

Glossary

Mining

Acid mine drainage (AMD): When sulfides (such as pyrite) oxidize and create acid. Not all mining activities create AMD, but it is often associated with metal mining because of the tendency for sulfides to be present in the rock. The acidity of the water can cause the soil to mobilize other metals into the water.

Beneficiation: Processes that separate the desired mineral from the rest of the rocks and minerals in the ore.

Electroplating: A process that uses an electrical current to encourage precipitation of the desired element.

Flotation: The beneficiation process in which bubbles of a reagent attract the desired mineral from the slurry and rise with it to the top of the mixture. This froth can then be removed for further concentration.

Leaching (in mining): The use of chemicals (such as sulfuric acid or sodium cyanide) to dissolve the desired metals and transport them in solution to a collection area.

Milling: The physical process of crushing and grinding the ore within the beneficiation process.

Mountain top mining/removal: A type of surface mining in which an entire mountain or mountain top is removed to obtain the ore within or underneath.

Ore: A material that occurs naturally and that contains a mineral(s) that can be extracted for a profit.

Ore grade: The concentration of the desired metal or element within the ore.

Reclamation: The restoration of land to either natural conditions or another useful purpose; this often involves the process of stabilizing soils and slopes in an area through the grading of slopes and use of vegetation.

Refining/Refinery: The final process in purifying an ore to the desired concentration after previous beneficiation. A refinery is where refining happens.

Remediation: The process of fixing, removing, or counteracting an environmental problem.

Slurry: A mixture of water and fine particulate material.

Smelting: The process of melting the beneficiated ore (concentrate) to reduce the impurities and concentrate the desired element.

Superfund: The program established to address hazardous waste sites with no owners. It enables the Environmental Protection Agency (EPA) to fund and perform clean-ups as well as locate the responsible party if still in existence.

Tailings: Waste material created from the beneficiation process.

Waste rock: Rock that must be moved in order to obtain the ore. This rock does not have a high enough concentration of the desired mineral to make it economically or technologically viable to extract.