

## Morrison Copper-Gold Project Application: Screening Evaluation Table

Section in ATOR	EIS Guidelines/Application Terms of Reference Requirement	Additional information or clarification required in Application
<b>3.0 Project description</b>	The Application will describe the Project facilities including all on-site and off-site components and the activities associated with them for all relevant stages of the Project development, construction, operations/maintenance, and decommissioning/reclamation and post-closure in sufficient detail to allow a meaningful assessment of the Project effects.	The Application does not meet the information requirements as per the TOR.  Application does not describe the Project facilities in sufficient detail. Please ensure that Application fully and accurately describes all water management structures, including the proposed the effluent diffusers (total number, location), diversions, settling and polishing pond(s), water treatment plant and associated structures.
<b>3.2 (d) Location of project and mapping</b>	The Application will: (d) contain maps, plans, figures and photographs at appropriate scales, including air photos and satellite images if appropriate, that indicate the regional setting of the Project and the site layout of on-site and off-site Project components and activities;	The Application does not meet the information requirements as per the TOR.  Ensure that the site layout of on-site and off-site project components and activities includes maps of routes for employee transportation, and mine-related construction and hauling, as well as layout for water treatment structures including the treatment plant.
<b>3.5 Mine development</b>	(f) concentrate stockpile and load-out;	The Application does not meet the information requirements as per the TOR.  Describe and provide map(s) for the concentrate stockpile and load-out.
	(i) water management activities and structures including diversions, mine dewatering, treatment and storage;	The Application does not meet the information requirements as per the TOR.  Include descriptions of the polishing ponds, diffuser(s), routing of all drainage channels, and water treatment facilities.
<b>3.5.5 Permanent access to the mine site</b>	The Application will describe the preferred access route and all relevant design criteria. The Application will also evaluate terrain mapping, hazard mapping, road design parameters, use requirements, construction scheduling, engineering design deliverables, stream crossing structures and design. The Application will describe	The Application does not meet the information requirements as per the TOR.  Clarify the stream crossing design. Clarify the proposed borrow sources for road construction, the use by First Nations and others of any pre-existing roads, the owner of the road, and any road use

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	proposed mitigation measures if terrain hazards are identified along the access road. The Application will also identify proposed borrow sources for road construction, the use by First Nations and others of any pre-existing roads, the owner of the road, and any road use agreements, and a summary of potential design upgrade requirements.	agreements.
<b>3.5.7 Transport of concentrate to port</b>	The Application will describe the transport of concentrate from the mine-site to a loadout facility (railhead or the Port of Stewart). The Application will identify the anticipated average number of truck trips per day (both to the port and returning from the port) and the anticipated load and fuel capacity of the trucks used to transport the concentrate. The Application will also provide a review of background dust levels along the proposed transportation corridor.	The Application does not meet the information requirements as per the TOR.  Include the anticipated number of truck trips per day (both to the port and returning from the port). Describe the staging area(s) for concentrate at the Babine Lake barge crossing.
<b>3.8 Decommissioning activities</b>	The Application will:  (h) describe the monitoring program for permanent infrastructure, including tailings storage facility and its components, after mine closure;  (i) provide a list of rationale and alternatives that were considered and rejected including costs and associated environmental issues;	The Application does not meet the information requirements as per the TOR.  The Application must include the monitoring program for water treatment plant and associated discharge infrastructure.  The Application does not meet the information requirements as per the TOR.  Provide a list of rationale and alternatives that were considered and rejected including costs and associated environmental issues.
<b>3.9 Assessment of alternative options</b>	The Application will include a description of alternative procedures, designs or component locations considered for the Project including:  (f) waste rock storage;	The Application does not meet the information requirements as per the TOR.  The Application must provide an adequate alternatives assessment for mine waste rock management which provides a clear analysis of economical, environmental and technical aspects and justification for the management strategy chosen. As required in the TOR, this must include a discussion of "where alternatives that would mitigate impacts on the environment and/or enhance the socio-economics of the Project are deemed economically or

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		technically non-feasible, the economic, environmental and technical analysis to determine feasibility will be summarized in the Application.”
	(l) long-term collect-and-treat systems.	The Application does not meet the information requirements as per the TOR.  Section 15.6 deals with alternatives for waste rock storage, not the collect-and-treat system required. Describe the alternatives considered for the design and implementation of a long-term collect-and-treat system.
	The Application will include a rationale for the waste and water management strategies chosen, including a discussion of mitigation requirements (e.g. covers, collection and treatment, etc.), monitoring and maintenance requirements, short and long-term environmental risks and liability, and financial costs.	The Application does not meet the information requirements as per the TOR. See 3.9 (f) above.
<b>5.3 Geology and ML/ARD</b>	The Application will contain:  (d) water chemistry for all toxicity samples, where available;	The Application does not contain this information as is required in the TOR.  The Application must include water chemistry for all toxicity samples, where available. Identify where complete information is not available.
	(g) a discussion of possible worst case and median case scenarios for ML/ARD potential, including a worst-case kinetic test to capture potential worst-case MLARD from exposed pit walls  (n) static ML/ARD tests will be conducted to characterize the ML/ARD potential of disturbed materials (waste rock, ore, overburden), including construction materials such as roads, berms, dams, lay-downs, etc	The Application does not meet the information requirements as per the TOR.  There is insufficient ML/ARD characterization and testing of the materials to be disturbed, including the final pit wall material and the waste rock. There is incomplete data with which to assess the possible worst-case scenario for the lag time to onset of acidic conditions. (See memo, C. Stewart, 09/10/21)

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<b>5.6 Hydrology and surface water quality and quantity</b>	The Application will describe the baseline surface water quality including physical characteristics for all potentially affected waters in the Project area (e.g., Morrison Creek), as well as potential reference areas for environmental effects monitoring.	The Application does not meet the information requirements as per the TOR.  The Application must provide baseline characterization of water quality, sediment, and aquatic resources for Nakinilerak Lake, the lakes / wetlands on Stream 10 and for the area of Morrison Lake adjacent to the low grade ore stockpile. In the case of stream 10, data from another stream is required for TSF water quality modeling purposes.
	(f) compare current and historic water quality data, where possible, and include in the interpretation reference to improvements in detection limits and sampling quality assurance	The Application does not meet the information requirements as per the TOR.  Provide information on comparison of historic water quality (i.e. pre 2004) and description of improvements in detection limits found.
<b>5.8 Aquatic biology and fisheries</b>	(b) describe fish (species and life stage) use, sediments, benthic invertebrates, periphyton, and habitat characteristics of all watercourses that could be affected by Project components	The Application does not meet the information requirements as per the TOR.  Describe the habitats of benthic invertebrates and periphyton that could be affected by project components.
<b>6.0 Assessment of project effects, mitigation measures, and significance of residual effects</b>	The Application will report on the effects resulting from the Project on the physical, chemical and biological components of the environment following proposed mitigation. The Application will identify monitoring programs during all phases for all environmental components included in this section subject to requirements of regulatory agencies during operational and post-closure phases. For each category of effects in this section, the Application will describe the potential environmental effects of the Project on resources identified in TEK and TU studies, providing the results of TEK and TU studies have been released by Lake Babine Nation	The Application does not meet the information requirements as per the TOR.  Describe the potential environmental effects of the Project on resources identified in TEK and TU studies. If this information is not available, indicate why, as per the TOR conditions regarding First Nations information requirements.
<b>6.1 Atmosphere and climate</b>	The Application will also describe:  (a) the effect of climate warming and climate variability on mine design and impact assessment;	The Application does not meet the information requirements as per the TOR.  Provide information on the potential impacts that changing climatic conditions, resulting in increased precipitation at the project site, may have on the infrastructure and receiving environment. Please include the effects

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	(f) the Project's sensitivity to changes of specific climate and related environmental parameters, including total annual rainfall, total annual snowfall frequency and/or severity of precipitation extremes and stream-flows.	of increasing precipitation in the summary of site water balance during operations and closure. Include a discussion of the impacts of short-duration, high-intensity events. Include an assessment of the predicted 10% uncaptured seepage and the volumetric increases due to climate change, and the subsequent potential increase in contaminant loadings. Provide an analysis of how this scenario would impact the efficacy of mitigation strategies. (See memo, C. Stewart, 09/10/21)
<b>6.3 Geology and ML/ARD</b>	If engineered cover systems are proposed, the Application will:  (dd) assess the expected performance and long-term effectiveness under the expected range of climatic conditions; and  (ee) describe monitoring and maintenance requirements and contingency plans.	The Application does not meet the information requirements as per the TOR.  Please provide an assessment of expected performance and long-term effectiveness of the cover on the waste rock dump under the expected range of climatic conditions.  Clarify the monitoring, maintenance and contingency plans for ML/ARD for waste rock dump.
	If drainage collection and treatment is proposed as a mitigation strategy for the Project, the Application will:  (ff) contain a conceptual design including location, characterization of influent and effluent chemistry and flow, and capital and operating costs;  (gg) a discussion of the effectiveness of the drainage collection and holding system and conceptual design information on the treatment process including predicted reagent use;  (hh) assess the predicted performance under the expected range of flow and climatic conditions;  (jj) describe the operating, monitoring and maintenance requirements to ensure successful treatment is sufficient to achieve long-term environmental protection requirements.	The Application does not meet the information requirements as per the TOR.  (See memo, K. Bellefontaine, 09/10/21)

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	(ii) describe conceptually the sludge disposal plan	<p>The Application does not meet the information requirements as per the TOR. (See memo, K. Bellefontaine, 09/10/21)</p> <p>The Application must describe the sludge management system and environmental ramifications of subaqueous discharge. Conceptual plans for land-based sludge disposal (conceptual design including location, capacity, etc) must be provided in the application and this alternative should also be carried through the alternatives analysis.</p>
<b>6.6 Hydrology and surface water quality</b>	<p>The Application will outline the effects on surface water quality from proposed Project activities using the numerical water model. The Application will provide a detailed assessment and prediction for all site water discharges including volumes, water quality, discharge structures and location, potential impacts on the receiving environment and the description of any treatment processes. The characterization will include a consideration of changing ML/ARD influences over time. Geochemical modeling will be presented in a clear and transparent manner and the assumptions and rationale used to estimate water quality will be explained.</p> <p>The Application will identify potential effects of the Project on surface water quantity and quality. Effects conclusions will be based on predicted and modeled water quality of all waste streams and containment ponds throughout the Project, including (where applicable) mine water, seepage, surface runoff and collection ponds, process plant discharges, the open pit dewatering pond and sewage treatment facility.</p>	<p>The Application does not meet the information requirements as per the TOR. (See memo, K. Bellefontaine, 09/10/21)</p> <p>Provide a detailed assessment and prediction for all site water discharges, including water treatment plant, seepage from the WRD / low ore stockpile and seepage from the TSF, to all potentially affected waterbodies.</p>
<b>6.8 Aquatic biology and fisheries</b>	<p>The Application will identify potential effects on aquatic life, fish and fish habitat during all phases of the Project and explain how these will be avoided or minimized or addressed through appropriate mitigation measures. Aquatic life includes: benthic invertebrates, periphyton and</p>	<p>The Application does not meet the information requirements as per the TOR.</p> <p>Please provide information on the potential effects on aquatic biology, fisheries, and aquatic habitat related to the effluent diffuser(s) installation and discharge of water into Morrison Lake from the pit and treatment plant, reduced stream flows particularly during winter lowflow periods, and</p>

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	plankton.	seepage from the TSF.  If there would be flow reductions to Nakinilerak Lake and stream 6070 from the north seepage pond and dam, these potential impacts and residual effects should be addressed in the body of this application and the assessment data (fish productivity) should be included in the Baseline Appendices.
<b>6.18 Access and infrastructure</b>	The Application will identify potential effects on existing social, institutional and community services, transportation facilities, infrastructure (e.g., transportation safety), and permanent changes to the infrastructure and services arising from the Project.	The Application does not meet the information requirements as per the TOR.  Describe the potential effects related to the transportation route(s), including a description of the public roads will be used to access Hwy 118 and associated commitment to design an acceptable access point.
<b>8.0 Cumulative effects</b>	The Application will include a discussion of potential cumulative effects related to:  (k) potential effects on downstream water users (e.g., Fort Babine and others);	The Application does not meet the information requirements as per the TOR.  Describe the potential effects of decreased water quality on downstream water users.
<b>9.1 Construction and operational Environmental Management Plans</b>	The Application will describe general approaches to individual EMPs and include preliminary outlines of EMPs required during construction and operation. Preliminary outlines for EMPs will be developed in the following areas:  (c) Water Management Plan, including an outline of drinking water source protection measures, monitoring plans, and contingency plans in the event of worst-case situations;  (d) Morrison Lake Water Quality Protection Plan;	The Application does not meet the information requirements as per the TOR.  Describe drinking water source protection measures.  The water quality protection EMP does not address Morrison Lake.
<b>9.2 Habitat Mitigation and Compensation Plan</b>	The Application will include habitat impact mitigation and compensation plans, including a fish habitat compensation plan (FHCP) to a level acceptable to Department of Fisheries and Oceans, if such are determined to be required. The Application will describe the implications of such plans on the environment and other species (e.g. a fisheries compensation plan	The Application does not meet the information requirements as per the TOR.  Provide a table of projected HADDs (including any impacts from effluent diffusers and reduced flow) and projected habitat units gained by the proposed compensatory ponds. If detailed HADD/Compensation values are not available at this time, the section should provide a general range of expected HADDs and a specific maximum area that can be constructed in

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	altering migratory bird habitat). A wildlife and fisheries/aquatic assessment will be completed that identifies impacts and prescribes preliminary impact mitigation and compensation measures. For fish, a detailed FHCP with design drawings will be required if necessary to satisfy Section 35(2) of the <i>Fisheries Act</i> .	this reach.
<b>9.3 Closure, decommissioning and reclamation</b>	The Application will: (f) estimate costs of decommissioning, closure and reclamation;	The Application does not meet the information requirements as per the TOR.  Provide estimates of the in-perpetuity costs of operating a collect-and-treat system including operation costs for reagent usage, power, labour and maintenance.
	(f) describe how the proposed treatment system will meet point of compliance requirements;	The Application does not meet the information requirements as per the TOR.  Include predictions of water quality exiting the water treatment plant and entering Morrison Lake It should also be recognized that several parameters are estimated to be elevated in pit lake waters (e.g. sulphate, nitrate, manganese and selenium) that are poorly treated in lime neutralization systems.
	(h) describe the physical and geochemical ramifications of land-based or subaqueous deposition of treatment sludge, if long-term collection and treatment is utilized; and	The Application does not meet the information requirements as per the TOR. (See memo, K. Bellefontaine, 09/10/21)
<b>Other</b>		EAO requires that the comments, clarifications, and information requests regarding alternatives assessment collect and treatment, and predictions of water quality contained in the attached memorandum dated October 21, 2009 from the Ministry of Energy, Mines, and Petroleum Resources be addressed.
<b>Other</b>		EAO requires that the comments, clarifications, and information requests regarding metal leaching/acid rock drainage, water balance and climatic conditions, collect and treatment, and water quality predictions contained in the attached memorandum dated October 21, 2009 from the Ministry of Environment – Environmental Protection Division be addressed.