Grand Council of the Crees (Eeyou Istchee)
Grand Conseil des Cris (Eeyou Istchee)
Cree Nation Government
Gouvernement de la Nation Crie

Impact Assessment Agency of Canada
Agence d'évaluation d'impact du Canada

Quebec City, December 14, 2020 **BY EMAIL**

Mr. Jean-Sébastien Lavallée
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SUBJECT: Amendment to the Letter Sent to the Proponent on November 16, 2020 Concerning the Rose Lithium-Tantalum Mining Project – Responses to the Second Information Request (March and May 2020)

Dear Mr. Lavallée,

On November 16, 2020, the Joint Assessment Committee sent you a letter of non-concordance concerning certain responses to the Second Information Request presented in the following document.

> WSP, 2020. *Rose Lithium-Tantalum Mining Project – Responses to the Second Information Request of the IAAC.* Report prepared for Critical Elements Lithium Corporation. 162 pages + appendices.

This letter replaces the letter of November 16, 2020 and reiterates the information missing from the above-mentioned document, which is necessary for the conduct of the analysis by the Committee and the expert departments. Certain details were added. The letter also contains the clarifications from the Committee and the expert departments further to the in-depth review of the response document cited above, including the preliminary responses shared with the Committee on November 30, 2020, so that you could provide more details.

Note that no further information beyond what is specified in the Final Guidelines for the Preparation of an Environmental Impact Statement of December 2012, including the Addendum of August 2016, is requested in this letter.

Question CCE 4
Alternatives - Energy Sources

In Question CCE 4, the proponent was asked to incorporate the main air pollutant emissions (NO_2, CO, PMT, PM_{10}, $PM_{2.5}$, SO_2 and NH_3), as well as any other relevant pollutant, into the analysis and selection of energy sources.

On the one hand, the proponent responded that greenhouse gas (GHG) emissions were not the only factor studied and refers to Table CEAA-5a (*Responses to the CEAA's Questions and Comments*, WSP, December 2019), in which economic and technical criteria are presented on the line entitled “Realism of the scenario”. However, GHGs are not the only factors to consider in terms of environmental impact. The impacts of the pollutants, including the main air pollutants, should also be analyzed in addition to GHGs.

On the other hand, the proponent responded that the inclusion of the main air pollutants according to the energy sources envisioned [TRANSLATION] “must be assessed only if fuel is used, and would add little to the analysis grid”. The proponent's response seems to indicate that no fuel source would be used on the site, but it adds in the same sentence that [TRANSLATION] “this would just provide the difference between diesel and natural gas”. Yet according to Table CEAA-5a (WSP, December 2019), the energy sources considered that would supply the mine site in terms of fuels are biomass and natural gas. Diesel and propane are not mentioned in this table. Moreover, according to the description of the project, electricity will be used for most of the stationary equipment, while the buildings will be heated with liquefied natural gas.

In short, the proponent was asked to perform an analysis, accounting for all the direct or indirect aspects of the alternatives that could contribute to the impacts that will be associated with each option. Therefore, this involves integration into the analysis of the pollutant emissions for each of the potential energy sources (in addition to GHGs and other criteria already integrated). According to the proponent’s responses, these alternatives could be biomass and fossil fuels (natural gas, propane and diesel). For example, the analysis grid and the decision matrix should integrate an estimate or an order of magnitude of the emissions quantities for each of these energy sources considered so that they can be assessed.

The proponent must specify which fuel sources would be used on the site and redo the analysis of the alternatives by integrating the pollutant emissions for each potential energy source.

Question CCE 10 B
Air Quality Monitoring - Compliance with Sensitive Receptor Standards and Addition of NO2

In its response, the proponent explained that in the absence of site-specific data, a second approach was used to assess an initial concentration in the mine site area. It used nitrogen dioxide (NO_2) remote sensing measurements. It concludes that the assessment of the NO_2 concentrations presented in Response CEAA-60 *(Responses to the CEAA's Questions and Comments*, WSP, December 2019) presents a conservative picture based on the initial concentration considered. A more accurate assessment of the initial concentration showed that no exceedance of the standard is expected at the Cree camp.

Comment:
According to Environment and Climate Change Canada (ECCC), the approach based on NO_2 remote sensor measurements to assess an initial concentration in the mine site area should not be used. Indeed, this technique does not allow measuring of low NO_2 concentrations, and the measurements taken at a larger scale cannot be extrapolated to a smaller scale because the error would be too significant. For this reason, ECCC instead recommends using generic concentrations recommended by Quebec's Ministère de l'Environnement et de la Lutte contre les changements climatiques for projects in remote areas. Only the presentation and interpretation of results accounting for this initial concentration are acceptable.

Question CCE 11 A
Air Quality Monitoring - Compliance with Sensitive Receptor Standards and Addition of NO_2

In its response, the proponent presented an update of the dust management plan, including the air quality monitoring program. This update includes monitoring of particulate matter ($PM_{2.5}$ and PM_{10}) and a description of all the sampling methods and analysis frequencies. For crystalline silica, the proponent proposes a sampling frequency of once every 15 days, adjustable according to the results. According to the experts, a closer sampling frequency would ensure better information gathering. The experts recommend a closer collection frequency, starting with once every six days, followed by an adjustment depending on the results obtained.

The proponent must assess the option of committing to increase the follow-up sampling frequency so as to allow better information gathering.

Question CCE 12
Air Quality Monitoring - Toxic Gases (CO and NO_2) During Blasting, Dust, PM2.5, PM10 and Total and Fine Particles
The proponent states in its response that [TRANSLATION] “the effectiveness of the mitigation measures will be verifiable by continuous monitoring of particulate matter, which will then be applied”. In Table 2 of the *Ambient Air Sampling Plan* presented in Appendix Q-7BIS (*Responses to Additional Questions from the MELCC*, WSP, February 2019), fine particulate matter ($PM_{2.5}$) will be monitored continuously. Yet according to the dust management plan and the response to Question CCE 11, continuous monitoring is anticipated only if monitoring by sampling showed concentrations higher than the air quality standards.

The proponent must clarify if there is an intention to implement a continuous monitoring plan for particulate matter. If not, explain.

Question CCE 18
Effects of Road Transport
On page 25 of the Response to the Second Information Request, the predicted noise levels are presented for different distances. However, the information provided does not make it possible to determine if the human receptors are located within or beyond a 55-metre distance from the road. The traffic distribution over a 24-hour period is also absent. Road traffic can have an impact on the human receptors near roads, because the proximity of a noise source influences noise perception and sensitivity to noise is higher during sleep periods.

Moreover, on page 23 of the Response, the proponent indicated that 24 one-way truck trips (12 return trips) are expected per day during the construction phase and 68 one-way trips (34 return trips) in the operations phase (Critical Scenario). However, on page 25, the proponent indicated that, for its analysis of the ambient noise level, it considered 48 one-way trips per day (24 return trips) during construction and 136 one-way trips per day (68 return trips) during operation. The proponent also determined the potential increase in the mean noise level caused by the increase in road transport, but without determining its effects.

The proponent must:

i) Determine the minimum distance between the components and the Nemiscau-Eastmain-1 road. Use this distance to estimate the noise levels and the percentage of Highly Annoyed persons (%HA). Provide these new estimates.

ii) Calculate the minimum distance that would be necessary between the camps and the roads that would be used for the project to allow compliance with the noise-related human health effects indicators relevant to the context of this project

(daytime level (Ld), nighttime level (Ln) and daytime and nighttime level (Ldn) (including a 10-decibel adjustment to account for nighttime noise) and %HA).

iii) Identify the periods of the day when a traffic increase is anticipated.

Iv) Confirm that 24 one-way truck trips (12 return trips) are expected per day during the construction phase and 68 one-way trips (34 return trips) in the operations phase (Critical Scenario). The proponent must also confirm that the effects on ambient noise were analyzed with these figures. In the negative, the proponent must redo this analysis and provide it with the right figures.

v) Assess the expected potential effects on ambient noise of the increased traffic on the road network at an appropriate distance from the project. The proponent must determine and justify this distance.

Question CCE 25 A, D, E and G
Environmental Risks Associated with Tantalum

A) The proponent must consider that tantalum dissolved in water is adsorbed to colloids and particles. The response provided is based entirely on the dissolved tantalum content, which is indeed very low, instead of the measurement of total tantalum in the water. The propensity of tantalum to be adsorbed, although this limits aqueous exposure to fish and other aquatic organisms, will result in an accumulation in sediments and a possible risk for benthic invertebrates and benthivorous fish.

The Committee acknowledges the proponent's commitment to monitor the effluent if the dissolved tantalum is higher than 0.1 µg/L. By measuring the total tantalum, as required by the *Metal and Diamond Mining Effluent Regulations*, it is very likely that the tantalum will exceed the threshold of 0.1 µg/L in the effluent. Faced with this contingency, the proponent must propose water treatment or management practices limiting the tantalum releases to the lowest possible levels. The proponent must also confirm if the commitment to monitor the effluent is added to the environmental monitoring program.

The proponent must also confirm whether it undertakes, for this monitoring program, to measure the natural tantalum concentrations in the groundwater and surface water, and in the sediments. If not, explain. The proponent must also assess the option of including a commitment in this monitoring program to participate in the development of a freshwater quality criterion for protection of aquatic life and studies on the solubility of tantalum in natural water. If not, justify.

D) and E) The proponent must consider the total tantalum (colloïdal and particulate) in its dispersion model, as explained in A). For question E) specifically, the

proponent must account for tantalum in the treatment process sludge, tailings and waste rock in its dispersion model.

G) The proponent reiterated that co-disposal without a sealing barrier of the waste rock, tailings and treatment sludge met the mining industry requirements for mining waste management, particularly those of the Global Industry Standard on Tailings Management of the International Council on Mining & Metals, published in August 2020. However, the experts consider that little information is available to date on the mobility and toxicity of tantalum and that preventive measures must be taken to minimize the risk to the environment. Moreover, during leaching tests serving to determine the risk associated with tailings, the proponent only measured the dissolved tantalum and not the tantalum associated with colloids and particles, as explained in A). Tailings leaching is therefore underestimated.

According to Directive 019 (2012) and Schedule 2 of Quebec's Soil Protection and Contaminated Sites Rehabilitation Policy, criteria indicative of soil contamination are not published or established for all the existing parameters. The list provided is therefore neither exhaustive nor limiting. The user shall report all the quantified parameters, even if the grid does not provide criteria for these parameters, as in this case for tantalum. The new Global Industry Standard on Tailings Management published last August recommends minimizing the risks to the environment and the public. The Tailings Guide of the Mining Association of Canada also suggests considering protection of the environment.

The proponent, even though it provides for close monitoring of the final mining effluent, must consider installing a sealing barrier at this co-disposal pad and, in the negative, must provide justification.

Question CCE 26 A
Low-Level Streamflows

In the Response to the Second Information Request, the value of zero litres per second was assigned to the selected streamflows (Table 2-3 of Appendix CCE-26) of watersheds no larger than five square kilometres. The methodology based on hydrographic region 09 of Nord-du-Québec is acceptable due to the northern location of the watersheds and the insufficiency of historical hydrometric data.

To validate the estimates, the proponent must indicate the monitoring that will be deployed to assess the long-term trend of the low-level streamflows (for example, the frequency and location of the flow measuring stations).

Question CCE-26 B
Low-Level Streamflows

Clarification 1

Table 2.6 (Appendix CCE-26 of the Response to the Second Information Request) shows the project's impact on the low-level streamflows with the chosen alternative at four discharge points. At point “A1 + M1”, flow reductions down to -100% (zero flow) are indicated. Also, in Appendix CCE-27, it is mentioned that the effluent of the water treatment unit (WTU) flows intermittently, so that at low level, there should be no flow in Watercourse A. Taking the following factors into consideration:

- The 0% values entered in Table 2.6 (Appendix CCE-26), at points “A1” and “M1”, for all years during the low-water period seem to indicate the project will have no effect on the flows in watercourses A and M during the two low-water periods.
- Table 2.7 (Appendix CCE-26) presents the project's impact on the mean streamflows. The project leads to major increases in the winter mean monthly streamflows (months 1, 2, 3, 4 and 12), when the small watercourses, such as Watercourse A, are in winter low-water conditions with almost zero flows.
- Table 2-5 (Appendix CCE-26), presents the estimate of the projected mean monthly streamflows (in litres per second) at the outlet of the WTU. Discharges are forecast every month of the year.

The proponent must:

i) Specify if Table 2-5 (Appendix CCE-26) applies to the alternative with four discharge points. Otherwise, provide an equivalent table for this alternative.

ii) Provide a detailed timeline of the forecast discharges into Watercourse A and the other receiving environments (Lakes 3, 4 and 6), for every month, and specify if the discharges will be continuous during each of these months. As applicable, indicate how the water volumes discharged daily will be determined (for example, the maximum or minimum thresholds). For Watercourse A in winter and summer low-water periods, indicate the decision threshold resulting in the stoppage of discharge at the WTU and specify the period during which the discharge will remain zero at the WTU.

Clarification 2

Tables 2.6, 2.7 and 2.8 (Appendix CCE-26) present only the percentage variations. For Table 2.6, in particular, the 0% variations indicated for the watersheds of no more than five square kilometres do not show the potential impacts on fish and fish habitat in low-water periods, because these values indicate an absence of changes, which is unlikely.

The proponent must provide the quantitative values of the streamflows under current and projected conditions, which are at the origin of Tables 2.6, 2.7 and 2.8, so as to allow a better assessment of the project's effects.

Note: For reference, see Annexe E - *Hydrologie* (Hydrology) of the document *Renseignements demandés par l'ACÉE pour la concordance de l'étude d'impact environnemental* (WSP, February 2019 - Information requested by the CEAA for the consistency of the Environmental Impact Statement). In Annexe A - *Débits caractéristiques aux conditions projetées* (Characteristic streamflows at the projected conditions) of this document, the tables present the type of data sought.

Clarification 3
Table 3.2, included in Appendix CCE-27, presents the project's impacts (alternative with 4 discharge points) on the water levels in the watercourse.

The proponent must also indicate the variations for Year 13 and specify the baseline depths (current conditions) used to calculate the water level variation.

Clarification 4
Considering that in Appendix CCE-3, for the alternative with 4 discharge points, it is mentioned that in Watercourse A, the mean monthly streamflows will not exceed the current two-year flood flow and that the responses provided to Question CCE-20 indicates that the hydrogeological modelling was not reviewed after the removal of the dike at Lake 3 (which is conservative regarding the projected flow reductions), the proponent must provide the following information:

i) Specify if the projected mean monthly streamflows will exceed the two-year flood flows for the other watercourses that will receive the discharges from the peripheral wells (Watercourses C, E and F).

ii) Indicate if the projected flow increases could be underestimated, given that the water table drawdown would be less significant in the absence of the dike at Lake 3, as mentioned in the hydrogeological modelling. As applicable, specify if it is possible that the projected mean streamflows may exceed the two-year flood flows.

Question CCE 27
Effects on Fish and Fish Habitat of Changes in Surface Water and Groundwater Supplies

Clarification 1
Considering that Lake 3 and Watercourses G, E and H will suffer the effects of the dewatering of Lake 3 and the water table drawdown during the operations phase,

up to 22 years after closure, fish and fish habitats will also be likely to suffer the effects. Due to the anticipated duration of these effects, a deterioration or disturbance of the fish habitats could occur.

The proponent must:

i) Specify the areas, the habitat functions (e.g. breeding, nursery, etc.) and the fish species that would be likely to suffer the effects, during the next two periods, when no discharge from the peripheral wells associated with Lake 3 will allow mitigation of the decrease in surface water and groundwater intakes:

- after dewatering of Lake 2 up to the beginning of discharge; and
- after the end of discharge up to filling of the pit.

ii) Justify the removal of Watercourses G and H from the overall losses, considering that the water table drawdown would lead to a deterioration of the fish habitat as far as Lakes 11, 12 and 13 and their respective outfalls.

iii) Depending on the responses to the previous clarifications, provide an update of Map 2 (Appendix CCE-27), where a line still appears at the location of Lake 3. The proponent must also provide an update of Tables 4 to 7, if required (Appendix CCE-27).

Clarification 2

In its response to Question CCE-26, the proponent presents the hydrologic modelling, which was revised after the changes made to the alternative with four discharge points and the removal of the dike at Lake 3. However, depending on the response to Question CCE-20, the hydrogeological modelling was not revised. The analysis of the effects on the aquatic fauna during the operations phase shows significant changes in mean annual streamflow (Table 2 of Schedule CCE-27), which suggests a potentially significantly variation of the monthly streamflows.

In the cases where the projected mean monthly streamflows prove greater than the two-year flood flows for Watercourses C, E, and F, the proponent must specify the effects these streamflow changes could have on fish and fish habitats.

Questions CCE 30, CCE 31 and CCE 35

Water Management - Construction and Operations Phases

In response to Question CCE 30, the proponent explains that a semi-permeable berm surrounding the overburden dump will be installed to capture the suspended particulate matter. According to Environment and Climate Change Canada (ECCC), a semi-permeable berm is not sufficient for adequate management of the runoff water from the overburden pile, even if it is revegetated.

In response to Question CCE 31, the proponent revised the information on management of minewater and non-contact water in order to prove they would be collected and managed adequately. However, ECCC considers that the proponent did not prove that it was going to collect and manage all the minewater from the mine site adequately, particularly the water from the overburden pile and the ditches of the main access road.

In the preliminary responses shared with the Committee on November 30, 2020 concerning Question CCE 35 (*Preliminary Responses – CCE 35 to 38, 40, 41, 61 and 88*), the proponent provided information on management of the water in contact with the service roads. However, the proponent does not consider all of the roads to be part of the mine site.

ECCC specifies that all the runoff water within the limits of the mine site must be collected and discharged from one or more effluents, which must meet the requirements of the *Metal and Diamond Mining Effluent Regulations* (MDMER). ECCC considers that the overburden pile and all the access roads and roads located within the limits of the mine site are part of it and the runoff water within them must be collected, sampled and treated as needed, before it can be discharged into the receiving environment.

Moreover, ECCC specifies that it is possible not to collect or sample the runoff water on the portions of the land that are not operated during the first years of construction of the mine (for example, Watersheds M and N up to Year 4). However, these areas not under operations must be protected so that they are not contaminated by “contact water” that could reach them from the operated portion of the site.

Depending on the facilities necessary to collect all the runoff water within the mine site adequately according to the MDMER requirements, the proponent must:

i) Update the information on management of runoff water on the mine site during the construction and operations phases, particularly the runoff water from the overburden pile and all the highways and roads.

ii) Update Maps 20-1, 20-2, 20-3, 20-4 and 20-5 of Appendix CCE-30;

iii) Update Maps 21-2 and 21-2 of Appendix CEAA-21 (*Responses to the CEAA's Questions and Comments,* WSP, December 2019) and Map 03-03 of Appendix CCE-29. In this update, include all the highways and the access and service roads (including the access roads to all the piles), their ditches, and the location of the control points and water treatment infrastructures. The proponent must make a clear distinction between the roads and the power transmission line roads, because they may be confused on the existing maps.

iv) Update the water balance of Appendix CEAA-18 (*Responses to the CEAA's Questions and Comments*, WSP, December 2019) to include the runoff water from the entire mine site, particularly including the runoff water from the overburden pile and the ditches of all the roads. The proponent must prove that all the water management facilities (ponds, ditches, pipes, pumps, etc.) have dimensions and capacities adapted to the new water balance; and

v) Reassess the design of the main water treatment plant's accumulation basin based on all the changes made to runoff water management, as applicable.

Question CCE-32
Water Management - Options for Dewatering in the Operations Phase
In Appendix CCE-3, the proponent analyzed three alternatives to identify the best treatment for minewater. It recommended Alternative 1, the polishing and pH neutralizer ponds. Environment and Climate Change Canada (ECCC) considers that an additional treatment to the one described in Alternative 1 will probably be required for the peripheral pumping water.

Indeed, ECCC considers that the quality of the water used for analysis of the alternative for minewater treatment is inappropriate. The quality of the pumping water would be different from that of the current groundwater used for analysis of the alternatives. It could be located between the groundwater and the minewater, because the proponent does not provide for an impermeable barrier between the limit of the pit and the peripheral pumps. Moreover, the quality of the minewater could be altered by the nitrates and other possible contaminants that would come from the explosives used in the pit.

In section 3.4.1 of Appendix CCE-3, the proponent indicates that the [TRANSLATION} “sedimentation pond does not allow capture of the metals enumerated in the [*Metal and Diamond Mining Effluent Regulations* (MDMER)]. If the rates exceed the MDMER standards, a physicochemical filtration system will be integrated into the treatment”.

In response to Question CCE 32, the proponent indicates that: [TRANSLATION] “In case other geochemical analyses show that certain contaminants exceed the limits authorized by the MDMER, small treatment plants will be installed downstream from the sedimentation ponds […] before discharge into the receiving environment (Lakes 3, 4 and 6).”.

In its letter of non-concordance of November 16, 2020, the Committee mentioned, regarding Question CCE 25, that tantalum leaching from the tailings was underestimated during the kinetic tests, due to the methodology for measuring tantalum in water (dissolved versus total).

The proponent must:

i) Describe what additional treatment steps would be required in the three small treatment plants: type of technology implemented, physical and/or chemical principles involved (coagulation, flocculation, decantation, etc.), dimensions of the main structural components that must be built or installed upstream of the sedimentation ponds, management of the sludge generated, monitoring and maintenance.

ii) Explain how it would be determined whether these small plants should be implemented. Indicate an approximate period between the time of this decision and the time when the first plants would be operational.

iii) Update Map 03-03 (Appendix CCE-29) to indicate the location of these 3 small treatment plants.

iv) Update the water balance of Appendix CEAA-18 (*Responses to the CEAA's Questions and Comments,* WSP, December 2019) to include the peripheral pumping water.

Questions CCE-33 and CCE-34
Water Management - Decommissioning and Restoration Phases
In response to Questions CCE 33 and CCE 34, the proponent provides information on the mine restoration work, particularly by referring to the *Site Redevelopment and Restoration Plan for the Rose Lithium Tantalum Project* developed by SNC-Lavalin (2019) and providing an update of Map QC-95 (Appendix CCE-33) showing the mine site after restoration. Environment and Climate Change Canada considers that certain details regarding surface water drainage on the mine site are still missing to be able to assess the project's effects on the hydrologic regime and the fish habitat after restoration and closure of the mine.

The proponent must present the details on surface water drainage on the mine site during closure of the mine and post-closure. This should include, without being limited to, the delimitations of the different sub-basins, accounting for the configuration of the mine site during closure (presence of piles and pits), the drainage scheme and the drainage regime, including the water flows and volumes draining to the receiving environments (lakes and rivers).

Suggestion: To respond to this request, Appendix CCE-26 could be amended to present the results for the years after Year 17.

Question CCE 35 A and B
Management of Water in Contact with Service Roads
A) The proponent must clearly identify on the maps in Appendices CEAA-20 and CEAA-21 the runoff water collection system for all roads (e.g., ditches, ponds) and the direction of flow.

B) The proponent must explain, in the Water Management Plan, how water collected from road ditches will then be managed in accordance with applicable standards and regulations (including the *Metal and Diamond Mining Effluent Regulations* and the *Fisheries Act*):

- The location of all ditches and other infrastructure to collect water from roads and the direction of water flow;
- The location and dimensions of the basins referred to in the proponent's response;
- The parameters measured and the frequency of monitoring to verify water quality, as well as the locations where sampling will be done;
- Updating the water balance and design of various collection and treatment structures, if applicable.

Question CCE 36 A and B
Water Treatment Unit and Accumulation and Sedimentation Ponds
A) The proponent must include the additional water coming from the road ditches in its water balance.

B) The proponent must provide the following details concerning the mechanisms for recirculation of water from the water treatment plant, which will be a key stage in case the treated water monitoring criteria are exceeded:

- The mechanism and its operation in detail, including whether this will be done automatically or manually. Indicate the robustness of this system and the measures that will be taken in the event of sensor failure.
- Estimated capacity of the accumulation basin, in number of days, should an incident occur that requires recirculation of the discharge water:
    - And that ore processing was not stopped;
    - And that ore processing was stopped.
- Examples of mine sites that use recirculation and water treatment system suppliers. Present this information in a detailed manner, including information on the performance of this type of system.

Question CCE-37 A and B
Impermeability of Accumulation Basins

Environment and Climate Change Canada considers that the information provided in Response CCE 37A) is insufficient. On page 54 of the response document, the proponent does not explain clearly if the sealing of the sedimentation ponds of Lakes 3, 4 and 6 also concerns Ponds 2 and 3.

The water that would pass through Ponds 2 and 3 would come from the waste rock and tailings pile. Despite the results of the geochemical tests, which indicate the absence of metal leaching potential and acid mine drainage from the tested samples, the runoff water from this pile could contain higher contaminant concentrations than the results of these tests, because the behaviour in a high-volume pile could lead to higher contaminant concentrations. The results of the geochemical tests are indicators that help determine what protective measures should be taken to avoid contamination of the receiving environment, but do not accurately predict the changes in geochemical characteristics under uncontrolled real conditions.

In its letter of non-concordance of November 16, 2020, the Committee mentioned, regarding Question CCE 25, that the tailings leaching tests underestimated the tantalum concentrations due to the methodology for measuring this element in water (dissolved versus total). Environment and Climate Change Canada considers that little information is available to date on the mobility and toxicity of tantalum and that preventive measures must be taken to minimize the risk to the environment, which includes the impermeability of Ponds 2 and 3.

In the preliminary responses shared with the Committee on November 30, 2020 concerning Question CCE 37 B (*Preliminary Responses – CCE 35 to 38, 40, 41, 61 and 88*), the proponent indicated that the Manning coefficient used for the calculations related to the flows in the ditches is 0.036. This same coefficient is estimated at 0.06 in Response CCE 29 B. Moreover, it is indicated [TRANSLATION] “that a characterization of the till present in the overburden of the pit will be a prerequisite to construction of the ditches, in order to confirm that this material is impermeable enough to limit infiltration of contaminated water in the soil”.

A) The proponent must describe and justify the choice of materials that would be used to seal Ponds 2 and 3. It must describe the methods that would be used to characterize the degree of impermeability of these materials and what results are sought to prevent the risks of infiltration of contaminants into the groundwater.

B) The proponent must explain what the blue area east of the co-disposal pad represents on Map 03-03 in Appendix CEAA-21 and what design and sealing criteria are planned for this infrastructure. It must also indicate the correct value of the Manning coefficient, or explain the difference between the two values presented in the proponent's response documents.

In addition, the proponent must indicate what the alternative plans would be if the results of the impermeability characterization of the till coming from the pit were inconclusive.

Question CCE-38
Surface Water Monitoring Plan
In the preliminary responses shared with the Committee on November 30, 2020 concerning Question CCE 38 (*Preliminary Responses – CCE 35 to 38, 40, 41, 61 and 88*), the proponent did not provide a surface water quality monitoring plan for the receiving environment, but rather an effluent monitoring plan.

ECCC suggests that the proponent be inspired by the groundwater monitoring plan of Appendix QC2-74 (Responses to the Additional Questions of the MELCC) for the surface water quality monitoring plan.

Moreover, Appendix CEAA-46 (Responses to the CEAA's Questions), which establishes the initial status of water bodies, is referenced for identifying the parameters to be measured as part of the surface water monitoring plan during operations and after closure. In addition to the metals identified in the initial state of water bodies, tantalum and lithium should be included in the surface water monitoring plan because they are the elements sought by the Rose Project. The comparison criterion for tantalum could be determined and justified in light of recent studies on the toxicity of this metal, as there are no existing criteria in Quebec and Canada (refer to Question CCE 25 for further clarifications on this subject).

The proponent must provide the surface water monitoring plan for the operations, closure and post-closure phases.

i) Indicate what parameters will be measured, and the sampling location and frequency. Include lithium and tantalum;

ii) Compare the results obtained in the Canadian Water Quality Guidelines for Protection of Aquatic Life of the Canadian Council of Ministers of the Environment.

iii) Present the mitigation measures and the corrective measures that will be taken in the event that water quality monitoring shows that certain substances would not meet the water quality objectives.

Question CCE 40 A and B
Certificates of Analysis for Leaching Tests
A) The proponent shall provide the certificates of analysis of the **waste rock**. The question initially concerned the ore and the *tailings*, but this was a translation error.

B) The proponent shall provide the certificates of analysis of the ore. The proponent instead shall provide the certificates of analysis of the **tailings**.

Question CCE 41 A, B and C
Overburden and Sediment Geochemical Characterizations
A and B) The proponent did not provide a sampling plan or results of the overburden geochemical characterization.

The Committee reminds the proponent that the mine site's water management system must include the correction of all drainage water in contact with the mine structures, including the overburden pile. The proponent shall provide an assessment of the effects of these components on water quality and review the management mode of the runoff water coming from the overburden pile.

C) *Amended question:* The proponent must confirm if the sediments of Lakes 1 and 2 would be disposed of in the overburden pile or on the co-disposal pad. It must also explain the timing of disposal of these sediments at that location (for example, upon their excavation or after storage at a temporary location).

Question CCE-43
Sulphide Minerals and Acid Generation Potential
To understand the reactivity and the potential environmental risk of the waste rock, the proponent must provide a confirmation of the predominant sulphide minerals observed in the waste rock.

Question CCE-51
Woodland Caribou - Blasting Impacts
In response to Question CCE 51, the proponent indicates that [TRANSLATION] “if a significant presence of caribou is reported in the area, blasting would be postponed to allow the caribou to move away from the project's area of influence”. The proponent’s commitment is not described in a manner that makes it possible to avoid any ambiguous intention, interpretation and implementation, as requested in section 11.5 of the Environmental Impact Statement Guidelines.

For example, the use of the “significant presence of caribou” formula gives reason to believe that the detected presence of one or more caribou near the mine would not be enough to delay blasting. If such is the case, it would have to be justified, particularly by accounting for the status of the species under the *Species at Risk Act*.

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Moreover, the “project’s area of influence” for assessment of the blasting impacts on woodland caribou is not defined, which does not allow assessment of spatial range for which the measure could be applied.

The proponent must:

i) Define and justify the parameters of the commitment to postpone blasting in order to mitigate the effects on woodland caribou.

ii) Define the expressions “significant presence of caribou” and “the project's area of influence”.

Question CCE 61
Traditional Food - Measures to Protect Surface Water Quality
The proponent shall describe the measures that will be taken to detect leaks and spills from the waste rock and tailings pile or minewater basins (including exfiltration from piles, ponds and ditches) to protect surface water quality. The proponent only referred to the water treatment plant.

Next Phases

To facilitate the analysis and referencing of information, the proponent is invited to submit a single document responding to the two parts of this letter.

If you need further information, please contact Véronique Lalande by phone at 418-455-4116 or by email at the following address: veronique.lalande@canada.ca

Yours truly,

John Paul Murdoch
Co-Chair, Joint Assessment Committee
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<Original signed by>

Benoît Dubreuil
Co-Chair, Joint Assessment Committee
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