

## Nuclear Regulatory Commission

## § 20.1001

### Subpart H—Respiratory Protection and Controls to Restrict Internal Exposure in Restricted Areas

- 20.1701 Use of process or other engineering controls.
- 20.1702 Use of other controls.
- 20.1703 Use of individual respiratory protection equipment.
- 20.1704 Further restrictions on the use of respiratory protection equipment.
- § 20.1705 Application for use of higher assigned protection factors.

### Subpart I—Storage and Control of Licensed Material

- 20.1801 Security of stored material.
- 20.1802 Control of material not in storage.

### Subpart J—Precautionary Procedures

- 20.1901 Caution signs.
- 20.1902 Posting requirements.
- 20.1903 Exceptions to posting requirements.
- 20.1904 Labeling containers.
- 20.1905 Exemptions to labeling requirements.
- 20.1906 Procedures for receiving and opening packages.

### Subpart K—Waste Disposal

- 20.2001 General requirements.
- 20.2002 Method for obtaining approval of proposed disposal procedures.
- 20.2003 Disposal by release into sanitary sewerage.
- 20.2004 Treatment or disposal by incineration.
- 20.2005 Disposal of specific wastes.
- 20.2006 Transfer for disposal and manifests.
- 20.2007 Compliance with environmental and health protection regulations.

### Subpart L—Records

- 20.2101 General provisions.
- 20.2102 Records of radiation protection programs.
- 20.2103 Records of surveys.
- 20.2104 Determination of prior occupational dose.
- 20.2105 Records of planned special exposures.
- 20.2106 Records of individual monitoring results.
- 20.2107 Records of dose to individual members of the public.
- 20.2108 Records of waste disposal.
- 20.2109 [Reserved]
- 20.2110 Form of records.

### Subpart M—Reports

- 20.2201 Reports of theft or loss of licensed material.
- 20.2202 Notification of incidents.

- 20.2203 Reports of exposures, radiation levels, and concentrations of radioactive material exceeding the constraints or limits.
- 20.2204 Reports of planned special exposures.
- 20.2205 Reports to individuals of exceeding dose limits.
- 20.2206 Reports of individual monitoring.

### Subpart N—Exemptions and Additional Requirements

- 20.2301 Applications for exemptions.
- 20.2302 Additional requirements.

### Subpart O—Enforcement

- 20.2401 Violations.
- 20.2402 Criminal penalties.

APPENDIX A TO PART 20—ASSIGNED PROTECTION FACTORS FOR RESPIRATORS

APPENDIX B TO PART 20—ANNUAL LIMITS ON INTAKE (ALIs) AND DERIVED AIR CONCENTRATIONS (DACs) OF RADIONUCLIDES FOR OCCUPATIONAL EXPOSURE; EFFLUENT CONCENTRATIONS; CONCENTRATIONS FOR RELEASE TO SEWERAGE

APPENDIX C TO PART 20—QUANTITIES OF LICENSED MATERIAL REQUIRING LABELING

APPENDIX D TO PART 20—UNITED STATES NUCLEAR REGULATORY COMMISSION REGIONAL OFFICES

APPENDICES E–F TO PART 20 [RESERVED]

APPENDIX G TO PART 20—REQUIREMENTS FOR TRANSFERS OF LOW-LEVEL RADIOACTIVE WASTE INTENDED FOR DISPOSAL AT LICENSED LAND DISPOSAL FACILITIES AND MANIFESTS

AUTHORITY: Secs. 53, 63, 65, 81, 103, 104, 161, 182, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 953, 955, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201, 2232, 2236, 2297f), secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

### Subpart A—General Provisions

SOURCE: 56 FR 23391, May 21, 1991, unless otherwise noted.

#### § 20.1001 Purpose.

(a) The regulations in this part establish standards for protection against ionizing radiation resulting from activities conducted under licenses issued by the Nuclear Regulatory Commission. These regulations are issued under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended.

## § 20.1002

(b) It is the purpose of the regulations in this part to control the receipt, possession, use, transfer, and disposal of licensed material by any licensee in such a manner that the total dose 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 part. However, nothing in this part shall be construed as limiting actions that may be necessary to protect health and safety.

### § 20.1002 Scope.

The regulations in this part apply to persons licensed by the Commission to receive, possess, use, transfer, or dispose of byproduct, source, or special nuclear material or to operate a production or utilization facility under parts 30 through 36, 39, 40, 50, 60, 61, 70, or 72 of this chapter, and in accordance with 10 CFR 76.60 to persons required to obtain a certificate of compliance or an approved compliance plan under part 76 of this chapter. The limits in this part 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 in accordance with § 35.75, or to exposure from voluntary participation in medical research programs.

[63 FR 50128, Sept. 21, 1998]

### § 20.1003 Definitions.

As used in this part:

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

*Act* means the Atomic Energy Act of 1954 (42 U.S.C. 2011 *et seq.*), as amended.

*Activity* is the rate of disintegration (transformation) or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq).

*Adult* means an individual 18 or more years of age.

*Airborne radioactive material* means radioactive material dispersed in the

## 10 CFR Ch. I (1–1–01 Edition)

air in the form of dusts, fumes, particulates, mists, vapors, or gases.

*Airborne radioactivity area* means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exist in concentrations—

(1) In excess of the derived air concentrations (DACs) specified in appendix B, to §§ 20.1001–20.2401, or

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

*Air-purifying respirator* means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

*ALARA* (acronym for “as low as is reasonably achievable”) means making every reasonable effort to maintain exposures to radiation as far below the dose limits in this part as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

*Annual limit on intake (ALI)* means the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by the reference man that would result in a committed effective dose equivalent of 5 rems (0.05 Sv) or a committed dose equivalent of 50 rems (0.5 Sv) to any individual organ or tissue. (ALI values for intake by ingestion and by inhalation of selected radionuclides are given in table 1, columns 1 and 2, of appendix B to §§ 20.1001–20.2401).