

GLOSSARY

Absorbed dose	The fundamental dosimetric quantity in radiological protection. It is the energy absorbed per unit mass of the irradiated material, represented in the unit of Gray (Gy) (1 Gy = 1 J/kg).
Average individual dose	The committed effective dose that the average individual would be expected to receive under the conditions being assessed in Sievert (Sv).
Alpha particle	The nucleus of the element Helium.
Becquerel	The basic unit of radioactivity (Bq) (1 Bq = 1 disintegration per second).
Beta particle	Electron or positron.
Beyond design basis accident	NPPs are designed to cope with events, or combinations of events, which are outside the conventional design-basis faults. These conditions have a very low frequency of occurrence but are also liable to have serious consequences.
Collective dose	To relate the exposure to the exposed groups, the average individual dose representative of the population is multiplied by the number of people in the group to be considered (man.Sv).
Committed effective dose	The effective dose integrated over 50 years for an adult Sv.
Controlled area	Any area subject to special rules for the purposes of protection against ionizing radiation and to which access is controlled.
Critical groups	See reference groups.
Dose equivalent	The weighted absorbed dose, taking into account the type and energy of the radiation. This is reported in the unit of Joule/kg with the name Sievert (Sv).
Design basis accident	NPPs are designed to cope with a wide range of potential accidents. Various safety features and provisions are adopted in the design of a NPP in order to ensure that the reactor can be safely shut down and kept shut down whenever required. Also, to eliminate unacceptable risks, provision is made to ensure the fuel element is kept cool, and thereby intact, under all circumstances.
Dose limits	The limits laid down for doses resulting from the exposure of workers and members of the public, excluding the doses resulting from natural background radiation and exposure of individuals as a result of medical examination and treatment

	undergone by them. The dose limits apply to the sum of the doses received from external exposure during the period considered and the committed doses resulting from the intake of radionuclides during the same period.
Effective dose	The weighted sum of the dose equivalents to the most sensitive organs and tissues. The unit is the Sievert (Sv).
Exposed workers	Persons subjected, as a result of their work, to an exposure liable to result in annual doses exceeding a fraction of the annual dose limits laid down for workers.
External exposure	Exposure resulting from sources outside the body.
Exposure	Any exposure of persons to ionizing radiation. A distinction is made between external exposure, internal exposure and total exposure.
Gamma radiation	Electromagnetic radiation similar to light and radio waves.
Intake	The activity entering the body from the external environment.
Internal exposure	Exposure resulting from sources inside the body.
Intervention level	A value of absorbed dose or dose equivalent or a derived value fixed in connection with the drawing-up of emergency plans.
Ionizing radiation	Radiation capable of producing electrically charged particles called ions, directly or indirectly. Ionizing radiation consists of alpha radiation, beta radiation, gamma radiation, X-rays, and neutrons.
Long lived nuclides	Radionuclides associated with aerosols trapped in a filter within 24 hours and able to be monitored after 24 hours from the moment the sample was taken.
Natural background radiation	All ionizing radiation from natural terrestrial and cosmic sources, to the extent that the exposure which it causes is not significantly increased by man.
Neutrons	Neutral particles present in all atomic nuclei except hydrogen.
Operator	any natural or legal person who under national law, is responsible for a controlled area.
Outside undertaking	Any natural or legal person, other than the operator, including members of his staff, performing an activity of any sort in a controlled area.

Outside worker	Any worker performing activities of any sort in a controlled area, whether employed temporarily or permanently by an outside undertaking, or whether he provides services as a self-employed worker.
Physical half-life	Time it takes for the radioactivity of a radionuclide to decrease by half.
Radioactive contamination	Contamination of any material, surface or environment or of a person by radioactive substances. In the specific case of the human body, this radioactive contamination includes both external skin contamination and internal contamination irrespective of method of intake.
Radioactive substance	Any substance that contains one or more radionuclides, the activity or the concentration of which cannot be disregarded as far as radiation protection is concerned.
Reference groups	Groups of the population comprising persons whose exposure is reasonably uniform and representative of that of the more highly exposed individuals in the population.
Source	An apparatus or substance capable of emitting ionizing radiation.
Total exposure	The sum of external exposure and internal exposure.
X-rays	Electromagnetic radiation similar to light and radio waves.