

December 9, 2008

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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 a 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.

(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 regulations 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 regulations 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 regulations in this chapter. However, nothing in this chapter shall be construed as limiting actions that may be necessary to protect health and safety.

7:28-1.2. Construction

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

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 duplicated at NJAC 7:28-6. Words and terms applicable to a specific subchapter only, will be found in that subchapter.

1. General Terms:

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“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.

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“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.

“Year” means the period of time beginning in January used to determine compliance with the provisions of this part. The licensee may change the starting date of the year used to determine compliance by the licensee provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

2. Ionizing radiation terms:

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

“Bioassay” (radiobioassay) means the determination of kinds, quantities or concentrations, and, in some cases, the locations of radioactive material in the human body, whether by direct measurement (in vivo counting) or by analysis and evaluation of materials excreted or removed from the human body.

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“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.

“Dosimetry processor” means an individual or organization that processes and evaluates individual monitoring equipment in order to determine the radiation dose delivered to the equipment.

"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.

"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.

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"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:

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"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

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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).

$$\text{SAR} = \frac{dW}{dt \, dm} \quad \frac{dW}{dt \, \rho \, dV}$$

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".

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 a week

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

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

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(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.

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.

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.

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.

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.

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.

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.

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 *N.J.A.C. 7:28-4.3(b)*;

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

Element (nuclide)	Column 1 Gas concentration (uCi/ml)	Column 2 Liq. & solid Concentration (uCi/ml) ***[*]
Argon (Ar-37)	1 x 10<-3>	--
Arsenic (As-73)	--	5 x 10<-3>
(As-74)	--	5 x 10<-4>
Barium (Ba-131)	--	2 x 10<-3>
Beryllium (Be-7)	--	2 x 10<-2>
Bismuth (Bi-206)	--	4 x 10<-4>
(Bi-207) *	--	2 x 10<-4>
Cadmium (Cd-109)	--	2 x 10<-3>
Chromium (Cr-51)	--	2 x 10<-2>
Cobalt (Co-56) *	--	1.2 x 10<-4>
(Co-57)	--	5 x 10<-3>
(Co-58)	--	1 x 10<-3>
Dysprosium (Dy-159) *	--	4 x 10<-3>
Fluorine (F-18)	2 x 10<-6>	8 x 10<-3>
Gallium (Ga-67) *	--	2 x 10<-3>
Germanium (Ge-68) *	--	1.2 x 10<-3>
(Ge-71)	--	2 x 10<-2>
Gold (Au-196)	--	2 x 10<-3>
(Au-199)	--	2 x 10<-3>
Indium (In-111) *	--	1.2 x 10<-3>
(In-113m)	--	1 x 10<-2>
Iodine (I-123) *	4 x 10<-7>	2 x 10<-3>
(I-124) *	8 x 10<-9>	4 x 10<-5>
Iridium (Ir-190)	--	2 x 10<-3>
(Ir-192)	--	4 x 10<-4>
Iron (Fe-55)	--	8 x 10<-3>
Krypton (Kr-85m)	1 x 10<-6>	--
Lead (Pb-201) *	--	2 x 10<-3>
(Pb-203)	--	4 x 10<-3>
(Pb-210) *	--	2 x 10<-7>
Manganese (Mn-52)	--	3 x 10<-4>
(Mn-54)	--	1 x 10<-3>
Mercury (Hg-197m)	--	2 x 10<-3>
(Hg-197)	--	3 x 10<-3>
Neptunium (Np-237) *	--	4 x 10<-7>
Palladium (Pd-103)	--	3 x 10<-3>
Platinum (Pt-191)	--	1 x 10<-3>
(Pt-193m)	--	1 x 10<-2>

(Pt-197m)	--	1 x 10<-2>
Radium (Ra-226) *	--	1.2 x 10<-6>
(Ra-228)	--	4 x 10<-11>
Rhenium (Re-183)	--	6 x 10<-3>
Rubidium (Rb-81) *	--	1 x 10<-2>
(Rb-83) *	--	1.8 x 10<-4>
(Rb-84) *	--	1.4 x 10<-4>
Ruthenium (Ru-97)	--	4 x 10<-4>
Samarium (Sm-153)	--	8 x 10<-4>
Scandium (Sc-48)	--	3 x 10<-4>
Silver (Ag-105)	--	1 x 10<-3>
(Ag-111)	--	4 x 10<-4>
Sodium (Na-22) *	--	1.2 x 10<-4>
Tantalum (Ta-179) *	--	6 x 10<-3>
Technetium (Tc-96)	--	1 x 10<-3>
Thallium (Tl-200)	--	4 x 10<-3>
(Tl-201)	--	3 x 10<-3>
(Tl-202)	--	1 x 10<-3>
** Thorium (Th-228) *	--	4 x 10<-6>
(Th-230) *	--	2 x 10<-6>
(Th-232) *	--	6 x 10<-7>
(Th-234) *	--	1 x 10<-4>
Thulium (Tm-170)	--	5 x 10<-4>
Tungsten (Wolfram)	--	4 x 10<-3>
(W-181)		
** Uranium (U-234) *	--	6 x 10<-6>
(U-235) *	--	6 x 10<-6>
(U-238) *	--	6 x 10<-6>
Vanadium (V-48)	--	3 x 10<-4>
Yttrium (Y-88) *	--	2 x 10<-4>
(Y-92)	--	6 x 10<-4>
Zinc (Zn-69m)	--	7 x 10<-4>
Any other beta/gamma emitter with half-life <3 years	1 x 10<-10>	1 x 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:

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.

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.

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 N.J.A.C. 7:28-4.5(a) and (c) 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 N.J.A.C. 7:28-4.5(a):

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.

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 ten 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 hereunder;
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.

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*.

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.

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 {*ref to Subchapter 8 will be removed*}, 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.

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.

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.

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.

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.

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, [State] licensees shall make available for inspection by the Department records kept pursuant to this chapter.

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.

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 and the Appendices as referenced in 10 CFR 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."

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.

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. 1:1-1 et seq. 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.

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.

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.

(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, 42 U.S.C. §2014, as amended. 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 56 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 NJAC 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 NJAC 7:28-4.18.

SUBCHAPTER 12. REMEDIATION STANDARDS FOR RADIOACTIVE MATERIALS

7:28-12.1 Purpose and scope

The purpose of this subchapter is to establish minimum standards for the remediation of real property contaminated by radioactive materials. This subchapter also provides direction on remediating a site contaminated with radioactive materials with regard to sampling, surveying, and laboratory requirements, remedial action selection, and remedial action requirements.

7:28-12.2 Applicability

(a) The standards and/or dose criteria in this subchapter are applicable to:

1. Remediation of radioactive contamination of real property by any technologically enhanced naturally occurring radioactive materials, source, by-product, certain special nuclear material, and diffuse NARM; and

2. Any other remediation of radioactive contamination including, without limitation, any remediation pursuant to: the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq.; the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.; the Industrial Site Recovery Act, N.J.S.A. 13:1K-6 et seq.; the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.; the Comprehensive Regulated Medical Waste Management Act, N.J.S.A. 13:1E-48.1 et seq.; the Major Hazardous Waste Facilities Siting Act, N.J.S.A. 13:1E-49 et seq.; the Sanitary Landfill Facility Closure and Contingency Fund Act, N.J.S.A. 13:1E-100 et seq.; the Regional Low Level Radioactive Waste Disposal Facility Siting Act, N.J.S.A. 13:1E-177 et seq.; any law or regulation by which the State may compel a person or licensee to perform remediation activities; or N.J.A.C. 7:26C.

(b) The standards in this subchapter are not applicable to:

1. Materials containing naturally occurring radionuclides whose concentrations have not been technologically enhanced; or

2. Coal ash that has been or is being used in:

i. The manufacture of construction materials including, but not limited to, cinder blocks, concrete products and roofing materials;

ii. Road construction materials including, but not limited to, asphalt filler or road base material; or

iii. Landfill cover.

(c) The Department shall apply the radiation remediation standards and dose criteria in this chapter at applicable sites as "Applicable or Relevant and Appropriate Requirements" as defined in the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq.

7:28-12.3 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings, unless the context clearly indicates otherwise:

"Appropriate period of time" means the length of time determined by the Department, taking into consideration the radioactive half-life, total activity, concentration, and physical condition of the residual radioactivity, geologic stability of the area, and current and projected future demographics.

"Committed dose equivalent" means the total dose equivalent averaged throughout any body tissue in the 50 years after intake of a radionuclide into the body.

"Committed effective dose equivalent" means the sum of the products of the committed dose equivalents to individual tissues resulting from an intake of a radionuclide multiplied by the appropriate weighting factor (W[T]) indicated below:

Organ or Tissue	W[T]
Gonads	0.25
Breast	0.15

Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone Surfaces	0.03
Remainder	0.30*
Whole Body (external)	1.00

*0.30 results from 0.06 for each of five "remainder" organs (excluding the skin and the lens of the eye) that receive the highest doses.

"Contaminated site" means a site as defined pursuant to the Technical Requirements for Site Remediation rules at N.J.A.C. 7:26E-1.8.

"Deep-dose equivalent" means, applied to external whole-body exposure, the dose equivalent at a tissue depth of one centimeter.

"Derived concentration guideline level" means the radionuclide-specific activity concentration corresponding to the release criterion.

"Design features" means those features of a remediation that do not rely on additional expenditures after installation to achieve their intended purpose.

"Dose equivalent" means the product of the absorbed dose (D), the quality factor (Q), and other modifying factors (N). For purposes of this definition, $N = 1$.

"Engineering controls" means any physical mechanism to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls under this subchapter may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, radon remediation systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.

"Final status survey" is a survey or analysis, performed after remediation, which provides data that demonstrates that all radiological parameters satisfy the remediation standards.

"Institutional controls" means a mechanism used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site in levels or concentrations above the applicable remediation standard that would allow unrestricted use of that property. Institutional controls under this subchapter may include, without limitation, structure, land and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

"Intake dose" means the annual radiation dose to a person from all potential intake pathways (exclusive of radon inhalation), including the ingestion of water, direct ingestion of soil, intake of foods, and the inhalation of resuspended particulate matter (in committed effective dose equivalent).

"Limited restricted-use remedial action" means any remedial action that requires the continued use of institutional controls but does not require the use of an engineering control.

"Natural background radionuclide concentration" means the average value of a particular radionuclide concentration in soils measured in areas in the vicinity of the site, in an area that has not been influenced by localized human activities, including the site's prior or current operations.

"Quality factor" means the factor by which absorbed doses are multiplied to obtain a quantity that expresses the effectiveness of the absorbed dose on a common scale for all types of ionizing radiation.

"Radioactive contamination or radioactive contaminant" means the collective amount of radiation emitted from one or more radionuclides in the soil and in/on building materials and/or equipment at concentrations above natural background levels.

"Radioactive materials" means any material, solid, liquid, or gas, that emits radiation spontaneously.

"Radionuclide" means a type of atom that spontaneously undergoes radioactive decay.

"Regional natural background variation" means the best Department estimate, based on available data, of a region's naturally experienced variation in radiation dose from mean levels that are commonly and consistently experienced by persons in the State.

"Remedial action" means those actions taken at a site, or offsite if a radioactive contaminant has migrated or is migrating there from a radioactively contaminated site as may be required by the Department, including, without limitation, removal, treatment, containment, transportation, securing, or other engineering or treatment measures, whether to an unrestricted use or otherwise, designed to ensure that any discharged radioactive contaminant at the site, or that has migrated or is migrating from the site, is remediated in compliance with the applicable remediation standards in this subchapter.

"Remediation" or "remediate" means all necessary actions to investigate and cleanup or respond to any known, suspected, or threatened discharge of radioactive contaminants, including, as necessary, the preliminary assessment, site investigation, remedial investigation, and remedial action.

"Remediation standards" means the combination of numeric standards that establish a level or concentration, and narrative standards, to which radioactive contaminants must be treated, removed or otherwise cleaned for soil, ground water or surface water, as established by the Department pursuant to N.J.S.A. 58:10B-12 and this chapter, in order to meet the health risk or environmental standards.

"Residual radioactivity" means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's or person responsible for the remediation's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee or person responsible for the remediation, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance

with the provisions of US NRC regulations at Title 10 CFR Part 20 or the provisions of N.J.A.C. 7:28-12.15.

"Restricted use remedial action" means any remedial action that requires the continued use of engineering and institutional controls in order to meet the established health risk or environmental standards.

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

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

"Uncontaminated surface soil" means soil whose average natural background radionuclide total concentrations are less than the remediation standards for radionuclides, and cannot exceed the background established for the site by more than two standard deviations.

"Unrestricted use remedial action" means any remedial action that does not require the continued use of engineering or institutional controls in order to meet the established standards.

"Vertical extent" means the average depth, measured in feet, of the post-remediation radioactive contamination over an affected area.

7:28-12.4 General requirements

(a) Any person or licensee conducting remediation pursuant to this subchapter shall comply with the requirements of N.J.A.C. 7:26E, Technical Requirements for Site Remediation, excluding those sections related to sampling, surveying, and background investigations. Sampling, surveying and laboratory requirements shall be in accordance with N.J.A.C. 7:28-12.5.

(b) The Department shall require a licensee to provide a decommissioning plan that addresses historical site assessment, scoping, characterization, remedial action options and selection, and a final status survey report when, based on the types, quantities, and half-lives of the licensed material, such elements of the decommissioning plan are appropriate.

(c) Compliance with this subchapter shall not relieve any person or licensee from complying with more stringent cleanup standards or provisions imposed by any other applicable statute, rule or regulation.

(d) Upon Departmental approval of the remedial action workplan or similar plan, the Department may not subsequently require a change to that workplan or similar plan in order to compel a different remediation standard due to the fact that the established remediation standards have changed; however, the Department may compel a different remediation standard if the difference between the new remediation standard and the remediation standard approved by the Department in the workplan or similar plan differs by an order of magnitude.

7:28-12.5 Sampling, surveying and laboratory requirements

(a) Facilities licensed under 10 CFR Part 50 that have Nuclear Regulatory Commission-approved quality assurance plans are exempt from the requirements of this section. Otherwise, in addition to the requirements in N.J.A.C. 7:26E Appendix A IV.1, persons responsible for conducting remediations or licensees shall include the following in the radionuclide analysis reports:

1. Report final results as a value plus or minus the associated error for each sample;
2. Report data as calculated, and not report "less than" values for any sample;
3. Report minimum detectable activities;
4. Calculate results for single sample and composites to the sample collection period mid point;
5. Provide a quantitation report; and
6. Provide copies of the instrument run logs.

(b) If available, persons responsible for conducting remediations or licensees shall provide:

1. The Gamma Spectroscopy Report which includes sample specific header information, peak search, peak identification, background subtraction, activity, and minimum detectable activity;
2. The Gross Beta calculation worksheets and computer generated result forms;
3. Radiochemical Iodine calculation worksheets and computer generated result forms;
4. Liquid Scintillation calculation worksheets and computer-generated result forms; and
5. Gross Alpha and Gross Beta, radium-226, uranium, and strontium-89 and 90 calculation worksheets and computer-generated result forms.

(c) Any laboratory providing radiological analysis for soil or water shall be certified pursuant to N.J.A.C. 7:18.

(d) Sampling and surveying for radioactive contamination shall be done in accordance with the protocol specified in that version of the Department of Environmental Protection's Field Sampling Procedure Manual's section on Radiological Assessment, incorporated herein by reference, in effect at the time of sampling and surveying 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>.

7:28-12.6 Remedial action selection

Remedial action selection for all sites contaminated with radioactive material shall be in accordance with N.J.A.C. 7:26E-5.

7:28-12.7 Remedial action requirements

The remedial action requirements for all sites contaminated with radioactive material shall be in accordance with N.J.A.C. 7:26E-6, with the exception of *N.J.A.C. 7:26E-6.4*, Post-remedial action requirements. Post-remedial sampling shall be conducted in accordance with the guidance provided in that version of the Department of Environmental Protection's Field Sampling Procedure Manual's section on Radiological Assessment, in effect at the time of the post-remedial sampling.

7:28-12.8 Radiation dose standards applicable to remediation of radioactive contamination of all real property

(a) Sites shall be remediated so that the incremental radiation dose to any person from any residual radioactive contamination at the site above that due to natural background radionuclide concentration, under either an unrestricted use remedial action, limited restricted use remedial action, or a restricted use remedial action, shall be as specified below:

1. For the sum of annual external gamma radiation dose (in effective dose equivalent) and intake dose (in committed effective dose equivalent), including the groundwater pathway: 15 millirem (0.15 milliSievert) total annual effective dose equivalent (15 mrem/yr TEDE).

2. For radon-222: three picocuries per liter (pCi/L) of radon gas (111 Bq/m³).

(b) Radioactively contaminated ground water shall be remediated to comply with the New Jersey Groundwater Quality Standards rules, N.J.A.C. 7:9C.

(c) Radioactively contaminated surface water shall be remediated to comply with the New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B-1.14(c)6.

7:28-12.9 Minimum remediation standards for TENORM and source material contamination

(a) For radioactive contamination, the requirements of N.J.A.C. 7:28-12.8 shall be considered to be met for a specific radionuclide if:

1. Where only one radionuclide adds to the radioactive contamination of the site, the incremental concentration of the radionuclide above the natural background radionuclide concentration does not exceed the value in Table 1A, 1B (for unrestricted use), 2A, 2B (for limited restricted use), 3A, or 3B (for restricted use) below;

Table 1A Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils;

Radionuclide	Unrestricted Use Standards for Radioactive Contamination (pCi/g) ⁽¹⁾								
	Feet of Vertical Extent of Residual Radionuclides (VE)								
	VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238 ⁽²⁾	54	35	26	20	17	14	12	11	10
U234 ⁽²⁾	62	37	26	21	17	14	12	11	10
Ra226 ⁽³⁾	3	2	2	2	2	2	2	2	2
U235 ⁽²⁾	29	22	17	14	12	10	9	8	7
Ac227	3	2	2	2	2	2	2	2	2
Th232	2	2	2	2	2	2	1	1	1

Table 1B Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils;

Unrestricted Use Standards for Radioactive Contamination (Bq/g)⁽¹⁾

Feet of Vertical Extent of Residual Radionuclides (VE)

Radionuclide	VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238 ⁽²⁾	2.02	1.29	0.94	0.75	0.62	0.53	0.46	0.41	0.36
U234 ⁽²⁾	2.29	1.36	0.98	0.76	0.62	0.53	0.46	0.41	0.36
Ra226 ⁽³⁾	0.10	0.08	0.08	0.08	0.07	0.07	0.07	0.06	0.06
U235 ⁽²⁾	1.07	0.08	0.63	0.52	0.44	0.38	0.34	0.30	0.27
Ac227	0.09	0.08	0.08	0.08	0.08	0.08	0.08	0.07	0.07
Th232	0.08	0.07	0.07	0.06	0.06	0.06	0.06	0.05	1

Table 2A Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils;

Limited Restricted Use Standards for Radioactive Contamination (pCi/g)⁽¹⁾

Feet of Vertical Extent of Residual Radionuclides (VE)

Radionuclide	VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238 ⁽²⁾	64	41	30	24	20	17	15	13	12
U234 ⁽²⁾	69	42	30	24	19	16	14	13	11
Ra226 ⁽³⁾	5	4	3	3	2	2	2	2	2
U235 ⁽²⁾	37	27	22	18	15	13	11	10	9
Ac227	5	5	5	5	5	5	5	4	4
Th232	3	3	3	3	3	3	3	3	3

Table 2B Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils;

Limited Restricted Use Standards for Radioactive Contamination (Bq/g)⁽¹⁾

Feet of Vertical Extent of Residual Radionuclides (VE)

Radionuclide	VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238 ⁽²⁾	2.37	1.52	1.12	0.88	0.73	0.62	0.54	0.48	0.43
U234 ⁽²⁾	2.56	1.56	1.12	0.88	0.72	0.61	0.53	0.47	0.42
Ra226 ⁽³⁾	0.19	0.13	0.11	0.10	0.19	0.19	0.08	0.08	0.08
U235 ⁽²⁾	1.38	1.01	0.80	0.65	0.55	0.48	0.42	0.38	0.34
Ac227	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Th232	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.10	0.10

Table 3A Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils;
Restricted Use Standards for Radioactive Contamination (pCi/g) (1)

Feet of Uncontaminated		Feet of Vertical Extent of Residual Radionuclides (VE)								
Surface Soil		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238(2)	USS 1	82	46	32	24	20	17	15	13	12
	USS 2	83	46	32	25	20	17	15	13	12
	USS 3	83	46	33	25	20	17	15	13	12
	USS 4	83	47	33	25	20	18	15	13	12
	USS 5	85	47	33	25	21	16	14	13	12
U234(2)	USS 1	81	45	31	24	19	16	14	13	11
	USS 2	81	45	31	24	20	17	14	13	11
	USS 3	81	46	32	24	20	17	14	13	11
	USS 4	81	46	32	24	20	17	15	13	11
	USS 5	83	46	32	25	20	17	15	13	12
Ra226(3)	USS 1	7	4	3	3	2	2	2	2	2
	USS 2	7	4	3	3	2	2	2	2	2
	USS 3	7	4	3	3	2	2	2	2	2
	USS 4	7	4	3	3	2	2	2	2	2
	USS 5	7	4	3	3	2	2	2	2	2
U235(2)	USS 1	62	35	25	19	16	13	11	10	9
	USS 2	67	37	25	20	16	13	12	10	9
	USS 3	67	37	26	20	16	14	12	11	10
	USS 4	67	37	26	20	16	14	12	11	10
	USS 5	68	37	26	20	17	14	13	11	10
Ac227	USS 1	17	9	6	5	5	5	5	4	4
	USS 2	17	10	7	7	6	5	5	5	5
	USS 3	17	10	10	8	6	6	6	6	6
	USS 4	17	15	10	8	8	8	8	8	8
	USS 5	17	15	10	10	10	10	10	10	10
Th232	USS 1	13	9	7	5	4	2	3	3	3
	USS 2	13	10	7	5	4	3	3	3	3
	USS 3	13	10	7	5	4	4	4	4	4
	USS 4	13	10	7	5	5	5	5	5	5
	USS 5	13	10	7	6	6	6	6	6	6

Table 3B Allowed Incremental Derived Concentration
Restricted Use Standards for Radioactive Contamination Bq/g(1)

Feet of Uncontaminated		Feet of Vertical Extent of Residual (VE)								
Surface Soil (USS)		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238(2)	USS 1	3.03	1.70	1.18	0.90	0.74	0.63	0.54	0.48	0.43
	USS 2	3.08	1.71	1.18	0.92	0.75	0.63	0.55	0.48	0.43
	USS 3	3.09	1.71	1.21	0.92	0.75	0.63	0.55	0.49	0.44
	USS 4	3.09	1.74	1.21	0.92	0.75	0.64	0.56	0.49	0.44
	USS 5	3.14	1.74	1.21	0.93	0.77	0.65	0.56	0.50	0.44
U234(2)	USS 1	2.98	1.66	1.15	0.88	0.72	0.61	0.53	0.47	0.42
	USS2	2.98	1.66	1.15	0.89	0.73	0.61	0.53	0.47	0.42
	USS3	2.98	1.66	1.17	0.90	0.73	0.62	0.54	0.47	0.42
	USS 4	2.98	1.70	1.18	0.90	0.74	0.62	0.54	0.47	0.42

Ra226(1)	USS 5	3.05	1.70	1.18	0.91	0.74	0.63	0.54	0.48	0.43
	USS 1	0.28	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08
	USS 2	0.28	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08
	USS 3	0.28	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08
	USS 4	0.28	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08
U235(2)	USS 5	0.28	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08
	USS 1	2.30	1.30	0.91	0.70	0.59	0.49	0.42	0.38	0.34
	USS 2	2.47	1.36	0.94	0.73	0.59	0.49	0.43	0.39	0.35
	USS 3	2.48	1.36	0.95	0.73	0.59	0.50	0.44	0.40	0.36
	USS4	2.49	1.38	0.95	0.73	0.60	0.52	0.45	0.41	0.37
Ac227	USS 5	2.51	1.38	0.95	0.74	0.62	0.53	0.47	0.42	0.37
	USS 1	0.62	0.34	0.24	0.18	0.18	0.18	0.17	0.17	0.17
	USS 2	0.63	0.36	0.24	0.24	0.23	0.20	0.19	0.19	0.19
	USS 3	0.63	0.36	0.36	0.29	0.23	0.23	0.23	0.23	0.23
	USS 4	0.63	0.54	0.37	0.29	0.28	0.28	0.28	0.28	0.28
Th232	USS 5	0.63	0.54	0.37	0.36	0.36	0.36	0.36	0.36	0.36
	USS 1	0.48	0.35	0.25	0.19	0.15	0.13	0.11	0.10	0.10
	USS2	0.48	0.39	0.26	0.19	0.15	0.13	0.12	0.12	0.12
	USS3	0.48	0.39	0.26	0.19	0.15	0.14	0.14	0.14	0.14
	USS4	0.48	0.39	0.26	0.19	0.17	0.17	0.17	0.17	0.17
USS 5	0.48	0.39	0.26	0.22	0.22	0.22	0.22	0.22	0.22	

(1) The allowed Incremental Concentrations are added to the natural background radionuclide concentration to obtain the absolute value of the allowed radionuclide concentration following site remediation.

(2) These allowable concentrations may however, further be limited by the chemical toxicity of uranium. Applicants should inquire with NJDEP's Site Remediation Program for the additional applicable chemical cleanup standards for uranium.

(3) When more than one nuclide is present, use the Radium-226 Table in Appendix A, incorporated herein by reference, for applying the sum of the fractions rule. Then use whatever number is more restrictive for radium-226, the value in Tables 1A through 3B or the value derived by using the sum of the fractions rule.

2. Where more than one radionuclide contaminant is present at the site, their concentrations meet the sum of the fractions as described below:

$$\text{Sum of fractions rule} \quad \frac{CA[i]}{C[i]} < 1$$

where:

CA[i] = the incremental concentration of radionuclide i at the site, and

C[i] = the incremental allowed concentration of radionuclide i from Table 1A, 1B, 2A, 2B, 3A, or 3B above, if it were the only remaining radionuclide at the site; and

3. Natural background radionuclide concentration shall be established by the methods presented in the Multi Agency Radiation Survey and Site Investigation Manual (MARSSIM), NUREG-1575, EPA 402 R-97-018, and any subsequent revisions thereto, or as discussed in Chapter 12 of the Department's Field Sampling Procedures Manual.

(b) As an alternate, the requirements of *N.J.A.C. 7:28-12.8* shall be considered to be met for a specific radionuclide if: 1. Where only one radionuclide adds to the radioactive contamination of the site, the incremental concentration of the radionuclide above the natural background radionuclide concentration and the amount of

uncontaminated surface soil meet the pre-mixing values in Table 4A, 4B (for unrestricted use), 5A, or 5B (for limited restricted use) below;

Table 4A Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils; Required Depth of USS; Pre-Mixing Values - Unrestricted Use (pCi/g) ⁽¹⁾

Feet of Uncontaminated		Feet of Vertical Extent of Residual Radionuclides (VE)								
Surface Soil		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238 ⁽²⁾	USS 1	70*	39	27	21	17	14	12	11	10
	USS 2	76	40	28	21	17	14	13	11	10
	USS 3	76	41	28	22	17	15	13	11	10
	USS 4	77	42	28	22	18	15	13	11	10
	USS 5	78	42	28	22	18	15	13	12	10
U234 ⁽²⁾	USS 1	74	40	27	21	17	14	12	11	10
	USS 2	74	40	27	21	17	14	13	11	10
	USS 3	74	40	28	21	17	15	13	11	10
	USS 4	76	42	28	22	18	15	13	11	10
	USS 5	78	42	28	22	18	15	13	11	10
Ra226 ⁽³⁾	USS 1	5*	3*	3	3	2	2	2	2	2
	USS 2	7	4	3	3	2	2	2	2	2
	USS 3	7	4	3	3	2	2	2	2	2
	USS 4	7	4	3	3	2	2	2	2	2
	USS 5	7	4	3	3	2	2	2	2	2
U235 ⁽²⁾	USS 1	43*	26*	19*	15	13	11	9	8	7
	USS 2	51*	29*	21	15*	13	11	9	8	8
	USS 3	58*	31*	21	16	13	11	10	9	8
	USS 4	62*	31*	21	16	13	11	10	9	8
	USS 5	62*	32*	21	16	14	12	10	9	8
Ac227	USS 1	5*	3*	3	2	2	2	2	2	2
	USS 2	6*	4	3	3	3	3	3	3	3
	USS 3	8	5	4*	3*	4	3	3*	3*	3*
	USS 4	11*	6*	5*	4*	3*	3*	3*	3*	3*
	USS 5	13*	8*	5*	5*	4*	4*	4*	3*	3*
Th232	USS 1	4*	3*	2*	2	2	2	1	1	1
	USS 2	6*	4*	3	3	2	2	2	2	2
	USS 3	8*	5	4	2*	2	2	2	2	2
	USS 4	10*	6	3*	2*	2	2	2	2	2
	USS 5	11	5*	3*	3	3	2*	2*	2*	2*

Table 4B Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils;
 Required Depth of USS; Pre-Mixing Values - Unrestricted Use (Bq/g) ⁽¹⁾

Feet of Uncontaminated		Feet of Vertical Extent of Residual Radionuclides (VE)								
Surface Soil		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238 ⁽²⁾	USS 1	2.06*	1.46	1.00	0.77	0.64	0.53	0.46	0.41	0.36
	USS 2	2.80	1.49	1.03	0.79	0.64	0.54	0.46	0.41	0.37
	USS 3	2.81	1.51	1.05	0.80	0.64	0.54	0.47	0.42	0.37
	USS 4	2.86	1.54	1.05	0.80	0.65	0.55	0.48	0.42	0.38
	USS 5	2.88	1.54	1.05	0.81	0.66	0.56	0.49	0.43	0.38
U234 ⁽²⁾	USS 1	2.75	1.46	1.00	0.76	0.62	0.53	0.46	0.41	0.36
	USS 2	2.75	1.47	1.01	0.78	0.64	0.53	0.46	0.41	0.37
	USS 3	2.75	1.48	1.04	0.80	0.64	0.54	0.47	0.41	0.37
	USS 4	2.80	1.54	1.05	0.80	0.65	0.55	0.47	0.41	0.37
	USS 5	2.88	1.54	1.05	0.81	0.64	0.55	0.47	0.42	0.37
Ra226 ⁽³⁾	USS 1	0.18*	0.11*	0.11	0.10	0.09	0.08	0.07	0.06	0.06
	USS 2	0.28	0.13	0.11	0.10	0.19	0.08	0.07	0.07	0.07
	USS 3	0.28	0.13	0.11	0.10	0.09	0.09	0.09	0.08	0.08
	USS 4	0.28	0.13	0.11	0.10	0.09	0.09	0.09	0.08	0.08
	USS 5	0.28	0.13	0.11	0.10	0.09	0.09	0.09	0.08	0.08
U235 ⁽²⁾	USS 1	1.59*	0.96*	0.70*	0.57	0.47	0.39	0.34	0.30	0.27
	USS 2	1.89*	1.07*	0.78*	0.55*	0.47	0.39	0.34	0.31	0.28
	USS 3	2.15*	1.15*	0.78	0.59	0.47	0.40	0.35	0.32	0.29
	USS 4	2.30*	1.15*	0.79	0.59	0.48	0.41	0.37	0.33	0.30
	USS 5	2.30*	1.17	0.79	0.59	0.50	0.43	0.38	0.34	0.31
Ac227	USS 1	0.18*	0.10*	0.10	0.08	0.08	0.08	0.08	0.07	0.07
	USS 2	0.21*	0.14	0.11	0.11	0.11*	0.10	0.09	0.09	0.09
	USS 3	0.28	0.18	0.14*	0.11*	0.13	0.13	0.09*	0.09*	0.09*
	USS 4	0.41*	0.22*	0.18*	0.14*	0.11*	0.11*	0.09*	0.09*	0.09*
	USS 5	0.48*	0.30*	0.18*	0.18*	0.14*	0.14*	0.14*	0.11*	0.11*
Th232	USS 1	0.15*	0.11*	0.09*	0.09	0.07	0.06	0.06	0.05	0.05
	USS 2	0.22*	0.15*	0.13	0.10	0.08	0.07	0.06	0.06	0.06
	USS 3	0.30*	0.20	0.14	0.08*	0.08	0.07	0.07	0.07	0.07
	USS 4	0.37*	0.21	0.11*	0.08*	0.09	0.09	0.09	0.09	0.09
	USS 5	0.42	0.20*	0.11*	0.11	0.11	0.09*	0.09*	0.09*	0.09*

Table 5A Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils;
 Required Depth of USS; Pre-Mixing Values – Limited Restricted Use (pCi/g) ⁽¹⁾

Feet of Uncontaminated		Feet of Vertical Extent of Residual Radionuclides (VE)								
Surface Soil		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238 ⁽²⁾	USS 1	82	45*	32	24	20	17	15	13	12
	USS 2	83	46	32	25	20	17	15	13	12
	USS 3	83	46	33	25	20	17	15	13	12
	USS 4	83	47	33	25	20	17	15	13	12
	USS 5	85	47	33	25	21	18	15	13	12
U234 ⁽²⁾	USS 1	81	45	31	24	19	16	14	13	11
	USS 2	81	45	31	24	20	17	14	13	11
	USS 3	81	45	32	24	20	17	14	13	11
	USS 4	81	46	32	24	20	17	15	13	11
	USS 5	83	46	32	25	20	17	15	13	11*
Ra226 ⁽³⁾	USS 1	7	4	3	3	2	2	2	2	2
	USS 2	7	4	3	3	2	2	2	2	2
	USS 3	7	4	3	3	2	2	2	2	2
	USS 4	7	4	3	3	2	2	2	2	2
	USS 5	7	4	3	3	2	2	2	2	2
U235 ⁽²⁾	USS 1	62	32*	24*	19	16	13	11	10	9
	USS 2	67	37	25	20	16	13	12	10	9
	USS 3	67	37	26	20	16	14	12	11	10
	USS 4	67	37	26	20	16	14	12	11	10
	USS 5	68	37	26	20	17	14	13	11	10
Ac227	USS 1	9*	7*	6	5	5	5	5	4	4
	USS 2	14*	10	7	7	6	5	5	5	5
	USS 3	18	10	10	8	6	6	6	6	6
	USS 4	18	15	10	8	8	7*	7*	7*	7*
	USS 5	26	15	10	10	9*	8*	8*	7*	7*
Th232	USS 1	7*	5*	5*	4*	4	3	3	3	3
	USS 2	10*	7*	6*	5	4	3	3	3	3
	USS 3	14*	8*	7	5	4	4	4	4	4
	USS 4	17*	10	7	5	5	5	5	5	5
	USS 5	20*	10	7	6	6	6	6	5*	5*

**Table 5B Allowed Incremental Derived Concentration Guideline Level of Individual Radionuclides in Soils;
Required Depth of USS; Pre-Mixing Values – Limited Restricted Use (Bq/g) ⁽¹⁾**

Feet of Uncontaminated		Feet of Vertical Extent of Residual Radionuclides (VE)								
Surface Soil		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
U238 ⁽²⁾	USS 1	3.03	1.67	1.18	0.90	0.74	0.63	0.54	0.48	0.43
	USS 2	3.08	1.71	1.18	0.92	0.75	0.63	0.55	0.48	0.43
	USS 3	3.09	1.71	1.21	0.92	0.75	0.63	0.55	0.49	0.44
	USS 4	3.09	1.74	1.21	0.92	0.75	0.64	0.56	0.49	0.44
	USS 5	3.14	1.74	1.21	0.93	0.77	0.65	0.56	0.50	0.44
U234 ⁽²⁾	USS 1	2.98	1.66	1.15	0.88	0.72	0.61	0.53	0.47	0.42
	USS 2	2.98	1.66	1.15	0.89	0.73	0.61	0.53	0.47	0.42
	USS 3	2.98	1.66	1.17	0.90	0.73	0.62	0.54	0.47	0.42
	USS 4	2.98	1.70	1.18	0.90	0.74	0.62	0.54	0.47	0.42
	USS 5	3.05	1.70	1.18	0.91	0.74	0.63	0.54	0.48	0.43
Ra226 ⁽³⁾	USS 1	0.28	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08
	USS 2	0.28	0.13	0.11	0.10	0.09	0.09	0.08	0.08	0.08
	USS 3	0.28	0.13	0.11	0.10	0.09	0.09	0.09	0.08	0.08
	USS 4	0.28	0.13	0.11	0.10	0.09	0.09	0.09	0.08	0.08
	USS 5	0.28	0.13	0.11	0.10	0.09	0.09	0.09	0.08	0.08
U235 ⁽²⁾	USS 1	2.30	1.18*	0.89*	0.70	0.59	0.49	0.42	0.38	0.34
	USS 2	2.47	1.36	0.94	0.73	0.59	0.49	0.43	0.39	0.35
	USS 3	2.48	1.36	0.95	0.73	0.59	0.50	0.44	0.40	0.36
	USS 4	2.49	1.38	0.95	0.73	0.60	0.52	0.45	0.41	0.37
	USS 5	2.51	1.38	0.95	0.74	0.62	0.53	0.47	0.42	0.37
Ac227	USS 1	0.33	0.26*	0.24	0.18	0.18	0.18	0.17	0.17	0.17
	USS 2	0.52*	0.36	0.24	0.24	0.23	0.20	0.19	0.19	0.19
	USS 3	0.66	0.36	0.36	0.29	0.23	0.23	0.23	0.23	0.23
	USS 4	0.66	0.54	0.37	0.29	0.28	0.26*	0.26*	0.26*	0.26*
	USS 5	0.97	0.54	0.37	0.36	0.33*	0.28*	0.28*	0.26*	0.26*
Th232	USS 1	0.26*	0.18*	0.18*	0.15*	0.15	0.13	0.11	0.10	0.10
	USS 2	0.37*	0.26*	0.22*	0.19	0.15	0.13	0.12	0.12	0.12
	USS 3	0.52	0.30	0.26	0.19	0.15	0.14	0.14	0.14	0.14
	USS 4	0.63*	0.39	0.26	0.19	0.17	0.17	0.17	0.17	0.17
	USS 5	0.74*	0.39	0.26	0.22	0.22	0.22	0.22	0.17	0.17

(1) The allowed Incremental Concentrations are added to the natural background radionuclide concentration to obtain the absolute value of the allowed radionuclide concentration before mixing.

(2) These allowable concentrations may however, further be limited by the chemical toxicity of uranium. Applicants should inquire with NJDEP's Site Remediation Program for the additional applicable chemical cleanup standards for uranium.

(3) When more than one nuclide is present, use the Radium-226 Table in Appendix B, incorporated herein by reference, for applying the sum of the fractions rule. Then use whatever number is more restrictive for radium-226, the value in Tables 4A through 5B or the value derived by using the sum of the fractions rule.

*Values were back-calculated to ensure 15 mrem/yr TEDE after mixing.

2. After it is established that the concentrations in Table 4A, 4B, 5A, or 5B above are met, the layer of residual radionuclides shall be mixed thoroughly with the layer of uncontaminated surface soil to achieve a uniform concentration, as outlined in Chapter 12 of the Department's Field Sampling Procedures Manual, throughout the soil column;

3. Where more than one radionuclide contaminant is present at the site, their concentrations meet the sum of the fractions as described below:

$$\text{Sum of } \frac{CA[i]}{C[i]} \leq 1$$

where:

CA[i] = the incremental concentration of radionuclide i at the site, and
C[i] = the incremental allowed concentration of radionuclide i from Table 4A, 4B, 5A, or 5B above, if it were the only remaining radionuclide at the site; and

4. The requirements in (a)3 above shall be met.

7:28-12.10 Minimum remediation standards for accelerator-produced, by-product, and certain special nuclear materials

(a) Remediation standards shall meet the requirements at N.J.A.C. 7:28-12.8.

(b) Computer models acceptable to the Department shall be used to determine the remediation standards.

(c) Modeling parameters used in developing unrestricted and restricted use standards shall be equivalent to those used in the NJDEP's model, RaSoRS, as supplemented or amended, and incorporated herein by reference, which is available on the Radiation Protection Program's website at <http://www.state.nj.us/dep/rpp/index.htm>.

(d) Dose calculations shall be performed out to the time of peak dose or 1000 years, whichever is longer.

(e) Restricted use remediation standards shall meet requirements at N.J.A.C. 7:28-12.11(e) and 12.12.

7:28-12.11 Petition for alternative remediation standards for radioactive contamination

(a) In lieu of using the minimum remediation standards for radioactive contamination found at N.J.A.C. 7:28-12.9 or developed under N.J.A.C. 7:28-12.10, a person or licensee may petition the Department for an alternative remediation standard for radioactive contamination. Such an alternate remediation standard:

1. Shall not result in incremental doses, for sum of annual external radiation dose and intake dose, exceeding 15 mrem/yr (0.15 mSv/yr) total effective dose equivalent;

2. Shall not result in incremental concentrations exceeding three pCi/L (111 Bq/m³) of radon in indoor air in the lowest level of the building; and

3. Shall not result in radionuclide in groundwater levels exceeding those in the New Jersey Groundwater Quality Standards in N.J.A.C. 7:9-6.

4. Shall not result in radionuclide in surface water levels exceeding those in the New Jersey Surface Quality Standards in N.J.A.C. 7:9B-1.14(c)6.

(b) The Department shall not consider a petition for an alternative remediation standard for radionuclides that is supported by increasing, in any manner, the allowed incremental dose criterion of 15 mrem/yr (0.15 mSv/yr) or the allowed incremental radon in air concentration of three pCi/L (111 Bq/m³), or varying the parameters listed in Tables 6 or 7 below.

Table 6

Parameter	Unrestricted	Limited or Restricted
Indoor onsite breathing rate(m ³ /hr)	0.63	1.4
Outdoor onsite breathing rate(m ³ /hr)	1.40	1.4
Soil ingestion rate (g/yr)	70	12.5
Homegrown crop ingestion rate(g/yr)	17,136	0
Drinking water consumption rate(l/yr)	700	700
Shielding factor throughbasement or slab	0.20	0.20
Shielding factorthrough wall	0.80	0.80
Shielding factor outside	1.00	1.00

Table 7 Soil to Vegetation Transfer Factors

Element	pCi/g plant (wet) to pCi/g soil (dry)
Th	1E-3
Ra	4E-2
Pb	1E-2
Po	1E-3
U	2.5E-3
Ac	2.5E-3
Pa	1E-2
Bi	1E-1

(c) The Department shall consider petitions only in cases where site-specific or waste specific factors, and/or site design features are used in performing the dose assessment, which are different than those used by the Department in establishing the remediation standards in N.J.A.C. 7:28-12.9 or 12.10. Factors which the Department shall consider in a petition for an alternate remediation standard include, but are not limited to:

1. The chemical or physical state of the radioactive material;
2. Site-specific soil characteristics, depth to groundwater and other geological and hydrogeological characteristics which may substantially change the potential dose from radionuclides, as compared to the values listed in Tables 8 and 9 below.

Table 8 Generic Site Input Parameters for Groundwater Pathway Analysis

Dimensions of contaminated zone, LxW (m)	100 x 100
Percolation rate (vertical Darcy velocity, m/yr)	0.5
Volumetric water content in contaminated zone (m ³ /m ³)	0.35
Volumetric water content in unsaturated zone (m ³ /m ³)	0.2
Bulk density of contaminated zone (g/m ³)	1.6
Bulk density of saturated zone (g/m ³)	1.6

Unsaturated zone thickness (distance from bottom of source to aquifer, m)	0.5
Porosity of aquifer	0.45
Longitudinal dispersivity in aquifer (m)	9
Transverse dispersivity in aquifer (m)	4
Pore velocity in aquifer (m/yr)	4
Well screen thickness (mixing depth, m)	10

Table 9 Sorption Coefficients used for Groundwater Pathway Analysis

Isotopes	Kd (mg/L)
uranium	35
thorium	3,200
radium	500
lead	270
proactinium	550
actinium	450

3. Use of caps, covers, sealants, geotextile membranes, limits on the vertical extent of radioactive contamination remaining on site and/or other engineering or institutional controls that reduce potential exposures to radioactive materials; and

4. Changes in indoor and outdoor occupancy times, which are justified by land uses other than residential or commercial.

(d) A petition for an alternate remediation standard shall include an analysis demonstrating how and why the difference in factors such as those in Tables 8 and 9 above and/or indoor and outdoor occupancy times will result in substantially different remediation standards than those in N.J.A.C. 7:28-12.9.

(e) Regardless of the factors used by the petitioner or licensee, the Department shall not approve alternative standard petitions that include institutional and engineering controls where failure of those controls, not including the failure of a radon remediation system, would result in more than 100 mrem (one mSv) total annual effective dose equivalent.

(f) In the event the Department determines that sufficient evidence exists to support consideration of an alternative remediation standard, the petitioner or licensee shall submit a written analysis which demonstrates compliance with the dose limits in N.J.A.C. 7:28-12.9 or 12.10 including:

1. The remedial action informational requirements of N.J.A.C. 7:26E-6; and
2. A dose assessment analysis, including:
 - i. An estimate of the radiation doses received by a post-remediation on-site resident for an unrestricted use remedial action, or by [a resident or] an employee (of a proposed commercial use facility) for a limited restricted use or restricted use remedial action.
 - ii. A presentation of all equations or other mathematical techniques used, either directly or embodied in a computer model, to predict the movement of radionuclides and/or their resulting radiation dose;
 - iii. Dose calculations which shall be extended for a period of 1,000 years or to the time of peak dose, whichever is longer;

iv. A presentation of all numerical input parameters to equations or computer models, the range of values for those parameters, including reference sources, the value selected for use and the basis for that selection;

v. A presentation of other relevant factors and assumptions used in the analyses, such as site-specific geology, land use, etc.;

vi. An analysis of which input parameters, when varied, would most significantly affect radiation dose 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 N.J.A.C. 7:28-12.10 have been and will continue to be met.

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.

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

Restricted Standards	USS 1	18	15	10	8	6	5	5	4	4
	USS 2	18	15	10	8	6	5	5	5	5
	USS 3	18	15	10	8	6	6	6	6	6
	USS 4	18	15	10	8	7	7	7	7	7
	USS 5	18	15	10	9	9	9	9	9	9

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

Nuclide	Feet of Vertical Extent of Residual									
	VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9	
Ra226										
Unrestricted Use Standards	0.13	0.09	0.09	0.09	0.09	0.09	0.09	0.08	0.08	0.08
Ra226										
Limited Restricted Use Standards	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.15	0.15	0.15

Allowed Incremental Derived Concentration Guideline Levels (Bq/g) for the Gamma and

Feet of Uncontaminated Surface Soil	Feet of Vertical Extent of Residual									
	VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9	
Ra226										
Restricted Standards										
USS 1	0.67	0.55	0.37	0.30	0.22	0.18	0.18	0.15	0.15	0.15
USS 2	0.67	0.56	0.37	0.30	0.22	0.18	0.18	0.18	0.18	0.18
USS 3	0.67	0.56	0.37	0.30	0.22	0.22	0.22	0.22	0.22	0.22
USS 4	0.67	0.56	0.37	0.30	0.23	0.23	0.26	0.26	0.26	0.26
USS 5	0.67	0.56	0.37	0.33	0.33	0.33	0.33	0.33	0.33	0.33

APPENDIX B

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

Feet of Uncontaminated Surface Soil (USS)	Feet of Vertical Extent of Residual Radionuclides (VE)									
	VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9	
Ra226										
Unrestricted Use										
USS 1	5*	3*	3	3	3	3	2	2	2	2
Premixing USS 2	7*	4*	4*	3*	3	3	2	2	2	2

Values	USS 3	7	5*	4*	4	3	3	3	3	3
	USS 4	11	7*	5*	4	3	3	3	3	3
	USS 5	13*	8	6	4	4	4	4	4	4

Feet of Uncontaminated Surface Soil (USS)		Feet of Vertical Extent of Residual Radionuclides (VE)								
Ra226 Limited		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
Restricted Use	USS 1	11*	8*	7*	7*	6*	6*	5*	5*	5*
Premixing Values	USS 2	16*	11*	9*	8*	7*	6*	6*	5*	5*
	USS 3	21*	13*	10*	9*	7*	6*	6*	6*	6*
	USS 4	26*	16*	12*	9*	8*	7*	7*	6*	6*
	USS 5	31*	18*	11*	10*	9*	8*	7*	7*	7*

Allowed Incremental Derived Concentration Guideline Level (Bq/g for the Gamma and Intake Pathways(1))

Feet of Uncontaminated Surface Soil (USS)		Feet of Vertical Extent of Residual Radionuclides (VE)								
Ra226 Unrestricted		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
Use	USS 1	0.18*	0.12*	0.12*	0.12*	0.12	0.10	0.09	0.08	0.08
Premixing Values	USS 2	0.25*	0.15*	0.15*	0.15*	0.12*	0.11	0.09	0.09	0.09
	USS 3	0.25*	0.18*	0.17*	0.17	0.14	0.11	0.11	0.11	0.11
	USS 4	0.40*	0.25*	0.18*	0.17	0.13	0.13	0.13	0.13	0.13
	USS 5	0.48*	0.32	0.22	0.16	0.16	0.16	0.16	0.16	0.16

Feet of Uncontaminated Surface Soil (USS)		Feet of Vertical Extent of Residual								
Ra226 Limited		VE1	VE2	VE3	VE4	VE5	VE6	VE7	VE8	VE9
Restricted Use	USS 1	0.40*	0.30*	0.26*	0.26*	0.22*	0.22*	0.18*	0.18*	0.18*
Premixing Values	USS 2	0.59*	0.40*	0.33*	0.30*	0.26*	0.22*	0.22*	0.22*	0.22*
	USS 3	0.77*	0.48*	0.37*	0.33*	0.26*	0.22*	0.22*	0.22*	0.22*
	USS 4	0.96*	0.59*	0.44*	0.33*	0.30*	0.26*	0.26*	0.22*	0.22
	USS 5	1.15*	0.67*	0.41*	0.37*	0.33*	0.30*	0.26*	0.26*	0.26*

*Back calculated to ensure 15 mrem/yr TEDE after mixing.

(1) These Ra226 concentration numbers may be used only when more than one radionuclide is present for the sum of the fractions rule at NJAC 7:28-12.9(b).

SUBCHAPTER 13. REPORTS OF THEFTS AND RADIATION INCIDENTS FOR REGISTRANTS

7:28-13.1 Reports of theft or loss

A registrant shall immediately notify the Department by telephone, telefax or telegraph of any theft or loss of any ionizing radiation-producing machine under such circumstances that a substantial radiation hazard may result.

7:28-13.2. Reportable radiation incidents

(a) A registrant shall immediately notify the Department by telephone, telefax or telegraph of any radiation incident which may have caused or threatens to cause the following:

1. Exposure of the whole body of any individual to 25 rems or more of radiation; exposure of the skin of the whole body of any individual to 150 rems or more of radiation; or exposure of the feet, ankles, hands or forearms of any individual to 375 rems or more of radiation;

2. A loss of one working week or more of the operation of any facilities affected;
or

3. Damage to property in excess of \$100,000.

(b) The names of any individuals who have been exposed to radiation levels set forth in subsection (a) of this Section shall not be included in the report.

(c) A registrant shall notify the Department within 24 hours by telephone, telefax or telegraph of any radiation incident which may have caused or threatens to cause the following:

1. Exposure of the whole body of any individual to five rems or more of radiation; exposure of the skin of the whole body of any individual to 30 rems or more of radiation; or exposure of the feet, ankles, hands or forearms to 75 rems or more of radiation;

2. A loss of one day or more of the operation of any facilities affected; or

3. Damage to property in excess of \$1,000.

(d) The names of any individuals who have been exposed to radiation levels set forth in subsection (c) of this Section shall not be included in the report.

(e) A registrant shall notify the Department in writing within 30 days of the following:

1. Each exposure of an individual to radiation in excess of any applicable limit of N.J.A.C. 7:28-6;

2. Any incident for which notification is required by subsections (a) and (c) of this Section; or

3. Levels of radiation not involving exposure of any individual in excess of any applicable limit of N.J.A.C. 7:28-6 outside a controlled area in excess of 10 times the limits of N.J.A.C. 7:28-6, Standards for Protection Against Radiation.

(f) The reports set forth in subsection (e) of this Section shall describe the extent of exposure of individuals to radiation, the levels of radiation, the cause of the exposure and/or levels, and corrective steps taken or planned to assure against a recurrence.

(g) In each case where (e)1 above requires a report to the Department of exposure of an individual, the owner shall:

1. Delete from the report all references to the names and addresses of individuals so exposed. The identity of such individuals shall be privileged and shall be submitted as a separate document of such report; and

2. Concurrently give written notification to the individual of the nature and extent of the exposure. Such notice shall contain the following statement: "This report is furnished to you under the provisions of N.J.A.C. 7:28-13, Reports of Thefts and Radiation Incidents for Registrants. You should preserve this report for future reference."

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.

(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.
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;

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.

(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 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.

(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.

(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.

(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.

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.

(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
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.

(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.

(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”;
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.”

(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 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.

(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;

- licenses;
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.

(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), (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. 10CFR 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 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 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.

(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.

(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 $10^5 A_2$;
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 42 U.S.C. §2021 SECTION 274

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.

(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.

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.

(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

22. 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.

(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 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 the (the operative date of the rules).

(c) Fees for NRC licenses that are transferred to New Jersey will be prorated to (July of the year following the operative date of these rules), when the Department will again issue invoices for annual fees.

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, 42 U.S.C. § 2014, as amended.

(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";

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(c) and 64.4(e).

FEE CATEGORY	LICENSE TYPE	ANNUAL FEE (\$)
1.	Special Nuclear Material	
A.	(Reserved.)	
B.	(Reserved.)	
C.	(Reserved.)	
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 Subchapter 62 of this chapter; 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.	4,275
E.	(Reserved.)	
2.	Source Material	

A.	(Reserved.)	
B.	Licenses that authorize only the possession, use and/or installation of source material for shielding.	575
C.	All other source material licenses	9,825
3.	Byproduct material	
A.	Licenses of broad scope for possession and use of byproduct material issued under subchapters 51 and 54 for processing or manufacturing of items containing byproduct material for commercial distribution.	21,600
B.	Other licenses for possession and use of byproduct material issued under subchapter 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.	6,225
C.	Licenses issued under subchapter 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 subchapter 58 of this chapter when included on the same license.	8,850
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).	3,000
F.	Licenses for possession and use of less than 10,000 curies of byproduct material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes. This category also includes	5,850

G.	underwater irradiators for irradiation of materials in which the source is not exposed for irradiation purposes. 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.	23,100
H.	(Reserved.)	
I.	(Reserved.)	
J.	Licenses issued under subchapter 53 of this chapter to distribute items containing byproduct material that require sealed source and/or device review to persons generally licensed under subchapter 52 of this chapter, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under subchapter 52 of this chapter.	1,800
K.	Licenses issued under subchapter 53 of this chapter 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 subchapter 52 of this chapter, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under subchapter 52 of this chapter.	1,350
L.	Licenses of broad scope for possession and use of byproduct material issued under subchapters 51 and 54 of this chapter for research and development that do not authorize commercial distribution.	11,000
M.	Other licenses for possession and use of byproduct material issued under subchapter 51 of this chapter for research and development that do not	4,200

	authorize commercial distribution.	
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.	6,225
O.	Licenses for possession and use of byproduct material issued under subchapter 63 of this chapter for industrial radiography operations. This category also includes the possession and use of source material for shielding authorized under subchapter 58 of this chapter when authorized on the same license.	10,575
P.	All other specific byproduct material licenses, except those in Categories 4.A through 9.D.	2,025
Q.	(Reserved.)	
R.	Possession of items or products containing radium-226 identified in subchapter 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 10 subchapter 52, but less than or equal to 10 times the number of items or limits specified.	1,575
2.	Possession of quantities exceeding 10 times the number of items or limits specified in Subchapter 52.	2,025
S.	Licenses for production of accelerator-produced radionuclides.	8,100
4.	Waste Processing	
A.	(Reserved.)	
B.	(Reserved.)	
C.	(Reserved.)	
5.	Well Logging	
A.	Licenses for possession and use of byproduct material, source material, and/or special nuclear material for	3,225

well logging, well surveys, and tracer studies other than field flooding tracer studies.

- B. (Reserved.)
- 6. **Nuclear Laundry**
- A. (Reserved.)
- 7. **Medical**
- A. Licenses issued under subchapters 51, 55, 58, and 60 of this chapter 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. 10,125
- B. Licenses of broad scope issued to medical institutions or two or more physicians under subchapters 51, 55, 58, and 60 of this chapter authorizing research and development, including human use of byproduct 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. 21,615
- C. Other licenses issued under subchapters 51, 55, 58, and 60 of this chapter 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 3,600

	institutions who also hold nuclear medicine licenses under Category 7.B. or 7.C.	
8.	(Reserved.)	
9.	(Reserved.)	
10.	(Reserved.)	
11.	(Reserved.)	
12.	(Reserved.)	
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 subchapters 51, 58, and 60 of this chapter.	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.	(Reserved.)	
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	\$300
B.	Small Community Water Systems	\$875
C.	Medium Community Water Systems	\$1250
D.	Large Community Water Systems	\$2500
E.	Non-Transient Non-Community Water Systems treating equal to or less than 1000 gallons per day	\$200
F.	Non-Transient Non-	\$500

	Community Water Systems treating more than 1000 gallons per day	
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
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% of appropriate fee
B.	Medical Private Practices	50% of appropriate fee
5.	Generally Licensed Devices	\$350
6.	Diffuse NARM License	\$2500

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 Subchapter 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.