

# GLOSSARY

<b>Agglomeration</b>	In beneficiation, a concentration process based on the adhesion of pulp particles to water. Also refers to briquetting, nodulizing, sintering.
<b>Beneficiation</b>	The dressing or processing of coal or other ores for the purpose of (1) regulating the size of a desired product, (2) removing unwanted constituents, and (3) improving the quality, purity, or assay grade of a desired product.
<b>Brine</b>	Water saturated or strongly impregnated with common salt.
<b>By-product</b>	A secondary or additional product.
<b>Carbonizing</b>	The reduction of a substance to carbon by subjecting it to intense heat in a closed vessel.
<b>Coal</b>	A readily combustible rock containing more than 50% by weight and more than 70% by volume of carbonaceous material, including inherent moisture; formed from compacting and in duration of variously altered plant remains similar to those in peat. Differences in the kinds of plant materials (type), in degree of metamorphism (rank), and in the range of impurity (grade) are characteristic of coal and are used in classification.
<b>Cyanidation</b>	A process in extracting gold and silver as cyanide slimes from their ores by treatment with dilute solution of potassium cyanide or sodium cyanide. The slimes are subsequently fused and cast into ingots or bullion.
<b>Doré</b>	Gold and silver bullion that remains in a cupelling furnace after the lead has been oxidized and skimmed off.
<b>Effluent</b>	A liquid waste discharged from a process.
<b>Electrowinning</b>	An electrochemical process in which a metal dissolved within an electrolyte is plated onto an electrode.
<b>Emissions</b>	A gaseous waste discharged from a process.
<b>Gangue</b>	The valueless minerals in an ore; that part of an ore that is not

economically desirable but cannot be avoided in mining. It is separated from the ore minerals during concentration.

<b>Hazardous Waste</b>	Waste streams that exhibit characteristics such as toxicity, ignitability, corrosivity, or reactivity.
<b>Hydrometallurgy</b>	The treatment of ores, concentrates, and their metal-bearing material by wet processes, usually involving the solution of some component, and its subsequent recovery from the solution.
<b>In situ</b>	In the natural or original position. Applied to a rock, soil, or fossil occurring in the situation in which it was originally formed or deposited.
<b>Leachate</b>	A solution obtained by leaching; e.g., water that has percolated through soil containing soluble substances and that contains certain amounts of these substances in solution.
<b>Materials Handling</b>	The art and science involving movement, packaging, and storage of substances in any form.
<b>Mesh</b>	The number of apertures per unit area of a screen.
<b>Mill</b>	(a) A plant in which ore is treated and minerals are recovered or prepared for smelting. (b) Revolving drum used in the grinding of ores in preparation for treatment.
<b>Ore</b>	The naturally occurring material from which a mineral or minerals of economic value can be extracted profitably or to satisfy social or political objectives.
<b>Overburden</b>	Designates material of any nature, consolidated or unconsolidated, that overlies a deposit of useful materials, ores, or coal that are mined from the surface.
<b>Porphyry Deposits</b>	A deposit in which minerals of copper, molybdenum, gold, or less commonly tungsten and tin are disseminated or occur in small veinlets within a large mass.
<b>Pyrometallurgy</b>	Metallurgy involved in winning and refining metals in which heat is used, as in roasting and smelting.
<b>Raffinate</b>	The aqueous solution remaining after the metal has been extracted by the solvent; the tailing of the solvent extraction system.
<b>Reclamation</b>	Restoration of mined land to original contour, use, or condition.

<b>Refining</b>	The purification of crude metallic products.
<b>Restoration</b>	Restore mined land to a condition capable of supporting the uses which it was capable of supporting prior to any mining, or higher or better uses.
<b>Sintering</b>	A process for agglomerating ore concentrate in which partial reduction or minerals may take place and some impurities be expelled prior to subsequent smelting and refining.
<b>Slag</b>	A substance formed by chemical action and fusion at furnace operating temperatures.
<b>Slurry</b>	A fine carbonaceous discharge from a mine washery.
<b>Special Wastes</b>	Certain specific solid wastes excluded from regulation as RCRA hazardous wastes. They include (1) fossil fuel combustion byproducts from combustion of coal or other fuels, (2) solid wastes from the extraction, beneficiation, and processing of ores and minerals, and (3) cement kiln dust. Special Wastes are also known as Bevill Wastes.
<b>Solid Waste</b>	A solid waste discharged for a process.
<b>Solution Mining</b>	The in-place dissolution of water-soluble mineral components of an ore deposit by permitting a leaching solution, usually aqueous, to trickle downward through the fractured ore to collection galleries at depth.
<b>Solvent Extraction</b>	A method of separating one or more substances from a mixture, by treating a solution of the mixture with a solvent that will dissolve the required substances, leaving the others.
<b>Surface Mining</b>	Mining at or near the surface. This type of mining is generally done where the overburden can be removed without too much expense. Also called strip mining; placer mining, opencast; opencut mining; open-pit mining.
<b>Tailings</b>	The gangue and other refuse material resulting from the washing, concentration, or treatment of ground ore.
<b>Trona</b>	A monoclinic mineral; soft, vitreous; colorless to white; alkaline tasting; in saline lake deposits and desert soils; a major source of sodium compounds.

**Underground  
Mining**

Mining that takes place underground. This type of mining is generally done where the valuable material is located deep enough where it is not economically viable to be removed by surface mining.