Contaminants and Remediation Division
P.O. Box 1500
Yellowknife, NT X1A 2R3

September 18, 2020

Mr. Joseph Mackenzie
Chair
Wek'èezhìi Land and Water Board
#1-4905 48th St., Yellowknife, NT X1A 3S3

Re: Rayrock Remediation Project
Type A Water Licence and Type A Land Use Permit Applications

Dear Mr. Mackenzie,

Please see attached applications and supporting documentation for a Type A Water Licence and Type A Land Use Permit for the Rayrock Remediation Project (RRP), respectfully submitted by Crown-Indigenous Relations and Northern Affairs Canada – Contaminants and Remediation Division (CIRNAC-CARD).

All assessment work has now been completed for the RRP, with the Remedial Action Plan (RAP) having been finalized with the Tłı̨chǫ Ndek'àowo (Department of Culture and Lands Protection) in July 2020. The full scale remediation work is scheduled to commence in May 2022 with completion by March 2025. The work required to complete final remediation at Rayrock – in particular, the remediation of Mill Lake – and other sites within the RRP bundle (Sun Rose, REX, Barge Landing, Power Line, TED, MK and GS), will trigger a Type A Water Licence and a new Type A Land Use Permit (LUP W2015X000 extended to August 13, 2022).

The table below provides concordance between the Wek'èezhìi Land and Water Board's Closure and Reclamation Plan requirements and the Rayrock Remedial Action Plan:

Closure and Reclamation Plan Requirement	Corresponding Section in Remedial Action Plan
Table of Contents *Include lists of tables, figures, maps, photos, and appendices presented in the CRP*	Table of Contents
1.0 Plain Language Summary *Provide a plain language summary of the CRP with a level of detail dependant on the stage of the project. … Note any major uncertainties and how they will be addressed (e.g., research plans or engineering studies). …CRPs for projects approaching closure can include a table that presents closure objectives, closure criteria, and monitoring. This table would demonstrate how the proponent's success in meeting objectives will be measured and assessed. Tables can be organized by project component and even further divided into*	Page i) - Kwetı̨ı̨ɔaà (Rayrock) Remediation Project: Plain Language Summary

valued ecosystem components (e.g., air, land, wildlife, etc.). Proponents should tailor these summary tables so they present information in the most useful way possible.	
2.0 Introduction	1.0 Introduction
2.1 Purpose and Scope of the Closure and Reclamation Plan *Describe the purpose and scope of the CRP as it relates to the Boards' requirements, previous versions of the interim CRP, and the expectations of stakeholders. Provide a general description of the project including, a brief description of the proponent(s) and the overall spatial and temporal extent of the project. (See section 4.0 for more details.) State whether the plan is a conceptual CRP, a version of an interim CRP, or a final CRP. Provide the approval dates of any previous CRPs.*	1.1 Purpose and Scope 6.3 Schedule
2.2 Goal of the Closure and Reclamation Plan *The closure and reclamation goal (or closure goal) as described in Part 1 is to return the mine site and affected areas to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and with human activities. Proponents can add to this goal, provided the reclamation standard expressed in the goal is maintained or improved. The four closure principles of physical stability, chemical stability, no long-term active care requirements, and future use (including aesthetics and values) support the closure goal. This closure goal applies to both mines and advanced mineral exploration projects.*	1.2 Project Objectives
2.3 Closure and Reclamation Planning Team *The CRP should describe, list, or show (e.g., organizational chart) the important internal and external organizational relationships and specific responsibilities (e.g., accountability structure, operations vs. post closure, etc.) that will facilitate and manage the closure and reclamation process; include any consultants working on behalf of the proponent and their reporting relationships.*	1.3 Remedial Planning Team
2.4 Engagement *Proponents must outline their approach to engagement and how they have or will integrate local community values into closure and reclamation planning, including any strategies for engaging communities in CRP development and implementation. It is usual for the level of public involvement to increase in relation to the size and duration of the project and the complexity of facility development, traditional significance of the area to residents, and anticipated future use (see Part 1, section 1.4 of the Guidelines). Public meetings, face-to-face meetings, and workshops may be required at various stages; typically these occur prior to submission of conceptual, interim, or final CRPs. In the appropriate appendix, proponents should provide an engagement log detailing all relevant meetings, teleconferences, e-mails, workshops, etc. with the topics of discussion, the outcomes (including any changes or improvements made by the proponents), and persons involved, plus a record of all files, letters, invitations, presentations, e-mails, etc.*	1.4 Engagement
2.5 Regulatory Instruments for Closure and Reclamation *The Boards need a detailed summary…of all existing and potentially required permits, authorizations, and agreements, with the regulatory authority with jurisdiction for closure and reclamation identified. Regulatory instruments under consideration would include:* *• water licence(s)* *• Fisheries and Oceans Canada authorization(s)* *• land use permit(s)*	2.0 Regulatory Framework Table 2-2

• *environmental agreements* • *land leases (surface)* *Also, proponents must provide a conformance table that references where the CRP satisfies the conditions of the water licence and other applicable licences and permits. This important tool assists the Board when it is determining whether to approve the CRP. In addition to the above requirements, there may be other guidelines that the proponent will have to follow (e.g., MVLWB Guidelines for Developing a Waste Management Plan, AANDC's Guidelines for Spill Contingency Planning). The proponent may also have their own company closure standards or want to reference relevant guidelines that are not specific to CRPs or the NWT.*	
3.0 Project Environment *Proponents need to provide detailed descriptions of pre-disturbance conditions and the current development status of the project. The amount of information presented for each subsection should be sufficient to understand baseline conditions. Much of this information may be derived from current/historic baseline data, the environmental assessment phase (if applicable), or updated with data and information from monitoring plans, studies, and reclamation research.*	3.0 Project Environment 3.1 Site Overview and History 3.2.2 Geology/Morphology 3.2.3 Hydrology 3.2.4 Hydrogeology
3.1 Atmospheric Environment *Provide an overview of the regional and local climate setting, temperature, and precipitation statistics and trends based on regional and project-specific climate stations. Provide general descriptions of regional and site air quality conditions (e.g., due to emissions and dust from the project). Use tables and figures to help summarize and depict data.*	3.2.1 Ecoregion
3.2 Physical (Terrestrial) Environment *Provide an overview of the regional and local physiography (e.g., topography and relative relief and drainage basin, surface- and ground-water characteristics), surficial and bedrock geology, extent and distribution of permafrost, geologic hazards and hydrogeology. Use maps, photo mosaics, tables, and figures to help summarize and depict monitoring stations or wells and other data and information.*	3.2.2 Geology/Geomorphology 3.2.3 Hydrology 3.2.4 Hydrogeology
3.3 Chemical Environment *Provide an overview of regional and local soil and sediment chemistry, surface water quality (i.e., lakes, streams, springs), groundwater quality (i.e. from production and/or monitoring wells), and acid rock drainage (ARD) and metal leaching (ML) potential. (See Part 3.0, subsection 3.2.1 for more about ARD/ML.) Use maps, tables, and figures to help summarize and depict sampling locations, data, and information.*	3.3 Chemical Environment 5.3 - 5.10 Remediation Strategy
3.4 Biological Environment *Provide an overview of vegetation (flora), aquatic life, terrestrial wildlife (fauna), avifauna and their respective habitats, and the overall ecosystem(s); use maps, tables, and figures to help summarize and depict monitoring locations, biogeoclimatic zones, habitat extent and boundaries, and genera/species data and information.*	3.4 Biological Environment
4.0 Project Description	3.0 Project Environment 4.0 Project Description
4.1 Location and Access *Describe regional and local contexts of affected areas, and provide relevant reference coordinates where applicable; use detailed maps and photo mosaics. Describe access points and methods of access, with seasonal variations and limitations.*	3.1 Site Overview and History

4.2 Site History *Provide a relevant summary of the history of any ore discovery, exploration, and previous development and operations that have led to the current project. This would also include any ownership changes and a synopsis of the application, permitting, and licensing process to date. This information should be presented in chronological order. Use figures and photos to depict major site changes and tables where the site history is complex and extensive.*	3.1 Site Overview and History
4.3 Site Geology *Describe major rock types and structure, to the level of detail appropriate to depict the mining resource, extraction methods that were/will be used, and the rationale for footprint and specific target areas. Use tables, maps, cross sections, photos, and figures to help the presentation of relevant information.*	3.2.1 Ecoregion 3.2.2 Geology/Geomorphology
4.4 Project Summary *… List all of the project components, as more detailed descriptions of each component will be required in section 5.*	4.3 Remediation Summary
5.0 Permanent Closure and Reclamation	
5.1 Definition of Permanent Closure and Reclamation *This section should include the following definition of permanent closure: "Permanent closure is the final closure of a mine site with no foreseeable intent by the existing proponent to return to either active exploration or mining."… Proponents should indicate whether any components will require passive long-term care and the expected timelines for relinquishment.*	5.0 Remediation Strategy
5.2 Permanent Closure and Reclamation Requirements *Describe details for each individual project component. Project components should be categorized as follows unless proponents provide a rationale for a different categorization:* *• underground mine workings* *• open pit mine workings* *• waste rock and overburden piles* *• tailings containment areas* *• buildings and equipment* *• mine infrastructure* *• transportation routes* *• landfills and other waste disposal areas* *• water management systems.* *For each project component include, at a minimum, the following subsections.* **Project Component Description** *Provide a description of each project component, including proposed components and historical components no longer in use. Provide the details of the project component (e.g., dimensions, footprints, and relative locations on a site map) with accompanying figures, maps, and photos as appropriate. Each component should be presented in separate subsections for clarity. The descriptions should also include the lifespan and current status (operating, permitted, temporary closure, and any progressive reclamation completed, etc.) of each component…* **Pre-Disturbance, Existing, and Final Site Conditions** *Using maps, photos, photo mosaics, etc. as appropriate, describe (compare and contrast) the pre-development (or pre-disturbance), existing, and projected final site conditions. Illustrate all relevant water bodies (including*	5.0 Remediation Strategy 6.0 Implementation Strategy 5.0 Remediation Strategy Appendix A Appendix B Appendix A Appendix B Figures 20-21-22

watershed boundaries), topographic modifications (e.g., waste rock or tailings storage areas, etc.), and vegetation changes. Describe any important or unique environmental conditions (i.e., atmospheric, physical, biological, chemical, and/or social) for the project component that will have a bearing on closure. Accurate and transparent depiction of final site conditions can be critical to good engagement; 3-D representations are encouraged.	
Closure Objectives and Criteria *This section of the CRP should list the closure objectives and closure criteria for each project component. …Any uncertainties related to closure objectives and criteria must be noted along with a reference to the reclamation research plan associated with each. A table may be helpful during certain stages of the project to illustrate the relationship between closure objectives, selected closure activities, closure criteria, reclamation research, and closure monitoring. The content of these tables may depend on the planning stage. During the initial development of objectives, it may be helpful to document preferences discovered during engagement activities. It is important to note that the timeframe to successfully achieve closure criteria may be short-, medium-, or long-term.*	Appendix C, Table C1
Consideration of Closure Options and Selection of Closure Activities *This section presents alternatives analyses of various closure options, including a discussion of various risk scenarios and any unique or novel closure situations for the component under discussion. …The alternatives analysis should clearly demonstrate the pros and cons of each option. Following the analysis should be a determination of the selected closure activity, with the rationale for the selection of the closure activity and reason(s) for the rejection of other options. This section is dynamic in that modifications will likely occur over time from development of the conceptual CRP through to interim CRPs and the final CRP.*	5.3 - 5.10 Remediation Strategy
Engineering Work Associated with Selected Closure Activity *This section should describe all demolition, construction, or other engineering work that will be necessary to close and reclaim each project component…*	5.3 – 5.6 Remediation Strategy
Predicted Residual Effects *This section contains an assessment of any potential negative residual effects that may remain after the completion of the reclamation. Provide results of any risk assessments that were conducted to identify or address the residual effects. Include a discussion on how any residual effects currently predicted to occur at the end of closure and reclamation compare to stakeholders' preferences or the company's commitments made during the environmental assessment (if one has occurred).*	5.11 Reclamation 6.6 Environmental Monitoring
Uncertainties *Proponents should identify important uncertainties that arise during closure planning including uncertainties associated with the risks of various closure options and how to select the best closure activity, how to best implement a selected closure activity, how to define closure criteria, how Traditional Knowledge will inform closure planning, and more. Indicate how each uncertainty will be addressed—whether through specific reclamation research (including Traditional Knowledge research), an engineering study*	6.10 Uncertainties

plan, or other means. Proponents should include reclamation research plans in appendices as they develop... **Post-Closure Monitoring, Maintenance, and Reporting** *The primary purpose of post-closure monitoring is to determine whether closure criteria have been met, and therefore that closure objectives and the closure goal have been achieved. The implementation of a successful monitoring program, which will likely begin during the exploration stage and continue during operations through post-closure, will help the proponent demonstrate that relinquishment can occur. The proponent should provide a description of what (e.g., fugitive dust, stream flow, wildlife and aquatic life movement, etc.) will be monitored and why. For interim and final CRPs, identify the sampling locations, frequencies, and duration. This section should also include a description of any maintenance activities that will occur post-closure and how monitoring and maintenance activities will be reported.* **Contingencies** *The proponent must describe what it will do if it becomes apparent that the selected closure activity will not be successful in meeting closure criteria and objectives. List possible contingencies, and identify the preferred contingency with rationale.*	6.6 Environmental Monitoring 5.3 – 5.10 Remediation Strategy
6.0 Progressive Reclamation	N/A
7.0 Temporary Closure	N/A
8.0 Integrated Schedule of Activities *It is important that the Boards are confident that a proponent's planned schedule of activities will result in timely and successful closure and reclamation. Proponents need to provide a component-specific schedule that depicts operations, closure dates, and expected start and end times for selected closure activities. This schedule will include any progressive reclamation, initiation, and completion of research (including pilot studies), timeframes for meeting closure criteria and monitoring and reporting phases. For interim and final CRPs, a Gantt-type chart or equivalent may assist in depicting temporal sequences of multiple tasks and identifying critical paths (i.e., those that would impede the progress of inter-related tasks or the overall project process). Boards recognize that schedules are subject to change as mine plans adapt over time. Proponents should therefore discuss schedule uncertainties based on, for example, extent and success of progressive reclamation, temporary and permanent closure, research and studies, and upset conditions.*	6.3 Schedule
9.0 Post-Closure Site Assessment *The proponent should provide a description or study design of how the residual environmental impacts of the project as a whole will be assessed once they have completed the selected closure activities.*	6.6.3 Post-Construction Environmental Monitoring
10.0 Financial Security	N/A
11.0 References *This includes documents and reports that support the characterization of baseline environmental data (e.g., terrestrial studies, hydrology and aquatic studies, and climate and air quality studies), geochemical analyses and predicted ARD/ML potential, and any relevant engineering work related to support the CRP.*	7. References
Appendices	
A) Glossary of Terms and Definitions	Table of Contents - List of Acronyms and Abbreviations

The definitions section should include discipline-specific technical terms (e.g., processed kimberlite, esker, dewatering) and key closure and reclamation planning terms (e.g., closure goal, closure objectives, closure criteria, etc.) explained in plain language.	Table of Contents - Tłı̨cho Translations
B) List of Acronyms, Abbreviations, Units, and Symbols	List of Acronyms and Abbreviations
C) Record of Engagement This is a table that outlines all engagement *specific to closure that has occurred; it must include any issues identified by the engaged parties and how the company has addressed them or modified the project in response*	1.4.2 Key Engagement to Date (detailed Engagement Log included in Engagement Plan)
D) Lessons Learned from Other Projects *In this summary table of relevant on-site closure issues/concerns that have been dealt with successfully or unsuccessfully, the proponent should focus on those lessons that would have direct application to managing project closure and reclamation*	6.2 Lessons Learned
E) Reclamation Research Plans	N/A

Additionally, and for clarity, the Rayrock RAP indicates that an Aquatic Effects Monitoring Program (AEMP) would form part of our Water Licence application. Unfortunately, the AEMP has not yet been finalized. Our anticipated completion date will be sometime in November-December 2020.

CIRNAC-CARD is requesting a seven (7) year Type A Water Licence term to align with the new Type A Land Use Permit (five years + two-year extension). These authorizations will allow for the completion of remediation at all sites and commencement of Long Term Monitoring for the Rayrock Remediation Project.

If you have any questions regarding these applications, please do not hesitate to contact me at 867-445-8539 or via email at joel.gowman@canada.ca.

Yours truly,

Joel Gowman
A/Senior Manager
CIRNAC-CARD

cc. Ron Breadmore, Project Manager, CIRNAC-CARD
Andrew Richardson, Project Officer, CIRNAC-CARD
Tim Morton, Inspector, CIRNAC-RLMO
Rhiana Bams, Regulatory Specialist, WLWB
Violet Camsell-Blondin, Regulatory Manager, Tłı̨chǫ Ndek'àowo

Encl: 1. Rayrock Water Licence Application
2. Rayrock Land Use Permit Application
3. Supporting documents:
    i) Remedial Action Plan
    ii) Community Engagement Plan and Log
    iii) Waste Management Plan
    iv) Spill Contingency Plan
    v) Sediment and Erosion Control Plan
    vi) Wildlife Management and Monitoring Plan
    vii) Emergency Management Fire Plan