

### Review Comment Table

<b>Board:</b>	WLWB
<b>Review Item:</b>	CIRNAC-CARD - Rayrock Remediation Project - Type A WL and LUP Applications - Draft WL and LUP (W2020X0005 & W2020L8-0003)
<b>File(s):</b>	<a href="#">W2020L8-0003</a> <a href="#">W2020X0005</a>
<b>Proponent:</b>	CIRNAC-CARD
<b>Document(s):</b>	<a href="#">Draft Water Licence</a> (789 KB) <a href="#">Draft Permit</a> (335 KB)
<b>Item For Review Distributed On:</b>	May 27 at 16:52 <a href="#">Distribution List</a>
<b>Reviewer Comments Due By:</b>	June 10, 2021
<b>Proponent Responses Due By:</b>	June 17, 2021
<b>Item Description:</b>	<p>This draft Water Licence and draft Land Use Permit have been developed by Board staff, using the MVLWB's current Standard Water Licence Conditions Template and Standard Land Use Permit Conditions Template to allow reviewers to comment on possible conditions. Non-standard conditions are highlighted in green. These draft materials are not intended to limit, in any way, the scope of reviewers' comments.</p> <p>The Board is not bound by the contents of the draft Licence or draft Land Use Permit and will make its decision at the close of the proceeding on the basis of all the evidence and arguments filed by all parties. Please note that review comments and recommendations on the draft Licence and draft Permit must not introduce new evidence at this point in the proceeding. <b>Please clearly indicate which condition you are commenting on, and if you are commenting on the draft Licence or draft Permit.</b></p> <p><b>Using the Online Review System (ORS), reviewers are invited to submit comments and recommendations on the documents linked below by the review comment deadline specified.</b></p> <p>All documents that have been uploaded to this review are also available on our public Registry. If you have any questions or comments about the ORS or this review, please contact Board staff identified below.</p>
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## Comment Summary

CIRNAC-CARD (Proponent)			
ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	General File	<p><b>Comment</b> (<a href="#">doc</a>) Rayrock Remediation Team - Review and Commentary on the Draft Water Licence and Land Use Permit.</p> <p><b>Recommendation</b></p>	
CIRNAC - Inspector: Tim Morton			
ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	Draft Land Use Permit “ Condition #10	<p><b>Comment</b> Even though most of the winter road construction is on territorial lands. The CIRNAC Inspector should be notified before the construction of any portion of the winter road system as some of the winter road is on federal lands.</p> <p><b>Recommendation</b> Reword the condition to include the CIRNAC Inspector under the winter road notification.</p>	<b>June 17:</b> CIRNAC agrees with this recommendation.
2	Draft Land Use Permit “ Condition #13	<p><b>Comment</b> The CIRNAC Inspector requires an inventory and plan for the fuel that will remain on site during the shutdown period. This plan should include total fuel onsite, secondary containment information, fuel storage inspection information, etc.</p> <p><b>Recommendation</b> Add the above information as a requirement to the condition.</p>	<b>June 17:</b> CIRNAC agrees with this recommendation.
3	Draft Land Use Permit “ Condition #62	<p><b>Comment</b> This condition requires the examination of fuel storage containers and tanks for leaks but has no minimum frequency. The Inspector recommends that all fuel storage containers and tanks are inspected daily while the site is active.</p>	<b>June 17:</b> CIRNAC agrees with this recommendation.

		<b>Recommendation</b> Add &lsquo;inspected daily while active&rsquo; to condition #62 part &lsquo;a&rsquo;.	
4	Draft Land Use Permit â€“ Condition #70	<b>Comment</b> The Inspector recommends that the Permittee reviews these quantities to ensure that it will meet the needs of the project.&nbsp; The Inspector assumes that the 30,000 lbs is in reference to propane but needs to be clarified.&nbsp; <b>Recommendation</b> Clarify the 30,000 lbs reference and have the Permittee confirm that these limits on fuel quantity will meet the project&rsquo;s needs.	<b>June 17:</b> CIRNAC agrees with this recommendation. CIRNAC will confirm the quantities after the Contractor is selected and describes their fuel requirements. These details will be provided in the revised Spill Contingency Plan.
5	Draft Water Licence â€“ Term	<b>Comment</b> The Inspector agrees with the proposed term of the water licence. <b>Recommendation</b> This term seems to meet the needs of the project and the closure monitoring timeline.	<b>June 17:</b> CIRNAC agrees with this recommendation.
6	Draft Water Licence â€“ Scope	<b>Comment</b> The water licence scope does not include drilling.&nbsp; The Inspector recommends that this is added to the water licence to ensure the project does not have any unnecessary delays. <b>Recommendation</b> Consider adding drilling to the scope of the licence.	<b>June 17:</b> CIRNAC suggests drilling and blasting, as part of the quarrying operations, be added to the scope.
7	Draft Water Licence â€“ Definitions of Sewage and Greywater	<b>Comment</b> The definition of sewage includes greywater.&nbsp; This will required all greywater to be treated as sewage which could create problems in the camp setup.&nbsp; <b>Recommendation</b> Consider the removal of greywater from the sewage definition.&nbsp;	<b>June 17:</b> CIRNAC agrees that the licence should allow for greywater to be treated separate from toilet wastes.
8	Draft Water Licence â€“ Part D Condition #1	<b>Comment</b> Due to the changing water levels within the Northwest Territories the Inspector recommends that the Applicant is allowed to request a new source to avoid amendments	<b>June 17:</b> CIRNAC agrees with this recommendation.

		to the licence in the future. <b>Recommendation</b> Consider adding a statement to allow the Applicant to request the authorization of a new water source.&nbsp;	
9	Draft Water Licence â€œ Part H Condition 4C	<b>Comment</b> This condition requires the immediate notification of the Inspector for and spill or unauthorized discharge.&nbsp; The draft land use permit requires the reporting within 24 hours.&nbsp; The Inspector strongly recommends that both of these conditions are mirrored and that both require the immediate reporting to the Inspector. <b>Recommendation</b> Recommend changing both conditions to mirror each other.&nbsp;	<b>June 17:</b> CIRNAC agrees with this recommendation.
10	Draft Water Licence â€œ Part H Condition 7	<b>Comment</b> The draft land use permit allows the Inspector to approve fuel caches within 100 meters of the OHWM, however the water licence does not.&nbsp; The Inspector once again recommends that the licence mirrors the permit and allows the Inspector to approve these caches. <b>Recommendation</b> Add, or authorized by the Inspector to the condition.	<b>June 17:</b> CIRNAC agrees with this recommendation.

**Environment and Climate Change Canada: Anna Graham**

ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	WL and LUP Applications	<b>Comment</b> ECCC has reviewed the provided documents and has no comments. <b>Recommendation</b> None	<b>June 17:</b> Thank you.

**GNWT - ENR - EAM (Environmental Assessment and Monitoring): Central Email GNWT**

ID	Topic	Reviewer Comment/Recommendation	Proponent Response
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9	General File	<p><b>Comment</b> (<a href="#">doc</a>) ENR Letter with Comments and Recommendations</p> <p><b>Recommendation</b></p>	
1	Topic: Water Licence Term	<p><b>Comment</b> As noted by the Board in the Draft Water Licence, at the Public Hearing the Tliche government (TG) suggested that based on CIRNAC's schedule, a Water Licence term of more than seven years may be required. GNWT does not have any concerns with a 10 year Water Licence term.</p> <p><b>Recommendation</b> 1) The GNWT recommends that the Water Licence be issued for a 10 year term based on the suggestion from TG that the Water Licence term be longer than the seven year term proposed in the Water Licence application.</p>	<p><b>June 17:</b> CIRNAC agrees with this recommendation.</p>
2	Topic: Scope	<p><b>Comment</b> GNWT notes that the wording of Scope item 1 f) isn't clear, and may need revising.</p> <p><b>Recommendation</b> 1) GNWT recommends that the WLWB review and revise the wording of Scope item 1 f) as necessary.</p>	<p><b>June 17:</b> CIRNAC agrees with this recommendation.</p>
3	Topic: Part C "Security"	<p><b>Comment</b> The Draft Water Licence included a blank section for security. GNWT notes that CIRNAC's Water Licence for Colomac (W2014L8-0003), and other similar remediation project Water Licences do not contain a blank section for security. It isn't clear why this blank section has been included in the draft Water Licence for the Rayrock Remediation Project.</p> <p><b>Recommendation</b> 1) GNWT recommends that the blank section for Security be removed from the Water Licence as it does not apply to the Rayrock Remediation Project.</p>	<p><b>June 17:</b> CIRNAC accepts this recommendation.</p>

4	Topic: Part D "Water Use Condition 1"	<p><b>Comment</b> The water source table presented in Condition 1 includes "less than (&lt;)"symbols for maximum quantity of water used for most rows; however, the maximum quantity allowed for use from Sherman Lake does not include this symbol. It isn't clear why this volume may be different.</p> <p><b>Recommendation</b> 1) GNWT recommends that the Board clarify why the maximum quantity of water use from Sherman Lake is not recorded as &lt;25,000 m3 per year as is the case for Chico, Lake B, Tumi Lake, etc.</p>	<p><b>June 17:</b> CIRNAC consider "maximum" to be quite clear, so the &lt; listed with the maximum is not necessary.</p>
5	Topic: Effluent Quality Criteria " Mill Lake Treatment Discharge"	<p><b>Comment</b> As stated in our presentation at the Public Hearing, GNWT supports the effluent quality criteria (EQC) proposed by CIRNAC for the Mill Lake Water Treatment discharge with the addition of a total suspended solids (TSS) EQC maximum grab of 15 mg/L and a total petroleum hydrocarbons (TPH) EQC maximum grab of 5 mg/L.</p> <p><b>Recommendation</b> 1) GNWT recommends that the EQC proposed by CIRNAC for the Mill Lake Treatment Discharge be approved, with the addition of a maximum grab EQC of 15 mg/L for TSS and a maximum grab EQC of 5 mg/L for TPH.</p>	<p><b>June 17:</b> CIRNAC agrees to the TSS EQC but disagrees with the TPH EQC. The stated reason for the inclusion of TPH is that TPH might be spilled. TPH is not a contaminant of concern for Mill Lake water or sediment, and the water treatment system is not designed to remove organic contaminants. As noted in the CIRNAC Response to the GNWT Intervention, which included this recommendation, we stated "CIRNAC-CARD does not agree with inclusion of an EQC for TPH. TPH has not been identified as a CoC at Rayrock. The ENR statement "Given that there will be heavy equipment operating on site conducting remediation activities, and there will be potential for hydrocarbon spills, EQC for TPH should also be included for discharge to Sherman Lake" assumes that the Contractor will not abide by the Spill Contingency Plan and will allow uncontrolled releases to the environment. CIRNAC-CARD does not agree that uncontrolled TPH releases are inevitable and will ensure that measures are in place to prevent accidental release of TPH. The Spill Contingency Plan describes the measures required to protect the site from accidental release of petroleum products and is the appropriate location for addressing petroleum use on the site."</p>
6	Topic: EQC - Treated Sewage Discharge	<p><b>Comment</b> As noted in our presentation at the Public Hearing, GNWT supports the EQC proposed by CIRNAC for the treated sewage discharge including the EQC of 10,000 CFU/dL for fecal coliforms.</p> <p><b>Recommendation</b> 1) GNWT recommends that the EQC proposed by CIRNAC for the treated</p>	<p><b>June 17:</b> CIRNAC accepts this recommendation.</p>

		sewage discharge be approved, including the EQC of 10,000 CFU/dL for fecal coliforms.	
7	Topic: Annual Water Licence Report - Schedule 1 m) vi. Water Quality Monitoring	<p><b>Comment</b> Schedule 1, m) vi requires "a summary and interpretation of water quality monitoring results for each of the main source areas and how these compare to predicted values." GNWT notes that it isn't clear what the "main source areas" are.</p> <p><b>Recommendation</b> 1) GNWT recommends that the Board define "main source areas" in the Water Licence as referred to in Schedule 1, m) vi.</p>	<p><b>June 17:</b> CIRNAC is concerned that the scope of reporting required, in general, for the Quarry Management Plan is beyond the scope of the plan that will be submitted. CIRNAC will provide additional detail in our recommendations for the Licence. Specifically, water quality monitoring is not currently proposed in the Quarry Management Plan, so the definition of "Main Source Areas" is unnecessary.</p>
8	Topic: SNP Sampling Frequency	<p><b>Comment</b> GNWT notes that the sampling frequency for SNP 1663-1 to 1663-4 is described as "Monthly during open water and construction activities" and "Bi-weekly during upstream remediation activities". GNWT notes that without defining the activities that are considered "remediation activities" versus "construction activities", and given that this is a remediation project, there could be ambiguity about which sampling frequency applies to these SNP stations. The definition of "remediation activities" would also help to clarify the required sampling frequencies for SNP 1663-5, 6, 8 and 10.</p> <p><b>Recommendation</b> 1) GNWT recommends that the Board include a definition in the Water Licence for "remediation activities" in order to add clarity for periods when bi-weekly sampling is required.</p>	<p><b>June 17:</b> CIRNAC is unclear of the advantage to the SNP of the "biweekly" sampling program, as monthly samples would be sufficient to track any changes in water quality parameters within the waterbodies. Since "biweekly" means both twice a week and once every two weeks, it is requested that once every two weeks is used if this requirement remains. Whenever "upstream" remediation is occurring near a potentially affected water body, measurements for potential sedimentation in the water will be taken before and during remediation work to monitor the effectiveness of the SEC measures and to determine if additional controls are required to protect water quality during construction. The additional water quality results collected during the extra week sampling would simply be added to the annual water quality reporting.</p>

**Tlicho Government: Brett Wheler**

ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	General Comment	<p><b>Comment</b> The Tlicho are generally in agreement with the the WL and LUP documents. In general, recommendations</p>	<p><b>June 17:</b> CIRNAC notes that the WLWB added locations equivalent to TG-2 and TG-3. Any new locations on Beta Lake or Gamma Lake (TG-4), or locations down-gradient of Gamma Lake (TG-5), will need to be addressed as part of any</p>

		<p>provided by the Tlicho during the public hearing process seem to have been adopted where appropriate within the WL and LUP. We note that many of the TG locations for monitoring are not taken into account by the WLWB.</p> <p><b>Recommendation</b> We note that many of the sites identified in TG Undertaking 1 are useful for the AEMP monitoring program. We expect that they will be taken in to account then.</p>	<p>modifications associated with Beta and Gamma Lakes. CIRNAC feels that TG-7 has been addressed through the inclusion of 1663-10 (Sherman Lake K) in the SNP, which is located in the bay at a location close to the north Mill Creek and Kwe Tso Tia outlet. CIRNAC is of the opinion that Sherman Lake is sufficiently covered through the proposed program. TG-8 suggests a different background location specific to Beta and Gamma Lakes - this will be considered in 2021. The TG Undertaking response recommended the combination of 1663-8 and 1663-10 or inclusion of a location between 1663-10 and 1663-7. The proposed point of discharge is 1663-7, which will measure the effluent water quality going directly into Sherman Lake. The intent is to have 1663-8 as a down-gradient location and 1663-10 as the up-gradient location to compare water quality from the discharge location (1663-7). CIRNAC believes having results from sampling locations both upgradient in the bay and downgradient in Sherman Lake from the discharge location is an appropriate means of detecting potential water quality changes from the treated effluent discharge.</p>
2	General Comment	<p><b>Comment</b> The Tlicho Intervention and Undertakings documents contain project related recommendations, some of which were beyond the scope/detail of the specific WL and LUP documents. These recommendations are applicable for consideration and inclusion in the WL associated plans and other documents. The Tlicho look forward to providing input and review of the following WL related plans, documents, and activities. 1. Engagement plan 2. CDF Design and Construction Plan, as well as CDF monitoring and maintenance 3. Water Treatment Design and Construction Plan 4. Tailings areas design drawings 5. Waste Management Plan 6. Sediment and Erosion Control Plan 7. Quarry Management Plan 8. Water treatment facility - Operation and Maintenance Plan 9. Aquatic Effects Monitoring Program 10. Spill Contingency Plan 11. Closure Objectives and Criteria Workshop 12. Closure and Recalvation Plan</p>	<p><b>June 17:</b> Many of the plans and documents listed are standardized submissions, with preparation guidelines provided by the Board. TG input is solicited through review and commentary of final drafts, which are provided in as timely a manner as possible. The MVLWB &amp; WLWB lays out a very specific framework and requirements for many of these submissions, and CIRNAC anticipates that the WLWB's standard conditions related to the submissions would apply to the Rayrock Remediation Project as well. It is important that CIRNAC has the necessary control of the submissions to meet its legal obligations.</p>



		<p>13. Post-closure monitoring and maintenance plan.</p> <p><b>Recommendation</b> The TG notes that as a part of the engagement process, CIRNAC needs to ensure that they solicit and include TG input into the design and development of plans, rather than asking TG to provide comments after the fact. The earlier information can be shared, the more effectively TG can prepare and respond in a meaningful and timely manner. Consistent with MVLWB &amp; WLWB Engagement Policy and Guidelines, these two elements should be incorporated in CIRNAC's engagement plan (1. solicit and include TG input in design and development of plans, 2. timely sharing of information in an accessible form). The detailed approaches and timelines can be set out bilaterally between TG and CIRNAC, building on existing approaches and the positive working relationship we have.</p>	
3	WL - Page 1 - Term of Licence	<p><b>Comment</b> TG assume that WLWB suggest that a 10 year licence term is required in order for site remediation, including substantive revegetation and short-term performance monitoring, to be completed within the term. Based on this assumption a 10 year licence term seems acceptable.</p> <p><b>Recommendation</b> Although more time may be available in the licence, the TG do not want to see site remediation delayed.</p>	<b>June 17:</b> CIRNAC agrees with this recommendation.
4	WL - Page 3 - Scope 1.a (3rd & 4th lines of bullet a)- 'Tailings Containment Areas' is misleading terminology.	<p><b>Comment</b> 'Tailings Storage Areas' is more accurate description than 'Tailings Containment Areas'. The tailings are not fully contained from downstream receptors (and they were not discharged into an engineered facility), consequently it seems somewhat misleading to refer to them as a 'tailings</p>	<b>June 17:</b> The locations have been identified for over 20 years as Tailings Containment Areas and this is common industry terminology. There is no evidence to suggest that the tailings are not contained. Tailings Containment Area is used to describe the north and south TCAs in the Waste Nuclear Substance Licence (on the appended map), and CIRNAC does not feel it would be appropriate to have different names for the same location in the two

		containment areas'. <b>Recommendation</b> Consider revising terminology used to describe the tailings storage areas to "Tailings Storage Areas".	Licences for the Rayrock site. CIRNAC would strongly prefer to maintain the terminology that has been used.
5	WL - Page 3 - Scope 1.a (line 19 of bullet a) - 'burial of uranium-impacted debris with concentrations above safe shipping levels in Mill Lake'	<b>Comment 1.</b> Specifying that uranium-impacted debris will be buried is overly specific, and does not include all of the radiological-impacted or mine-impacted debris that will be buried in the CDF. 2. Materials will be disposed in the CDF not within Mill Lake. <b>Recommendation</b> Consider stating that radiological and mine-impacted debris will be disposed in the CDF.	<b>June 17:</b> CIRNAC accepts this recommendation. Regardless of the terminology used within the Licence, only debris that cannot be made to meet the release limits described in Section 2.2.6.3 of the Remedial Action Plan will be disposed in the CDF.
6	WL - Page 3 - Scope 1.a (line 20 of bullet a) - 'safe shipping limits for Uranium'	<b>Comment</b> Specifying uranium is overly specific language. Safe shipping limits should apply for all potential radiological contamination from site, not just uranium. <b>Recommendation</b> Consider more replacing 'uranium' with 'radiological contaminants'.	<b>June 17:</b> Uranium is the principal contaminant of concern at Rayrock and all other sites (except the powerline). Uranium is the radiological contaminant of concern, and the risk from the uranium will always exceed the other radionuclides as the relative concentrations of the others derive from the original uranium source concentration.
7	WL-Page 5, Defined Terms, Closure and Reclamation	<b>Comment</b> The TG aims to restore and reintegrate this site into the cultural and social heart of the Tlicho region. This means that the definition of closure and reclamation needs to be not just about self-sustaining ecosystems that are compatible with healthy environment and human activities. There needs to be a broader recognition of the cultural importance of the Rayrock area and the need to have remediation restore the area for cultural use. <b>Recommendation</b> Please revise the definition with a new statement at the end: ", in a way that is culturally and socially accepted within the Tlicho region. "	<b>June 17:</b> The Guidelines for the Closure and Reclamation of Mine Sites in the NWT were developed collaboratively by the federal government and the four Land and Water Boards to provide proponents with consistent expectations for closure and reclamation planning. While CIRNAC commits to restoration of the site as closely as possible to the way that is culturally and socially acceptable to the Tlicho, given that this recommendation does not involve the use of land or waters or the deposit of waste, CIRNAC submits that this recommendation does not fall within the jurisdiction of the WLWB and the definition should not be changed. CIRNAC is committed to ongoing engagement with the Tlicho Government throughout all phases of remediation as described in the Engagement Plan.

8	WL-Page 6, Defined Terms, Inspector	<p><b>Comment</b> The definition of inspector is correct. However, The ability to have Tlicho witnessing of inspections in order to establish trust and long term connection back to the land should be contemplated.</p> <p><b>Recommendation</b> In the definition or in a condition, please add: During inspections, the Inspector shall, when feasible, be accompanied by a qualified co-Inspector or environmental monitor from the Tlicho Government.</p>	<p><b>June 17:</b> While this recommendation affects the Inspectors, not the Rayrock Remediation Project or its personnel, CIRNAC is not aware of other instances where Inspectors are directed within a Licence to include a third party in their inspection. CIRNAC supports the TG involvement in the inspection process.</p>
9	WL - Page 8 - Defined Terms - 'Tailings Containment Facility' (language is inconsistent).	<p><b>Comment</b> Earlier the tailings storage areas were referred to as 'Tailings Containment Areas', here they are referred to 'Tailings Containment Facilities'. 'Tailings Storage Areas' is more accurate description. The tailings are not fully contained from downstream receptors (and they were not discharged into an engineered facility), consequently it seems somewhat misleading to refer to them as a 'tailings containment facilities'.</p> <p><b>Recommendation</b> Consider revising terminology used to describe the tailings storage areas.</p>	<p><b>June 17:</b> As noted for Tlicho comment #4, CIRNAC would like the term Tailings Containment Area to be preserved.</p>
10	WL: Part B: General Conditions, Part B, Section 3. Incorporate Scientific Information and TK	<p><b>Comment</b> Referring to Traditional Knowledge, this section gives the responsibility to the Proponent to manage the TK received. The TG would like to have control and ownership of TK knowledge.</p> <p><b>Recommendation</b> The ownership, identification, and appropriate use of TK should be the responsibility of the Tlicho Government. In practical terms, Licence conditions should acknowledge that TK needs to be considered and incorporated following</p>	<p><b>June 17:</b> Part B Item 3 states "the Licensee shall make every reasonable effort to consider and incorporate any scientific information and Traditional Knowledge that is made available to the Licensee". As such, the Tlicho Government is responsible for the ownership, identification and appropriate use of the TK. The Tlicho Government will explain to CIRNAC how the TK should be applied in the conduct of activities under the licence, and CIRNAC will make every reasonable effort to apply the TK as directed. CIRNAC feels the wording is appropriate for both the purposes of CIRNAC and the Tlicho Government.</p>

		guidance and direction from TG and in ways deemed appropriate by TG.	
11	WL: Part B: General Conditions, Part B Section 19. Annual Water License Report	<p><b>Comment</b> Here the Annual Water Licence Report is noted. It should be provided directly to TG as well.</p> <p><b>Recommendation</b> Please add, "and Tlicho Government."</p>	<p><b>June 17:</b> The Annual Water Licence Report is submitted to the WLWB, where it is posted for public access. It is not clear to CIRNAC why the Tlicho Government would require the submission sent separately to them.</p>
12	WL - Page 11 - General Conditions - 21. Engagement plan submission.	<p><b>Comment</b> Assuming the WL is signed by the minister by the beginning of November, option 1 would have Engagement plan submitted by February (90 days after licence issue), which may be too tight to allow for winter road construction activities to start on schedule.</p> <p><b>Recommendation</b> TG prefers that the Engagement plan is submitted 90 days prior to commencement of activities (option 2). Assuming a January start for the winter road work, the Engagement Plan would be supplied the beginning of October. Also would prefer that the TG Guidelines are referenced here. These are in alignment with the MVLWB Engagement Guidelines. However they are specific to the Tlicho Region. Consider adding a sentence, at the end of the second sentence on Option 2, "as well as in accordance with any guidelines set out by the Tlicho Government." We need to continue good engagement between CIRNAC and TG, AND we do not want to see remediation work delayed. If there are other ways to make the timing work we would be open to that.</p>	<p><b>June 17:</b> It is important to note that the Engagement Plan that is the subject of Part B Item 21 is an update of the Engagement Plan currently before the Board. It is CIRNAC's understanding that winter road construction activities will be permitted under the current version of the Engagement Plan that will be approved with Licence Issuance; therefore, neither option 1 or option 2 should affect the start of the start of Project activities. With approval of the current version of the Plan, the following statement would not apply: " The Licensee shall not commence Project activities in association with any actions licensed as part of the Remediation project prior to Board approval of the Plan." There are no aspects of the Engagement Plan that are dependent on the Contractor.</p>
13	WL - Page 22 - Waste and Water Management - Bullet 18 - Effluent Quality	<p><b>Comment</b> The numerical effluent quality criteria are not presented.</p> <p><b>Recommendation</b> The numeric criteria should be presented so that they can be reviewed, or</p>	<p><b>June 17:</b> No response required by CIRNAC.</p>

	Criteria - Mill Lake treated discharge.	additional guidance should be provided by the Board to ensure we can make clear and effective closing arguments about water quality objectives and how EQC should be set. Clear recommendations and commitments by CIRNAC were made regarding the EQC.	
14	WL - Page 22 - Waste and Water Management - Bullet 18 - Effluent Quality Criteria - Mill Lake treated discharge.	<p><b>Comment</b> Selenium is not included in list of EQC parameters. Selenium is present at elevated levels in the Mill Lake sediments.</p> <p><b>Recommendation</b> Add selenium EQC for the treated discharge from Mill Lake.</p>	<p><b>June 17:</b> While selenium was detected in concentrations above sediment guidelines, it was not detected in concentrations above water guidelines. As noted in the response to the Tlicho Government Intervention, "Selenium does not need to be considered as a contaminant of concern as the sediment assessments considered a weight of evidence approach using sediment chemistry and benthic community studies. The benthic community studies carried a larger weight in the determination of potential effects since they demonstrate the real effect in the environment rather than the use of a generic laboratory benchmark based on sediment chemistry. In addition, any effects observed in the benthic community is an integration of exposure to all contaminants present in the sediment and therefore would encompass selenium present in the sediments." Therefore, CIRNAC does not propose EQCs for selenium.</p>
15	WL - Page 22 - Waste and Water Management - Bullet 18 - Effluent Quality Criteria - Mill Lake treated discharge.	<p><b>Comment</b> Mill Lake sediments contain elevated radionuclides beyond uranium, however uranium is the only radionuclide with a EQC. It seems to make sense to set license limits for radionuclides such as lead-210, radium-226 (both have HC drinking water guidelines), and potentially other radionuclides as they are mine associated and are present at potential effect levels in the sediments.</p> <p><b>Recommendation</b> Add radionuclides EQC (in addition to uranium) for the treated discharge from Mill Lake.</p>	<p><b>June 17:</b> As discussed during the Public Hearing, concentrations for radionuclides will always be a set ratio of the uranium concentration. Since uranium is the principle contaminant of concern and will be maintained below the EQC, all radionuclides will be below any reasonable EQC that we might establish. CIRNAC feels that establishment of radionuclide EQCs is not necessary.</p>
16	WL - Page 28 - Part I: Closure and Reclamation, Section 2 on Closure	<p><b>Comment</b> There is a need for the TG and Elder closure criteria to be clearly identified. The TG requests that Closure Objectives and Criteria be co-developed, in order to achieve</p>	<p><b>June 17:</b> CIRNAC believes that the co-development of closure objectives between the Tlicho Government and CIRNAC is necessary to achieve the objective of designing for social and cultural remediation and reconciliation.</p>

	Objectives and Criteria	the objective of designing for social and cultural remediation and reconciliation. <b>Recommendation</b> This should be revised to include co-design with the Tlicho Government of the objectives and criteria.	These objectives are outside the licencing or permitting process, but CIRNAC commits to continuing to work closely with the TG on these objectives.
17	WL: - Page 28 -Part I: Closure and Reclamation, Section 5 & 6 on Plan and Performance Assessment Report.	<b>Comment</b> The area needs to be restored and reintegrated into the heart of the Tlicho territory. That is a key goal and purpose of this remediation project. Therefore the plan and report needs to have been reviewed and witnessed by the Tlicho Government. Also see comments on Schedule 7, below. <b>Recommendation</b> Please revise this section to acknowledge the critical importance of Tlicho involvement in developing and implementing the monitoring plan, and in assessing the performance of the remediation work. This should also be supported by engagement requirements.	<b>June 17:</b> CIRNAC recognizes the critical importance of Tlicho involvement in developing and implementing the monitoring plan, and in assessing the performance of the remediation work. It is important to note that the CIRNAC maintains the necessary control of the monitoring to meet its legal obligations both through the WLWB and through CNSC. It would be inappropriate to assign CIRNAC the legal responsibility to meet the WLWB's requirements for monitoring but then make the development of the monitoring, or its execution, conditional upon a third-party outside of the CIRNAC's control. The Tlicho will be involved with the development and delivery of monitoring plans, and will have opportunities to have input into CIRNAC's external Performance Assessment Review process, conducted after each 5 years of monitoring.
18	WL: - Page 29 - Schedule 1: Annual Water Licence Report, Section e)	<b>Comment</b> This refers to engagement activities. The TG would like to see engagement be expansive and inclusive of capacity building. <b>Recommendation</b> The reporting should be on engagement "and capacity building activities"	<b>June 17:</b> Capacity building and reporting will be voluntarily reported by CIRNAC in the Annual Water Licence Report. CIRNAC is already mandated to build capacity for our Indigenous partners. Capacity building is not a regulatory issue. As such, the reporting on this activity should not be a licence requirement.
19	WL: - Page 32 - Schedule 2: Conditions Applying to General Conditions (PART B)	<b>Comment</b> Schedule 2 is generally very helpful. The intent should be noted, that the parties intend to culturally, socially and environmentally reintegrate the area into Tlicho harvesting and use. Section 2) needs to reference capacity building as well. <b>Recommendation</b> Please include under e) that there is a commitment to provide funding for "capacity building throughout the	<b>June 17:</b> Funding commitments between CIRNAC and the Tlicho Government will be negotiated between the Governments, and we have publically made the commitment to this funding within the Licencing process. The Engagement Plan will be updated to describe the scope and schedule of the funding negotiated. However, that scope will be determined between CIRNAC and the Tlicho Government. CIRNAC does not view funding in support of capacity building as a regulatory issue, and these topics should not be included in Conditions for the Engagement Plan.

		full project, and for additional monitoring	
20	WL: - Page 32 - Schedule 2: Conditions Applying to General Conditions (PART B)	<p><b>Comment</b> Section f) refers to risk communication. This should be primarily led by the TG. CIRNAC has committed to having TG lead this work.</p> <p><b>Recommendation</b> Please revise bullet f) to read: Update to include commitment to "provide" financial and in-kind support to the Tlicho Government for "the Tlicho Government to lead" a risk communication program...</p>	<p><b>June 17:</b> CIRNAC does not view funding in support of capacity building as a regulatory issue, and these topics should not be included in Conditions for the Engagement Plan.</p>
21	WL: - Page 32 - Schedule 2: Conditions Applying to General Conditions (PART B)	<p><b>Comment</b> There is no reference to the HHERA with the TG after the project is complete.</p> <p><b>Recommendation</b> The Conditions in the licence or the items in the engagement plan should include an HHERA that will be completed at the time that remediation activities are complete. Please consider how this CIRNAC commitment can be included as part of the closure plan or performance assessment.</p>	<p><b>June 17:</b> Schedule 2 describes the revised Engagement Plan. A requirement for an HHERA should not be dictated through this Plan. As noted in the Public Hearing, the CNSC will require an assessment of risk after remediation as part of the Waste Nuclear Substance Licence; therefore this requirement is already established through another Authority Having Jurisdiction.</p>
22	WL: - Page 32 - Schedule 2: Conditions Applying to General Conditions (PART B)	<p><b>Comment</b> In each item a-f, reference should be made to the "Tlicho Government".</p> <p><b>Recommendation</b> Please replace "Tlicho" with "Tlicho Government" in a, c, e. Revise "Tlicho Elders" in d to "Tlicho Government and Elders".</p>	<p><b>June 17:</b> CIRNAC accepts this recommendation.</p>
23	WL - Page 33 - Schedule 3, Part E, Item 1, bullet d)	<p><b>Comment</b> Quantities and the physical and geochemical characteristics of materials required for Construction;</p> <p><b>Recommendation</b> Please add to this bullet or an extra bullet that states to include the volume and characteristic of natural material to be removed or regraded for the construction of this facility.</p>	<p><b>June 17:</b> Design quantities and the physical and geochemical characteristics of materials required for construction are available. Within the Plan, the volume of overburden material that will require removal can be estimated. Since the CDF is located in an area that was previously disturbed by mining activities, CIRNAC would not be able to differentiate between natural material, impacted soil, tailings and waste rock.</p>

24	WL - Page 33 - Schedule 3, Part E, Item 1, bullet c) & k)	<p><b>Comment</b> Relevant background information, including the data from geotechnical and geochemical investigations, the results of programs to characterize soil, rock, groundwater, ground ice, and ground temperature conditions to the depth expected to be affected by the proposed facility, beneath the footprint of all containment and runoff control structures, as deemed adequate by the Professional Engineer responsible for the design; k) Description of seepage management from the Confined Disposal Facility;</p> <p><b>Recommendation</b> The background information should include the hydraulic conductivity of the underlying soil or rock, factor of safety of the CDF, and the risk associated with these factors. Given the hazardous nature of the waste material and the cultural importance of the area, the factor of safety in preventing leakage from the facility must be high. The hydraulic conductivity of the underlying soil is important as this will affect the distance and rate that contaminants will travel if they depart the facility. (We recognize that the facility is designed and will be constructed to prevent leakage/seepage, but we still want to see this background information included).</p>	<p><b>June 17:</b> The Confined Disposal Facility Design Plan can include summary details on technical items (e.g., soil, rock, hydrogeology, etc.) as they relate to design. However, the Plan should not be scoped to comprise a Conceptual Site Model detailing all natural site physical processes outside of construction elements, including the results of all historical data, which would make the Plan unwieldy. CIRNAC recommends that the Plan constitute a concise design overview for CDF construction containing relevant details. Clause C would remain as-is. The Plan can describe the design details relating to leakage mitigation (Clause K); however, providing additional requested items like a "factor of safety" for the entire CDF is not practical (though describing this for some items like a berm is). References to past reports containing historical data can be included in the Plan.</p>
25	CDF	<p><b>Comment</b> The Schedule for the PCMM (Schedule 3) has no requirements for maintenance. Proper maintenance of the CDF in particular is vital for long-term performance and to achieve the goal of making the site safe and shrinking the avoidance zone. This includes routine maintenance, non-routine maintenance, and</p>	<p><b>June 17:</b> CIRNAC assumes that this comment is in reference to the Post-Closure Monitoring and Maintenance Plan in Schedule 7. The requested elements (a, b and c) can be prepared and included in both Schedule 3 and 7. We note that the word "replaced" [proposed Item C] should be "managed".</p>



		<p>replacement in the long-term of anything with a limited life span (e.g., geomembranes).</p> <p><b>Recommendation</b> Schedule 3 should require:</p> <p>a. A description of routine and potential non-routine maintenance for each component of the site; b. An estimate of the approximate design life of the CDF geomembranes, CDF liners, and any other structures that have limited life spans; and c. A summary description of how CDF geomembranes, CDF liners, and any other structures that have limited life spans would be replaced.</p>	
26	CDF	<p><b>Comment</b> We did not see where the draft Water Licence incorporated the TG's recommendation to address the integrity of the CDF structures in performance reporting. The Licence should require that the integrity of the structures (geomembrane, liners, cap, drainage structure, etc.) be reported in plain language and in technical detail in the Performance Assessment Reports and/or the Geotechnical Inspection Report. TG confidence in the integrity of the CDF could help to shrink the avoidance zone over time</p> <p><b>Recommendation</b> We recommend that the licence should require that the Performance Assessment Report include an evaluation of the integrity of the CDF structures including the geomembranes, liners, cap, drainage structure etc.</p>	<p><b>June 17:</b> The Post-Closure Monitoring and Maintenance Plan will detail the non-intrusive inspections to be conducted for the Project (including the CDF). The results of these inspections provide the data required to assess performance and integrity, and identify the recommendations for repair or maintenance as-required. Therefore, since this activity is already included in the Post-Closure Monitoring and Maintenance Plan, and the Performance Assessment Report will bring together and interpret annual monitoring results, no additional clauses to this effect are deemed necessary.</p>
27	CDF	<p><b>Comment</b> We did not see where the following TG recommendation was included in the draft Licence: "If possible, provisions should be made for adoption of better containment or remediation technology in future as we know that technology will continue to evolve as we progress into the future and the proposed</p>	<p><b>June 17:</b> CIRNAC would like to point out that the Water Licence will be in place between issuance and the date of expiry. There will not be "better containment or remediation technology" within the term of the Licence, and the Waste Nuclear Substance Licence for Rayrock prohibits the removal of the uranium-contaminated material. CIRNAC is requiring design and construction for the CDF that does not include retaining structures (such as dams) that require on-going water licencing. CIRNAC does not agree with inclusion of</p>

		<p>containment facility may not be a permanent solution." New technologies could become available in the future that could help improve the CDF performance or reduce the monitoring and maintenance requirements for the CDF. This could help to achieve the TG's goal of making the site safe and shrinking the avoidance zone. Technology evaluation doesn't need to happen annually, so the PAR (which is required less often than annual reports) could be a good place for this information. This would also allow new technologies to be evaluated in the context of the CDF's performance.</p> <p><b>Recommendation</b> We recommend that the licence should include a requirement in the PAR to identify and evaluate new or emerging containment or remediation technologies and discuss the feasibility of implementing these technologies. Alternatively the PAR or the PCMM Plan should at least establish a schedule for technology evaluation to occur regularly in the future.</p>	<p>water licence conditions that describe required action beyond the effective date of the Licence.</p>
28	CDF	<p><b>Comment</b> TG intervention recommended a long design life, such as 1000 years be considered for the CDF. Based on principles in the Canadian Dam Association's Mining Dams Bulletin (part of the CDA Guidelines), the CDF (including the swale/drainage channel) and any other permanent long-term engineered structures should be designed with more conservatism than required during operations. This is because of how long these structures have to perform post-closure ("forever" or 1,000 years or more). A specific example of this is that the inflow design flood (IDF) or any other storm events considered in</p>	<p><b>June 17:</b> As noted by AECOM on Day 1 of the Public Hearing, "With respect to designing for a thousand years, the cost to do so would be absolutely prohibitive because a thousand (1000) year outlook from an engineering standpoint is very, very difficult if -- probably impossible." CIRNAC is aware of the Tlicho desire for extra conservatism, and we have asked the CDF designer to be conservative in the design; however, the Waste Nuclear Substance Licence will continue to require monitoring of the CDF that will confirm that the CDF continues to perform in accordance with its design intent, so this monitoring is not also required in the Water Licence.</p>

		<p>the design, should be more conservative than the CDA Guidelines recommend for operations. Although the CDA put this idea forward for mining dams, it is appropriate for other engineered containment structures like the CDF.</p> <p><b>Recommendation</b> We recommend that the CDF design incorporate extra conservatism, because of the long life of the structure and the need for permanent containment of the contaminated sediments.</p>	
29	WL - Page 35 - Schedule 4 - Insert radon/radiation monitoring requirement during construction and remediation phases.	<p><b>Comment</b> Radon (and radiation) monitoring does not have an identified requirement/home during construction and remediation phases. Radon monitoring is identified in the Post-Closure Monitoring and Maintenance Plan, but not during the operation phase of site work.</p> <p><b>Recommendation</b> Consider including language that requires radon and radiation monitoring during all phases of the project (and placed into appropriate section of the WL).</p>	<p><b>June 17:</b> Radon and radiation monitoring, and other Health and Safety requirements for the work on the Rayrock Remediation Project sites, are primarily within the jurisdictions of other Authorities. The radon and radiation concerns at Rayrock are addressed through CNSC. If WLWB intends to include conditions requiring radon or radiation monitoring, they will need to confirm that the condition included conforms to requirements of other authorities.</p>
30	WL - Page -Schedule 4.2 - Sediment and Erosion Control Plan.	<p><b>Comment</b> The list of information requirements could include 'Site drainage monitoring during freshet and during/following precipitation'. This would make the SECP more consistent with the freshet monitoring requirement for the Post-Closure Monitoring Plan.</p> <p><b>Recommendation</b> Please add freshet monitoring to SECP requirements.</p>	<p><b>June 17:</b> CIRNAC would require more information on what freshet monitoring would require. If the monitoring is appropriate and required, we suggest that it be included in the next version of the SECP. It should be noted that site access during freshet will be limited to helicopters, the Contractor may be in a temporary shutdown and monitoring personnel may not be on-site. As such, CIRNAC would only be interested in completing this monitoring if it is necessary for environmental protection. The Remediation Contractor will be responsible for sediment and erosion control, and CIRNAC expects that the Contractor will arrange all necessary monitoring to protect against sediment release.</p>
31	WL - Page 39 - Schedule 7.2.f.	<p><b>Comment</b> Schedule 7.2.f. - list item. Consideration should be given to adding 'radiological conditions' to the list presented.</p>	<p><b>June 17:</b> Several reports provide recent radiological conditions; however, all of these radiological conditions are legacy conditions from the mine. Legacy conditions are described in the Remedial Action Plan.</p>

	Closure and Reclamation Plan.	'Chemical conditions' would not include gamma radiation exposure, and may not include atmospheric radon risk. <b>Recommendation</b> Consider adding 'radiological conditions' to the list presented in Schedule 7.2.f.	
32	WL - Page 39 - Schedule 7.1.a) & b) Closure and Reclamation Plan.	<b>Comment</b> The TG would like to see reconciliation objectives recognized. The land was alienated from Tlicho use more than 50 years ago, and the intent is conduct activities that reconcile the land back to the Tlicho people. This will require more than environmental and construction based activities. <b>Recommendation</b> In item c), please include: Demonstrate how Closure Activities contribute to reconciliation, particularly towards cultural, social and spiritual reconciliation and restoration of the area of land back into Tlicho use.	<b>June 17:</b> While CIRNAC commits to reconciliation objectives and intends to work with the Tlicho Government to find solutions, this recommendation does not involve the use of land or waters or the deposit of waste. CIRNAC submits that this recommendation does not fall within the jurisdiction of the WLWB.
33	WL - Page 39 - Schedule 7.2.f) i. Closure and Reclamation Plan.	<b>Comment</b> The TG notes that there are primarily biophysical items in this description of pre-existing and current Project environment. <b>Recommendation</b> Please add "vii) cultural, social and spiritual conditions." Only listing "traditional uses" does not adequately represent this.	<b>June 17:</b> CIRNAC and the Tlicho Government have completed several investigations of the cultural, social and spiritual condition of the Rayrock area, and CIRNAC commits to continuing this investigation as directed by the Tlicho Government. This recommendation does not involve the use of land or waters or the deposit of waste. CIRNAC submits that this recommendation does not fall within the jurisdiction of the WLWB.
34	WL - Page 39 - Schedule 7.2.g) i. Closure and Reclamation Plan.	<b>Comment</b> The past social and health history should be acknowledged in the closure plan. <b>Recommendation</b> Please revise i. site history to include the social and cultural experience of the Tlicho people.	<b>June 17:</b> CIRNAC and the Tlicho Government have completed several investigations of the past social and health of the Rayrock area, and CIRNAC commits to continuing this investigation as directed by the Tlicho Government. This recommendation does not involve the use of land or waters or the deposit of waste. CIRNAC submits that this recommendation does not fall within the jurisdiction of the WLWB.
35	WL - Page 40 - Schedule 7.3.b.vii. -	<b>Comment</b> Tlicho consultation is required for the entire monitoring program, not just for	<b>June 17:</b> The WLWB lays out a very specific framework and requirements for AEMP and other monitoring and CIRNAC anticipates that the WLWB's standard

	'Consultation with the Tlicho for sampling sites'	sample site selection. <b>Recommendation</b> Please revise bullet vii) to "Consultation and collaboration with the Tlicho Government"	conditions related to monitoring would apply to the CIRNAC as well. It is important that CIRNAC has the necessary control of monitoring to meet its legal obligations. It would not be inappropriate to give CIRNAC the legal responsibility to meet the WLWB's requirements for monitoring but then make the development of the monitoring, or its execution, conditional upon a third-party outside of CIRNAC's control.
36	WL - Page 40 - Schedule 7.3.c	<b>Comment</b> Considering the TG intervention and hearing presentation, public hearing statements made by Tlicho Citizens, and commitments made by CIRNAC, TG and Tlicho Citizens need to be active participants in the monitoring. <b>Recommendation</b> Under C), please add a new item "How Tlicho Government and Tlicho Citizens will be involved in the monitoring programs."	<b>June 17:</b> CIRNAC accepts this recommendation.
37	WL - Annex A - SNP monitoring frequency.	<b>Comment</b> Sampling Frequency: Monthly during open water and construction activities; Bi-weekly during upstream remediation activities. 1. It is not clear what would be considered an 'upstream remediation activity' that would trigger the biweekly sampling frequency for the SNP stations. Would treatment discharge be an upstream remediation activity that would trigger bi-weekly sampling in the four Sherman Lake sites and the Lake A site? 2. Based on bi-weekly sampling being required during upstream remediation work, when work occurs on the north tailings storage area, bi-weekly sampling of Beta Lake, Alpha Bay, all four Sherman Lake sites, as well as Lake A would be required - is this the intention of the licence? It may be more appropriate and cost effective to require bi-weekly sampling only at the immediate downstream SNP station to the activity (where practicable), with the	<b>June 17:</b> CIRNAC is unclear of the advantage to the SNP of the "biweekly" sampling program, as monthly samples would be sufficient to track any changes in water quality parameters within the waterbodies. Since "biweekly" means both twice a week and once every two weeks, it is requested that once every two weeks is used if this requirement remains. CIRNAC would consider "upstream" remediation to be work requiring SEC measures to protect the waterbody in which the SNP station is located - thus treatment discharge, which we assume means discharge at 1663-7, would not be an every two week trigger. CIRNAC agrees with the recommendation that, if samples are to be required every two weeks, that only the SNP stations near the remedial action require the additional sampling.

		<p>sampling frequency of the further downstream SNP stations adjusted if required based on the results from the immediate downstream SNP station.</p> <p><b>Recommendation</b> Please provide more specific information to identify when bi-weekly sampling is required for the various SNP stations.</p>	
38	WL - Annex A - Radionuclide monitoring frequency.	<p><b>Comment 1.</b> The radionuclide sampling frequency is generally more frequent than what was envisioned by the Tlicho. 2. For stations other than the discharge (1663-7), monthly radionuclide sampling may be sufficient when there is little potential for disturbance of the tailings areas . Weekly radionuclide sampling of 1663-7 seems appropriate.</p> <p><b>Recommendation</b> In general, consider revising radionuclide sampling frequency to monthly, with bi-weekly sampling required for sites adjacent to the tailings when work has potential to significantly disturb/alter the upstream tailings area.</p>	<p><b>June 17:</b> CIRNAC notes that the TCA repairs would not disturb the underlying tailings, and the borrow material used for the 1996 construction did not have significant uranium concentrations. CIRNAC does not feel that sampling every two weeks is necessary; however, if it will be required we suggest a consistent sampling parameter group (suite) be applied through the program.</p>
39	WL- Page 45 - Annex A - 1663-9	<p><b>Comment</b> New Control Lake A is only accessible by floatplane or helicopter from Rayrock.</p> <p><b>Recommendation</b> Would it be better to select a background water sampling site that has easier access from the Rayrock site (i.e. use the original Control Lake or another lake close to site)?</p>	<p><b>June 17:</b> New Control Lake was selected to replace Control Lake due to access issues; however, it should be noted that New Control Lake is the only SNP point that will require aerial access. AECOM will be reviewing reference locations in 2021 and will recommend locations.</p>
40	WL - Page 47 - Annex A. Radiological parameters	<p><b>Comment</b> Uranium-238 is included in the list of radionuclides, but U-234 is not. Can the U-238, U-234, and U-235 concentration be calculated from the total uranium concentration using natural abundance</p>	<p><b>June 17:</b> Uranium consists of 99.274% U-238, 0.72% U-235 and 0.005% U-234 when naturally occurring (such as at all project sites). Therefore, 15 µg/L uranium in water would consist of 14.8911 µg/L U-238, 0.108 µg/L U-235 and 0.0008 µg/L U-234. However, radionuclides are reported in Bq/L, which represents the isotope activity per litre of water. Since the concentration of</p>

		<p>ratios? (with confirmation that natural uranium isotope abundance ratios accurately represent site conditions).</p> <p><b>Recommendation</b> Please consider including U-234. If uranium-238 is included in the radionuclide analysis, what is the rationale for not including uranium-234 as a monitoring parameter? (U-234 is formed from the decay of U-238).</p>	<p>uranium will be below 15 µg/L, the activity of each isotope per litre will be very low.</p>
41	WL - Page 48 - Annex A. Bullets 5 & 6.	<p><b>Comment</b> Bullets 5 and 6 state are nearly duplicates</p> <p><b>Recommendation</b> Suggest removing bullet 6.</p>	<p><b>June 17:</b> CIRNAC will specify the use of a CALA laboratory, so bullet 6 can be used. CIRNAC agrees that only one of the two is needed.</p>
42	LUP - Page 8 - Point 42. Excavation of land within 100 m of watercourse.	<p><b>Comment</b> The Permittee shall not excavate land within 100 metres of the Ordinary High Water Mark of any Watercourse, unless otherwise authorized in writing by an Inspector. Would cap repair work that requires excavator work and is within 100 m of any watercourse require inspector approval?</p> <p><b>Recommendation</b> Consider excavator-based activities that would require inspector approval. Some of the planned areas of tailings cap repair are probably within 100m of the high water mark.</p>	<p><b>June 17:</b> TCA repairs are intended to completed to the edge of the three Lakes (Alpha Lake, Beta Lake and Gamma Lake). The scope of this work has been outlined in the applications, in the RAP and in the other plans submitted in support of the Land Use Permit and Water Licence. CIRNAC will inform the Inspectors of the timing of this work prior to the start of work.</p>
43	LUP - No reference	<p><b>Comment</b> There is no reference to the Air Quality Monitoring.</p> <p><b>Recommendation</b> Please consider a section for Air Quality and dust monitoring in the water licence or land use permit. Worker Protection monitoring should also be covered somewhere.</p>	<p><b>June 17:</b> Dust monitoring is described in the SECP. All aspects of worker protection will be provided in the Contractor's Site Specific Health and Safety Plan.</p>
44	LUP 26 (1)(j) Protection of Historical,	<p><b>Comment</b> There is no reference to bringing Tlichon monitors in, in the event that there is a find.</p>	<p><b>June 17:</b> It is CIRNAC's understanding that either CIRNAC Inspectors or the Prince of Wales Northern Heritage Centre has jurisdiction for archaeological matters. CIRNAC would contact them, and they would make other appropriate contacts. CIRNAC-CARD (the Permittee) would not be responsible for</p>

	Archeological, and Burial Sites	<b>Recommendation</b> Please include a requirement to notify the Tlicho Government.	contacting the Tlicho Government, so this requirement would not be appropriate in the LUP.
45	WL - Page 24, Part F, Section 20. And also Annex A - Pg 44 - SNP 1663-7 - Aquatic toxicity testing requirement.	<p><b>Comment</b> 1. Chronic toxicity testing is more sensitive than acute toxicity testing. Chronic toxicity testing is not included in the permit. Chronic toxicity testing is warranted to confirm that there are no synergistic compounding effects between the various contaminants, and also to confirm that the radioactive contaminants that do not have CCME freshwater aquatic life guidelines, such as radium and lead-210, are at safe levels. 2. Ideally, the TG would like to see acute and chronic toxicity testing of the discharge at its worst case and/or with concentrations at the discharge limits. This is to confirm that the discharge is safe and the permit limits are protective of the environment. Upon treatment startup, the plant inflow will be relatively clean lake water, however during sediment dewatering the plant inflow will likely be significantly worse. Testing of discharge at its worst case is warranted. 3. With regard to toxicity testing frequency, the TG has no strong position, however the monthly requirement may be excessive, and does not seem to target the discharge at its worst case.</p> <p><b>Recommendation</b> Recommendations: 1. Please add chronic toxicity testing requirements to the licence. 2. Consider revision to the frequency for toxicity testing.</p>	<p><b>June 17:</b> CIRNAC considers the EQCs for the Mill Lake discharge to be highly conservative. Monthly toxicity testing does not seem appropriate for these EQCs. CIRNAC would agree to chronic toxicity testing at the start of each water treatment season (annually) or at any other one time per year that is considered appropriate.</p>

Wek' eezhii Renewable Resources Board: Randi Jennings			
ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	CIRNAC-CARD - Rayrock Remediation	<p><b>Comment</b> Condition 21 - Engagement.</p> <p><b>Recommendation</b> The WRRB recommends</p>	<p><b>June 17:</b> It is important to note that the Engagement Plan that is the subject of Part B Item 21 is an update of the Engagement Plan currently before the</p>



	Project - Type A WL Application - Draft WL (W2020L8-0003)	the use of option 2 for the enagement plan of the draft water licence W2020L8-0003.&nbsp;<em>&quot;Option 2: A minimum of 90 days prior to commencement of activities, the Licensee shall submit to the Board, for approval, a revised Engagement Plan. The updated version shall be developed in accordance with the MVLWB Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits and Schedule 2, Condition 1. The Licensee shall not commence Project activities in association with any actions licensed as part of the Remediation project prior to Board approval of the Plan.&quot;</em>	Board. It is CIRNAC's understanding that winter road construction activities will be permitted under the current version of the Engagement Plan that will be approved with Licence Issuance; therefore, neither option 1 or option 2 should affect the start of the start of Project activities. With approval of the current version of the Plan, the following statement would not apply: " The Licensee shall not commence Project activities in association with any actions licensed as part of the Remediation project prior to Board approval of the Plan." There are no aspects of the Engagement Plan that are dependent on the Contractor.
2	CIRNAC-CARD - Rayrock Remediation Project - Type A LUP Application - Draft LUP (W2020X0005)	<b>Comment</b> The WRRB have no comments at this time. <b>Recommendation</b> The WRRB have no recommendations at this time.	<b>June 17:</b> Thank you.

## Distribution List

CIRNAC-CARD - Rayrock Remediation Project - Type A WL and LUP Applications - Draft WL and LUP (W2020X0005 & W2020L8-0003)

File(s): W2020L8-0003 W2020X0005

Proponent: CIRNAC-CARD

Reviewer Comments Due By: June 10, 2021

Proponent Comments Due By: June 17, 2021

### Document(s)

Draft Water Licence

Draft Permit

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June 10, 2021

Joseph Mackenzie  
Chair  
Wek'èezhì Land and Water Board  
#1-4905 48<sup>th</sup> Street  
Yellowknife, NT  
X1A 3S3

Dear Mr. Mackenzie,

**Re: CIRNAC CARD**  
**Water Licence Application – MV2020L8-0003**  
**Land Use Permit Application – MV2020X0005**  
**Rayrock Remediation Project**  
**Draft Type A Water Licence and Land Use Permit Review**  
**Request for Comments**

The Department of Environment and Natural Resources (ENR), Government of the Northwest Territories has reviewed the Water Licence at reference based on its mandated responsibilities under the *Waters Act* and provides the following comments and recommendations for the consideration of the Board.

**Topic: Water Licence Term**

**Comment(s):**

As noted by the Board in the Draft Water Licence, at the Public Hearing the Tłıchǫ government (TG) suggested that based on CIRNAC's schedule, a Water Licence term of more than seven years may be required. GNWT does not have any concerns with a 10 year Water Licence term.

**Recommendation(s):**

- 1) The GNWT recommends that the Water Licence be issued for a 10 year term based on the suggestion from TG that the Water Licence term be longer than the seven year term proposed in the Water Licence application.

**Topic: Scope****Comment(s):**

GNWT notes that the wording of Scope item 1 f) isn't clear, and may need revising.

**Recommendation(s):**

- 1) GNWT recommends that the WLWB review and revise the wording of Scope item 1 f) as necessary.

**Topic: Part C – Security****Comment(s):**

The Draft Water Licence included a blank section for security. GNWT notes that CIRNAC's Water Licence for Colomac (W2014L8-0003), and other similar remediation project Water Licences do not contain a blank section for security. It isn't clear why this blank section has been included in the draft Water Licence for the Rayrock Remediation Project.

**Recommendation(s):**

- 1) GNWT recommends that the blank section for Security be removed from the Water Licence as it does not apply to the Rayrock Remediation Project.

**Topic: Part D – Water Use Condition 1****Comment(s):**

The water source table presented in Condition 1 includes "less than (<)" symbols for maximum quantity of water used for most rows; however, the maximum quantity allowed for use from Sherman Lake does not include this symbol. It isn't clear why this volume may be different.

**Recommendation(s):**

- 1) GNWT recommends that the Board clarify why the maximum quantity of water use from Sherman Lake is not recorded as <25,000 m<sup>3</sup> per year as is the case for Chico, Lake B, Tumi Lake, etc.

## **Topic: Effluent Quality Criteria – Mill Lake Treatment Discharge**

### **Comment(s):**

As stated in our presentation at the Public Hearing, GNWT supports the effluent quality criteria (EQC) proposed by CIRNAC for the Mill Lake Water Treatment discharge with the addition of a total suspended solids (TSS) EQC maximum grab of 15 mg/L and a total petroleum hydrocarbons (TPH) EQC maximum grab of 5 mg/L.

### **Recommendation(s):**

- 1) GNWT recommends that the EQC proposed by CIRNAC for the Mill Lake Treatment Discharge be approved, with the addition of a maximum grab EQC of 15 mg/L for TSS and a maximum grab EQC of 5 mg/L for TPH.

## **Topic: EQC - Treated Sewage Discharge**

### **Comment(s):**

As noted in our presentation at the Public Hearing, GNWT supports the EQC proposed by CIRNAC for the treated sewage discharge including the EQC of 10,000 CFU/dL for fecal coliforms.

### **Recommendation(s):**

- 1) GNWT recommends that the EQC proposed by CIRNAC for the treated sewage discharge be approved, including the EQC of 10,000 CFU/dL for fecal coliforms.

## **Topic: Annual Water Licence Report - Schedule 1 m) vi. Water Quality Monitoring**

### **Comment(s):**

Schedule 1, m) vi requires “a summary and interpretation of water quality monitoring results for each of the main source areas and how these compare to predicted values.” GNWT notes that it isn’t clear what the “main source areas” are.

### **Recommendation(s):**

- 1) GNWT recommends that the Board define “main source areas” in the Water Licence as referred to in Schedule 1, m) vi.



## **Topic: SNP Sampling Frequency**

### **Comment(s):**

GNWT notes that the sampling frequency for SNP 1663-1 to 1663-4 is described as “Monthly during open water and construction activities” and “Bi-weekly during upstream remediation activities”. GNWT notes that without defining the activities that are considered “remediation activities” versus “construction activities”, and given that this is a remediation project, there could be ambiguity about which sampling frequency applies to these SNP stations.

The definition of “remediation activities” would also help to clarify the required sampling frequencies for SNP 1663-5, 6, 8 and 10.

### **Recommendation(s):**

- 1) GNWT recommends that the Board include a definition in the Water Licence for “remediation activities” in order to add clarity for periods when bi-weekly sampling is required.

Comments and recommendations were provided by ENR technical experts in the Water Management and Monitoring Division and were coordinated and collated by the Environmental Assessment and Monitoring Section (EAM), Environmental Stewardship and Climate Change Division.

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at (867) 767-9233 Ext: 53096 or email [patrick\\_clancy@gov.nt.ca](mailto:patrick_clancy@gov.nt.ca).

Sincerely,



Patrick Clancy  
Environmental Regulatory Analyst  
Environmental Assessment and Monitoring Section  
Environmental Stewardship and Climate Change Division  
Department of Environment and Natural Resources  
Government of the Northwest Territories

COMMENT SHEET					
Draft Water Licence Application and Land Use Permit, Rayrock Remediation Project, June 2021					
Comment No.	Page (pdf)	Section	Clause	Reviewer	Comment
<b>Draft Land Use Permit</b>					
1	1	Part A	1	PSPC	The scope of land use operation listed in the LUP should include all activities outlined in the applications and Remedial Action Plan. The list included in the Draft LUP appears to be missing a number of project activities. It is important to note that the LUP needs to apply to all project sites outlined in the applications and Remedial Action Plan and not only the abandoned Rayrock Mine site. CIRNAC recommends the use of "Rayrock Remediation Project Sites" or similar terminology.
2	1	Part A	3	CIRNAC-CARD	The Rayrock Remediation Project does not have obligations/commitments under the Déjàné agreement. CIRNAC recommends that the reference to "applicable Déjàné laws" be removed from this clause.
3	1 to 3	Part B	All	PSPC	CIRNAC recommends that the definitions used in the Land Use Permit be consistent with those included in the Water Licence (e.g. definition for watercourse is different in water licence and LUP). CIRNAC recommends that the definition for Minister be updated to refer to the "Minister of Northern Affairs" rather than Minister of Indian Affairs and Northern Development Canada.
4	3 5	Part B Part C 26(1)(b)	Shut Down Period 11, 13, 15	CIRNAC-CARD	CIRNAC recommends that the specific dates included within the definition of "Shut Down Period" be removed from the definition. CIRNAC currently anticipates work occurring between May 1 to 31 and December 1 to January 31.
5	4	Part C 26(1)(c)	16	CIRNAC-CARD	This clause about equipment should include "unless otherwise authorized in writing by an Inspector."
6	7	Part C 26(1)(f)	32	CIRNAC-CARD	Although effort will be made to limit off-road vehicle travel, off-road vehicle travel will be required during snow-free conditions in order to access all areas requiring remediation. CIRNAC recommends that this clause be revised to <u>require that off-road vehicle travel be avoided to the extent practicable</u> .
7	7	Part C 26 (1)(f)	33-35	PSPC	CIRNAC requests that these clauses be modified to be specific to the "natural ground surface". There are previously disturbed areas of the site that may be rutted during the course of remediation activities.
8	8	Part C 26 (1)(f)	40	PSPC	This clause should be clarified to be for stream crossing during open water.
9	9	Part C 26(1)(h)	52, 53	CIRNAC-CARD	It is CIRNACs understanding that the WMMP must be submitted to WLWB for approval and then to WRRB for approval. CIRNAC requests that WLWB confirm/clarity expectations on deadlines and reporting structure (not currently stated in this permit).
10	9	Part C 26(1)(i)	54	PSPC	The WL includes a condition for the submission of a Waste Management Plan (Part F (4)). CIRNAC suggests rewording this condition (54) so it is clear that the Waste Management Plan is not also submitted under the LUP. This comment also applies to Part C 26 (1) (m) 73 regarding the SCP and Part C 26 (1) (q) regarding the Engagement Plan.
11	9	Part C 26(1)(i)	55	PSPC	CIRNAC requests that the wording of this clause be adjusted as follows: "The Permittee shall keep all domestic garbage and debris in a secure container until disposal."
12	11	Part C 26 (1)(m)	70	AECOM	Can the volume of fuel being stored at site be adjusted by approval of the Inspector, rather than the Board? This may be a faster approval process.
13	11	Part C 26 (1)(m)	71	PSPC	Does this only apply to fuel caches established at Rayrock? Is there a threshold volume below which the cache doesn't need to be reported? If a third party establishes a fuel cache on one of our sites, does the cache have conform to our LUP? If a third party established a fuel cache for use of the Rayrock project, but places it in a location outside of the sites identified in the project, does the cache have conform to our LUP?
14	13	Part C 26(1)(q)	87	CIRNAC-CARD	Is the prohibition on moving equipment when caribou are present new? While there should be a requirement to not disturb the caribou, it seems unnecessarily restrictive to "not move any equipment". A certain amount of site noise will deter the caribou from moving through the site.
15	13	Part C 26(1)(q)	88	CIRNAC-CARD	Only migratory birds are identified in the LUP, but there are several other concerns identified by the WRRB in the WMMP, including raptor nests, hibernacula, etc.
<b>Draft Water Licence</b>					
1		All	General	AECOM	Terminology used to describe the options is confusing. In the Licence, activities, project activities, and construction activities are used in description of the same or similar activities. Recommend that it be used consistently as <u>construction activities</u> .
2	3	Part A	1 a)	CIRNAC-CARD	CIRNAC requests that the reference to "blast pits" be changed to "exploration workings" in this clause. CIRNAC requests that this clause be revised to refer to "burial of uranium-impacted debris in the Confined Disposal Facility".
3	3	Part A	1 a)	CIRNAC-CARD	The scope of licence should include all activities outlined in the applications and Remedial Action Plan. It appears that the list is currently missing a reference do the removal and disposal of concrete foundations in the CDF. CIRNAC requests that scope item (b) be revised as follows: "Withdrawal of Water for use in camp operations, dust control, washing, winter road construction and sediment remediation activities".
4	3	Part A	1 b)	AECOM	Please add "water treatment diluent" to this definition. We may need to withdraw water from Sherman Lake as diluent (or make-up water) of the Mill Lake sediments if the sediment-water ratio needs adjustment.
5	3	Part A	1 e)	AECOM	Can the word ice be removed? This would leave just bridges and would allow for structural bridges to be used if that is preferred by the road builder.
6	5	Part A	Defined Terms	PSPC	CIRNAC recommends removing the definitions that aren't used in the Water Licence including "closure cost estimate" and "freiboard".

75% Remedial Action Plan Comments

Comment No.	Page (pdf)	Section	Clause	Reviewer	Comment
7	6	Part A	Defined Terms	PSPC	CIRNAC recommends that the definition of Maximum Average Concentration be removed, as a maximum average is not proposed for this Licence. CIRNAC recommends that the definition of Maximum Grab Concentration be revised to: "the concentration of a parameter that cannot be exceeded in any one analytical result collected in accordance with the sampling and analysis requirements specified in the SNP".
8	7	Part A	Defined Terms	PSPC	In order to make a distinction between Project Activities and Construction Activities, CIRNAC recommends adding a definition for Project Activities and Construction Activities as follows: Project Activities - Activities that will commence upon Licence issuance and continue until all closure activities are complete. Construction Activities - Activities that will commence when construction begins on the first Project Component(s). CIRNAC would like to verify that plans currently before the WLWB, submitted in support of the Permit and Licence, will be Board approved with Licence Issuance to allow for initiation of Project Activities (specifically winter road construction).
9	11	Part B	17	CIRNAC-CARD	Signage for SNP monitoring locations - Signs will only provide station numbers (1663-1, etc.) unless additional information is specified before the signs are erected.
10	11	Part B	21	CIRNAC-CARD	It is important to note that the Engagement Plan that is the subject of Part B Item 21 is an update of the Engagement Plan currently before the Board. The Rayrock Engagement Plan describes the collaboration between the Tlcho Government and CIRNAC to get the Rayrock Project to remediation. Nothing within the Engagement Plan is anticipated to change between now and the commencement of Project Activities. It is CIRNAC's understanding that winter road construction activities will be permitted under the current version of the Engagement Plan that will be approved with Licence Issuance; therefore, neither option 1 or option 2 should affect the start of the start of Project activities. With approval of the current version of the Plan, the following statement would not apply: " The Licensee shall not commence Project activities in association with any actions licensed as part of the Remediation project prior to Board approval of the Plan." There are no aspects of the Engagement Plan that are dependent on the Contractor.
11	14	Part D	1	CIRNAC-CARD	The Emile River is a River, not a lake. CIRNAC requests that the maximum quantity for both the Emile River and Marian River be based on instantaneous flow (the same method as stated for WhA#6).
12	14	Part D	1	AECOM	Add Water Treatment Diluent to Purpose of Water from Sherman Lake.
13	18	Part E	6, 7, 8	PSPC	In response to IR 16, CIRNAC proposed separating the design and construction plans into "Design Plans" and "Construction Plans". It is unclear whether the WLWB has considered the submissions proposed in response to IR 16 in its development of the draft Water Licence conditions. CIRNAC continues to request that the Design Plans be submitted 90 days prior to the commencement of winter road mobilization activities and would be subject to board approval. CIRNAC continues to request that the Construction Plans be submitted 45 days prior to the commencement of construction of the engineered structure and would not be subject to board approval (provided for information purposes). CIRNAC is unable to meet the timeline proposed in the Draft Water Licence for Design and Construction Plans since construction details need to be provided by the remediation contractor and these details will not be available 90 days prior to the commencement of winter road mobilization activities.
14	19	Part E	9	CIRNAC-CARD	CIRNAC notes the planned repairs do not involve the movement or disturbance of wastes or work involving water. What is the point of these activities being regulated and why are these submissions needed? Is it the intention of the Board to require a water licence to be obtained for all infrastructure repair work? This repair work typically may require a Land Use Permit (depending on the equipment needed for the repairs), but would not normally require a water licence.
15	18	Part E	10, 11	PSPC	CIRNAC recommends the removal of Part E (10) and (11) since Part B (22) and (23) of the Water Licence already requires notifications upon commencement of Project Activities. Requiring notification a minimum of ten days prior to the commencement of construction on any project component is unnecessarily onerous and limits the contractor's flexibility with respect to sequencing remediation activities.
16	19	Part E	12	PSPC	As described in previous comments, CIRNAC is proposing that Design Plans be subject to board approval while Construction Plans be provided to the board for information. CIRNAC recommends revising this condition as follows: The Licensee shall ensure that all Engineered Structures are constructed in accordance with the Repair Design Drawings or approved Design Plans and submitted Construction Plans." This comment applies to other licence conditions with similar wording.
17	19	Part E	13	CIRNAC-CARD/PSPC	As-Builts are asked for 90 days following the completion of construction. For temporary infrastructure (i.e. the water treatment plant), are as-builts appropriate given the temporary nature of the facility? For permanent infrastructure (i.e. the CDF), when is construction considered complete? It could be argued that completion is following final inspection and acceptance, which would be post-remediation. In previous communications with the WLWB we had suggested rolling all of the as-built info into the Remediation Completion Report to streamline submittals. Is there a reason we can't do this?
18	20	Part F	9	CIRNAC-CARD	The Draft Water Licence is asking for a Mill Lake Water Treatment Design and Construction Plan and a OMS Plan. We had proposed a single plan (Mill Lake Water Treatment Facility Design, Operation, Maintenance and Surveillance Plan) in IR 16. However, considering the timing of the different plans, it appears that only the two plan approach would permit plan submission and approval without presenting potential project delays.
19	21	Part F	10	CIRNAC-CARD	The clause states that construction of the water treatment facility shall not commence prior to Board approval, but the clause describes operations. Construction is covered in Part E Clause 8.

75% Remedial Action Plan Comments

Comment No.	Page (pdf)	Section	Clause	Reviewer	Comment
20	21	Part F	11	PSPC	Clause 11 Part (a) is an example of the separation of Design Plans and Construction Plans in comment number 16 above, where Design Plans are subject to approval while the Construction Plans are not. This type of language should be used throughout (for example, Part F 12 on page 21 should be changed accordingly).
	21	Part F	11	PSPC	CIRNAC requests that Part F 11(c) be removed from the licence since Part F 11(d) requires CIRNAC to report any deterioration or erosion of construction structures/facilities that requires repair to an Inspector and the Board.
21	21/22	Part F	14	CIRNAC-CARD	Geotechnical Inspection - Requirement for inspection every five years. The licence will potentially extend to 2031, but this licence requirement extends beyond that date. ("every five years there after" - 2029 would be final year of annual inspection. 2034 would be the first geotechnical review 5 years later (after WL expiry))
	22	Part F	17	AECOM	Clause is: "The Licensee shall not discharge Waste, including Wastewater, to any Watercourse, or to the ground surface within 100 metres of the Ordinary High-Water Mark of any Watercourse". This discharge should be possible through the approval of an Inspector. Treated filtrate water or Mill Lake circulation water will be discharged to Mill Lake during the course of operation. We need to ensure this clause excludes Mill Lake during the remediation process. This may be assumed by some, but we should ensure it is clear in the licence. The treatment process also describes the discharge of treated Mill Lake water to Sherman Lake. This exception should also be noted.
22	23	Part F	18	CIRNAC-CARD	Considering the amount of discussion that went into the EQCs, it is unusual that they would not be provided here. Does the Board intend to provide another water licence draft review to permit comments on the EQCs?
#REF!	24	Part F	20	CIRNAC-CARD	The requirement for acute toxicity can be completed on start up of the system, and annually thereafter. Given the level of water treatment proposed for the Mill Lake effluent and the characterization of the Mill Lake water, monthly acute toxicity testing is unnecessary and costly.
#REF!	24	Part F	21 a)	CIRNAC-CARD	CIRNAC-CARD had two interpretations of this clause. The first required submitting SNP EQC results 5 days prior to commencement/resumption of activities, meaning that all EQC reporting to date would be provided annually, i.e. May 31 following year, five days before the restart of the system. The second considered water treatment facility as a constant discharge facility. Water needed to be treated for 5 days, to get five days of results, with the water returned to the Mill Lake source (no discharge). The analyses would be sent to the board after five days and then discharge could begin. Since there is no proposed interim storage in the water treatment system, this looping of the water would be the only way to get five days of results without discharging. This will increase the cost of water treatment considerably and is not a reasonable requirement. Please clarify the clause.
#REF!	27	Part H	7	PSPC	Do we need to be sure that Mill Lake (once Mill Creek outlet is blocked) is not classified as a water course? Is there a location in the Licence where this is clarified?
#REF!	28	Part I	all	CIRNAC-CARD	The need for a C&R Plan has been constantly changing through the discussion of project requirements. Without going into too much detail here, we have provided a Table showing how the RAP provided the information associated with a C&R Plan and we have responded through the water Licence process to several questions regarding the need for a C&R Plan. If the WLWB now insists that a C&R plan is required, then CIRNAC is of the opinion that it should cover operational activities only, and not assume the liabilities from past operations. Our RAP covers the acceptance of and remediation of legacy liabilities, so the C&R would cover the operational liabilities like the camp, fuel tanks and other things brought to the site.
#REF!	28	Part I	2	CIRNAC-CARD	A Closure Objectives and Criteria Workshop is required within 90 days of licence issuance. Who does the WLWB see required as attendees? Closure Objectives and Criteria have been proposed and modified several times through the Licencing Process. The last version, provided in response to Undertaking #3 from the Public Hearing, addressed the issues of metrics presented in earlier comments on the closure objectives. Is the need for this workshop due to the WLWB rejection of the Closure Objectives and Criteria proposed in Undertaking #3? Will CIRNAC receive any Board feedback on these Objectives and Criteria? Feedback would be critical to any Workshop that would be proposed.
#REF!	28	Part I	4	CIRNAC-CARD	The Rayrock Remediation Project will complete all remediation by 2025. Description of the remediation will be updated in annual Water Licence Reports and finalized in the Remediation Completion Report. Separate Closure and Reclamation Completion Reports will not be submitted. Please remove this clause.
#REF!	29	Schedule 1	1 j) v&vi	CIRNAC-CARD	Why would treated wastewater from the CDF and from Mill Lake need to be measured separately? All water is discharge to the same waste stream and the flowmeters for this water are not likely to be configured to permit distinguishing the sources. Please combine sub-items v and vi.
#REF!	30	Schedule 1	1 m) vi	CIRNAC-CARD	The Quarry Management Plan will not be discussing seepage monitoring (sub-item iv) as the rock quarries are to be build on (CDF location) and will be free draining (Mill Lake outlet). Seepage (if any) will be monitored through water quality analysis at previously established locations. This would also mean that sub-items vi, vii and viii covering water quality and action items are not necessary.
#REF!	33	Schedule 3	1	AECOM	The Confined Disposal Facility Design and Construction Plan should be broken into two plans: 1) Confined Disposal Facility Design Plan and 2) Confined Disposal Facility Construction Plan.
	33	Schedule 3	1c)	AECOM	The Confined Disposal Facility Design Plan can include summary details on technical items (e.g., soil, rock, hydrogeology, etc.) as they relate to design. However, the Plan should not be scoped to comprise a Conceptual Site Model detailing all natural site physical processes outside of construction elements including the results of all historical data which would make the Plan unwieldy. CIRNAC recommends that the Plan constitute a concise design overview for CDF construction containing relevant details.

## 75% Remedial Action Plan Comments

Comment No.	Page (pdf)	Section	Clause	Reviewer	Comment
19	33	Schedule 3	1 n)	AECOM	These activities would be part of the construction plan and subject to the contractor's "ways and means" of construction rather than dictated by the Professional Engineer. These elements should not be included in the CDF Design Plan
19	33	Schedule 3	2	AECOM	The Sun Main Waste Rock Cover Design and Construction Plan should be broken into two plans: 1) Design Plan and 2) Construction Plan. Does the Construction Plan need to be submitted to the WLWB?
19	33	Schedule 3	2 f)	AECOM	These activities would be part of the construction plan and subject to the contractor's "ways and means" of construction rather than dictated by the Professional Engineer. These elements should not be included in the Design Plan
#REF!	37	Schedule 5	1 f)	CIRNAC-CARD	CIRNAC did not propose a mixing zone. Please delete this sub-item requiring prediction of effluent mixing.
#REF!	39	Schedule 7	all	CIRNAC-CARD	The scope of the C&R needs to be clarified based on consideration of the RAP and other documents provided to date.
	42	Annex A Part A	SNP 1663-1	CIRNAC-CARD	CIRNAC is unclear of the advantage to the SNP of the "biweekly" sampling program, as monthly samples would be sufficient to track any changes in water quality parameters within the waterbodies. Since "biweekly" means both twice a week and once every two weeks, it is requested that once every two weeks is used if this requirement remains. Whenever "upstream" remediation is occurring near a potentially affected water body, measurements for potential sedimentation in the water will be taken before and during remediation work to monitor the effectiveness of the SEC measures and to determine if additional controls are required to protect water quality during construction. The additional water quality results collected during the extra week sampling would simply be added to the annual water quality reporting.
#REF!	41	Annex A Part A	SNP 1663-4	CIRNAC-CARD	The Rationale for 1663-4 is the same as for 1663-3; it is not the rationale for Gamma Lake (1663-2). Please revise.