**Section 1000.201 Definitions**

Except as stated in this Section, or unless a different meaning of a word or term is clear from the context, the definition of words or terms in this Part are the same as that applied to the same words or terms in the Environmental Protection Act [415 ILCS 5]:

"Act" means the Environmental Protection Act [415 ILCS 5].

"Board" means the Illinois Pollution Control Board.

"Dose" means the quantity of radiation absorbed, per unit of mass, by the body or by any portion of the body. Under this Part, a dose during a period of time means the total quantity of radiation absorbed, per unit of mass, by the body or by any portion of the body during such period of time. The units of dose used in this Part are "Rad" and "Rem", as defined in this Section.

"IEMA" means the Illinois Emergency Management Agency, Division of Nuclear Safety.

"Individual" means any human being.

"Licensed activity" means any activity engaged in under a general or specific license issued by the NRC.

"Licensed facility" means any facility constructed or operated under a permit or a general or specific license issued by the NRC.

"Licensed material" means any material received, possessed, used, or transferred under a general or specific license issued by the NRC.

"Licensee" means any person to whom a permit or a general or specific license has been issued by the NRC.

"NRC" means the United States Nuclear Regulatory Commission.

"Rad" means a measure of the dose of any radiation to body tissues in terms of the energy absorbed per unit mass of the tissue. One rad is the dose corresponding to the absorption of 100 ergs per gram of tissue. (One millirad (mrad) = 0.001 rad).

"Radiation" means any or all of the following: alpha rays, beta rays, gamma rays, X-rays, neutrons, high-speed electrons, high-speed protons, and other atomic particles; but not sound or radio waves, or visible, infrared, or ultraviolet light.

"Radioactive material" and "radioactive emissions" mean any dusts, particulates, fumes, mists, vapors, or gases which spontaneously emit ionizing radiation.

"Rem" means a measure of the dose of any ionizing radiation to body tissue in terms of its estimated biological effect relative to a dose received from an exposure to one roentgen of X-rays. (One millirem (mrem) = 0.001 rem). The relation of rem to other dose units depends on the biological effect under consideration and the condition of irradiation. For this Part, any of the following is considered to be equivalent to a dose of one rem:

An exposure to one roentgen of X- or gamma radiation;

A dose of one rad due to X-, gamma, or beta radiation;

A dose of 0.1 rad due to neutrons or high energy protons;

A dose of 0.05 rad due to particles heavier than protons and with sufficient energy to reach the lens of the eye. If it is more convenient to measure the neutron flux, or equivalent, than to determine the neutron dose in rads, one rem of neutron radiation may be assumed to be equivalent to 14 million neutrons per square centimeter incident upon the body; or, if information is available to estimate with reasonable accuracy the approximate distribution in the energy of neutrons, the incident number of neutrons per square centimeter equivalent to one rem may be estimated from the following table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Neutron Flux Dose Equivalents | | | | | |
| Neutron Energy (Mev) | No. of Neutron per square centimeter equivalent to a dose of 1 rem (neutrons/cm2) | | | Average flux to deliver 100 millirem in 40 hours (neutron/cm2 per second) | |
| Thermal | | 970 x 106 | 670 | |
| 0.0001 | | 720 x 106 | 500 | |
| 0.005 | | 820 x 106 | 570 | |
| 0.02 | | 400 x 106 | 280 | |
| 0.1 | | 120 x 106 | 80 | |
| 0.5 | | 43 x 106 | 30 | |
| 1.0 | | 26 x 106 | 18 | |
| 2.5 | | 29 x 106 | 20 | |
| 5.0 | | 26 x 106 | 18 | |
| 7.5 | | 24 x 106 | 17 | |
| 10.0 | | 24 x 106 | 17 | |
| 10 to 30 | | 14 x 106 | 10 | |

"Restricted area" means any area to which access is controlled by the licensee to protect individuals from exposure to radiation and radioactive materials. "Restricted area" must not include any areas used as residential quarters, although a separate room or rooms in a residential building may be set apart as a restricted area.

"Unrestricted area" means any area to which access is not controlled by the licensee to protect individuals from exposure to radiation and radioactive materials, and any area used for residential quarters.

(Source: Amended at 47 Ill. Reg. 6679, effective May 4, 2023)