

Glossary

100-Year, 24-Hour storm. A model storm of a 24-hour duration with an intensity that is likely to occur only once every 100 years.

601 Champion Pit Overpass; 601 Tailings Storage Overpass. Bridge for haul trucks to avoid disruption to traffic flow on US Highway 601.

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A-Weighted Decibel (dBA). The equivalent constant sound level for a varying sound level measured over a period of time.

Acid. A chemical compound that dissociates (separates) in solution, releasing hydrogen ions and lowering the solution's pH (a proton donor). An acid solution has a pH below 7.0.

Acid-Generating Potential. A material's potential to generate acid and produce acid rock/mine drainage. To determine the extent to which a material has acid generating potential, analytical laboratory tests are performed using either static or kinetic processes.

Acid Mine Drainage. The outflow of acid rock drainage from mines, underground workings, waste rock, and tailings after sulfide minerals have been exposed to air and water, oxidizing metal sulfides (often pyrite, which is iron-sulfide) within the surrounding rock and overburden. Open-pit mining increases the exposed surface area of sulfur-bearing rocks, which allows acid generation beyond the natural buffering capabilities found in the host rock and water resources. Acid rock drainage can mobilize and transport the heavy metals that occur in metal deposits. See "Acid Rock Drainage."

Acid Rock Drainage. A solution of ferrous sulfate and sulfuric acid produced by the oxidation of sulfide minerals, chiefly iron pyrite or iron disulfide (FeS_2). Ferrous iron can be further oxidized, producing additional acidity. This is a natural chemical reaction when minerals are exposed to air and water that produces acidity and dissolves metals in water; however, it can impair water quality. Acidic drainage is found around the world, as a result of naturally occurring processes and as a result of activities associated with land disturbances (e.g., highway construction and mining) where acid-forming minerals are exposed at the surface of the earth. See "Acid Mine Drainage."

Acute Exposure. A single exposure to a toxic substance that may result in severe biological harm or death; acute exposures are usually characterized as lasting no longer than a day.

Adversely. Unfavorably.

Advisory Council on Historic Preservation (ACHP). Independent federal agency responsible for implementing the Section 106 and Section 110 review processes in the National Historic Preservation Act.

Aesthetic Resources. The components of the environment as perceived through the visual sense only. *Aesthetics* specifically refers to beauty in both form and appearance.

Affected Environment. A portion of a NEPA document that succinctly describes the environment of the area(s) to be affected by the alternatives under consideration. The descriptions should be no larger than is necessary to understand the effects of the alternatives. Data and analyses in an environmental impact statement should be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced.

The affected environment also includes the environmental and regulatory setting of the proposed Project. The environmental setting includes the natural and physical environmental conditions in the vicinity of the proposed Project and the built human environment (e.g., cultural resources and socioeconomics). Within the regulatory setting, the affected environment would include all applicable laws, regulations, permits, and policies associated with the effects of the proposed Project. The area of a potential effect may vary based on the resource and the nature of the impact.

Air Overpressure. Pressure resulting from a shock wave that is greater than normal atmospheric pressure levels. Air overpressure is air-borne vibration perceived as noise.

Air Quality. A measure of health-related and visual characteristics of the air often derived from quantitative measurements of concentrations of specific substances.

Alkalinity. The alkaline nature of a substance (water) derived by measuring its ability to accept hydrogen ions.

Alternatives. A way to fix the identified problem or satisfy the stated need. Under NEPA and the USACE's regulations for implementation of NEPA, an environmental impact statement examines all reasonable alternatives that meet the purpose and need.

Alternatives Analysis. As defined by Section 404(b)(1) of the Clean Water Act, describes the alternatives that would meet the overall project purpose, considering the following: (1) the proposed Project; (2) alternatives that would not involve discharges of dredged or fill material into waters of the United States, including wetlands (e.g., the No Action Alternative or off-site or on-site alternatives); (3) alternatives involving discharges with less adverse impact on waters of the United States, including wetlands (on-site or off-site alternatives); and (4) alternatives involving discharges with greater adverse impact on waters of the United States, including wetlands (on-site or off-site alternatives).

The alternatives analysis also considers alternatives with both smaller and larger aerial coverage, as well as alternatives that would be sited in different locations. The analysis focuses on potential alternatives with potentially less adverse impact on the aquatic ecosystem but also considers alternatives with greater impact on the aquatic ecosystem but less adverse impact on the environment overall.

Ambient. The background or surrounding parameters occurring in the environment.

Applicant. The entity seeking authorization for a proposed Project from a regulatory agency; also referred to as the project Proponent. For this EIS, the Applicant is Haile Gold Mine, Inc. (Haile).

Aquifer. A body of rock or sediment that is capable of transmitting groundwater and yielding usable quantities of water to wells or springs.

Attenuate, Attenuation. To lessen, decrease, or reduce in concentration.

Avoidance. During project planning, potential impacts on sensitive resources are identified. Where feasible, alternatives can be changed during planning or the design phase to avoid impacts on these areas.

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Backfill. Mine waste or rock used to refill voids in mined areas, including open-pit and underground mines.

Background Levels. Two types of background levels may exist for chemical substances or other resources: (1) naturally occurring levels: ambient concentrations of substances present in the environment, without human influence; or (2) anthropogenic levels: concentrations of substances present in the environment due to human-made, non-site sources (e.g., automobiles, industries).

Baseflow. The contribution of the stream discharge from groundwater seeping into the stream.

Baseline. The existing environmental conditions against which impacts of the proposed Project and its alternatives can be compared. For a specific NEPA document, a further statement can be included about the date or conditions that are considered the baseline.

Barrier. Any feature that restricts movement from one place to another.

Basin. The land area that drains water to a particular stream, river, lake, or other surface water body. It is a land feature that can be identified by tracing a line along the highest elevations between two areas on a map. Equivalent to a watershed.

Bedrock. Any solid rock exposed at the surface of the earth or overlain by unconsolidated material.

Beneficial Use. Use of water, including but not limited to, agricultural, domestic, fish and wildlife, industrial, irrigation, mining, municipal, power, water leasing, and recreation uses.

Benefit. Used in opposition to impacts (effects), which are typically considered as negative, to denote positive impacts (effects) of an action.

Benthic. Pertaining to the bottom or sediment habitats of a body of water.

Berm. A horizontal, earthen structure, often constructed on exposed slopes, that increases slope stability, redirects the flow of water or other materials, or provides a place for sloughing material to collect.

Best Available Controllable Technology (BACT). Available devices, systems, or techniques used to achieve the maximum reduction of air pollutant emissions while considering energy, environmental, and economic impacts. BACT is determined on a case-by-case basis for new sources or major modifications to existing sources in areas that are in attainment of national ambient air quality standards. BACT does not permit emissions in excess of those allowed under any Clean Air Act provisions. BACT can also be used in reference to resources other than air.

Best Management Practices (BMPs). Structural, nonstructural, and managerial techniques, other than effluent limitations, to prevent or reduce pollution of surface water or reduce impacts on other resources. They are the most effective and practical means to control pollutants that are compatible with the productive use of the resource to which they are applied. BMPs are used in both urban and agricultural areas. BMPs can include schedules of activities; prohibitions of practices; maintenance procedures; treatment requirements; operating procedures; and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Bioaccumulation. The retention and accumulation over time of certain chemical compounds in organic matter such as the tissues of plants and animals used as food sources.

Borrow. An area that provides a source of earthen construction material such as sand, gravel, or topsoil for use in construction or reclamation.

Borrow Areas. The areas from which material for construction of the tailings storage facility embankment is excavated.

Buffer. A multi-use transition area designated and managed to protect core reserves and critical corridors from the destructive impacts of human activities. Buffers are designed with consideration for the specific ecological features to be protected and the specific activities that threaten them. These lands may be owned and managed through a wide variety of public and/or private programs.

Byproduct. A metal or mineral product recovered in the milling process in addition to the target product (e.g., gold).

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Carbon-in-Leach. A method of recovering gold and other precious metals from pregnant cyanide solutions by adsorbing the precious metals onto activated carbon.

Chronic Exposure. Continuous exposure to a toxin over an extended period of time, often measured in months or years.

Clean Air Act (CAA). The comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, the CAA authorizes the U.S. Environmental Protection Agency to establish national ambient air quality standards to protect public health and public welfare and to regulate emissions of hazardous air pollutants.

Clean Water Act (CWA). The CWA establishes the basic structure for regulating discharges of pollutants into waters of the United States and regulating quality standards for surface waters.

Closure Plan. Set of measures designed to ensure that mining operations are developed and operated with a sound strategy and the financial resources necessary for eventual closure of the operation. A closure plan must include a guide to deactivate, stabilize, and perform long-term surveillance of waste management units or facilities.

Compensatory Mitigation. Establishment, enhancement, restoration, or preservation of natural resources to offset unavoidable adverse impacts from a project.

Compliance Monitoring. In a water quality management project, associated with meeting permit conditions based on ambient standards. Ongoing monitoring provides periodic water quality data, which are used to assess compliance.

Concentration. Separation and accumulation of economic minerals from waste rock, increasing the strength of aqueous solutions by evaporating part of their water.

Connected Actions. Actions that are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

- i. Automatically trigger other actions that may require an EIS.
- ii. Cannot or will not proceed unless other actions are taken previously or simultaneously.
- iii. Are interdependent parts of a larger action and depend on the larger action for their justification.

Construction. Building facilities that are necessary to the operation of the mine. This includes constructing the ore processing plant.

Consulting Parties. “Certain individuals and organizations with a demonstrated interest in the undertaking may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking’s effects on historic properties” (36 CFR Part 800, Subpart A, Section 800.2, “Participants in the Section 106 Process”).

Contact. The place or surface where two different types of rock meet.

Contact Water. Water with the potential to be contaminated as a result of contact with potentially acid-generating (PAG) material.

Contamination. The action of introducing hazardous substances (or excessive amounts of substances not usually hazardous) to the environment, causing negative environmental impacts.

Cooperating Agency. Any federal agency other than the lead agency, which has jurisdiction by law or special expertise with respect to any environmental impact involved in a major federal action significantly affecting the quality of the human environment. A state or local agency of similar qualifications (or, when the effects are on a reservation, a Native American tribe) may, by agreement with the lead agency, become a cooperating agency.

Council on Environmental Quality (CEQ). Established by Congress within the Executive Office of the President as part of NEPA, the CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives.

Criteria Pollutant. An air pollutant that is regulated by the national ambient air quality standards. USEPA must describe the characteristics and potential health and welfare effects that form the basis for setting, or revising, the standard for each regulated pollutant. Criteria pollutants include sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and two size classes of particulate matter – PM₁₀ and PM_{2.5}. New pollutants may be added to, or removed from, the list of criteria pollutants as more information becomes available.

Critical Habitat. For listed species, consisting of (1) the specific areas within the geographical area occupied by the species at the time it is listed, in accordance with the provisions of Section 4 of the Endangered Species Act (ESA), on which are found those physical or biological features (constituent elements) (a) essential to the conservation of the species, and (b) that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed, in accordance with the provisions of Section 4 of the ESA, upon a determination by the Secretary of the Interior that such areas are essential for the conservation of the species. Designated critical habitats are described in 50 CFR 17 and 226.

Crushing and Grinding. The process by which ore is broken into smaller pieces to prepare it for further processing.

Cultural Resources. Historic properties as defined by the National Historic Preservation Act, cultural items as defined by the Native American Graves Protection and Repatriation Act, archeological resources as defined by the American Indian Religious Freedom Act (ARPA), sacred sites as defined in Executive Order 13007 to which access is afforded under the ARPA, and collections and associated records as defined in 36 CFR 79.

Cultural Resources Management Plan (CRMP). The CRMP is a planning document that will aid the USACE and the Applicant in ensuring that activities conducted as part of the Project address cultural resource management issues and legal compliance requirements. This document also defines how Project effects on historic properties and unevaluated cultural resources will be mitigated. The CRMP will be implemented through the Project Memorandum of Agreement (MOA).

Cumulative Actions. Actions, that, when viewed with other proposed actions, cause cumulatively significant impacts and should therefore be discussed in the same impact statement.

Cumulative Effect/Impact. The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Cyanide. Cyanide is used in ore processing as part of the method to extract gold from the ore. The term *cyanide* includes any chemical compound that contains the cyano group (CN), which consists of a carbon atom triple-bonded to a nitrogen atom. Inorganic cyanides are generally salts of the anion CN⁻. There are many cyanide compounds—some are gases and others are solids or liquids. Those that can release the cyanide ion CN⁻ are highly toxic.

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Daylight Sound Level. The A-weighted decibel level for a 24-hour period with an additional 10 decibels (dB) imposed on the equivalent sound levels for night0time hours between 10 p.m. and 7 a.m.

Decibel (dB). A unit for expressing the relative intensity of sounds on a logarithmic scale, from zero for the average least perceptible sound to approximately 130 for the average level at which sound causes pain to humans. For traffic and industrial noise measurements, the A-weighted decibel (dBA), a frequency-weighted noise unit, is widely used. The A-weighted decibel scale corresponds approximately to the frequency response of the human ear and thus correlates well with the loudness perceived by people.

Degradation. Reduction or loss of the overall environmental quality, or the quality of an environmental component (e.g., water quality).

Deposit. A natural occurrence of a useful mineral ore in sufficient extent and concentration to be profitably mined.

Depressurization. The process of lowering the groundwater water level (and water pressure), generally by pumping out groundwater from surrounding wells, from the mine pit to allow excavation of a mine pit and removal of the ore. Also see “Dewatering.”

Designated Use. A regulation by water quality standards requiring that States and authorized Native American tribes specify appropriate water uses to be achieved and protected or “designated uses.” Appropriate uses are identified by evaluating the use and value of the water body for public water supply;

for protection of fish, shellfish, and wildlife; and for recreational, agricultural, industrial, and navigational purposes.

Detrimental. Causing damage.

Dewatering. The process of removing water from the mine in order to keep the work area dry. Also see “Depressurization.”

Dike (or Diabase Dike). A vertical or near-vertical mass of igneous rock that has forced its way upward through overlying materials.

Direct Effect/Impact. The effects of an action that are caused by the action and occur at the same time and place. See “Effect.”

Direct Runoff. Water that flows over the ground surface or through the ground directly into streams, rivers, and lakes.

Discharge. Outflow of surface water in a stream or canal. Discharge may come from an industrial facility and may contain pollutants.

Dispersal. Movement of organisms away from a location, such as their point of origin.

Dissolved Oxygen (DO). The amount of oxygen dissolved in an aqueous solution.

Diversion. A channel, embankment, or other man-made structure used to direct, convey, and control the flow of water from where it previously flowed.

Doré. Unrefined gold and silver bullion bars usually consisting of approximately 90 percent precious metals that will be further refined to almost pure metal.

Downgradient. At a lower point of elevation in relation to any fixed point with regard to the direction of drainage or flow.

Drainage. Artificial or natural removal of surface water or groundwater from a certain area.

Drawdown. Decrease in the elevation of the water surface in a well, local water table, or pressure head of an artesian well due to removal of groundwater or decrease in the aquifer's recharge.

Drought. A long period of abnormally low rainfall, especially one that adversely affects growing or living conditions.

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Easement. An interest in the land of another that provides the easement holder specified rights without actual ownership.

Economically Viable. Capability of developing and surviving as a relatively independent social, economic, or political unit.

Ecoregion. An area that is defined by its ecology; covers relatively large areas of land or water; and contains characteristic, geographically distinct assemblages of communities and species.

Effect. As used in NEPA, synonymous with *impact*. Effects include ecological (e.g., the effects on natural resources and on the components, structures, and functioning of ecosystems), aesthetic, historic, cultural, economic, social, and health impacts—whether direct, indirect, or cumulative, as described below. Effects may also include those resulting from actions that may cause both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems. Cumulative effects result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.

Electrowinning. Extraction of metal from a solution by electrochemical processes. Also called *electroextraction*.

Emergents. Erect plants that are rooted in water and grow above the water's surface.

Emission. The act of emitting, releasing, or discharging a substance to the natural environment (e.g., air pollutant emissions from a stationary or mobile source).

Endangered Species. Plants or animals that are in danger of extinction through all or a significant portion of their ranges and that have been listed as endangered by the U.S. Fish and Wildlife Service or National Marine Fisheries Service following the procedures outlined in the Endangered Species Act and its implementing regulations (50 CFR 424). (See "Threatened Species.") The lists of endangered species can be found in 50 CFR 17.11 (wildlife), 50 CFR 17.12 (plants), and 50 CFR 222.23(a) (marine organisms).

Endangered Species Act (ESA). Provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found. The lead federal agencies for implementing ESA are the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service. The USFWS maintains a worldwide list of endangered species. Species include birds, insects, fish, reptiles, mammals, crustaceans, flowers, grasses, and trees.

Environment. The physical, biological, and social conditions that exist within an area, including land; air; water; minerals; flora; fauna; social and economic values; and objects of historical, aesthetic, or cultural significance. The environment is the sum of all external conditions that affect an organism or community (human and natural) and ultimately determine its form and survival.

Environmental Consequences. The environmental effects of project alternatives, including the proposed Project; any adverse environmental effects that cannot be avoided; the relationship between short-term uses of the human environment; and any irreversible or irretrievable commitments of resources that would be involved if the proposal should be implemented. This is also a chapter in an environmental impact statement that addresses resources potentially affected by a proposed Project.

Environmental Impact Statement (EIS). A document required by NEPA that provides full disclosure to decision makers for projects that require federal actions. The document details the process through which a project was developed, includes consideration of a range of reasonable alternatives, analyzes the potential impacts resulting from the alternatives, and demonstrates compliance with other applicable environmental laws and executive orders.

Environmental Justice. The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. See “Executive Order 12898.”

Ephemeral Stream. A stream that flows only in direct response to precipitation.

Erosion. The process in which a material is worn away by a stream of liquid (water) or air.

Eutrophication. The process of nutrient enrichment in a water body. Eutrophication often results from nitrogen and phosphorous inputs from human activities such as sewage disposal and runoff from uplands. Such input stimulates algal blooms and bacteria growth, which contribute to depletion of oxygen in the water and anoxic conditions, and eventually lead to fish kills.

Executive Order (EO). Official proclamation issued by the head of the executive branch at some level of government. Most often applied to orders issued by the President, executive orders may also be issued at the state and local level.

Executive Order 12898 – *Environmental Justice for Low Income and Minority Populations.* Directs federal agencies to make achieving environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high adverse human health or environmental effects of their activities on minority and low-income populations.

Exploration. Prospecting, sampling, mapping, diamond drilling, and other work involved in searching for ore.

Extraction. The process of mining and removal of ore from a mine.

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Federal Emergency Management Agency (FEMA). The federal agency under which the National Flood Insurance Program (NFIP) is administered. In March 2003, FEMA became part of the newly created U.S. Department of Homeland Security.

Fill. Soil added to an area.

Floodplain. The lowlands and relatively flat areas adjoining inland and coastal waters and the flood-prone areas of offshore islands. Floodplains include, at a minimum, that area with at least a 1.0 percent chance of being inundated by a flood in any given year.

Flotation. A method of mineral separation in which a froth, created in water by a variety of reagents, floats some fine particles of crushed minerals whereas other minerals sink.

Freeboard. The vertical distance between the horizontal crest of the embankment and the reservoir water level.

Fugitive Emissions. Emissions that do not pass through a stack, vent, chimney, or similar opening where they could be captured by a control device; unintended releases. Sources of fugitive emissions include

pumps; valves; flanges; seals; area sources such as ponds, lagoons, landfills, piles of stored material (e.g., coal); and road construction areas or other areas where earthwork is occurring.

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Geographic Information System (GIS). A system of computer hardware, software, and geographic data designed to capture, store, update, manipulate, analyze, and display geographically referenced data.

Geologic Formation. A formally named rock stratum (a bed or layer of sedimentary rock with approximately the same composition throughout) or geological unit (a volume of rock or ice of identifiable origin and age range that is defined by the distinctive and dominant, easily mapped, and recognizable characteristics).

Geology. The science that relates to the earth, the rocks of which it is composed, and the changes that the earth has undergone or is undergoing.

Geosynthetic. Polymer-based products or other material designed to function as a liner or barrier to contain material or prevent erosion.

Geotechnical. Pertaining to the application of scientific methods and engineering principles to the acquisition, interpretation, and use of knowledge of materials of the earth's crust for the solution of engineering problems. It includes application of the science of soil mechanics and rock mechanics, and many of the engineering aspects of geology, geophysics, hydrology, and related sciences.

Grade. The classification of an ore according the desired or worthless material in it or according to the value. An ore that carries a great or comparatively small amount of valuable metal is called a high grade or low grade ore, respectively. In road construction, the term *grade* is used to designate slope, or the action of rearranging and relocating soil or other material with earth-moving equipment.

Green Class Overburden. Overburden with pyritic sulfur levels less than 0.2 percent that would be stored at several overburden storage areas. Of the total amount of overburden to be produced during the planned life of mining operations, the largest portion would be Green Class. See “Red Class Overburden” and “Yellow Class Overburden.”

Greenhouse Gas. Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and other fluorinated gases including nitrogen trifluoride and hydrofluorinated ethers.

Groundwater. Water below the ground surface in a zone of saturation. Related definition: Subsurface water is all water that exists in the interstices of soil, rocks, and sediment below the land surface, including soil moisture, capillary fringe water, and groundwater. That part of subsurface water in interstices completely saturated with water is called groundwater.

Groundwater Drawdown. Lowering of the groundwater level as a result of overuse (over-extraction), pumping, or other form of withdrawal of groundwater.

Growth Media. Generally applies to the surface portion of the soil and overburden that may be reused as soil.

-----H-----

Habitat. The place where a population (e.g., human, animal, plant, microorganism) lives and its surroundings, both living and non-living.

Hazardous. Involving or exposing to risk.

Hazardous Air Pollutants (HAPs). Air pollutants not covered by ambient air quality standards but with the potential for adverse human health effects or adverse environmental effects. Those specifically listed in 40 CFR 61.01 are asbestos, benzene, beryllium, coke oven emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride. More broadly, HAPs are any of the 189 pollutants listed in or pursuant to Section 112(b) of the Clean Air Act. Very generally, HAPs are any air pollutants that may realistically be expected to pose a threat to human health or welfare.

Hazardous Material. Any material that poses a threat to human health and/or the environment. Hazardous materials are typically toxic, corrosive, ignitable, explosive, or chemically reactive.

Heap Leaching. A process whereby gold is extracted by placing piles or “heaping” crushed ore on sloping impermeable pads and continually applying a weak cyanide solution that dissolves the gold. The gold-laden solution is then collected for gold recovery.

Heavy Metals. Any metallic chemical element with a relatively high density that is toxic or poisonous at low concentrations.

High Grade Ore. Rich ore; the best ore in a deposit.

Historic Property. Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior.

Hydraulic Conductivity. A measure of the rock’s or soil’s ability to transmit water when submitted to a hydraulic gradient.

Hydraulic Gradient. In an aquifer, the rate of change of total head per unit of distance of flow at a given point and in a given direction.

Hydrogeology/Hydrogeologic. The branch of geology that deals with the occurrence, distribution, and flow of groundwater.

Hydrology/Hydrologic. The science of water, standing or flowing, on or beneath the surface of the earth.

-----I-----

Impact. As used in NEPA, synonymous with *effect*. Effects include ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health impacts, whether direct, indirect, or cumulative. Effects may also include those resulting from actions with both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial. There are three types of effects: direct, indirect, and cumulative effects. See “Effect.”

Impoundment. A naturally formed or artificially created basin that is closed or dammed to retain water, sediment, or waste.

Indirect Impact. Impacts are caused by the action and are later in time or farther removed in action or distance but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems. See “Effect.”

Infiltration. The movement of water or some other fluid into the soil through pores or other openings.

Infrastructure. The services, equipment, and facilities needed for a community or project to function such as roads, sewers, water, and electrical lines.

Intensity. The severity of an impact.

Intermittent Stream. A stream or river that flows seasonally during rainy periods and stops during dry periods.

International Cyanide Management Code. A code of rules for use internationally in determining management practices for cyanide usage. The Standards of Practice address production, transportation, handling and storage, operations, decommissioning, worker safety, emergency response, training, and dialogue with the public.

Invasive Species. Non-native plants or animals whose introduction may cause economic or environmental harm.

Input-Output (I-O) Analysis. A means of measuring the flow of commodities and services among industries, institutions, and final consumers within an economy. I-O models capture all the monetary market transactions for consumption in a given time period, accounting for inter-industry linkages and the availability of regionally produced goods and services. The primary input for I-O analysis is the dollar change in purchases of products or services for final use; this is referred to as *final demand*. Industries respond to meet demands directly or indirectly (by supplying goods and services to those industries responding directly to final demand changes). The output is the value of production.

Irreversible. Impacts that cannot be undone or altered.

Irrecoverable. Resources that cannot be recovered.

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Johnny’s PAG. An overburden storage area that contains potentially acid-generating (PAG) material (greater than 0.2 percent pyritic sulfur). Because of the potential to form free sulfuric acids, PAG material storage areas require stringent environmental controls to treat associated contact water. Ore would be stored in Johnny’s PAG.

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Land Use. General term used to describe how land is or may be utilized or developed, whether for industrial, commercial, residential or agricultural purposes, or as open space.

Landscape. An aerial entity that is a composite of all the characteristics that distinguish a certain area on the earth's surface from other areas.

Leachate. A solution containing material picked up as the liquid passes through soil or rock.

Leaching. In mining, dissolving out soluble constituents by percolation, including seepage from surface facilities into the soil or groundwater.

Lead Agency(ies). The agency or agencies preparing, or having taken primary responsibility for preparing, the NEPA document.

Least Environmentally Damaging Practicable Alternative (LEDPA). The alternative least damaging to the environment as described in Section 404(b)(1) in the Clean Water Act.

Listed Species. Plants or animals that are in danger of extinction through all or a significant portion of their ranges and that have been designated or “listed” as endangered or threatened by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service following the procedures outlined in the Endangered Species Act and its implementing regulations (50 CFR 424). See “Endangered Species” and “Threatened Species.”

Lithologic Units. Units of rocks that are described in terms of structure, color, mineral composition, grain size, and other visible features. Lithologic units are used to correlate rocks over a distance of thousands of meters.

Long-Term Impacts. Effects that substantially remain beyond short-term ground-disturbing activities.

-----M-----

Maximum Contaminant Level (MCL). The designation given by U.S. Environmental Protection Agency to water quality standards promulgated under the Safe Drinking Water Act. The MCL is the greatest amount of a contaminant that can be present in drinking water without causing a risk to human health. For surface water or groundwater, the MCL may be defined by applicable surface water or groundwater water quality standards set by the applicable state.

Median. The middle value in a set of ordered data. The median is often used to express the typical (average) value of a group of water quality data because it is less influenced than the arithmetic average by outlying values routinely seen in such data.

Memorandum of Agreement (MOA). The document that records the terms and conditions agreed upon to resolve the adverse effects of an undertaking on historic properties.

Metal. A chemical element, compound, or alloy characterized by high electrical conductivity. Metal is a good conductor of heat and forms cations and ionic bonds with non-metals.

Midden. A deposit containing a variety of archaeological material, including animal bone, feces, shell, botanical material, vermin, pottery, and other artifacts associated with past human occupation.

Migration. Broad-scale movement of water or organisms (e.g., groundwater migration, pathogen migration).

Mill. The processing facility where ore is crushed and concentrated and thereafter undergoes physical or chemical treatment to extract gold from the ore to be smelted in doré bars. A temporary ore stockpile would be located next to this facility.

Milligram per Liter (mg/L). A unit of the concentration of a constituent in water or wastewater. It represents 0.001 gram of a constituent in 1 liter of water and is approximately equal to one part per million (ppm).

Mine. A place where minerals may be obtained, either by excavation or washing of the soil.

Mine Pit, Open Mine Pit. Large excavated open pit from which gold bearing ore is removed for processing.

Mineral. An inorganic compound occurring naturally in the earth's crust, with a distinctive set of physical properties and a definite chemical composition.

Mineralization. The presence of a specific substance in host rock. See "Mineral Reserve."

Mineral Reserve. Mineralization at a grade that is technically, legally, and economically feasible to mine. Designation of a mineral reserve is governed by Securities laws.

Mineralized Zone. Process by which minerals are introduced into a rock, resulting in an economically valuable or potentially valuable deposit.

Minimization. Actions taken to reduce effects to the smallest possible amount.

Mitigation. Actions taken to avoid an impact altogether, minimize the degree or magnitude of the impact, reduce the impact over time, rectify the impact, or compensate for the impact.

Mitigation Measure. Actions considered necessary to prevent, reduce and, where possible, remedy or offset any significant adverse impact on the environment.

Monitoring Plan. Set of measures designed to continuously or repeatedly collect comparative information or measurements in the environment to evaluate whether the performance of a project adheres to required standards and does not adversely impact the environment.

Monitoring Well. A well used to continuously or repeatedly collect comparative information or measurement of groundwater quality or quantity.

Multiplier Effect. An economic effect that an increase in spending produces an increase in income and consumption greater than the initial amount spent; the regional economic benefits that extend beyond the mine as local expenditures and labor income ripple throughout the economy based on linkages among industries and households.

-----N-----

National Ambient Air Quality Standards (NAAQS). Standards defining the highest allowable levels of certain pollutants in the ambient air (the outdoor air to which the public has access). Because USEPA must establish the criteria for setting these standards, the regulated pollutants are called criteria pollutants. Primary standards are established to protect public health; secondary standards are established to protect public welfare (e.g., visibility, crops, animals, buildings). See "Criteria Pollutant."

National Emissions Standards for Hazardous Air Pollutants (NESHAPs). Emissions standards set by the U.S. Environmental Protection Agency for air pollutants that are not covered by the national ambient air quality standards and that may, at sufficiently high levels, cause increased fatalities, irreversible health effects, or incapacitating illness. These standards are given in 40 CFR 61 and 63. NESHAPs are given for many specific categories of sources (e.g., equipment leaks, industrial process cooling towers, dry cleaning facilities, petroleum refineries). See “Hazardous Air Pollutants.”

National Environmental Policy Act (NEPA). A U.S. environmental law that established a U.S. national policy promoting enhancement of the environment and also established the Council on Environmental Quality. NEPA’s most significant effect was to set up procedural requirements for all federal government agencies to prepare Environmental Assessments (EAs) and Environmental Impact Statements (EISs). EAs and EISs contain statements of the environmental effects of proposed federal agency actions.

National Flood Insurance Program (NFIP). The program of flood insurance coverage and floodplain management administered under the Act and applicable federal regulations promulgated in Title 44 CFR, Subchapter B.

National Historic Preservation Act (NHPA). Federal legislation enacted for preserving historical and archeological sites in the United States. The Act is codified at 16 USC 470 et seq.

National Pollutant Discharge Elimination System (NPDES). A provision of the Clean Water Act that prohibits discharge of pollutants into waters of the United States unless a special permit is issued by the U.S. Environmental Protection Agency, a state, or where delegated, a tribal government on an Indian reservation.

National Register of Historic Places (NRHP). The nation’s inventory of known historic properties that have been formally listed by the National Park Service (NPS). The NRHP is administered by NPS on behalf of the Secretary of the Interior. NRHP listings include districts, landscapes, sites, buildings, structures, and objects that meet the set of criteria found in 36 CFR 60.4.

Natural Resources. The viable and/or renewable products of nature and their environments of soil, air, and water. Included are the plants and animals occurring on grasslands, rangelands, croplands, forests, lakes, and streams.

Neutralization. Reduction in acidity or alkalinity.

No Action Alternative. The alternative to the proposed Project where current conditions and trends are projected into the future without implementing the proposed Project.

No Effect. A determination that the proposed Project will have no effect whatsoever on the species and/or critical habitat, not a small effect or an effect that is unlikely to occur.

Non-Attainment Area. An area that the U.S. Environmental Protection Agency has designated as not meeting (not being in attainment of) one or more of the national ambient air quality standards for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants but not for others.

Non-Contact Water. Water in the Project area (e.g., rainfall/precipitation, runoff) that does not come into contact with potentially acid-generating (PAG) material or mine process operations.

Nongovernmental Agency (NGO). A legally constituted organization created by natural or legal persons that operates independently from any form of government.

Non-Point Sources. Pollution discharged over a wide land area, not from one specific location. These are forms of diffuse pollution caused by sediment, nutrients, organic, and toxic substances originating from land use activities that are carried to lakes and streams by surface runoff. Non-point source pollution is contamination that occurs when rainwater, snowmelt, or irrigation washes off fields, city streets, or suburban backyards. As this runoff moves across the land surface, it picks up soil particles and pollutants, such as nutrients and pesticides.

Notice of Availability (NOA). The Federal Register notice that announces the availability of a Draft or Final Environmental Impact Statement.

Notice of Intent (NOI). A notice that an EIS will be prepared and considered.

Nutrients. Organic or inorganic compounds essential for the survival of an organism. In aquatic environments, nitrogen and phosphorus are important nutrients that affect the growth rate of plants.

-----O-----

Open-Pit Mining. A mine pit that is entirely open to the surface.

Ore. A mineral deposit that has sufficient utility and value to be mined at a profit.

Ore Body. A sufficiently large amount of mineral and rock that can be mined economically.

Ore Stockpiles. Areas where gold-bearing ore is temporarily stored until it can be processed to separate the gold from the raw ore.

Overburden. Layers of soil and rock covering an ore deposit. Overburden is removed prior to surface mining the gold-bearing ore and may be replaced after the metallic ore has been removed for processing.

Overburden Storage Area (OSA). An area designated for storage of the overburden removed from the mine pit. Six OSAs would be used for Green Class overburden material containing low levels of pyritic sulfur (less than 0.2 percent) with a low potential to generate acid and produce acid mine drainage.

Overburden Stripping. Removing the layers of soil and rock covering an ore deposit.

Oxidation. A chemical reaction caused by exposure to oxygen that results in a change in the chemical composition of a mineral.

-----P-----

PAG Material. Potentially acid-generating material with greater than 0.2 percent pyritic sulfur.

Parts per Million (ppm). The number of “parts” by weight of a substance per million parts of water. This unit is commonly used to represent pollutant concentrations.

Passive Treatment System. A water treatment system that does not require continuous chemical inputs and takes advantage of naturally occurring chemical and biological processes to cleanse contaminated mine waters.

Perennial Stream. Parts of a stream or an entire stream that flows continuously and year-round.

Permeability. The property or capacity of a porous rock, sediment, or soil for transmitting a fluid.

pH. A measure of the relative acidity or alkalinity of a solution, expressed on scale from 0 to 14, with the neutral point at 7.0. Acid solutions have pH values lower than 7.0, and basic (alkaline) solutions have pH values higher than 7.0. Natural waters usually have a pH between 6.5 and 8.5.

Pit. The area of a surface mine from which the overburden and ore is removed, resulting in a hole in the ground.

PM_{2.5}. Air pollutants with a diameter of approximately 2.5 micrometers or less, small enough to invade even the smallest airways.

PM₁₀. Air pollutants with a diameter of approximately 10 micrometers or less.

PMP Event. “The theoretically greatest depth of precipitation for a given duration that is physically possible over a particular drainage basin at a particular time of year” (American Meteorological Society 1959).

Point Source. A stationary location or fixed facility from which pollutants are discharged; any single identifiable source of pollution (e.g., a pipe, ditch, ship, ore pit, factory smokestack).

Pollution. The introduction of contaminants into the natural environment that can cause adverse change.

Pollutant. A substance introduced into the environment that has undesired effects or adversely affects a resource.

Porosity. The ratio of the volume of all the pores in a material to the volume of the whole.

Prime Farmland. Land with the best combination of physical and chemical characteristics for producing food, feed, fiber, forage, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor. Land without excessive soil erosion and not committed to urban development or water storage.

Probability. The extent to which something is likely to occur.

Process Water. Any water used in the Mill facility for extracting gold from the ore, including tailings slurry and tailings storage facility reclaim water. This water is used within a fully closed-loop system during mine operations.

Project Area. The land within control of Haile Gold Mine, Inc. and that may be disturbed by mining activities.

Proposed Project. A plan that contains sufficient details about the intended actions to be taken, or that will result, to allow alternatives to be developed and the environmental impacts of the intended actions to be analyzed. This is typically advocated by the Applicant.

In a NEPA document, this is the primary action being considered. Its impacts are analyzed together with the impacts from alternative ways to achieve the same objective and the required No Action Alternative. Typically, the proposed Project is considered in the Draft EIS and then in the Final EIS. A preferred

alternative is identified that may be the proposed Project, one of the other alternatives, or some combination of these.

Public Comment/Review Period. The public comment period for the draft environmental impact statement (Draft EIS) must be no less than 45 days. If the EIS is unusually long, a summary of the Draft EIS may be circulated, with an attached list of locations where the entire Draft EIS may be reviewed (e.g., at local public libraries). Distribution of the complete Draft EIS should be accompanied by the announcement of availability in established newspapers of major circulation. The action may proceed after availability of the Record of Decision (ROD) is announced. The proponent must wait 30 days after the ROD is signed before implementing the action.

Pumping Well. A well installed around an active mine pit to lower groundwater levels so that mining can occur.

Purpose and Need. *Purpose*, a statement of goals and objectives that the proponent or agency intends to fulfill by taking action. *Need*, a discussion of existing conditions that need to be changed, problems that need to be remedied, decisions that need to be made, and policies or mandates that need to be implemented. In other words, it explains why the proponent or agency is proposing this action at this time.

-----R-----

Rare Species/Special-Status Species. Plants or animals that are restricted in distribution. The species may be locally abundant in a limited area or few in number over a wide area.

Reagent. A chemical or solution used to produce a desired reaction; a substance used in assaying or in flotation.

Reasonably Foreseeable. Actions that are likely to occur in the future that could have a cumulative direct or indirect effect on issues or resources of concern.

Receptor. Someone or something that receives a stimulus, such as noise.

Recharge. Replenishment of an aquifer by the addition of water through natural or artificial means.

Reclamation. Reconstruction and restoration of the landscape in which a mine operated in order to make it possible for the landscape to be once again safely used for other purposes.

Red Class Overburden. Overburden with a high potential to generate acid (potentially acid-generating [PAG] material) that would be stored in a special storage area called Johnny's PAG. Red Class overburden has greater than 1 percent pyritic sulfur. See "Yellow Class Overburden" and "Green Class Overburden."

Refining. The final stage of metal production in which impurities are removed from the molten metal.

Reservoir. A human-made or natural water body used for water storage.

Restoration. The act of repairing damage to a site caused by human activity, industry, or natural disasters. The ideal environmental restoration is to restore the site as closely as possible to its natural condition before it was disturbed.

Revegetation. The process of re-establishing plants during reclamation of disturbed areas.

Riparian Habitat. Areas adjacent to rivers and streams with a differing density, diversity, and productivity of plant and animal species relative to nearby uplands.

Risk. A measure of the probability that damage to life, health, property, and/or the environment will occur as a result of a given hazard. Risk is often assessed for human health and ecosystems as the probability that specific chemicals will cause harm to individual humans and populations of other biota.

Runoff. The portion of rainfall, melted snow, or irrigation water that flows across ground surface and is eventually returned to streams. Runoff can pick up pollutants from the air or the land and carry them to streams, lakes, and oceans.

-----S-----

Saprolite. Soft, thoroughly decomposed rock rich in clay.

Saturated. Unable to hold or contain any more moisture.

Scoping. An early and open process for determining the extent and variety of issues to be addressed and for identifying the significant issues related to a proposed Project (40 CFR 1501.7). The scoping process helps not only to identify significant environmental issues deserving of study but also to de-emphasize insignificant issues, narrowing the scope of the EIS process accordingly (40 CFR 1500.4[g]). Scoping also enables early identification of what issues do or do not require additional study (40 CFR 1500.5[d]).

The scoping process identifies relevant issues related to a proposed Project through involvement of all potentially interested or affected parties (affected federal, state, and local agencies; recognized Indian tribes; interest groups, and other interested persons) in the environmental analysis and documentation (32 CFR 651.48[b]).

Section 106. Provision in the National Historic Preservation Act that requires federal agencies to consider effects of proposed actions on properties listed in or eligible for listing in the National Register of Historic Places.

Section 404. The portion of the Clean Water Act addressing conditions under which authorization to fill waters of the United States may be permitted.

Species at Risk. A species identified by a state, federal, or local agency; the state heritage program; a non-governmental organization; or other organization that is recognized to be in need of conservation management in order to maintain existing limited populations, limited distributions, or declining populations.

Sediment. Topsoil, sand, and minerals washed from the land into water, usually after rain or snow melt.

Sediment Detention Pond. A water impoundment made by constructing a dam or an embankment, or by excavating a pit or dugout.

Seepage. The movement or quantity of a fluid that has moved through a porous material without the formation of definite channels.

Sensitive Receptor. Those populations that are more susceptible to or more likely to be disturbed or affected by noise than the general population. Sensitive population groups include children and the elderly. Some land uses are generally regarded as being more sensitive to noise than others due to the types of population groups, aesthetic considerations, or activities involved. Sensitive land uses generally include residences, hospitals, schools, child care facilities, senior facilities, libraries, churches, botanical and zoological gardens, parks, and correctional facilities.

Sensitive Species. A species identified by a state, federal, or local agency; the state heritage program; a non-governmental organization; or other organization that is recognized to be in need of conservation management in order to maintain existing limited populations, limited distributions, or declining populations.

Sink. A natural area or feature that acts as a reservoir of carbon dioxide (CO₂); the opposite of a CO₂ source.

Slag. Stony waste matter separated from metals during the smelting or refining of ore. *Slagging* is the production of slag.

Slurry. Fine particles concentrated in a portion of the circulating water and waterborne to a storage facility or treatment plant of any kind.

Sodium Cyanide. A solid, white, water-soluble inorganic compound with a high affinity for metals, and particularly for gold. The high affinity induces gold metal to oxidize and dissolve in air and water, facilitating the separation of gold from native ore. Sodium cyanide is added to the ore in the leach circuit to recover gold and silver. It is also used to promote removal of gold and silver from the carbon in the carbon stripping circuit.

Solid Waste. Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid waste also refers to liquids and gases in containers.

Species Abundance. In ecology, the relative distribution of the number of individuals of each species in a community.

Species of Concern. A species identified by a state, federal, or local agency; the state heritage program; a non-governmental organization; or other organization that is recognized to be in need of conservation management in order to maintain existing limited populations, limited distributions, or declining populations.

Species Richness. The number of species occurring in a particular area for a specified sampling period.

Stakeholder. Persons, groups, and organizations that can affect or be affected by the Project's actions.

Stockpile. An accumulation or heap of material, ore, or mineral formed to create a reserve for loading, processing, or other purposes. A soil stockpile is an accumulation or heap of soil that has been salvaged during initial disturbance of a surface so that it can be used in site restoration.

Stormwater. Surface water runoff from the land or other surfaces generated due to rainfall.

Structure. Human-made pump stations, reservoirs, channel improvements, canals, levees, and diversion channels.

Subbasin/Subwatershed. A portion of a larger basin or watershed within which surface water collects and drains through a stream or similar water conveyance.

Surface Mine. An excavation at the surface for extraction of ore.

Surface Water. All bodies of water on the surface of the earth and open to the atmosphere, such as rivers, lakes, reservoirs, ponds, seas, and estuaries.

Surface Water-Groundwater Interface. The interaction of surface water and groundwater.

Suspended Solids. When referring to water quality, the very small solid particles that remain suspended in the water. Excessive levels of suspended solids impair the drinkability of water and its suitability for aquatic life.

-----T-----

Tailings. The material byproduct of the gold extraction process. It is in the form of a slurry composed of powdery material and rejected liquids used in the gold extraction process.

Tailings Pond. A low-lying depression used to confine tailings from the mine operation. The prime function of the tailings pond is to allow enough time for heavy metals to settle out or for cyanide to be destroyed before water is either recycled back into the mill operation or treated and discharged.

Tailings Storage Facility (TSF). An engineered facility for long-term storage of tailings. The TSF will include an earth-filled berm enclosure to contain the tailings. The TSF is designed so that the liquids in the tailings slurry can drain out and be recovered for reuse.

Threatened Species. Any species of plant or animal that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and that has been listed as threatened by the U.S. Fish and Wildlife Service or National Marine Fisheries Service following the procedures set out in the Endangered Species Act and its implementing regulations (50 CFR 424). (See “Endangered Species.”) The lists of threatened species can be found at 50 CFR 17.11 (wildlife) and 17.12 (plants).

Toxic. Poisonous.

Toxicity. Deleterious or adverse biological effects elicited by a chemical, physical, or biological agent.

Traditional Cultural Property. A place eligible for listing in the National Register of Historic Places because of its association with cultural practices and beliefs.

Transmissivity. The rate at which water moves through a unit width of the aquifer under a unit hydraulic gradient.

Troy Ounce. The standard unit of weight for precious metals such as gold and silver. A troy ounce equals approximately 31.1 grams, and there are 14.58 troy ounces in 1 pound.

Turbidity. Haziness in air caused by the presence of particles and pollutants. Turbidity in water is described as a cloudy condition in water due to suspended silt or organic matter and is related to suspended solids.

-----U-----

Unavoidable Adverse Effects. Effects that cannot be avoided due to constraints in alternatives. These effects do not have to be avoided by the planning agency, but they must be disclosed, discussed, and mitigated, if possible.

Uncertainty. The degree to which the effects are likely to be highly uncertain or involve unique or unknown risks.

Underdrain. The drain under the tailings storage facility to capture tailings drainage.

Underground Mine. A type of mining required when rocks, minerals, or gemstones are too far underground to extract with surface mining.

Upland. Lands located upgradient topographically from defined wetlands.

U.S. Army Corps of Engineers (USACE). The lead agency for this Environmental Impact Statement.

-----V-----

Visual Resources. The components of the environment as perceived only through the visual sense.

-----W-----

Waste Rock. Rock within, around, or above the orebody with insufficient concentrations of metal for economic recovery that is removed to facilitate access to the ore.

Water Quality. The measure of the conditions of water relative to the requirements of one or more biotic species and/or any human need or purpose.

Watershed. The land area that drains water to a particular stream, river, or lake. It is a land feature that can be identified by tracing a line along the highest elevations between two areas on a map. See “Basin.”

Waters of the United States. As defined in 40 CFR 230.3(s), the term *waters of the United States* means:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, ...;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in this section;
6. The territorial sea; and
7. Wetlands adjacent to waters identified in paragraphs 1 through 6 of this section.

Wetlands. Those areas that are inundated by surface water or groundwater with a frequency sufficient to support, and under normal circumstances do or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands

generally include swamps, marshes, bogs, and similar areas (e.g., sloughs, potholes, wet meadows, river overflow areas, mudflats, and natural ponds) (10 CFR 1022.4).

Jurisdictional wetlands are those wetlands protected by the Clean Water Act. They must have a minimum of one positive wetland indicator from each parameter (vegetation, soil, and hydrology). The USACE requires a permit to fill or dredge jurisdictional wetlands.

Worst-Case Scenario. An analysis based on available information, using reasonable projections of the worst possible consequences.

-----Y-----

Yellow Class Overburden. Overburden with pyritic sulfur levels between 0.2 and 1 percent that would be used as pit backfill or stored at a special storage area (Johnny's PAG) for potentially acid-generating (PAG) material. See "Red Class Overburden" and "Green Class Overburden."

-----Z-----

Zoning. Demarcation of a planning area by ordinance into land-use zones and establishment of regulations to govern use of the area.

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