

ANNEX 2 – Clarifications or Recommendation for the Goliath Gold Project Environmental Impact Statement (IR #2)

REC #	TMI ID	IR-1 #	Project Effects Link to CEAA 2012	Reference to EIS guidelines	Reference to EIS (including appendices)	Context and Rationale	Clarification or Recommendation
REC-01	145 147 162	WL(1)-02 WL(1)-04 WL(1)-19 AC(1)-216	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat 5(1)(a)(iii) Migratory Birds 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes	Reference to EIS guidelines: Part 2, Section 9.1.2	Reference to EIS: EIS Section 5.9.2.1 - 5.9.2.4, Table 5.9.1; Appendix G Section 9.1.2, Table 9.5, Figures 9.4 - 9.7; Appendix R Executive Summary, Section 2.2	Context and Rationale: - In WL(1)-02, the Agency requested clarification of the Project footprint and the associated impacts to wildlife habitat. Understanding the extent of the Project footprint is important to assess Project effects on habitat for migratory bird, species of interest to Indigenous groups and SAR. - In TMI_145-WL(1)-02, the proponent did not provide a boundary or description for Project site/footprint, referring to an undefined “development footprint” or “operations area” in figures and tables. It is unclear how the “development footprint” or “operations area” relate to the Project site. - Based on EIS Figure 3.0-1A, the “development footprint” presented in the EIS figures as well as TMI_145-WL(1)-02_Figures 1a, 1b, 2a and 2b, does not include all project components; it is missing the effluent discharge infrastructure, the process water pipeline, fire breaks (if applicable) and the diversion channel for Blackwater Creek Tributary 2. - Table 3 in TMI_145-WL(1)-02 was provided to breakdown the area of the Project footprint components by the existing wildlife habitat. The total area in this table (316 ha) does not match the “Project footprint” (188 ha), presented in EIS Section 3.0. In addition, EIS Section 6.1.3.1 states the “operations area” covers 310 ha, and Table 2 in TMI_145-WL(1)-02 states the “Project footprint” will cover 4.30 square kilometres. - Clearly defining the Project footprint is necessary to understand its effect on habitat for species at risk (SAR), migratory birds and species of interest to Indigenous groups, as well as the current use of lands and resources for traditional purposes.	Specific Question/ Request for Information: A. Change the existing footprint of the project to include all project components within the boundary, including but not limited to the following: - effluent discharge infrastructure; - process water pipeline; - fire breaks (if applicable); and - diversion channel for Blackwater Creek Tributary 2. B. Update figure 3.1-1A according to the response to Question A. C. Provide a glossary of terms that might be used to refer to the project footprint throughout the revised EIS.
REC-02	172	AE(1)-10	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions	Reference to EIS guidelines: Part 2, Section 10.1.3	Reference to EIS: Section 6.21.4, Appendix J-2	Context and Rationale: Appendix J-2, Figures 6 to 19 show contour plots from the operations phase, in areas outside of the Property Line. The response to IR# TMI_169C indicates that “for safety and security reasons, access to the operations area would be restricted throughout the active life of the Project.” From Figure 6.21.4-1, it appears that access will be allowed in some areas inside of the Property Line throughout the life of the Project, and access to the operations area itself may be allowed during the construction phase (see IR# MARC-AIR-03). Any locations within the Property Line where access will be allowed for traditional use of lands at any phase of	Specific Question/ Request for Information: A. Update Figures 6 to 19 of Appendix J-2 to include any areas within the Property Line where access will be allowed during any phase of the Project. It may be necessary to prepare two sets of figures – one for the construction phase, and one for the operations phase. Ensure that any updates from question D of IR# MARC-AIR-03 are incorporated, if necessary.

						the Project must be included in these contour plots, to understand potential effects to human health from air quality.	
REC # REC-03	TMI ID: 168, 169	IR-1 #: AE(1)-06, AE(1)-07	Project Effects Link to CEAA 2012: 5(1)(c)(i) Aboriginal Peoples Health/ socio-economic conditions	Reference to EIS guidelines: Part 2, Section 10.1.3	Reference to EIS: Section 6.6.4; Appendix J-5.	Context and Rationale: Particulate matter is a non-threshold pollutant and can cause health effects at levels below the applicable standard. Receptors will be exposed to elevated particulate matter levels as a result of the proposed project. Therefore, additional mitigation measures should be used to adequately protect human health. PM _{2.5} , PM ₁₀ , and NO ₂ should be reduced to as low as reasonably achievable, as these are non-threshold pollutants. The Canada Wide Standards, advocate “keeping clean areas clean” and “continuous improvement” in air quality.	Specific Question/ Request for Information: As appropriate, when updating the HHRA, note that Health Canada recommends mitigating negative impacts to air quality where exceedances or near-exceedances of air quality objectives and guidelines are anticipated or where potential human health impacts are predicted.
REC # REC-04	TMI ID: n/a	IR-1 #: n/a	Project Effects Link to CEAA 2012: 5(1)(c)(iii) Current Use of Lands and Resources for traditional purposes	Reference to EIS guidelines: Part 2, Section 10.1.2, Section 10.1.3	Reference to EIS: Figure 6.5.4-3	Context and Rationale: Figure 6.5.4-3 of the revised EIS is illegible and does not include a legend. It is unclear what the orange portion in the middle of the operations area conveys. The Agency would like to confirm whether the orange portion represents the area where light trespass is predicted to be above zero, as this would correspond to the comment in Section 6.5.4 of the revised EIS, which states that “based on the modelling, it is highly unlikely that light originating from the Project site would, or could, be measurable beyond the property boundaries.”	Context and Rationale: A. Provide a new figure 6.5.4-3 with a clear legend. B. Clarify whether the orange portion on the map represents the area where light trespass is predicted to be above zero
REC # REC-05	TMI ID: n/a	IR-1 #: n/a	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat	Reference to EIS guidelines: 10.1.2	Reference to EIS:	Context and Rationale: The proponent has not provided a detailed effluent plume delineation model. A model of the estimated effluent plume delineation is needed to allow for a complete understanding of the anticipated changes the project may cause to the environment. The effluent plume delineation model is needed to inform the Environmental Effects Monitoring (EEM) program in the Metal and Diamond Mining Effluent Regulations (MDMER). Under the MDMER, the extent of the one percent effluent plume is used to determine if a mine is required under EEM to conduct a fish survey and/or a benthic invertebrate community survey downstream of the Mine’s final discharge point. If the one percent effluent plume is less than one percent at 250 metres downstream, then a fish survey is not required under the MDMER. If the one percent effluent plume is less than one percent at 100 metres downstream, then a benthic invertebrate community survey is not required under the MDMER. Modeling the extent of the one percent effluent plume in the EA stage is useful to show the expected extent of the Exposure Area for EEM studies to be conducted	Specific Question/ Request for Information: Provide a detailed effluent plume delineation model to estimate the effluent concentration in Blackwater Creek downstream of the final discharge point. Describe the modelled extent of the 1% effluent plume.

						under the MDMER.	
REC # REC-06	TMI ID: n/a	IR-1 #: n/a	Project Effects Link to CEAA 2012: Choose an item.	Reference to EIS guidelines:	Reference to EIS: Appendix Q page13 Appendix II page 6	Context and Rationale: Various spots in the EIS and appendices make reference to Wabigoon lake designated as a Specially Designated Water (SDW)in FMZ5. As of recently, SDW have been eliminated.	Specific Question/ Request for Information: Please remove the references to Wabigoon Lake designated as a Specially Designated Water.
REC # REC-07	TMI ID: n/a	IR-1 #: n/a	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat	Reference to EIS guidelines: 9.1.2 Biophysical Environment, Terrestrial Environment-Geology and Geochemistry, Acid Rock Drainage and Metal Leaching	Reference to EIS: Appendix K: Geochemistry Evaluation Section 1.4.2 P1-4	Context and Rationale: The Main Zone is composed of well-defined pyritic quartz-sericite schist (MSS) separated by less-altered biotite-feldspar schist (BMS). Sulphide mineralisation and local visible gold occurs mainly within the leucocratic bands but occasionally it is localized in the melanocratic bands enriched with biotite and chlorite. The sulphide (mineral) content of the mineralised zone is generally 3 to 5 % but locally is up to 15 % (by volume). High sulphide zones within the deposit that will be processed and subsequently deposited as tailings could lead to rapid unpredicted onset of acidic weathering conditions, reducing the predicted time of onset of acid drainage. Additional information is required to understand these potential risks and determine if the proponent's plans to mitigate them will be effective.	Specific Question/ Request for Information: Given the risk of rapid unpredicted onset of acid weathering conditions, NRCan recommends that the proponent should provide a plan that includes tailings desulphurization of the top layer of the tailings most prone to sulphide oxidation so that acid drainage onset is limited until they can apply a dry cover during closure. If the proponent does not consider this a viable option, the proponent must explain how they intend to ensure that the tailings will not become acid generating prior to emplacement of a dry cover during closure.
REC # REC-08	TMI ID: n/a	IR-1 #: n/a	Project Effects Link to CEAA 2012: 5(1)(a)(i) Fish and Fish Habitat	Reference to EIS guidelines: EIS Guidelines 5.1 - Water Resources - groundwater	Reference to EIS: EIS Section 5.6 Page PDF 47	Context and Rationale: The proponent does not provide sufficient information about the distribution of the hydrogeological model units. To ensure the model methodology is clear, and in order for NRCan to ensure validity of the model, a number of maps need to be added. This information is important, because it will make it easier to determine the relationships between the units in the model. These relationships between units in the model have an impact on flow and transport, and thus the model results and on understanding the potential environmental effects of the project.	Specific Question/ Request for Information: NRCan recommends that the proponent should provide the spatial distribution of the thicknesses of the various units of the 3D model on the different maps. The units are Clay, Basal Sand, Sand-Clay/Silt-Sand, Sand and Gravel, Shallow Bedrock, Intermediate Bedrock, and Deep Bedrock. For each of the maps, overlay surface water bodies, private wells and monitoring wells, as well as the mining facilities.