N.J.A.C. 7:28-58 when included on the same license.	9,025
D.	(Reserved.)	
E.	Licenses for possession and use of byproduct material in sealed sources for irradiation of materials in which the source is not removed from its shield (self-shielded units).	3,060
F.	Licenses for possession and use of less than	5,965

FEE CATEGORY	LICENSE TYPE	ANNUAL FEE ($)
	10,000 curies of by-product material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes. This category also includes underwater irradiators for irradiation of materials in which the source is not exposed for irradiation purposes.	
G.	Licenses for possession and use of 10,000 curies or more of byproduct material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes. This category also includes underwater irradiators for irradiation of materials in which the source is not exposed for irradiation purposes.	23,560
H.	Licenses issued under N.J.A.C. 7:28-53 (Subpart A of 10 CFR 32) to distribute items containing byproduct material that require device review to persons exempt from the licensing requirements of N.J.A.C. 7:28-51 (10 CFR 30), except specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of N.J.A.C. 7:28-51.	9,445
I.	Licenses issued under N.J.A.C. 7:28-53 (Subpart A of 10 CFR 32) to distribute items containing byproduct material or quantities of byproduct material that do not require device evaluation to persons exempt from the licensing requirements of N.J.A.C. 7:28-51, except for specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of N.J.A.C. 7:28-51.	8,905
J.	Licenses issued under N.J.A.C. 7:28-53 to distribute items containing byproduct material that require sealed source and/or device review to persons generally licensed under N.J.A.C. 7:28-52, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under N.J.A.C. 7:28-52.	1,835
K.	Licenses issued under N.J.A.C. 7:28-53 to distribute items containing byproduct material or quantities of byproduct material that do not require sealed source and/or device review to persons generally licensed under N.J.A.C. 7:28-52, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under N.J.A.C. 7:28-52.	1,375
L.	Licenses of broad scope for possession and use of byproduct material issued under N.J.A.C. 7:28-51 and 54 for research and development that do not authorize commercial distribution.	11,220
M.	Other licenses for possession and use of byproduct material issued under N.J.A.C. 7:28-51 for research and development that do not authorize commercial distribution.	4,285
N.	Licenses that authorize services for other licensees, except: Licenses that authorize only calibration and/or leak testing services are subject to the fees specified in fee Category 3.P.	6,350

FEE CATEGORY	LICENSE TYPE	ANNUAL FEE ($)
O.	Licenses for possession and use of byproduct material issued under N.J.A.C. 7:28-63 for industrial radiography operations. This category also includes the possession and use of source material for shielding authorized under N.J.A.C. 7:28-58 when authorized on the same license.	10,785
P.	All other specific byproduct material licenses, except those in Categories 4.A through 9.D.	2,065
Q.	(Reserved.)	
R.	Possession of items or products containing radium–226 identified in N.J.A.C. 7:28-52 which exceed the number of items or limits specified in that section. (Persons who possess radium sources that are used for operational purposes in another fee category are not also subject to the fees in this category. This exception does not apply if the radium sources are possessed for storage only.)	
1.	Possession of quantities exceeding the number of items or limits in N.J.A.C. 7:28-52, but less than or equal to 10 times the number of items or limits specified.	1,605
2.	Possession of quantities exceeding 10 times the number of items or limits specified in N.J.A.C. 7:28-52.	2,065
S.	Licenses for production of accelerator-produced radionuclides.	8,260
4.	Waste Processing	
A.	(Reserved.)	
B.	Licenses specifically authorizing the receipt of waste byproduct material, source material, or special nuclear material from other persons for the purpose of packaging or repackaging the material. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.	9,190
C.	Licenses specifically authorizing the receipt of prepackaged waste byproduct material, source material, or special nuclear material from other persons. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.	7,315
5.	Well Logging	
A.	Licenses for possession and use of byproduct material, source material, and/or special nuclear material for well logging, well surveys, and tracer studies other than field flooding tracer studies.	3,290
B.	(Reserved.)	
6.	Nuclear Laundry	
A.	(Reserved.)	
7.	Medical	
A.	Licenses issued under N.J.A.C. 7:28-51, 55, 58 and 60 for human use of byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices. This category also includes the possession and use of source material for shielding when authorized on the same license.	10,325
B.	Licenses of broad scope issued to medical institutions or two or more physicians under N.J.A.C. 7:28-51, 55, 58 and 60 authorizing research and development, including human use of byproduct material except licenses for byproduct material, source material, or special nuclear material	22,045

FEE CATEGORY	LICENSE TYPE	ANNUAL FEE ($)
	in sealed sources contained in teletherapy devices. This category also includes the possession and use of source material for shielding when authorized on the same license. Separate fees will not be assessed for pacemaker licenses issued to medical institutions who also hold nuclear medicine licenses under Category 7.B. or 7.C.	
C.	Other licenses issued under N.J.A.C. 7:28-51, 55, 58 and 60 for human use of byproduct material, source material, and/or special nuclear material except licenses for byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices. This category also includes the possession and use of source material for shielding when authorized on the same license. Separate fees will not be assessed for pacemaker licenses issued to medical institutions who also hold nuclear medicine licenses under Category 7.B. or 7.C.	3,670
8.	Civil Defense	
A.	Licenses for possession and use of byproduct material, source material, or special nuclear material for civil defense activities.	1,650
9.-13.	(Reserved.)	
14.	Decommissioning/ Reclamation	
A.	Byproduct, source, or special nuclear material licenses and other approvals authorizing decommissioning, decontamination, reclamation, or site restoration activities under N.J.A.C. 7:28-51, 58 and 60.	Full Cost
B.	Site-specific decommissioning activities associated with unlicensed sites, whether or not the sites have been previously licensed.	Full Cost
15.	(Reserved.)	
16.	Reciprocity	
	Reciprocal recognition of an out-of-state license for a period of less than 180 days.	50 percent of annual fee of applicable category
17.-18.	(Reserved.)	

Table 2
Schedule of Radioactive Materials Annual Fees

FEE CATEGORY	LICENSE TYPE	ANNUAL FEE ($)
1.	Water Treatment Facilities as defined in N.J.A.C. 7:10-3.6	
A.	Very Small Community Water Systems	$305
B.	Small Community Water Systems	$890
C.	Medium Community Water Systems	$1,275
D.	Large Community Water Systems	$2,550
E.	Non-Transient Non-Community Water Systems treating equal to or less than 1,000 gallons per day	$205
F.	Non-Transient Non-Community Water Systems treating more than 1,000 gallons per day	$510
2.	Amendments	
A.	Request to amend a license requiring no license review including, but not limited to, facility name change or removal of a previously authorized user.	$0
B.	Request to amend a license requiring review including, but not limited to, addition of isotopes, procedure changes, new authorized users, or a new radiation safety officer.	$200

FEE CATEGORY	LICENSE TYPE	ANNUAL FEE ($)
C.	Request to amend a license requiring review and a site visit, but not limited to, facility move or addition of a process.	$400
3.	Inspections	
A.	Routine	$0
B.	Non-routine Reinspection	Full Cost
C.	Pre-licensing	$400
D.	Reciprocity	$400
E.	Inspection as a result of an incident	Full Cost
4.	Additional Use Sites (Non-contiguous)	
A.	Non-profit educational institutions	25 percent of appropriate fee
B.	Medical Private Practices	50 percent of appropriate fee
5.	Generally Licensed Devices	$360
6.	Diffuse NARM License	$2,550

Administrative correction and change.
See: 42 N.J.R. 2127(a).

7:28-64.3 Application fee

(a) An initial application for a license shall be accompanied by payment in the full amount of the fee specified in Tables 1 and 2 at N.J.A.C. 7:28-64.2.

(b) The Department may not process the application prior to the receipt of the required fee. The application fee is not refundable except in those cases where the Department determines that a license is not required.

(c) A license covering more than one of the categories in Tables 1 and 2 at N.J.A.C. 7:28-64.2 shall be accompanied by the prescribed fee for each category applicable to the license.

(d) The application fee for a category of NRC license that is not included in Table 1 at N.J.A.C. 7:28-64.2 shall be calculated as follows: NJ Fee = 0.75 (NRC Annual fee + 0.1 NRC application fee). NRC fees are established in 10 CFR Parts 170 and 171. The Department incorporates by reference the fee provisions of 10 CFR Parts 170 and 171, for purposes of calculating fees pursuant to this subsection.

7:28-64.4 Annual fee

(a) The annual fee is not refundable except in those cases where the Department determines that the fee is not required.

(b) Fees are payable 30 days after the date of the invoice.

(c) A license covering more than one of the categories in Tables 1 and 2 at N.J.A.C. 7:28-64.2 shall be invoiced for the prescribed fee for each category applicable to the license.

(d) The annual fee for a category of NRC license that is not included in Tables 1 and 2 at N.J.A.C. 7:28-64.2 shall be calculated as follows: NJ Fee = 0.75 (NRC Annual fee + 0.1 NRC application fee). NRC fees are established in 10 CFR Part 170 and 171. The Department incorporates by reference the fee provisions of 10 CFR Parts 170 and 171, for purposes of calculating fees pursuant to this subsection.

(e) No refund of a fee will be provided if a license is terminated.

7:28-64.5 Inspections

(a) The Department shall make periodic inspections of licensees.

(b) If the Department finds a violation that could have implications regarding worker or public dose limits at N.J.A.C. 7:28-6 during an inspection, the licensee must pay all Department costs associated with subsequent reinspection of the licensee. The costs shall be the actual costs incurred by the Department and include, but not limited to, labor, transportation, per diem, materials, legal fees, and monitoring costs.

7:28-64.6 Reciprocity fees

(a) A licensee submitting an application for reciprocal recognition of a materials license issued by another Agreement State or the NRC for a period of 180 days or less during a calendar year must pay one-half of the fee specified under Tables 1 and 2 at N.J.A.C. 7:28-64.2.

(b) The Department will not process the application for reciprocity prior to the receipt of the required fee.

7:28-64.7 Fees for licensees with additional use sites

(a) The Department will consider sites that are not contiguous or adjacent as additional use sites for non-profit educational institutions provided that:

1. The sites are operated by the same person;

2. The sites are in the same license category or categories;

3. The applicant for a license provides for one radiation safety officer, and if applicable, one radiation safety committee, as responsible for all sites; and

4. The Department is reasonably satisfied from the information provided in the application that the applicant will adequately control radioactive material at all sites listed in the application.

(b) Each additional use site as defined (a) above shall be charged 25 percent of the applicable fee for each applicable category.

(c) The Department will consider sites that are not contiguous or adjacent as additional use sites for private medical practices, provided that:

1. The sites are operated by the same person;

2. The sites are in the same license category or categories;

3. The applicant for a license provides for one radiation safety officer, and if applicable, one radiation safety committee, as responsible for all sites;

4. The Department is reasonably satisfied from the information provided in the application that the applicant will adequately control radioactive material at all sites listed in the application; and

5. There shall be no more than three additional use sites per license.

(d) Each additional use site as defined (c) above shall be charged 50 percent of the applicable fee for each applicable category.

7:28-64.8 Fees for license amendments

A letter requesting an amendment to a specific license shall be accompanied by payment in full of the fee specified in Table 2 at N.J.A.C. 7:28-64.2.

7:28-64.9 Failure to pay prescribed fees

(a) The Department will not process any application unless the licensee pays, on or before the due date, the fee prescribed by this subchapter.

(b) If the Department finds that a licensee has not paid a renewal fee prescribed by this section by the due date, the Department will take the appropriate enforcement action.

7:28-64.10 Annual adjustment of fees

(a) Each year the annual fees in Tables 1 and 2 in N.J.A.C. 7:28-64.2 will be adjusted by the previous 12-month inflation factor. The inflation factor is calculated from the Consumer Price Index, all urban consumers, U.S. city average (CPI-U), published monthly by the U.S. Department of Labor, Bureau of Labor Statistics. The CPI-U for purposes of calculating the inflation factor shall be the CPI-U for the 12-month period ending May 31.

(b) The inflation factor shall be the past year percent change for the United States city average, all items, all urban consumers.

(c) If the inflation factor for a 12-month period is negative, the fees will remain unchanged from the previous year.

(d) The adjusted fees shall be reflected through a notice of administrative change, published in the New Jersey Register; however, the adjusted fees shall be effective on July 1, whether or not a notice of administrative change has been published.