Radiation Terms

Acute Exposure: An exposure to radiation that occurs in a very short period of time such as seconds or minutes.

ALARA: Making every reasonable effort to maintain dose levels as far below the limit as possible.

Alpha Particle: Particle emitted by certain nuclei. Deposits energy very quickly when passing through tissue. Can be stopped by paper.

Beta Particle: Electrons ejected from the decaying nucleus of an atom. Can penetrate skin and cause extensive tissue damage and burns.

Bioassay: A measurement of radioactive materials present inside a person's body through analysis of the person's blood, urine, feces or sweat.

Californium-252: Primarily man-made but can be found in nature. Half-life of 2.64 years. Found in our cross-belt analyzer.

Cesium-137: Byproduct of nuclear fission. Used in medical devices and gauges. Half-life of 30.17 years. Found on Kiln 1 clinker cooler dump hoppers.

Chronic Exposure: Exposure to a substance over a long period of time, possibly resulting in adverse health effects.

Cobalt-60: Does not occur in nature. Primary uses are in medical and food industries. Half-life of 5.27 years. Found on Kiln 2 tower.

Cosmic Radiation: Radiation produced when heavy particles bombard the earth.

Critical Mass: The minimum amount of fissile material that can achieve a self-sustaining nuclear chain reaction.

Detector: A device that is sensitive to radiation and can produce a response signal suitable for measurement or analysis.

Dosimeter: Small portable instrument for measuring and reporting the total accumulated dose of ionizing radiation a person receives.