APPENDIX 2-E

Glossary

Glossary

This glossary defines the most important technical terms used in the Guidelines. It is designed to assist non-technical readers, and the definitions of terms are, therefore, of a "popular" nature.

Term	Definition
Acid Base Accounting (ABA)	Acid base accounting; a static test that defines the amounts, and relative balance, of potentially acid-generating and acid-neutralizing (or base) minerals in a sample.
Active Closure	Two year period when the majority of the mine infrastructure will be actively remediated, excluding water control structures, and active pumping of open pits will be initiated.
Active Layer	The layer of ground above the permafrost which thaws and freezes annually.
Acid Rock Drainage (ARD)	Acidic pH rock drainage due to the oxidation of sulphide minerals that includes natural acidic drainage from rock not related to mining activity; an acidic pH is defined as a value less than 6.0.
Addendum	Defined by the Nunavut Water Board to mean a "supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report".
Advanced Mineral Exploration	Any additional undertaking in which the proponent requires a Type A or Type B Water Licence to carry out the proposed activities.
Albedo	The amount of light reflected by a surface such as snow.
Aquifer	An underground layer of rock or soil that contains important amounts of water.
Archaeology	The scientific study of the material remains of the cultures of historical or pre-historical peoples.
Assessment Endpoint	Assessment endpoints are general statements about what is being protected. For example, protection of water quality, maintenance of self-sustaining and ecologically effective wildlife and fish populations, and continued opportunities for traditional use of these ecological resources may be assessment endpoints for surface water, wildlife, fish, and traditional land use.
Avifauna	Birds.
Backflooding	Refilling of drained and/or excavated area by flooding.
Bioaccumulation	The uptake and retention of contaminants by an organism from its environment.
Biochemical Oxygen Demand	A measure of the amount of oxygen consumed in the biological processes that break down organic matter in water. The greater the biochemical oxygen demand, the greater the degree of pollution.
Biodiversity	A measure of the variety of plants and animals in a particular habitat or ecosystem.
Borrow Pit	A pit from which material is taken for building roads and for similar activities.
Care And Maintenance	In respect of a mine, means the status of the facility when the Licensee ceases production or commercial operation temporarily for an undefined period of time.
Closure Criteria	Standards that measure the success of selected closure activities in meeting closure objectives. Closure criteria may have a temporal component (e.g., a standard may need to be met for a pre-defined number of years). Closure criteria can be site-specific or adopted from territorial/federal or other standards and can be narrative statements or numerical values.
Closure Goal	The guiding statement that provides the vision and purpose of reclamation. Attainment of the closure goal happens when the proponent has satisfied all closure objectives. By its nature, the closure goal is a broad, high-level statement and not directly measurable.

Term	Definition
Closure Objectives	Statements that describe what the selected closure activities are aiming to achieve; they are guided by the closure principles. Closure objectives are typically specific to project components, are measurable and achievable, and allow for the development of closure criteria.
Closure Options	A set of proposed alternatives for closing and reclaiming each mine component. The closure options are evaluated to determine the selected closure activity, which must be approved by the Nunavut Water Board.
Closure Principles	The four core closure principles are 1) physical stability, 2) chemical stability, 3) no long-term active care requirements, and 4) future use (including aesthetics and values). The principles guide the selection of closure objectives.
Coarse	Includes all coarse substrates (i.e., gravel, cobble, and boulder).
Contact Water	Any water that may be physically or chemically affected by mining activities.
Contaminant	1) any physical, chemical, biological or radiological substance in the air, soil, or water that has an adverse effect; and 2) any chemical substance with a concentration that exceeds background levels or which is not naturally occurring in the environment.
Cumulative Effects	The impacts of a development taken in combination with the impacts of other past, current, or reasonably foreseeable future developments.
Demography	The statistical study of populations, with particular reference to births, deaths, migratory movements, age, and sex.
Diversion	Water transfer from one watershed to another.
Duration	Duration is VC-specific and is defined as the amount of time from the beginning of an effect to when the effect on a VC is reversed, and is typically expressed relative to the Project development phases (usually in years). Duration has two components: the amount of time between the start and end of a Project activity or stressor (which is related to Project development phases: construction, operations, and closure), plus the time required for the effect to be reversed.
Ecosystem	The organisms of a natural community together with their environment.
Engagement	The communication and outreach activities a proponent undertakes with affected communities and Aboriginal organizations/governments prior to and during the operation of a project, including closure and reclamation phases.
Environmental Assessment (EA)	Used for the assessment of the environmental consequences (positive and negative) of a plan, policy, program, or project prior to the decision to move forward with the proposed action.
Esker	A winding ridge made of sand and gravel deposited by a melting glacier.
Explosives	Gunpowder, blasting powder, nitroglycerine, gun-cotton, dynamite, blasting gelatine, gelignite, fulminates of mercury or of other metals and every other substance made, manufactured or used with a view to producing a violent effect by explosion.
Faulting	Cracks or breaks within a body of rock, causing one part of the body of rock to slip or slide relative to the other.
Fines	Very small particles of rock, mineral, or sediment.
Frequency	Refers to how often an effect will occur and is expressed as isolated (confined to a discrete period), periodic (occurs intermittently, but repeatedly over the assessment period), or continuous (occurs continuously over the assessment period). Frequency is explained more fully by identifying when the effect occurs (e.g., once at the beginning of the Project).

Term	Definition
Geochemistry	The study of the chemical composition of the earth and the physical and chemical processes responsible for it.
Geology	The study of Earth in terms of its development as a planet. Commonly thought of as the study of rocks.
Geomorphology	The scientific discipline that studies the surface features of the Earth, including land forms.
Geotechnical	Relating to the application of engineering to geology.
Gradient	The angle of a slope, or its steepness.
Grains	The relative size of the particles composing a substance.
Geographic Extent	Geographic (spatial) extent refers to the area (or distance covered or range) of the effect to the measurement indicator, and is different from the spatial boundary (i.e., effects study area) for the effects analysis. The study area for the effects analysis represents the maximum area used for the assessment and is related to the spatial distribution and movement of VCs. Geographic extent is categorized as site (where applicable), local, regional, and beyond regional. The beyond regional scale includes cumulative residual effects from the Project and other developments that extend beyond the effects study area.
“Greenhouse” Gas	A gas released into the atmosphere, often by human activities such as burning fossil fuels, that increases the capacity of the lower atmosphere to trap heat from the sun, thereby contributing to global warming.
Humidify Cell Test (HCT)	A type of kinetic test in which a small sample (about 1 kg) is placed in an enclosed chamber in a laboratory, alternating cycles of moist and dry air is constantly pumped through the chamber, and once a week the sample is rinsed with water; chemical analysis of rinse water yields concentrations of elements and other parameters used to calculate reaction rates.
Hydrocarbons	Any substance containing carbon and hydrogen in various combinations (e.g., gasoline and oil).
Hydrology	The science that deals with the occurrence, circulation, distribution, and properties of the waters of the Earth, including their reactions with the environment.
Kinetic Test	A geochemical procedure for characterizing the chemical status of a sample through time during continued exposure to a known set of environmental conditions, such as a humidity cell.
Landfarm	Infrastructure that uses biological and physical processes to treat (remove contaminants) contaminated soil.
Land Owner	The responsible authority with administrative control and ownership of a type of land classified as crown land, commissioners land or Inuit Owned Land. a. Crown land is land belonging to Her Majesty or in respect of which Government has the power of disposition. In Nunavut, this power rests with Indigenous and Northern Affairs Canada. b. Commissions land is land belonging to the Commissioner for the Government of Nunavut; which typically is land within an established municipality administered by a Municipal Corporation and/or the Department of Community Government and Services (CGS) Inuit Owned Land are those lands vested in the Designated Inuit Organization (DIO) pursuant the Nunavut Land Claims Agreement. For this Project the DIO is the Kivalliq Inuit Association.

Term	Definition
Land Use Permit	a. For Crown land a Class A Permit or Class B Permit as required by the Territorial Land Use Regulations SOR/82-217, s.1; SOR/88-169, s.2 administered by AANDC Lands Department. b. For Inuit Owned Land's- Land Use Licence I, II or III or Commercial Lease I, II, III as defined by the DIO. c. For Commissioners land - a permit or lease as required by the Municipal Land Administration Policy.
Leachate	Water or other liquid that has washed (leached) from a solid material, such as a layer of soil or water; leachate may contain contaminants.
Leaching	The process by which a liquid (e.g., water) passes through a substance, picking up some of the material and carrying it to other places. Can occur underground in soil and rock, or above ground through piles of material.
Likelihood	The probability of an effect occurring and is described in parallel with uncertainty.
Limnology	The study of life in lakes, ponds, and streams.
Lithology	The description of the physical characteristics of a rock, often based on its colour, structure, mineral components, and grain size.
Long-term Active Care	A post-closure mine site is in long-term active care when sustained monitoring and maintenance of active facilities is required (e.g., for more than 25 years).
Magnitude	Magnitude is a measure of the intensity of an effect to the measurement indicator, or the degree of change caused by the Project relative to baseline conditions or a guideline value. Magnitude is often classified as negligible, low, moderate, or high. The number and definitions of scales of magnitude are specific to VCs. Where possible, magnitude is reported in absolute and relative terms.
Metal Leaching (ML)	Mobilization of metals into solution under neutral, acidic or alkaline conditions.
Model	A simplified representation of a relationship or system of relationships. A model uses calculation techniques to make estimates of an output parameter based on its relationship to the input parameters.
Nitrogen Dioxide	The result of nitrate oxide combining with oxygen in the atmosphere. Nitrate oxide is a gas formed by combustion under high temperature and pressure, for example in a vehicle engine. Nitrogen dioxide is a major component of photochemical smog.
Nunavummiut	The indigenous inhabitants of Nunavut.
Ore	A rock or mineral that contains a valuable constituent, such as diamonds or a metal, for which it is mined and processed.
Non-contact Water	Means the runoff originating from areas unaffected by mining activity that does not come into contact with developed areas.
Palaeontology	The study of life in the past as recorded by fossil remains.
Passive Closure	The breaching of remaining water retention infrastructure.
Passive Long-term Care	Occasional monitoring, coupled with infrequent maintenance or repairs that takes place following reclamation in the post closure phase of the mine site. Many mine sites require ongoing passive care, which can be an acceptable practice.
Periphyton	Very small plants that live attached to a surface in freshwater but do not move around.
Permafrost	Permanently frozen ground.
Phenology	The study of periodic phenomena in plants, such as the time of flowering in relation to climate.

Term	Definition
Phosphorus	A poisonous, nonmetallic chemical element. The key nutrient influencing plant growth in lakes. Total phosphorus is a measure of the amount of phosphorus both in solution (reactive phosphorus) and in particulate form.
Phytoplankton	Very small plants that float or drift in lakes.
Plume	A visible or measurable discharge of a contaminant from a given point of origin. Plumes may occur in water or air.
Pore	A very small hole, such as may occur in some types of rock.
Post-Closure	The period of time, considered to be up to 30 years, following the shut-down of a mine or other facility, during which monitoring of its effects should be continued.
Post-Project Audit	An evaluation after a development of all of its environmental and social impacts and of the mitigation measures applied to it.
Potentially Acid Generating (PAG)	Rock with an NP/AP ratio less than 2 as determined by static tests, as defined by MEND (2009). PAG rock can also be operationally defined based on the results of static testing such as ABA and NAG testing.
Progressive Reclamation	Selected closure activities that can be taken at advanced mineral exploration and mine sites before permanent closure. Progressive reclamation takes advantage of cost and operating efficiencies by using the resources available from an operation to reduce the overall reclamation costs incurred. It enhances environmental protection and shortens the timeframe for achieving the closure objectives.
Proponent	The individual or organization that wishes to carry out a development project.
Quarries And Granular Borrow Sites	Site from where soils and aggregates are obtained for use in earthworks construction.
Raptor	A bird that hunts by snatching its prey.
Reclamation	Means the process of returning the mine sites and affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities.
Reclamation Research	Literature reviews, laboratory or pilot-scale tests, engineering studies, and other methods of resolving uncertainties. Proponents conduct reclamation research to answer questions pertaining to environmental risks; the design of reclamation research plans aims to provide data and information which will reduce uncertainties for closure options, selected closure activities, and/or closure criteria.
Remediation	The removal, reduction, or neutralization of substances, wastes, or hazardous material from a site in order to prevent or minimize any adverse effects on the environment and public safety now or in the future.
Reversibility	After removal of the Project activity or stressor, reversibility is the likelihood that the Project will no longer influence a VC at a future predicted time (e.g. reversible or irreversible). The time frame is provided for reversibility (i.e., duration) if an impact is reversible. Permanent impacts are considered irreversible. Available scientific information and experienced opinion may predict that the residual effect is irreversible or the duration of the residual effect may not be known, except that it is expected to be extremely long and well beyond the temporal boundary of the Project. In this case, the residual effect is classified as irreversible. In terms of the socio-economic environment, the manageability of impacts is considered rather than their reversibility. Where appropriate, the evaluation identifies the resources that may be diverted to facilitate recovery.

Term	Definition
Riparian	The land-water interface. Also refers to organisms living or located on the bank of a stream, river or lake.
Risk Assessment	Analysis of potential threats and options for mitigation for a given site, component, or condition. Risk assessments consider factors such as risk acceptability, public perception of risk, socio-economic impacts, benefits, and technical feasibility. It forms the basis for risk management.
Rock Glacier	Boulders and fine material cemented by ice about a meter below the surface.
Rock Heave	The movement of rocks as a result of freezing and thawing.
Rotary-wing Aircraft	A helicopter.
Sacred Site	A place on the land created or used by Inuit spiritual leaders in the past for religious ceremonies, such as: a platform or formation leading to an “altar”; a hill, mountain, stone, boulder, river, lake, or Inukshuk designated as a sacred site; an offering place where people might plead for good fortune and well- being, often found along the coast, but also inland; a place where an unusual event might have happened, or an event that led to a death or a story of survival; a place known to Elders in legend where a significant story occurred (see Ittarnisalirijiit Conference on Sacred Sites and Spiritual Places, Rankin Inlet, 1996).
Salvageable Materials	Decommissioned materials which can be sold or reused elsewhere.
Security Deposit	Funds held by the Crown (Indigenous and Northern Development Canada) or land owner that can be used in the case of abandonment of an undertaking to reclaim the site or carry out any ongoing measures that may remain to be taken after the abandonment of the undertaking.
Seismicity	The phenomenon of earth movements, in extreme cases in the form of earthquakes, and their geographic distribution.
Selected Closure Activity	The closure and reclamation activity chosen from the closure options for each Project component.
Stakeholders	Industry, federal agencies, the territorial government, Aboriginal organizations/governments, land owners, affected communities, and other parties with an interest in the Project.
Sulfur Dioxide	A gas formed when sulfur burns in the presence of oxygen, as for example in the burning of gasoline or diesel fuel in a vehicle engine. It is a major air pollutant that is corrosive and harmful to plants and animals, especially trees.
Tailings Pond	An engineered structure for storing those portions of washed, processed or milled ore that are regarded as too poor to be treated/processed further.
Talik	Permanently unfrozen ground in regions of permafrost. Usually applies to a layer that lies above the permafrost but below the active layer.
Thermal Inversion	A phenomenon in which a layer of cold air above a layer of warm air close to the ground prohibits the dispersion of atmospheric pollution, such as vehicle exhausts.
Thermal Stability	The degree to which something, such as permafrost, has the capacity to remain at the same temperature over time.
Toponym	A place name.
Toxin	A poisonous substance.

Term	Definition
Traditional Knowledge	Means the practical knowledge that has been gathered through the experience of living in close contact with nature and has been passed along or communicated orally, and handed down from generation to generation.
Type A Water Licence	A Type A water licence is required if the use is of a type set out in column 2 of Schedule 2 and satisfies a criterion set out in column 5 in respect of an undertaking set out in column 1 of the Nunavut Water Regulations SOR/2013-69. (Note: despite definition of Type B water licence item a), a Type A licence is the appropriate licence for a use of waters if a Type A licence is required for another use of waters, or a deposit of waste, in respect of the same undertaking.)
Type B Water Licence	A Type B Water Licence required if a. The use is of a type set out in column2 of Schedule 2 and satisfies a criterion set out in column 4 in respect of an undertaking set out in column 1, or b. The use satisfies the criterion set out in paragraph 4(1)(a) but does not satisfy one or more criterion set out in paragraphs 4(1)(b) to (d) of the Nunavut Water Regulations SOR/2013-69
Valued Components (Vcs)	VCs are defined as the biophysical, economic, social, and cultural aspects of the environment potentially affected by the Project, and associated assessment endpoints and measurement indicators.
Vascular Plant	A plant with a particular type of tissue for carrying water and mineral salts and for assisting the plant to stand upright.
Waste Rock	All unprocessed rock materials that a mining operation produces.
Zooplankton	Very small animals that float or drift in lakes.

Note: The terms “impact” and “effect” are used interchangeably in the present text.