Term
alpha particle Definition: Alpha particles come from heavy radioactive elements such as uranium, radium and polonium. They can be stopped by a thin layer of light material, such as a sheet of paper, and cannot penetrate the outer, dead layer of skin. Therefore, they do not damage living tissue when outside the body. However, they can damage living tissue and pose a serious health threat if swallowed or inhaled.
ambient air Definition: The air that surrounds us.
background radiation Definition: Natural radiation caused by cosmic rays from space and radioactive elements found in the earth's crust. This natural radiation is around us at all times.
beta particles Definition: Beta particles come from many different radioactive elements, both natural and man-made. Although they can be stopped by a thin sheet of aluminum, beta particles outside the body can cause burns to unprotected skin. They can pose a serious health threat if swallowed or inhaled.
composite sample Definition: A sample formed by collecting several samples and combining them into a new sample for analysis.
counts per minute

Term
Definition: The number of decays of radioactive material that are detected by a radiation detector in one minute. Acronym: CPM
Curie Definition: A measure of radioactivity based on the radioactive decay rate of one gram of radium-226. Acronym: Ci
dose Definition: Dose is defined as the amount of radiation or energy absorbed by a person's body.
fallout Definition: Radioactive particles that fall to the ground after a nuclear explosion.
fixed monitor Definition: Permanently positioned and continuously operating monitors that sample particulates in the air and obtain gamma radioactivity spectra in real-time.
gamma rays Definition: Gamma rays come from many different radioactive elements, both natural and man-made. Gamma rays can easily pass completely through the human body, damaging tissue and DNA. Several inches of lead or a few feet of concrete may be required to

Term
stop gamma rays.
gamma spectroscopy Definition: The analysis of photons (X-ray or Gamma) emitted from radioactive atoms as they undergo transformations to more stable atoms. The RadNet Fixed (Stationary) Monitors contain a detector system that provides information on the quantity and energy of photons emitted by radioactive material captured on the air filter (and the surroundings). These data may then be used by trained spectroscopists to identify the radioactive atoms that are emitting the gamma radiation.
gross Definition: Total activity from all emitters (alpha or beta).
half-life Definition: The time required for one half the atoms of a given amount of a radioactive isotope to radioactively decay.
ionizing radiation Definition: Radiation with enough energy to remove electrons from atoms.
isotope Definition: Isotopes are different versions of the same chemical element. Isotopes of an element have the same number of protons but a different number of neutrons. The number of neutrons determines the radioactivity of an element.
particulates

Term
Definition: Tiny distinct particles such as dust that can be captured by filters from samples of air or water.
picocuries Definition: One-trillionth (1/1,000,000,000,000) of a Curie. Acronym: pCi
plume Definition: An area of contamination as it spreads into the environment from its source.
radioactive decay Definition: Spontaneous changes in the nucleus of an atom that produces ionizing radiation, including alpha or beta particles and/or gamma rays.
stationary monitor Definition: Permanently positioned and continuously operating monitors that sample particulates in the air and obtain gamma radioactivity spectra in real-time.