

## CHAPTER 7

### GLOSSARY

<b><i>background radiation</i></b>	Radiation from: (1) naturally occurring radioactive materials, as they exist in nature prior to removal, transport, or enhancement or processing by man; (2) cosmic and natural terrestrial radiation; (3) global fallout as it exists in the environment; (4) consumer products containing nominal amounts of radioactive material or emitting nominal levels of radiation; and (5) radon and its progeny in concentrations or levels existing in buildings or the environment that have not been elevated as a result of current or past human activities.
<b><i>basin</i></b>	A topographic or structurally low area compared to the immediately adjacent areas.
<b><i>Bell Canyon Formation</i></b>	A sequence of rock strata that forms the topmost unit of the Delaware Mountain Group.
<b><i>caliche</i></b>	Calcium carbonate (CaCO <sub>3</sub> ) deposited in the soils of arid or semiarid regions.
<b><i>cask</i></b>	A massive shipping container providing shielding for highly radioactive materials and holding one canister.
<b><i>Castile Formation</i></b>	A Permian age rock unit of evaporites (interbedded halite and anhydrite) that immediately underlies the Salado Formation, the rock unit in which disposal rooms are excavated.
<b><i>concentration</i></b>	The amount of a substance contained in a unit quantity (mass or volume) of a sample.
<b><i>conservative</i></b>	When used with predictions or estimates, leaning on the side of pessimism. A conservative estimate is one in which the uncertain inputs are used in the way that provides a reasonable upper limit of the estimate of an impact.
<b><i>containment</i></b>	Retention of a material or substance within prescribed boundaries.
<b><i>critical habitat</i></b>	The specific areas within the geographical area occupied by a species at the time it is listed as threatened or endangered on which are found those physical or biological features that are essential to the conservation of the species and that may require special management considerations or protection. It also includes specific areas outside the geographical area occupied by the species at the time it is listed if these areas are determined to be essential for the conservation of the species.
<b><i>Culebra Dolomite</i></b>	The lower of two geologic units of water-bearing dolomite within the Rustler Formation.

<b><i>cumulative impacts</i></b>	Cumulative impacts are those impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.
<b><i>curie</i></b>	A unit of radioactivity equal to 37 billion ( $3.7 \times 10^{10}$ ) disintegrations per second.
<b><i>decommissioning</i></b>	The removal from active service of a facility.
<b><i>decontamination</i></b>	The removal of unwanted material (especially radioactive material) from the surface or from within another material.
<b><i>dolomite</i></b>	A sedimentary rock consisting primarily of the mineral dolomite: $\text{CaMg}(\text{CO}_3)_2$ .
<b><i>EIS</i></b>	Environmental impact statement; a document required by the National Environmental Policy Act for proposed major Federal actions involving potentially significant environmental impacts.
<b><i>endangered species</i></b>	Plants and animals that are threatened with extinction, serious depletion, or destruction of critical habitat. Requirements for declaring a species endangered are contained in the Endangered Species Act.
<b><i>energy</i></b>	The capacity for doing work.
<b><i>environment</i></b>	The sum of all external conditions and influences affecting the life development and, ultimately, the survival of an organism.
<b><i>equilibrium</i></b>	A state of rest in a chemical or mechanical system. Chemical: The state of a reaction in which its forward and reverse reactions occur at equal rates so that the concentrations of the reactants do not change with time. Mechanical: Forces in one direction are equal and opposite to those in the opposing direction. Flow of salt to fill the excavated cavity is an attempt by the salt to reattain a state of mechanical equilibrium.
<b><i>evapotranspiration</i></b>	Loss of water from the earth's surface to the atmosphere by a combination of evaporation from the soil, lakes, streams, and transpiration from plants.
<b><i>fault</i></b>	A fracture or a zone of fractures along which there has been displacement parallel to the fracture.
<b><i>fissile</i></b>	Describes a nuclide that undergoes fission upon absorption of neutrons of any energy.
<b><i>formation</i></b>	A mappable geologic body of rock identified by lithic characteristics and stratigraphic position. Formations may be combined into groups or subdivided into members.

<b><i>geology</i></b>	The science that deals with the earth; the materials, processes, environments, and history of the planet, especially the lithosphere, including the rocks, their formation, and structure.
<b><i>groundwater</i></b>	All subsurface water, especially that contained in the saturated zone below the water table.
<b><i>habitat</i></b>	The part of the physical environment in which a plant or animal lives.
<b><i>halite</i></b>	A mineral composed of sodium chloride, NaCl.
<b><i>immediately dangerous to life and health</i></b>	A term that represents a maximum airborne concentration from which one could escape within 30 minutes without any escape-impairing symptoms or any irreversible health effects.
<b><i>isotope</i></b>	An atom of a chemical element with a specific atomic number and atomic weight. Isotopes of the same element have the same number of protons but different numbers of neutrons. Isotopes are identified by the name of the element and the total number of protons and neutrons in the nucleus. For example, uranium-235 is an isotope of uranium with 92 protons and 143 neutrons and uranium-238 is an isotope of uranium with 92 protons and 146 neutrons.
<b><i>Los Medaños</i></b>	The area in southeastern New Mexico surrounding the Waste Isolation Pilot Plant site. In English, it means “dune country.”
<b><i>low-income population</i></b>	A population where 25 percent or more of the population is identified as living in poverty.
<b><i>Magenta Dolomite</i></b>	The upper of the two dolomite layers within the Rustler Formation that are locally water-bearing.
<b><i>magnitude (earthquake)</i></b>	A measure of the total energy released by an earthquake. It is commonly measured in numerical units on the Richter scale. Each unit, e.g. 7, is different from an adjacent unit by a factor of 30.
<b><i>maximally exposed individual</i></b>	A hypothetical member of the public who is exposed to a release of radioactive or chemically hazardous material in such a way (by combination of location, dietary habits, etc.) that the individual will likely receive the maximum dose from such a release.
<b><i>Nash Draw</i></b>	A shallow 8-kilometer- (5-mile-) wide valley open to the southwest located to the west of the Waste Isolation Pilot Plant site.
<b><i>National Environmental Policy Act</i></b>	The act designed to promote inclusion of environmental concerns in Federal decision-making.
<b><i>National Register of Historic Places</i></b>	A list maintained by the National Park Service of architectural, historic, archaeological, and cultural sites of local, state, or national importance.

<b><i>physiographic</i></b>	Geographic regions based on geologic setting.
<b><i>potash</i></b>	The common industrial term for potassium in various chemical combinations with sodium, magnesium, chlorine, and sulfate.
<b><i>radiation</i></b>	Ionizing radiation; e.g., alpha particles, beta particles, gamma rays, X-rays, neutrons, protons, and other particles capable of producing ion pairs in matter. As used in this document, radiation does not include nonionizing radiation.
<b><i>radioactive decay</i></b>	The spontaneous transformation of one nuclide into a different nuclide or into a different state of the same nuclide. The process results in the emission of nuclear radiation (alpha, beta, or gamma radiation).
<b><i>radioactivity</i></b>	The property or characteristic of radioactive material to undergo spontaneous transformations (“disintegrations” or “decay”) with the emission of energy in the form of radiation. It means the rate of spontaneous transformations of a radionuclide. The unit of radioactivity is the curie (or becquerel). (1 curie = $3.7 \times 10^{10}$ becquerel).
<b><i>radionuclide</i></b>	A nuclide that emits radiation by spontaneous transformation.
<b><i>recharge</i></b>	In groundwater hydraulics, the addition of water to the zone of saturation; also, the amount of water added.
<b><i>Record of Decision</i></b>	The document, publicly available, by which a Federal department or agency decides on an alternative presented and evaluated through the environmental impact statement process.
<b><i>repository</i></b>	A facility for the disposal of radioactive waste.
<b><i>resources</i></b>	Mineralization that is concentrated enough, in large enough quantity, and in a physical and chemical form such that its extraction may be economical in the future.
<b><i>rock burst</i></b>	A sudden and often violent breaking of a mass of rock from the walls of a tunnel, mine, or deep quarry, caused by failure of highly stressed rock and the rapid or instantaneous release of accumulated strain energy.
<b><i>runoff</i></b>	The portion of rainfall, melted snow, or irrigation water that flows across the ground surface and either infiltrates or eventually returns to streams.
<b><i>Rustler Formation</i></b>	The evaporite beds, including mudstones, of Permian age that immediately overlie the Salado Formation in which the Waste Isolation Pilot Plant disposal levels are built.
<b><i>Salado Formation</i></b>	The Permian Age evaporite unit within which wastes would be disposed of in the Waste Isolation Pilot Plant repository.
<b><i>scintillation liquid</i></b>	A liquid that emits visible light when bombarded with particles or irradiated with ultraviolet light or X-rays.

<i>seismicity</i>	All of the earthquakes that may occur in a region, regardless of magnitude.
<i>shaft</i>	A man-made hole, either vertical or steeply inclined, that connects the surface with an underground excavation.
<i>surface water</i>	A creek, stream, river, pond, lake, bay, sea, or other waterway that is directly exposed to the atmosphere.
<i>threatened species</i>	Any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Requirements for declaring a species threatened are contained in the Endangered Species Act.
<i>transuranic waste</i>	Waste materials (excluding high-level waste and certain other waste types) contaminated with alpha-emitting radionuclides that are heavier than uranium with half-lives greater than 20 years and occur in concentrations greater than 100 nanocuries per gram. Transuranic waste results primarily from plutonium reprocessing and fabrication as well as research activities at U.S. Department of Energy defense installations.
<i>Waste Isolation Pilot Plant</i>	The facility near Carlsbad, New Mexico, that is a disposal site for transuranic waste generated as part of the nuclear defense research and production activities of the federal government.

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