

Glossary

Activation

This term refers to the process of creating a radio isotope. This is achieved when a stable element is bombarded with either neutrons or protons.

Activation Products

Activation products are materials made radioactive by neutron activation.

Fission products and actinides produced by neutron absorption of nuclear fuel itself are normally referred to by their specific names, and activation products reserved for products of neutron capture by other materials, such as structural components of the nuclear reactor, the reactor coolant, control rods or materials in the environment.

Acute exposure

A short, intensive exposure (less than one day) to radiation or to toxic substances which can result in severe biological harm or death.

Alpha particle

An ionising particle consisting of two protons and two neutrons. It is a Helium nucleus – i.e. a helium atom stripped of its two electrons.

Atomic energy

This term refers to the energy that is released in nuclear reactions. There are two chief ways this can occur. The first is in nuclear fission, whereby a neutron will initiate the breaking up of an atom's nucleus into smaller pieces. The second is nuclear fusion, whereby two nuclei are joined together under intense heat. It is more correctly called nuclear energy.

Breeder reactor

A reactor designed to produce more fuel (fissile material) than it consumes.