Unit 103 – 4622 Greig Avenue, Terrace, British Columbia, Canada, V8G 1M9
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Re: Public Comment on the Red Chris Mine Block Cave Application for an Environmental Assessment Certificate Amendment

Dear Environmental Assessment Office (EAO),

SkeenaWild Conservation Trust works throughout northwestern BC to conserve freshwater systems, salmon populations, and the human and animal communities that depend on these resources. SkeenaWild recently published an investigative report (the SkeenaWild Report) based on scientific and technical assessment of Red Chris Mine monitoring and technical reports and environmental data (Berchtold & Tuzlak 2025). Our report details numerous long-standing environmental risks and impacts at Red Chris Mine, largely caused by shortcomings in oversight by BC regulators during the mine's Environmental Assessment, permitting, and continued monitoring and enforcement. The SkeenaWild Report can be found at https://skeenawild.org/new-report-highlights-red-chris-mines-impacts/ and will be referenced in our comments below.

Please find below our comments on Newmont's Application for an Amendment to the Red Chris Mine Environmental Assessment Certificate to allow a transition to block cave mining and an increase in ore production rate (the Application). Our recommendations to require additional information from, or consideration by, Newmont and/or the EAO are in bold.

1. *Important risks and uncertainties with the Application remain*

We acknowledge that underground mining will reduce key environmental risks compared to open pit mining by reducing acid-generating waste production, thereby reducing contaminated mine seepage and acid rock drainage (ARD) potential. We understand the option for early mine closure is available; however, we also see the benefit in maximizing ore extraction from an already disturbed site. However, after reviewing the Application, we have identified several risks and uncertainties with the expansion proposal that require further assessment.

a. Subsidence from block cave mining may induce seismic events and mobilize landslides in geohazard risk areas surrounding the mine, such as the landslide complex near Kluea Lake. The Application acknowledges multiple uncertainties related to project effects on terrain instability, including whether or not project-induced seismicity will reach the Kluea Lake landslide complex. The Application has not addressed the possibility for landslides or debris slides to affect fish habitat in the vicinity of unstable terrain areas. **The EAO must require Newmont to provide additional information on the block cave expansion's potential seismic hazards and potential effects of terrain instability (i.e., landslides and debris slides) on fish and fish habitat.**

b. The mine's demand for water during the expansion's operations will increase to support increased ore production rates. If the addition of the tailings thickener and other proposed water recycling techniques are insufficient, this may lead to additional freshwater extractions from groundwater or surface water. **The EAO must require Newmont to provide additional information describing contingency water supply plans and what the impacts to aquatic ecosystems of those plans might be.**
c. Accelerated ore production and tailings deposition under the block cave expansion will lead to sulphate, copper, and selenium levels peaking earlier in the Quarry Creek and Trail Creek watersheds, with concentrations exceeding BC Water Quality Guidelines for the protection of aquatic life (WQGs). The SkeenaWild Report and Red Chris' own Aquatic Effects Monitoring Reports finds that mine environmental monitoring data indicate selenium accumulation is already occurring in the tissues of resident fish in mine-affected lakes (WSP 2023; Berchtold & Tuzlak 2025). Additionally, previous assessments have predicted impacts will occur to fish in the mine's receiving environment even before selenium water concentrations reach the WQG of 0.002 mg/L (Golder 2019). Therefore, a hastened timeline of water contamination from the block cave expansion, especially of selenium, could have negative consequences for fish health. **The EAO must require Newmont to provide additional information describing potential impacts to resident fish of accelerated downstream water contamination, specifically including an assessment of project effects on selenium bioaccumulation that takes into account the site-specific effects thresholds presented in Golder (2019).**
d. Several gaps and uncertainties in the Application may result in inaccurate or underpredicted effects of a shift to block cave mining. Understanding of the mine site is still limited by a lack of robust data regarding streamflow and groundwater-surface water interactions, leading to uncertainty in predictions of block-caving effects on both surface water quantity and quality. The geochemical properties of the deeper ore in the block cave are not well understood and the Application does not account for the likelihood that the natural attenuation currently reducing nitrate and selenium concentrations in groundwater will cease at some point, particularly when acid generation commences (SRK 2021), leading to higher loads of these contaminants reaching the receiving environment. Lastly, the Application does not mention whether or how block cave mining could impact Camp Creek water quality, which the SkeenaWild Report points out is a potentially mine-influenced source of downstream water contamination to Trail Creek that has not been properly characterized. **The EAO must require Newmont to provide additional information describing: i) an improved understanding of groundwater-surface water interactions, ii) a water quality effects assessment considering scenarios in which natural attenuation of nitrate and selenium is reduced or ceases to occur, and iii) assessment of project effects on surface water in Camp Creek and how these might affect Trail Creek and Kluea Lake.**

2. *Pre-existing issues relating to mine pollution and tailings risks must be addressed*

Significant pre-existing issues exist at the Red Chris Mine, many of which are detailed at length in the SkeenaWild Report. Broadly, these issues include: i) seepage from waste rock and tailings, ii) physical and chemical effects to fish and fish habitat, and iii) issues with tailings dam stability and preparations for a potential dam failure. The SkeenaWild Report demonstrates that Red Chris Mine has historically suffered from inaccurate predictions and has not been required by BC regulators to adequately address existing mine risks and impacts. Additionally, the Red Chris Independent

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Tailings Review Board stated that the pursuit of mine expansion "could be a distraction to the [tailings engineering team] and dilute the resources available to focus on the significant and high priority challenges that are currently facing the design and operation of the existing [tailings impoundment]" (Newcrest 2022, pg. 12). Such concern is also relevant for the mine's current challenges related to waste rock seepage and downstream aquatic ecosystem impacts. This expansion proposal is a critical opportunity to change this trend and ensure that existing mine issues are addressed. **Accordingly, the EAO must require Newmont to address the following issues as a condition of expansion approval:**

a. **Uncertainties related to the mine's water balance and seepage patterns, including quantifying the distance that tailings and waste rock seepage has spread into the receiving environment**
b. **Gaps in environmental monitoring and mitigation thresholds, including the need to:**
    i. **increase the spatial extent and temporal replication of sampling for hydrology, groundwater, surface water, sediment, and other aquatic indicators**
    ii. **perform tissue chemistry analysis of fish tissue samples collected in the mine receiving area for *all* metals, and**
    iii. **reduce mitigation thresholds (i.e., Site Performance Objectives and Trigger Response Plan thresholds) to be closer to background levels and/or proven no-effect thresholds.**
c. **Mine-related aquatic impacts in Trail Creek, White Rock Canyon Creek, Kluea Lake, and Ealue Lake, such as impacts to water quality, sediment quality, and invertebrate and fish tissues. This should specifically include addressing potential mine impacts to Trail Creek via Camp Creek, and selenium accumulation in rainbow trout tissue in Ealue Lake and Kluea Lake.**
d. **Water discharge and long-term treatment plans, including identifying water treatment technologies that will be appropriate for selenium removal prior to discharge.**
e. **Issues related to tailings dam construction, failure modelling, and emergency preparations, including the need to:**
    i. **further assess any dam stability risks related to the presence of glaciolacustrine layers in the dam foundations,**
    ii. **address challenges related to obtaining sufficient construction materials to achieve target dam raises, especially considering the currently proposed increases to tailings deposition rates,**
    iii. **address challenges related to potential downstream water quality impacts from the use of cyclone sand to construct tailings dams, including the implementation and activation of seepage capture systems,**
    iv. **address dam stability risks related to greater-than-expected tailings seepage,**
    v. **ensure water modelling and contingency planning accounts for the high uncertainties associated with the mine's water balance predictions,**
    vi. **improve dam inundation modelling to more accurately depict the potential impacts to downstream communities and populations at risk, and quantifies the extent and effects of tailings runout and chemical**

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effects of potentially acid-generating tailings to the extent current technology allows, and

vii. **increase the level of detail in the mine's emergency response plans related to a tailings dam failure, including discussing and preparing these plans with downstream communities, mine workers, first responders, and relevant government agencies.**

3. *Additional public engagement opportunities are needed*

Red Chris is located in close proximity to creeks and lakes where people camp and fish. Local communities consume rainbow trout from these mine-affected lakes, and a large-scale tailings failure could impact wild salmon habitat in the Stikine River. However, public engagement on the Red Chris Mine block cave expansion has been limited to a single opportunity to comment on the Application, with no opportunity provided to engage on what issues are addressed by the application (i.e., the Application Information Requirements) or on the EAO's interpretation and recommendations following review of the Application (i.e., the Amendment Assessment Report). This is an inappropriate level of public engagement given the scale, complexity, and existing and potential future environmental risks of the project. **The EAO must provide the following additional public engagement opportunities: i) a public comment period on the Amendment Assessment Report and ii) the opportunity to form a Community Advisory Committee.**

4. *Cumulative effects of future mine expansions must be considered*

Approval of this initial block cave expansion will open the door to additional phases of underground mining at Red Chris that would require additional tailings storage and result in cumulative environmental effects that are challenging to predict. The cumulative effects of such a phased development approach must be considered during assessments of the current expansion proposal. **The EAO must require Newmont to provide additional information assessing the potential cumulative effects of phased mine expansion.**

5. *The expansion must not be "fast-tracked" at the expense of preventing mine impacts*

The BC government's plan to expedite, or "fast-track", the Red Chris block cave expansion risks overlooking the multiple pre-existing challenges facing the mine as well as risks and uncertainties associated with the Application. **Assessment and approvals of the proposed expansion must not be expedited at the expense of robust consideration and precautionary planning related to existing and future environmental risks.**

6. *Public benefits and risks related to critical vs. precious metals mining must be considered*

Though not acknowledged in the Application, the mine's block cave Pre-Feasibility Study (Stewart et al. 2021) describes that the block cave ore reserves at Red Chris contain marginally increased copper grades but markedly increased gold grades compared to the open pit reserves, indicating that the mine will produce an increasing ratio of gold to copper as it expands. Gold is a luxury commodity, not a critical mineral; therefore, it provides less public benefit than copper. The job of the EAO is to weigh the public benefits and risks of proposed projects, of which the relative benefits and risks related to ore distribution of a project is a relevant consideration. **In its evaluation of this Application and all other proposed mine projects, the EAO must consider**

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the reduced public benefit of gold and other precious metals compared to critical minerals production.

7. *Mechanisms to confirm the project contributes to renewable energy must be required*

We understand that despite increasing gold grades in the underground ore, Newmont plans to maintain the focus of the Red Chris processing mill on copper extraction. The Application states that one of the primary rationales of the project is the "Continued and increased production of copper, a critical mineral, to address global industrial demand needed to support the global energy transition to low-carbon societies" (SLR 2024, pg. A-7). The BC government also points to domestic production of critical minerals to support the renewable energy transition as a rationale to "fast-track" this and other mining development projects. The EAO will undoubtedly consider the public benefits of critical mineral production in its assessment of the Application; however, the Application does not describe any mechanisms by which the end use of the copper produced at Red Chris will be traced to ensure that it is indeed put toward renewable energy technologies. In fact, most of BC's mined materials get shipped overseas for refining and can then be sold anywhere for any use. **The EAO and the Province must develop mechanisms by which to hold Newmont and other mining proponents of "critical minerals" mines accountable to the end use of their products.**

Thank you for receiving our comments. We look forward to an improved Amendment Assessment process for the Red Chris Mine Block Cave Expansion.

Sincerely,

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