

REVIEW COMMENT TABLE

Pine Point Mine EA2021-01 - Review of Developer's Assessment Proposal and issues scoping (MVEIRB)

File(s):

Proponent: Pine Point Mining Limited

Reviewer Comments Due By: June 4, 2021

Proponent Responses Due By: June 24, 2021

Documents: [Pine Point Mining Developer's Assessment Proposal](#) 1 MB
[Technical Scoping Session Summary Notes May 4 and 5, 2021](#) 1 MB
[Pine Point Mine Identification of Potential Project Interactions](#) 1 MB

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Item Description

Pine Point Mining Limited - Developer's Assessment Proposal
 Review Board - Technical Scoping Session Summary Notes May 4 and 5, 2021

General Reviewer Information

Technical scoping meetings for the Pine Point Mine took place online May 4 and 5, 2021. The next step is community scoping meetings. After these are concluded, the Review Board will prepare a draft Terms of Reference for review by parties.

The Review Board is seeking advice from parties on what you would like to see in the Terms of Reference and may not have had the opportunity to comment on during the online technical scoping meetings. To assist with this we ask that you focus your review on Pine Point Mining Ltd's Developer's Assessment Proposal as well as information in the May 4 and 5, 2021 Technical Scoping Session Summary Notes.

When reviewing the documents please keep in mind that the Terms of Reference is a list of all the topics that must be completely and clearly described by Pine Point Mining Limited in the Developer's Assessment Report. The Terms of Reference also sets out the scope of development and scope of assessment for the Pine Point Project. The Developer's Assessment Report should provide enough information to understand what the project is and what effects it may have on the environment and people. If there are important topics that you feel are missing, let the Review Board know.

Reviewers should ask the following questions when considering the DAP:

- 1. Valued components:** Do you agree with the list of valued components and the way the developer has prioritized them? These are in Section 2 and 3 of the DAP. If not, which valued components would you pick and how would you prioritize?
- 2. Assessment methodology:** Do you agree with the assessment methodology proposed in the DAP for the various valued components? If not, which assessment methods would you recommend?
- 3. Pathways:** Do you agree with the effects assessment pathways proposed by the developer in the identification of project interactions (in volume 4 of the EA Initiation Package)? Would you add any pathways by which the project could cause impacts? Which ones would you prioritize?

You do not need to repeat statements you made during the May 4-5 technical scoping meeting. However, it assists the Board if you explain the rationale behind your statements, whether regarding a valued component, effects pathway, aspect of development scope or other issue.

Please note that there is a separate regulatory review of the Water Licence Application and Land Use Permit (MV2020L8-0012 and MV2020C-0017) for Pine Point Mining Ltd.'s Confirmation and Exploration Program currently being conducted by the MVLWB. That is not part of this assessment.

Note: Pine Point Mining Limited has requested an extension to submit responses to June 23 due to work commitments for the Type A WL hearings conducted by the MVLWB. The Review Board grants this request.

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Comment Summary

Canadian Northern Economic Development Agency (CanNor): Katie Bakker			
ID	Topic	Reviewer Comment/Recommendation	Proponent Response
16	Possible upgrading of Hay River and Big Buffalo River bridges Reference: EA Initiation Package; Volume 1 - Pine Point Mine Project Description; Section 3.6.3 - Concentrate Transportation	Comment Based on the May 4-5 Technical Scoping Session, it is unclear whether impacts linked to upgrades of the Hay River and Big Buffalo River bridges, if required, will be assessed as part of the Pine Point Mine Project. If the bridges require upgrading to meet the needs of the Project, then as being a necessary part of the Project their impacts should be included in the scope of the Project. Recommendation Transport Canada recommends: -That a determination about whether the bridges require upgrading be made prior to the issuing of the TOR. - If upgrades are required, that the TOR identify that this activity is included in the scope of the Project and a requirement that their impacts be assessed. (The details of suggested TOR terms for the assessment of the Project's impacts to navigation are provided below in Transport Canada's third recommendation.)	June 24: PPML will be unable to determine whether the bridge will require an update prior to the release of the TOR and does not agree that this specifically needs to be included in the TOR. The need for an upgrade will be dependent on the level and type of traffic; this determination will be made by the Government of the Northwest Territories (GNWT) Department of Infrastructure (INF). Note that the Hay River bridge was replaced in 2020 and is now 10 metres wide. PPML will continue to work with GNWT-INF related to infrastructure requirements related to the Project.
17	Authorizations, Permits, and Licenses Required for the	Comment A number of works associated with the Project may be regulated by the Canadian Navigable Waters Act (CNWA). Depending on the type of work and waterway, one or more of these works may also further require a CNWA authorization from Transport Canada. These works include: - The water intake and diffuser in Great Slave Lake, - New or	June 24: PPML agrees to identify Project works that may require Canadian Navigable Waters Act (CNWA) authorization from Transport Canada in the DAR.

	<p>Project Reference: EA Initiation Package; Volume 1 - Pine Point Mine Project Description; Table 1-7 and sections 3.5.6, 3.6.3, and 3.9.4</p>	<p>upgraded haul roads crossing navigable waterways, - Use of the barge landing at Dawson Landing if it requires upgrading, and - Upgrading of bridge(s) over the Hay and/or Big Buffalo rivers.</p> <p>Recommendation Transport Canada recommends that the Terms of Reference require the Proponent to: - Identify the works that will occur in, on, across, through, and under navigable waterways, - Identify which of these works will require authorization under the CNWA, and - Update the list of authorizations, permits, and licenses required for the Project to include any identified CNWA authorizations.</p>	
<p>18</p>	<p>Project impacts to navigation Reference: Developer's Assessment Proposal (DAP)</p>	<p>Comment The right of navigation is a public right. Navigation is also an important traditional and non-traditional land and resource use. As a result, the assessment of a project's impacts to navigation is standard when the project requires works and/or activities that may effect navigation conditions, such as physical barriers or changes to stream flow. There is no reference to navigation in the DAP, e.g., Table 4-1.</p> <p>Recommendation Transport Canada recommends that the Terms of Reference require the Proponent to: - Identify all navigable waterways in the Project area (Guidance for how to determine whether a waterway is navigable can be found through Transport Canada's Navigation Protection Program (NPP) on-line Project Review Tool, available at: https://npp-submissions-demandes-ppn.tc.canada.ca/auth/login-connexion?ret=%2Fapplications), - Describe all uses of the navigable waterways in the project area, - Provide a list of all potentially affected waterway users and existing concerns regarding waterway use and access, - With as much specificity as possible, provide information on existing and proposed CNWA-defined works required for the Project, - Provide plans and other information on the dewatering of all streams and other waterbodies including wetlands, both ephemeral and permanent, during project construction, operation and decommissioning, - Describe how potentially affected waterway users have been consulted regarding navigational use and the issues that were raised and how they were addressed, and - Describe project effects to navigation and navigation safety, including potential effects from changes to water levels and flows.</p>	<p>June 24: PPML agrees to identify navigable waterways in the Project area and describe the uses of these navigable waterways in the DAR.</p>
<p>19</p>	<p>Human Health Risk Assessment Reference: Technical Scoping Session Notes (Page 16)</p>	<p>Comment A Human Health Risk Assessment (HHRA) is often completed for environmental assessments of large development projects including mines (e.g. Coffee Gold Mine and Kudz Ze Kayah Mine), as it provides a critical analysis and a more precise picture of potential health risks of a project. The findings of an HHRA (particularly a quantitative HHRA) are useful for determining the significance of potential health effects, and for establishing appropriate mitigation measures, follow-up programs, and plans for monitoring. The level of detail required to evaluate potential human health effects may vary from project to project. A qualitative (screening) approach may be sufficient if there are no active or potential exposure pathways. However, for a project with an identified potential human exposure to elevated levels of contaminants of potential concern (COPCs), a quantitative HHRA would be recommended. This is also relevant for a project in a region that may already be experiencing high background levels of certain contaminants and or if the project contribution, in conjunction with cumulative effects from existing developments or foreseeable projects, leads to a substantive increase of COPCs. A multimedia HHRA may need to be considered and conducted for any COPC with an identified risk and multiple pathways of exposure.</p> <p>Recommendation Health Canada recommends that an HHRA be completed for the Project.</p>	<p>June 24: PPML agrees to complete a Human Health and Ecological Risk Assessment (HHERA). This will be completed as a standalone annex to support the DAR. See Section 5 of the Developer's Assessment Proposal for the proposed structure of the DAR.</p>
<p>20</p>	<p>Assessment of Contaminants in Traditional Foods Reference: Developer's Assessment Proposal (Page 7, Table 2-1 and Page 79, Table 4-17) Reference: Technical Scoping Session Notes (Page 17)</p>	<p>Comment Table 2-1 (page 7) of the Developer's Assessment Proposal indicates that there is vegetation and wildlife that are used for subsistence purposes. As well, the proposed assessment methods for Traditional Land and Resource Use will include consideration of traditional hunting and trapping, traditional plant harvesting (Table 4-17 on page 79). At the Technical Scoping Session, the Deninu K'ue First Nation (DKFN) noted the importance of traditional foods consumption for health. However, it is not clear in the Developer's Assessment Proposal if there will be an assessment of potential chemical contamination of traditional foods (country foods). Traditional foods are defined as any food that is trapped, fished, hunted, harvested or grown for subsistence or medicinal purposes, outside of the commercial food chain. If it is determined that individuals are likely to consume foods (current or likely in the future) that may be impacted by project activities, then it is recommended that a HHRA be completed which includes the traditional food exposure pathway.</p> <p>Recommendation Health Canada recommends that there be an assessment of current and future changes to contaminant concentrations in traditional foods (i.e. foods that are trapped, fished, hunted, harvested or grown for subsistence, cultural or medicinal purposes) and describe how contaminants related to the Project and that can potentially end up in water, air or soil can be absorbed in traditional foods for all potential receptors.</p>	<p>June 24: PPML agrees to complete an HHERA.</p>
<p>21</p>	<p>Assessment of Drinking and Recreational Water Quality Reference: Developer's Assessment Proposal (Page 10, Table 2.2)</p>	<p>Comment Table 2.2 indicates that surface water quality and groundwater quality are considered intermediate components. However, it is not clear within the Developer's Assessment Proposal if there will be an assessment of potential impacts to drinking and recreational water quality. It would be important to determine drinking water sources, both surface and groundwater (permanent, seasonal, periodic or temporary), along with locations of individual private wells and drinking water sources for onsite workers.</p> <p>Recommendation Health Canada recommends that there be an assessment of current and future changes to water for drinking, recreational and cultural uses with respect to contaminant concentrations and quality. Apply the strictest guideline values of either the applicable territorial standards, Guidelines for Canadian Drinking Water Quality (GCDWQ) and Guidelines for Canadian Recreational Water Quality (GCRWQ). References: Health Canada. 2020. Guidelines for Canadian Drinking Water Quality—Summary Table. Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. Available online: https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/summary-table-EN-2020-02-11.pdf Health Canada. 2012. Guidelines for Canadian Recreational Water Quality (GCRWQ). Available online: https://www.canada.ca/en/health</p>	<p>June 24: Potential effects to drinking water are considered under the Traditional Land and Resource Use KLOI. See Table 4-17 of the Developer's Assessment Proposal. This assessment considers the results of the water quality assessment where parameters will be screened against relevant water quality guidelines, including those for drinking water. As previously indicated, PPML will also prepare an HHERA, which will consider the results of the water quality assessment.</p>

		canada/services/publications/healthy-living/guidelines-canadian-recreational-water-quality-third-edition.html	
22	Air Quality Standards Reference: Developer's Assessment Proposal (Table 4-5, Page 42)	<p>Comment The proposed assessment approach to determine impacts to air quality indicates that air quality dispersion modelling results will be compared to the measurement endpoints defined by the Northwest Territories (NWT) air quality standards. HC recommends that the most stringent air quality standards (which may be the Canadian Ambient Air Quality Standards (CAAQS)) or objectives be used to undertake an assessment of potential air quality impacts. It is important that the Proponent use the averaging period and the statistical format associated with each numerical value. HC notes that there are new CAAQS established by the Canadian Council of Ministers of the Environment (CCME) for PM2.5, ozone, SO2 and NO2 which take into effect in 2025.</p> <p>Recommendation Health Canada recommends use of the most stringent federal, provincial or territorial air quality standards applicable when assessing potential air quality impacts. In many cases, the CAAQs will be the most stringent levels for key air pollutants, especially for longer-term projects with emissions after 2025.</p>	<p>June 24: PPML disagrees that the CAAQS are appropriate at a project-level (see discussion below) and that this does not need to be a requirement in the Terms of Reference. However, even though the CAAQS are not applicable to an individual project, a comparison of predicted air quality to the CAAQS criteria can be provided at the request of Health Canada. The CAAQS are neither the best metric nor an appropriate metric to evaluate changes to air quality from the Project in the immediate area of the Project for the following reasons: • The Canadian Council of Ministers of the Environment (CCME) state that CAAQS were not developed as facility-level regulatory standards. Instead, CAAQS are used by provinces and territories to guide air zone management actions to improve air quality. • The spatial boundaries used in the assessment of air quality for the Project included a local study area and regional study area (see Table 4-5 of the Developer's Assessment Proposal). These spatial boundaries do not represent an 'air zone', the region over which the CCME states that achievement of the CAAQS is to be evaluated/compared. The North Slave 'air zone' covers a large portion of the NWT. • The CCME states that achievement of the CAAQS is to be evaluated/compared against airshed and air zones. The application of CAAQS to potentially sensitive receptors such as residences, camp sites, and recreational sites is not spatially relevant, as the discrete receptors assess the Project effects and cumulative effects at a more local scale, where the CAAQS compliance is used at the airshed scale.</p>
23	General Comment	<p>Comment Health Canada has published a series of guidance documents and checklists for evaluating human health impacts which are available here: https://www.canada.ca/en/services/health/publications/healthy-living.html#a2.5 These include: Guidance for Evaluating Human Health Impacts in Environmental Assessment: Human Health Risk Assessment Evaluating Human Health Impacts in Environmental Assessments: Country Foods Evaluating Human Health Impacts in Environmental Assessment: Noise Evaluating Human Health Impacts in Environmental Assessment: Air Quality Evaluating Human Health Impacts in Environmental Assessment: Water Quality Evaluating Human Health Impacts in Environmental Assessment: Radiological Impacts</p> <p>Recommendation Health Canada recommends consultation of these guidance documents for assessing potential health risks from the proposed project. These guidance documents present current practices and basic information that Health Canada looks for when it reviews documentation submitted by proponents as part to the environmental assessment process. These guidance documents were prepared for the benefit of proponents and their consultants to support an efficient and transparent project review process.</p>	<p>June 24: PPML agrees to review these guidance documents as preparation for the HHERA.</p>
24	Whooping Crane Reference: Developer's Assessment Proposal -Key Issues and Questions (Page vii) - Section 3.1 Proposed Key Lines of Inquiry (Page 11) - Table 4-1: Proposed Assessment Endpoints and Measurement Indicators for Valued Components (Page 18) - Section 4.2.1.9 SON-7: Impacts to Wildlife (P	<p>Comment Whooping Cranes have been observed at the Pine Point mine in the past and data of tracked individuals indicates usage of the area. A comprehensive assessment for Whooping Crane is required given its Endangered status on Schedule 1 of the Species at Risk Act. The Aransas-Wood Buffalo population is a small and distinct biological population (<500 individuals) and has a limited breeding distribution, primarily in the southern NWT. As such, project and cumulative effects should be considered in the context of the entire Aransas-Wood Buffalo population (i.e. when defining the assessment endpoints). Whooping Crane are specifically identified as a key characteristic contributing to the criteria that defines the Outstanding Universal Value of Wood Buffalo National Park as a UNESCO World Heritage Site: Statement of Outstanding Universal Value for Wood Buffalo National Park (UNESCO 1983) Wood Buffalo National Park is an outstanding example of ongoing ecological and biological processes encompassing some of the largest undisturbed grass and sedge meadows left in North America. It sustains the world's largest herd of wood bison, a threatened species. The park's huge tracts of boreal forest also provide crucial habitat for a diverse range of other species, including the endangered whooping crane. The continued evolution of a large inland delta, salt plains and gypsum karst add to the park's uniqueness. Criterion (vii): The great concentrations of migratory wildlife are of world importance and the rare and superlative natural phenomena include a large inland delta, salt plains and gypsum karst that are equally internationally significant. Criterion (ix): Wood Buffalo National Park is the most ecologically complete and largest example of the entire Great Plains-Boreal grassland ecosystem of North America, the only place where the predator-prey relationship between wolves and wood bison has continued, unbroken, over time. Criterion (x): Wood Buffalo National Park contains the only breeding habitat in the world for the Whooping Crane, an endangered species brought back from the brink of extinction through careful management of the small number of breeding pairs in the park. The park's size (4.5 million ha), complete ecosystems and protection are essential for in-situ conservation of the whooping crane. Due to the broad, descriptive language used in the World heritage Site Outstanding Universal Value criteria statements, Parks Canada, in partnership and collaboration with Indigenous groups and with input from other stakeholders, developed "desired outcomes" for the World Heritage Site Outstanding Universal Value based on interpretation of the criteria statements. The desired outcomes for criterion (x) are: • Habitat continues to support recovery strategy goals for breeding pairs and demonstrates resilience to climate change impacts. • Whooping Crane population reaches recovery strategy goal. • Recovery and down listing from Endangered status under Schedule 1 of SARA. Whooping Crane are regionally habitat limited and they have recently expanded to the north outside of the park boundaries, closer to the project area. Project assessment boundaries should be sufficient to account for direct and indirect effects on Whooping Crane that include, but are not limited to: changes to available habitat from</p>	<p>June 24: Based on comments received from parties, PPML has agreed to include whooping crane as a valued component that will be assessed comprehensively within the wildlife assessment. The use of KLOI and SON comes from guidance from the MVEIRB. PPML reiterates that a comprehensive assessment will be completed for SONs as well as KLOIs. Please see Section 4.2 of the Developer's Assessment Proposal for a summary of proposed methods. The methods proposed for wildlife VCs are outlined in Table 4-15 of the Developer's Assessment Proposal. However, PPML disagrees that this assessment needs to be a standalone section as a KLOI and not within the wildlife assessment with other wildlife VCs. The assessment of cumulative effects is not limited to KLOI but is included for all applicable VCs and intermediate components. The Environmental Assessment Initiation Guidelines for the Developers of Major Projects indicate that the Environmental Assessment Initiation Package is intended to focus the DAR. PPML has made efforts to focus the DAR, yet maintain a comprehensive assessment where required. Further, there will be significant overlap of the information used to assess effects to whooping crane and other migratory birds and species at risk (such as land cover data, hydrological information, forest fire history, and human developments (previous, existing, and future) and land use), and the associated mitigation to avoid or reduce effects. Separating whooping crane or any other individual species into a standalone KLOI or SON will lead to significant duplication and cross-referencing within the DAR.</p>

		<p>dewatering activities, increased predation, sensory disturbance from noise, increased traffic (including air traffic), blasting, etc. Project components therefore have the potential to negatively impact the desired outcomes for Whooping Crane, particularly its ability to recover and be down listed from "Endangered" status of Schedule 1 of SARA. A 2017 IUCN/World heritage Committee Reactive Monitoring Mission Report identified a number of cumulative effects concerns impacting Wood Buffalo National Park. The report identified 17 Recommendations for Canada to implement to mitigate the risk of Wood Buffalo National Park to be inscribed on the List of World Heritage Sites In Danger.</p> <p>Recommendation 9 is for the scope of project assessments to be expanded to encompass possible individual and cumulative impacts on the Outstanding Universal Value of Wood Buffalo National Park World Heritage Site. Given this recommendation and that there are project components that are likely to impact criterion (x)'s desired outcomes, it is appropriate for Whooping Crane to be assessed as a "Key Line of Inquiry" rather than a "Subject of Note"</p> <p>Recommendation Environment and Climate Change Canada and Parks Canada jointly recommend that Whooping Crane be assessed as a Key Line of Inquiry instead of a Subject of Note. ECCC recommends that Whooping Crane be a Key Line Of Inquiry for this environmental assessment and that effects be assessed in the context of the entire Aransas-Wood Buffalo population (i.e. when defining the assessment endpoint). Parks Canada acknowledges that the proponent has added Whooping Crane to the list of valued components that will be assessed comprehensively as a result of previous recommendations. However, due to the importance of the region to the maintenance and expansion of habitat for the Whooping Crane population and the Outstanding Universal Value of Wood Buffalo National Park, it is recommended that a cumulative effects assessment on Whooping Cranes be completed; and that it is assessed as a "Key Line of Inquiry" rather than a "Subject of Note", particularly as an assessment of cumulative effects is typically reserved for Key Lines of Inquiry.</p>	
25	<p>Whooping Crane: SARA Status Reference: Developer's Assessment Proposal - Table 2-1: Proposed Valued Components to be Used in the Developer's Assessment Report - Whooping Crane (Page 7)</p>	<p>Comment The SARA Status of Whooping Crane is: Schedule 1, Endangered. Whooping Crane contribute to the Outstanding Universal Value of the Wood Buffalo National Park World Heritage Site under criterion (x)</p> <p>Recommendation Parks Canada recommends that the information provided in the Rationale for Selection be updated for Whooping Crane to reflect the Endangered listing under SARA and their contribution to the Outstanding Universal Value of Wood Buffalo National Park World Heritage Site</p>	<p>June 24: PPML will update the species at risk classification as appropriate when preparing the DAR.</p>
26	<p>Whooping Crane Reference: Developer's Assessment Proposal 4.1.3 Spatial and temporal boundaries of the assessment - Table 4-15: Assessment Methods for Wildlife; Spatial Boundaries; page 74) Reference: Olson and Olson Planning and Design Consultants. 2003. Final Report: Whooping Crane Potential Hab</p>	<p>Comment Given the Whooping Crane's affinity for wetlands and waterbodies, the Proponent should consider a watershed approach to delineating the spatial boundaries of the local study area (LSA) and regional study are (RSA) in the assessment. In addition, the boundary of the LSA should be sufficiently large to capture any sensory disturbance arising from the project, adopting the greatest distance if effects vary seasonally and by breeding status of individuals. The RSA boundary should incorporate the Olson and Olson (2003) study area. Parks Canada, in partnership and collaboration with Indigenous groups and with input from other stakeholders, developed "desired outcomes" for the World Heritage Site Outstanding Universal Value based on interpretation of the criteria statements. The desired outcomes for criterion (x) are: • Habitat continues to support recovery strategy goals for breeding pairs and demonstrates resilience to climate change impacts. • Whooping Crane population reaches recovery strategy goal. • Recovery and down listing from Endangered status under Schedule 1 of SARA. Project assessment boundaries should be sufficient to account for direct and indirect effects on Whooping Crane that include, but are not limited to: changes to available habitat from dewatering activities, increased predation, sensory disturbance from noise, increased traffic (including air traffic), blasting, etc. Project components therefore have the potential to negatively impact the desired outcomes for Whooping Crane, particularly its ability to recover and be down listed from "Endangered" status of Schedule 1 of SARA. Wood Buffalo National Park hosts the only self-sustaining breeding population of Whooping Cranes in the world. Potential nesting habitat extends of the park boundaries, including in areas between Great Slave Lake and the proposed Pine Point mine project (Olson and Olson 2003). This potential nesting habitat is important in supporting the potential for the Whooping Crane population to continue to recover and expand in the region to facilitate the down-listing of Whooping Crane from "Endangered" status in the future. The distribution of Whooping Crane habitat has expanded to the north of the park boundaries, with confirmed nests identified within the potential nesting habitat outside of the park boundaries. The Proponent has included Whooping Crane in the RSA under migratory birds (small-ranging wildlife). The proposed RSA includes only a portion of the potential habitat that supports the maintenance and future expansion of the Whooping Crane population in the region, given that Whooping Crane within the region is a single distinct population, extending into Wood Buffalo National Park.</p> <p>Recommendation Environment and Climate Change Canada and Parks Canada jointly recommend a watershed approach to delineate the spatial boundaries of the LSA and RSA for the assessment of the Whooping Crane. The RSA should also incorporate the Olson and Olson (2003) study area, which includes a portion of Wood Buffalo National Park. ECCC recommends a watershed approach to delineate the spatial boundaries of the LSA and RSA for the assessment of Whooping Crane. The RSA should also incorporate the Olson and Olson (2003) study area. Parks Canada recommends that the Proponent review the extent of the Local Study Area and consider alternative approaches to defining the study area, such as at a watershed or sub-watershed scale, to account for direct and indirect Project impacts on Whooping Crane. Parks Canada recommends that the RSA be expanded to allow for the assessment of potential impacts on the ability for whooping cranes to expand</p>	<p>June 24: PPML will consider the comments from ECCC related to the LSA and RSA for whooping crane.</p>

		their habitat regionally and to consider including the portion of Wood Buffalo National Park relevant to Whooping Crane; or an alternate RSA boundary that allows for the assessment of effects at the population level, with detailed rationale supporting the confidence in assessment boundaries.	
27	Caribou Reference: Vol. 5 Developer's Assessment Proposal, Section 4.1.3 Spatial and temporal boundaries of the assessment	Comment ECCC agrees with GNWT-ENR and other participants at the technical scoping session that effects on boreal caribou should be assessed at multiple spatial scales, including but not limited to NT1, the southern NWT range planning region, and the local Pine Point population. Recommendation ECCC recommends that effects on boreal caribou be assessed at multiple spatial scales, including but not limited to NT1, the southern NWT range planning region, and the local Pine Point population	June 24: PPML agrees to assess the effects on boreal caribou at multiple spatial scales and will work with ECCC and ENR on determining the study areas to be used in the assessment.
28	Valued Components (VCs) – Wildlife	Comment ECCC supports that special focus be afforded to birds listed under the Species at Risk Act (SARA) for this environmental assessment (Table 2-1, Section 2.0), as these species are considered to have lower thresholds of acceptable risk but also in order to address the requirements of s.79 of SARA. Table 4-15 provides a brief rationale for the selection of Wildlife VCs for comprehensive assessment to minimize ecological and assessment redundancy. ECCC generally supports the need to minimize redundancy in the assessment, but does not believe the selection of VCs for comprehensive assessment is well supported. ECCC notes the following concerns: • Similar diets (i.e. aerial insectivores) is cited as a justification to limit the selection, but does not seem to account for the distinct breeding habitats used by those same species and the different pathways by which these species will be interacting with the project, in particular Bank Swallow. • Confirmation that Evening Grosbeak was observed or detected during baseline studies is needed to support its selection. • Lesser Yellowlegs was recently assessed by COSEWIC as Threatened and is missing from Table 2-1. Lesser Yellowlegs should also be considered amongst other bird VCs for a comprehensive assessment. A more detailed rationale for the selection of bird VCs for comprehensive assessment is required. Recommendation ECCC recommends a follow-up discussion with the Proponent to discuss the selection of bird VCs for comprehensive assessment.	June 24: PPML is willing to discuss VCs with ECCC. However, the purpose of selecting VCs is to focus the assessment rather than to include all species that may be present in the area. The Environmental Assessment Initiation Guidelines for the Developers of Major Projects indicate that the EA Initiation Package is meant to narrow the DAR. PPML has made efforts to focus the DAR; avoidance of ecological or socio-economic assessment redundancy with other VCs is one of the approaches used.
29	Ecological Risk Assessment	Comment During the technical scoping session, ECCC asked whether an ecological risk assessment would be included in the Developer's Assessment Report. This type of assessment is regularly conducted as part of environmental assessments for mining and remediation projects to evaluate the potential contamination risks posed by a proposed project. It is used to assess impacts to wildlife health and for this EA relates to the "animal survival and reproduction" measurement indicator. Ecological risk assessments are often combined with an assessment of impacts to human health from the consumption of country foods near the project. ECCC reviews ecological risk assessments during EAs in the context of Section 5.1 of the Migratory Birds Convention Act and in relation to threats to species at risk identified in recovery documents. Recommendation ECCC recommends that an Ecological Risk Assessment be included in the DAR.	June 24: PPML agrees to complete an HHERA.
30	General Comment	Comment Administration and governance of territorial lands and resources was devolved to the Northwest Territories in 2014. As part of devolution, certain lands were excluded from the transfer and the federal government kept responsibility for sections of the historic Pine Point railbed as a site requiring remediation. These sections of land, not transferred to the territory, are a federal area as defined in the Mackenzie Valley Resource Management Act. This applies only to the surface of these sections of land. Certain powers, duties and functions of the federal Minister (the Minister of Northern Affairs) under the Mackenzie Valley Resource Management Act were delegated to the territorial Minister of Lands in a devolution Delegation Instrument. This includes, for developments on lands wholly outside a federal area, receipt and distribution of the Mackenzie Valley Environmental Impact Review Board's report after the completion of an environmental assessment (paragraph 128(2)(a)), participation in decisions made following consideration of that report and distribution of such decisions (paragraphs 130(1)(a) and (b), and subsections 130(1.1), 130(2), 130(3), 130(4) and 130(4.01)), and the power to extend time-limits for an environmental assessment (subsections 128(2.2) and 130(4.03)). The delegation instrument includes similar provisions for environmental impact reviews. The Environmental Assessment Initiation Package submitted by Pine Point Mining Limited does not specify any project interactions with the historic railbed. Appreciating that certain aspects of project design may not yet be fully developed, as described, it is understood that the project would be wholly on lands outside a federal area. Should the proponent end up adjusting their proposal where development occurs on lands in a federal area, the relevant portions of the devolution Delegation Instrument mentioned above would not apply. Further, CIRNAC may be required to issue an authorization. Recommendation To the extent possible, the Developer's Assessment Report should clearly indicate whether the proposed Pine Point Mine Project would interact with the federal area of the historic railbed. If so, a detailed description of those interactions should be provided, particularly for any proposed development in this area (such as new or upgraded crossing infrastructure). Where there may be uncertainty, this should be indicated in the Developer's Assessment Report, and potential interactions with the federal area should be specified.	June 24: In the DAR, PPML will indicate where the Project will interact with the railbed.

Deninu K'ue First Nation: Marc d'Entremont

ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	General approach to EA review and participation	Comment To achieve the three core values of the MVRB's mission, the environmental assessment for the Pine Point Mine presents an excellent opportunity for the MVRB to take a proactive step towards	June 24: PPML agrees with the need for a collaborative approach and looks forward to deepening the working relationship with DKFN and other Indigenous groups.

		<p>achieving effective oversight of project development that is within the best interest of all parties involved. This approach can be based on guiding principles that include: 1) being responsive to Aboriginal values; 2) applying scientific rigor; and 3) embracing collaborative problem solving. The whole process should involve oversight by the MVRB with direct input by potentially impacted Indigenous groups.</p>	
		<p>Recommendation</p> <p>We recommend the MVRB provide guidance in the Terms of Reference that ensures PPML and Indigenous groups participate in the EA review process in good faith, which results in the engagement of a construction resolution process that identifies and addresses issues and concerns relating to the development of the Pine Point Mine. The EA should focus on potential impacts to valued components that form the basis of a sustainable environment for participating Indigenous groups. Interactions amongst parties within the review process can be characterised by the consensus nature of Indigenous society in which the exchange of ideas and information occurred in a semi-formal manner and where opportunities for mutual education and the sharing of knowledge occur. Interactions can primarily occur at the technical level, but when consensus cannot be reached, the responsibility to remedy the situation gets elevated to the leadership level of each party.</p>	
<p>2</p>	<p>Brownfield vs greenfield sites</p>	<p>Comment</p> <p>Despite the past disturbance the Pine Point area has been relatively undisturbed since the closure of the mine in the 1980s. As a result, use of the area, by wildlife and land users, has been occurring and the 'brownfield' sites provide some value. This value should be accounted for.</p> <p>Recommendation</p> <p>PPML should provide clear definitions and rationale for describing brownfield and greenfield sites.</p>	<p>June 24: The Ecological Land Classification used in the DAR will include the current state of the site, which may include regrowth of certain cutlines and other previously disturbed areas. PPML recognizes that there is ongoing traditional and non-traditional land use in the area, in both undisturbed and previously disturbed areas. The brownfield and greenfield terms were used as high-level descriptors and will be replaced by more precise measures of disturbance and regeneration in the DAR.</p>
<p>3</p>	<p>Cumulative effects / synergistic effects</p>	<p>Comment</p> <p>The DAP states that significance will be determined by combining the cumulative effects identified in the Base Case with the incremental effects identified for the Application Case, and then for the RFD Case (if applicable) to assess the total predicted cumulative effects. Impacts land use-use can cause a time-lag or carry-over effect on the future state of resources. For example, the full effects of project impacts on natural resources may go undetected for some time in plants, wildlife, and fish. In these cases the community level responses can be delayed. These types of synergistic effects are an important part of the cumulative effects assessment in terms of understanding residual effects that can carry-over or become magnified at a later time or over a broader regional scale. This delay makes it difficult to assess</p>	<p>June 24: Time-lag or carry over effects are included in the assessment through the duration and reversibility of effects. For example, the Application Case will include predictions on how far into the future effects will continue after closure (e.g., how long until the regeneration of forest seral stages following reclamation, how long will a wildlife VC continue to avoid or reduce the area of use after closure activities have ceased). The same duration or time lag would be applied to the RFD Case for future projects with effects identified as overlapping in time (and space) with the Pine Point Project. These effects on natural resources would be carried through the assessment of cultural and social</p>

		<p>the potential for relatively small disturbance on the landscape to contribute to hidden cumulative effects, and are often not accounted for in an environmental assessment.</p> <p>Recommendation</p> <p>When measuring cumulative effects, consideration of ecological, economic, social, and cultural effects will be important. This approach can address the holistic worldview.</p>	<p>effects, which also experience other effects so that the holistic world view is evaluated.</p>
4	Synergistic effects	<p>Comment</p> <p>Other considerations for synergistic effects is how larger scale impacts (e.g., climate change) work in concert with local scale effects and how the range of potential project impact (e.g., contamination, sensory, habitat loss, and direct mortality) work synergistically to effect valued components. The proponent stated it will use the pathway approach to assessing effects. Here, pathways that are predicted to have the greatest influence on effects on assessment endpoints are assumed to contribute the most to the determination of significance. This approach has the potential to bypass the consideration of synergistic effects.</p> <p>Recommendation</p> <p>Since environmental effects almost never occur in isolation, a process that fully considers synergistic (and cumulative) effects is critical. Clear direction on these components is required in the Terms of Reference.</p>	<p>June 24: The pathways approach, analogous to the “project interactions” described in the EA Initiation Guidelines, is a screening tool to identify how a project may cause direct and indirect effects to the environment. A determination of effects and significance does not rely only on the pathways, but also includes a discussion of the larger context of the effect, and any cumulative effects that may occur (including synergistic and additive effects). Although some pathways are expected to explain more variation in the cumulative effects, all primary pathways are used in the evaluation of total effects. The interactive effects from natural factors (e.g., fire, climate change) are also evaluated in the RFD Case or the Application Case (if no RFD Case).</p>
5	Boreal caribou assessment areas	<p>Comment</p> <p>In addition to the identified local study area and regional study areas documented in the DAP, the potential effects to the Pine Point herd should also be assessed.</p> <p>Recommendation</p> <p>In addition to the identified local study area and regional study areas documented in the DAP, the potential effects to the Pine Point herd should also be assessed.</p>	<p>June 24: See the response to CanNor#27. PPML agrees to assess effects to boreal caribou at several spatial scales.</p>
6	Treaty 8 rights	<p>Comment</p> <p>The assessment of impacts to the Deninu Kue First Nations ability to practice its rights, as described in Treaty 8 will be an important component of the Pine Point Mine EA. As described in the DAP, the base case will describe the current environment, which will include the combined effects from previous developments including Cominco’s historical mining operations. The effects of this mining operation are still being felt by the DKFN; these effects are at the social, economic, health, or cultural levels.</p>	<p>June 24: PPML will engage with DKFN on the development of a community-led Indigenous Knowledge study for the Project. It is anticipated that such a study would include a description of the Treaty Rights of DKFN.</p>

		<div style="border: 1px solid black; height: 30px; width: 100%;"></div> <p>Recommendation</p> <div style="border: 1px solid black; height: 100px; width: 100%; padding: 5px;"> Consideration of Treaty 8 rights in the KLOI: Traditional and Resource Use is recommended. </div>	
7	Water	<p>Comment</p> <div style="border: 1px solid black; height: 60px; width: 100%; padding: 5px;"> Similar to the comment above, the DKFN have been experiencing effects on its water from multiple projects for generations. </div> <p>Recommendation</p> <div style="border: 1px solid black; height: 60px; width: 100%; padding: 5px;"> Table 4.10 states that an assessment endpoint is not defined for the KLOI: Impacts to water quality. Other KLOI have assessment endpoints identified. One needs to be identified for Impacts to Water Quality. </div>	<p>June 24: PPML agrees that water is important for Indigenous peoples in the area, which is why water quality was selected as a KLOI. However, the significance of changes to water quality can only be determined through its effects to receptors (e.g., aquatic communities, wildlife, or humans). Numerical changes in concentrations are meaningless except in how these changes would affect receptors such as fish, vegetation, or people. For example, an adverse change in a water quality parameter by a predicted amount (magnitude) needs the context of what this may mean for fish that live in the water or people that drink the water. Therefore, PPML plans to assess the significance of predicted adverse changes to water quality in the fish and fish habitat section (for changes to aquatic communities, including fish) and the Traditional Land Use section (for drinking water and cultural use). Assessment endpoints are tied to the significance thresholds, and therefore, PPML proposes that an assessment endpoint is not appropriate for water quality on its own. It should also be noted that assessment endpoints are developed for valued components and not intermediate components; see Tables 4-1 and 4-2 of the Developer's Assessment Proposal. The need for assessment endpoint is linked to the concept of valued versus intermediate components, and not whether the overall disciplines was considered a KLOI or SON. As previously indicated, the concept of KLOI or SON comes from MVEIRB guidance.</p>

Fort Resolution Metis Government: Katy Dimmer

ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	Consideration of comments provided to-date	<p>Comment The comments included in this table provide additional context to comments already provided. These comments must be considered equally to remarks raised by FRMG and FRMG members in both technical and community scoping sessions.</p> <p>Recommendation Please consider all comments provided to-date from FRMG.</p>	<p>June 24: N/A</p>
2	Key Lines of Inquiry - Culture. Section 3.1 Proposed Key Lines of Inquiry (Volume 5 - Developer's Assessment Proposal, p. 11).	<p>Comment Culture must be included as a key line of inquiry. Pine Point is an area with great cultural and historical value to Fort Resolution Métis Government (FRMG) members. Examination of traditional use alone will not adequately capture potential impacts to cultural continuity for FRMG members and the potential further degradation of pine point as a cultural landscape special to FRMG members.</p> <p>Recommendation FRMG recommends to the board that Culture be included as a key line of inquiry. FRMG recommends to the Proponent that they work directly with FRMG to identify valued components for culture beyond traditional use and provide capacity for FRMG to conduct their own Culture and Rights studies.</p>	<p>June 24: PPML will engage with FRMG on the development of a community-led Indigenous Knowledge study for the Project. It is anticipated that such a study would include a discussion of components of Indigenous culture beyond just traditional land use, and a description of the Treaty Rights of FRMG. Where information is made available by the communities, it will form part of the discussion of effects within the Developer's Assessment Report. In some cases, this may occur in the KLOI Impacts to Social and Economic Conditions where Indigenous Knowledge relates to linked indicators.</p>
3	Key Lines of Inquiry - Health. Section 3.1 Proposed Key Lines of Inquiry (Volume 5 - Developer's Assessment Proposal, p. 11).	<p>Comment FRMG members are concerned with impacts to community health including mental well-being. FRMG members associate poor health with the legacy of environmental damage associated with the mine site. Further development in this area has the potential to negatively impact FRMG member health and well-being. Further, FRMG determinants of health need to be identified and included in assessment.</p> <p>Recommendation FRMG recommends to the board that Health be included as a key line of inquiry. FRMG recommends to the Proponent that they engage FRMG members and provide capacity support to identify FRMG specific determinants of health and community health priorities.</p>	<p>June 24: PPML recognizes the community concerns related to health and agrees to complete an HHERA as an annex to the DAR. PPML could also include a summary of the health risk assessment in the main document. This could be under the Impacts to Social and Economic Conditions KLOI or as its own SON. Community health and well-being is included in the Impacts to Social and Economic Conditions KLOI; see Table 4-18 of the Developer's Assessment Proposal.</p>
4	Key Lines of Inquiry - Ground Water Quantity and Quality. Section 3.1 Proposed Key Lines of Inquiry (Volume 5 -	<p>Comment FRMG is supportive of Water Quality as a key line of inquiry, however, ground water quantity and quality is also a key concern for FRMG members. Community scoping sessions have demonstrated that FRMG members are greatly concerned with the proposal to deposit tailings in the pits. FRMG members also have important Indigenous Knowledge/Traditional Knowledge concerning water that can inform the assessment of impacts.</p> <p>Recommendation FRMG recommends to the board that Water Quality as a Key line of Inquiry must address Surface and Groundwater. FRMG recommends to the board that</p>	<p>June 24: The water quality KLOI will consider the results of the groundwater and surface water hydrology assessments, contained within SON Impacts to Groundwater Quantity and Quality and SON Impacts to Surface Water Quantity. See Table 4-10 of the Developer's Assessment Proposal. As indicated in this table, a water quality model will be developed, which will be integrated with the site water balance and receiving environment surface water quantity</p>

	Developer's Assessment Proposal, p. 11).	water quantity be included as a Key line of Inquiry. FRMG recommends to the Proponent that they engage FRMG members in alternative means assessment for both the management of tailings and the management of water. FRMG recommends to the Proponent to provide capacity and engage FRMG in collecting and considering traditional knowledge concerning water quality and quantity, include the current state of Great Slave Lake and how it has changed over-time.	model and factor in the results of the hydrogeological modelling. PPML disagrees; however, that water quantity needs to be a KLOI. As an SON, a thorough assessment of changes to surface water quantity, including cumulative effects, will be completed; see Table 4-19 of the Developer's Assessment Proposal. PPML will continue to engage with FRMG on the Project, including tailings and water management, as the Project design and engineering advances. PPML will also engage with FRMG on the development of a community-led Indigenous Knowledge study for the Project.
5	Cumulative Effects - Assessment Cases. Section 4.1.3.3 Assessment Cases (Volume 5 - Developer's Assessment Proposal, p.23 to 25).	Comment Given the legacy of impacts experienced by FRMG members, cumulative effects is a priority concern. For cumulative effects of Key Lines of Inquiry (KLOI) and Subjects of Note (SONs), the temporal scope of assessment needs to be expanded to consider the pre-development case, especially where culture and traditional land and resource use are concerned. In addition the reasonably foreseeable development case needs to be inclusive of all pressures and stressors on valued components which includes sub-threshold projects not subject to regulatory review, climate change, and forest fires. Recommendation The Proponent and the board to support expanded assessment cases that support a robust understanding of change over time and incorporates consideration of all existing and likely future stressors.	June 24: Table 4.3 of the Developer's Assessment Proposal includes the future developments that would be considered in the DAR. To this list, PPML proposes to add the forestry operations proposed by Digga Enterprises near Fort Providence (MV2015W0018). This list will be confirmed prior to initiating the DAR based on any other projects that meet the criteria outlined in Section 4.1.3.3.3 of the Developer's Assessment Proposal. The interactive effects from natural factors (e.g., fire, climate change) are also evaluated in the RFD Case or the Application Case (if no RFD Case).
6	Valued Components - Little Buffalo River. Table 4-1 Proposed Assessment Endpoints and Measurement Indicators for Valued Components (Volume 5 - Developer's Assessment Proposal, p. 18).	Comment Little Buffalo River is a source of many fish species, including many that FRMG members harvest and consume. FRMG members have noted that water quality in the Little Buffalo River has deteriorated with past mining operations. FRMG asserts that the Little Buffalo River needs to be included in the assessment. Recommendation FRMG recommends to the board that the Little Buffalo River be included in the assessment of Fish and Fish Habitat and Water quality and quantity.	June 24: PPML did not include the Little Buffalo River in the local study area as it is not expected to be influenced by Project effects. As a result of this, PPML has not collected any recent field data for this watercourse. PPML can include the Little Buffalo River into the aquatics assessment. However, it should be noted that baseline information will be limited to historical and publicly available data.
7	Ancillary Activities and scope of assessment	Comment All activities associated with the proposed Mine need to be assessed. For example, FRMG is concerned that if equipment is shared with the remediation of the rail/bread cross-contamination or spread of contaminants could occur. Further, exploration activities associated with the Project need to be included in assessment especially for the assessment of cumulative effects. Recommendation FRMG recommends to the board that the scope of assessment must include all planned activities for the mine site in the foreseeable future including exploration and Proponent involvement in remediation projects.	June 24: PPML agrees that all activities with the proposed mine and other known reasonably foreseeable developments should be included in the assessment.
8	Indigenous Knowledge	Comment Indigenous Knowledge must inform the assessment of all valued components and not just the assessment of traditional land and resource use. To achieve this FRMG knowledge holders must be included in all aspects of assessment (baseline data collection, identification of impacts and effects characterization, identification of mitigation, determination of acceptability of effects). Recommendation FRMG recommends the board require evidence of engagement and consideration of Indigenous Knowledge/Traditional Knowledge on all aspects of assessment. FRMG recommends the Proponent support the formation of a Traditional Knowledge Committee to inform the environmental assessment and operations if the Project is approved. FRMG recommends the Proponent commit to funding and supporting Knowledge Holder involvement in baseline studies including fish and fish habitat studies. FRMG recommends the Proponent to work with knowledge holders to identify land-based receptor locations for air, viewpoints, and noise. FRMG recommends to the Proponent to commit to funding Traditional Knowledge and Land Use Studies led by each individual Indigenous Group (if desired by that group).	June 24: PPML will work with Indigenous groups prioritised for engagement and in close proximity to the Project on the development of community-led Indigenous Knowledge studies. It is anticipated that the results of such studies will include a discussion of topics beyond just traditional land use. The results of the Indigenous Knowledge studies for the Project will inform the Developer's Assessment Report, being reflected throughout.

GNWT - Lands: Melissa Pink

ID	Topic	Reviewer Comment/Recommendation	Proponent Response
103	General File	Comment  GNWT cover letter. Recommendation	
104	General File	Comment  memo from Arktis Recommendation	
1	DAP Section 2.0 - Valued Components & Section 4.2.1.1	Comment Air quality is currently identified as an integrated component in the assessment methodology rather than a valued component (VC). As a potential pathway for effects on the human and biophysical environment, air quality should receive greater attention and potential effects to human health should be incorporated within the assessment. Recommendation The GNWT recommends that air quality be considered a VC and measurement indicator for human health and wellbeing, given the scale of the Project and the proximity to communities and public infrastructure. The assessment methodology should be consistent with the approach described in Health Canada Guidance for Evaluating Human Health Impacts in Environmental Assessment. Spatial boundaries should include nearby communities, recreational areas and traditional land use areas. The assessment methodologies should include comprehensive baseline information, as well as identify the amount and types of emissions and particulates as well as fate and transport of chemicals and dust in the environment for each of the Project phases.	June 24: PPML agrees that a thorough assessment of air quality be completed in the DAR. See Table 4-5 of the Developer's Assessment Proposal for air quality methods. However, PPML disagrees that air quality needs to be a KLOI rather than an SON. The use of KLOI and SON comes from guidance from the MVEIRB. PPML reiterates that a comprehensive assessment will be completed for SONs as well as KLOIs. To clarify, air quality is listed as an intermediate component (Table 4-2 of the Developer's Assessment Proposal); however, intermediate components remain critical to the assessment. Changes to air quality can only be considered in the context of what it means to a receptor. An HHERA will be completed that takes into

			account the results of the air quality modelling. The significance of air quality changes to people will be considered in the HHERA and the Impacts to Traditional and Non-traditional land use and Social and Economic Conditions KLOI.
2	General	<p>Comment The GNWT retained Arktis Solutions to conduct a review of the groundwater/surface water quantity and quality and mine water management components in the Pine Point Mining Ltd. Environmental Assessment Initiation Package. The GNWT has extracted and summarized the comments and recommendations from the memorandum and provided them within this submission. The GNWT has also attached the memorandum to this submission which provides additional background for the Review Board's information.</p> <p>Recommendation The GNWT recommends that the Review Board refer to the attached memorandum for additional background and context supporting the GNWT's comments and recommendations related to groundwater/surface water quality and quantity.</p>	<p>June 24: N/A</p>
3	Water Resources as Valued Components DAP, Section 2	<p>Comment Table 2-2 in the Developer's Assessment Proposal (DAP) identifies that surface water and groundwater quantity and quality will be treated as intermediate components (ICs), not VCs. According to Section 2 of the DAP, changes to ICs are not directly assessed for significance and only changes to impacts on VCs such as vegetation, fish, wildlife, and traditional and non-traditional land and resource use are assessed for significance by the developer. The GNWT is concerned with the classification of surface and groundwater quantity and quality as an IC. By not assigning a significance to changes in surface or groundwater quantity and quality, any change to these components due to the Project, even very large ones, has potential to be considered acceptable as long as the change does not result in a significant impact to VCs such as downstream fish communities. The GNWT notes that in the previous Terms of Reference (TOR) for EA0607-002 Tamerlane Ventures Inc.'s Pine Point Pilot Project (PPPP) (MVEIRB, 2006), Section I-1 considered water resources as a main component for the environmental assessment, with specific requirements to assess changes to it resulting from the Project and assess the significance of their impacts on the biophysical environment. Given that a prior TOR for this area considered water to be a resource in its own right and a component of primary importance for effects assessment, the current EA (EA2021-01) should similarly consider surface and groundwater at the same level of priority and assessment (i.e. as VCs). The GNWT also notes that environmental assessment guidelines from other jurisdictions suggest that: "it may be appropriate to select an IC as a stand-alone VC, particularly if there is potential for significant adverse effects on the IC and/or the IC is of particular concern. An IC may also be selected as a VC when the IC is more amenable to measurement and monitoring than the receptor component" (British Columbia, 2013). Given that there is potential for significant adverse effects on water, it is of particular concern to stakeholders as highlighted during the May scoping session, water should at least be equal to the receptor component (e.g., fish). Finally, the value of water to the residents of the NWT is described in the NWT Water Stewardship Strategy (Water Strategy) and is reflected in the vision that "The waters of the Northwest Territories will remain clean, abundant and productive for all time." and the goals for "waters that flow into, within or through the NWT are substantially unaltered in quality, quantity and rates of flow" and "aquatic ecosystems are healthy and diverse" (GNWT, 2018). Aquatic ecosystems can include any aquatic community of living organisms, with or without fish. The developer's proposed approach to limit changes to water only in so far that impacts to a select few receptors, such as fish, is not consistent with vision of the Water Strategy or the interest of NWT residents. Reference: British Columbia. (2013). Guideline for the Selection of Valued Components and Assessment of Potential Effects. https://www2.gov.bc.ca/assets/gov/environment/natural-resource-stewardship/environmental-assessments/guidance-documents/eao-guidance-selection-of-valued-components.pdf Government of the Northwest Territories (GNWT). (2018). Northern Voices, Northern Waters: NWT Water Stewardship Strategy. https://www.enr.gov.nt.ca/sites/enr/files/resources/nwt_water_stewardship_strategy_web.pdf MVEIRB. (2006). Terms of Reference for the Environmental Assessment of Tamerlane Ventures Inc.'s Pine Point Pilot Project, EA 0607-002. October 5, 2006. https://reviewboard.ca/node/405/documents/4-TOR</p> <p>Recommendation The GNWT recommends surface water quantity and quality be considered together as a VC. The GNWT recommends groundwater quantity and quality be considered together as a VC.</p>	<p>June 24: PPML disagrees that groundwater, water quantity, and water quality should be considered valued components (VCs) with assessment endpoints and significance determinations. VCs are aspects of the biophysical, cultural and socio-economic environment that are identified as important, such as having ecological, scientific, social, cultural, economic, historical, archaeological, or aesthetic importance. Intermediate components of the biophysical environment are assessed to support VCs. Intermediate components are critical to the assessment; however, the VC is the ultimate receptor. Except for significance determination, there is no difference in how VCs and intermediate components will be assessed in the DAR. Similar to VCs, intermediate components have measurement indicators, which can be used in monitoring programs, if required. The magnitude of the changes to intermediate components can only be determined to be significant within the context of what it will mean for the receptors (fish, wildlife, humans). For example, a change in a groundwater parameter (measurement indicator) has no context without understanding what that means to surface water and to the fish, plants, or humans that use that water. Through development of the Project and the EA Initiation Package, PPML has reviewed information related to the Tamarlane Project, including the Terms of Reference (TOR). The TOR indicated in Section I-1 that potential effects on water quality, quantity, and flow (i.e., "water resources") of the underground mine were identified as issues. PPML agrees, and as such, has planned for a comprehensive assessment of groundwater quantity and quality, surface water quantity, and water quality; see Tables 4-8 to 4-10 of the Developer's Assessment Proposal. PPML; however, notes that the TOR is not prescriptive about what is considered a VC and how significance should be determined. PPML also recognizes that Canadian EA methods have advanced since 2006; MVEIRB has also been open to advancements in assessment methods. The approach for not determining significance for components that are not biological or human receptors has been used in multiple EAs across jurisdictions. A few recent examples include (note list is not exhaustive): • Canadian Nuclear Laboratories Near Surface Disposal Facility (CNL 2020) submitted to the Canadian Nuclear Safety Commission • Faro Mine Remediation Project (DIAND 2019) submitted to the Yukon Environmental and Socio-economic Assessment Board • Agnico Eagle Mines Ltd. Whale Tail Pit – Expansion Project submitted to the Nunavut Impact Review Board (Golder 2018) • Baldy Ridge Extension Project (Teck 2015) submitted to the British Columbia Environmental Assessment Office (BC EAO) • Dominion Diamond Jay Project (DDEC 2014) submitted to the MVEIRB Note that for clarity, PPML has proposed the term "intermediate component" to clearly differentiate those components that do not have assessment endpoints and are not assessed for significance. This approach was used in the EAs for the Faro Mine Remediation Project and the Teck Baldy Ridge Extension Project (from the list above). The GNWT reviewer also references guidance from the BC EAO with regards to valued and intermediate components. It should be noted that the Teck Baldy Ridge Extension Project referenced above used the approach for valued and intermediate components, with groundwater quantity and quality and surface water quantity and quality as intermediate components (Table B1.2-2 of Teck 2015). This project was approved by the BC EAO in 2016. PPML disagrees with the comment that "By not assigning a significance to changes in surface or groundwater quantity and quality, any change to these components due to the Project, even very large ones, has potential to be considered acceptable as long as the</p>

			<p>change does not result in a significant impact to VCs such as downstream fish communities". Large magnitude changes in groundwater quantity or quality that subsequently affect surface water quality could adversely affect fish and fish habitat through the following measurement indicators: • habitat quantity (e.g., water quantity, flow discharge, surface area) • habitat quality (e.g., water quality, substrate, depth, lower trophic levels as a food source) • habitat distribution (arrangement and connectivity) • fish survival and reproduction. Changes to fish and aquatic communities would be assessed and not deemed acceptable beyond a defined significance threshold. These changes would be appropriately assessed within the DAR according to the methods outlined in Section 4.1.8 and 4.1.9 of the Developer's Assessment Proposal. PPML also disagrees with packaging surface water quantity and quality together. They are interlinked but should be considered as separate intermediate components and SONs so that reviewers review the assessment of each independently and see how they are linked together in the surface water quality SON. References CNL (Canadian Nuclear Laboratories). 2020. Near Surface Disposal Facility Deep River, Renfrew County, Ontario. Environmental Impact Statement. Volume 2: EIS Report. Prepared by Golder Associates Ltd. Revision 2; November 27, 2020. https://www.cnl.ca/wp-content/uploads/2020/12/NSDF_EIS_Rev2_Volume2_EIS-Report.pdf DDEC (Dominion Diamond Ekati Corporation). 2015. Jay Project Developer's Assessment Report. November 2015. DIAND (Department of Indian Affairs and Northern Development). 2019. Faro Mine Remediation Project. Project Proposal Submitted May 2019 to the Yukon Environmental and Socio-economic Assessment Board Golder (Golder Associates Ltd.). 2018. Final Environmental Impact Statement Addendum Whale Tail Pit - Expansion Project. Submitted to Nunavut Impact Review Board by Agnico Eagle Mines Limited – Meadowbank Division. December 2018. Teck (Teck Coal Ltd.). 2015. Elkview Operations Baldy Ridge Extension Project. November 2015.</p>
4	Water Resources as KLOI DAP, Section 3.1 and 3.2	<p>Comment Section 3.1 of the DAP identifies that surface water quality is a proposed key line of inquiry (KLOI). Further, this section explains that KLOI will be given the most attention during the EA and the most rigorous analysis and detail, based on issues that were identified as bringing out potential significant public concern. Section 3.2 then identifies that surface water quantity and groundwater quantity/quality as Subjects of Note (SON) which represent lower priority items relative to KLOIs and do not require the same level of attention and detail as KLOIs. The GNWT is concerned with the classification of surface water quantity and groundwater quantity and quality as only a SON. In the previous TOR for EA0607-002 Tamerlane Ventures Inc.'s PPPP (MVEIRB, 2006), it was identified that water resources, including surface and groundwater quantity and quality, were main components for the impact assessment. Given the level of importance imparted on water resources by the previous TOR, a similar level of importance to that of a KLOI should be assigned to each water component for the EA. During the scoping session (May 4-5, 2021), people potentially affected by the Project expressed concern with impacts to water from various aspects of the Project. Given, the public concern regarding water noted during those sessions, a KLOI designation would appear to be more appropriate based on the developer's definition. As well, surface and groundwater systems are closely interconnected, as indicated by the developer in the Identification of Potential Project-Interactions and Proposed Mitigation Measures Report (Tables 4 to 7). It is therefore uncertain as to the possibility of separating out surface water quality from surface water quantity and groundwater quantity/quality for assessment at different levels of detail as a KLOI or SON, so they should be considered together at the same level of detail.</p> <p>Recommendation The GNWT recommends that surface water and groundwater be assessed together under a single KLOI as 'water resources' that includes both the quantity and quality of each, and the interactions between them.</p>	<p>June 24: The terminology related to KLOI and SON comes from MVEIRB. However, PPML reiterates that those components selected as SONs will still have a thorough and comprehensive assessment (including cumulative effects). Please see Section 4.2 of the Developers Assessment Proposal for methods for KLOIs and SONs. PPML disagrees with packaging surface water and groundwater as a single KLOI. The interactions between these components are an integral part of the assessment; however, having them as separate sections allows a more clear and transparent approach and leads to less confusion for readers/reviewers. The surface water quality KLOI links the results from groundwater quantity and quality and surface water quantity to water quality.</p>
5	Water Resource Assessment Endpoints DAP, Section 4.1.2.2, page 71, Table 4-2, page 21	<p>Comment Since surface water and groundwater quantity and quality are proposed to be ICs, assessment endpoints for these components have not been proposed, as indicated in Table 4-2 of the DAP. As well, Section 4.1.2.2 of the DAP states: "changes to water quantity or quality can only be evaluated in the context of how these changes affect the receptor; numerical changes in flows or concentrations are meaningless except in how these changes would affect fish and fish habitat or vegetation." The GNWT is concerned with the exclusion of assessment endpoints for surface and groundwater quantity and quality. Without assessment endpoints for water components, any change due to the Project, even very large ones, would be considered acceptable as long as the change does not result in a significant impact to other VCs. The GNWT notes that the TOR for the Jay-Cardinal Project (later changed to the Jay Project) (EA1314-01), for example, identifies several physical components including surface hydrology, water quality and aquatic life other than fish, groundwater and permafrost as VCs with assessment endpoints. For example, Table 8.1-1 in Section 8 of the Developer's Assessment Report (DAR) (Dominion Diamond Corporation, 2014) identifies surface water quality to be a VC with assessment endpoints to include: maintenance or suitability of surface water quality for healthy and sustainable aquatic and terrestrial ecosystems, ecological function is maintained, and aquatic life is not impaired. Reference: Dominion Diamond Corporation (2014). Developer's Assessment Report Jay Project, Section 8, Water Quality and Quantity. https://reviewboard.ca/upload/Project_document/EA1314-</p>	<p>June 24: PPML disagrees that assessment endpoints should be developed for groundwater quality and quantity and surface water quality and quantity. As per previous responses, the significance of the changes to these components can only be determined to what this means to the biological or human receptor. GNWT's interpretation is incorrect in that "without assessment endpoints for water components, any change due to the Project, even very large ones, would be considered acceptable as long as the change does not result in a significant impact to other VCs". As indicated in Table 4-1 of the Developer's Assessment Proposal, measurement indicators for fish and fish habitat include: • habitat quantity (water quantity, flow discharge, surface area) • habitat quality (water quality, substrate, depth) • habitat distribution (arrangement and connectivity) • fish survival and reproduction. Table 4-11 of the Developer's Assessment Proposal also has the following: • Predicted changes in water quality will also be used to qualitatively assess changes to fish habitat (e.g., changes to habitat quality or changes to food availability from changes</p>

		<p>01_S_08_Water_Quality_and_Quantity.PDF</p> <p>Recommendation In accordance with the GNWT's recommendation that water resources be considered a VC, the GNWT recommends assessment endpoints be developed for surface and groundwater quality and quantity.</p>	<p>to water quality). Effects on lower trophic levels (plankton and benthic invertebrates) are a key aspect for the fish and fish habitat assessment – and the results of the water quantity and water quality assessments are used in this assessment. To be clear, changes from a project that would have large magnitude effects on plankton or benthic invertebrates would be considered significant; this would adversely affect water quality, food supply, and survival and reproduction of fish, and ultimately self-sustainability of fish populations. In the Jay Project DAR, groundwater and surface hydrology did not have assessment endpoints. Please see Table 6.2-1 of the Jay Project DAR (DDEC 2014). Although the terminology related to intermediate components was not used, this is the approach that PPML is proposing for the DAR. In the Jay Project DAR, water quality did have an assessment endpoint as indicated in the comment. It should be noted; however, that this assessment endpoint references the biological receptors; for this determination of significance, the results of other assessments were used. PPML is proposing a similar approach be used for water quality as was done for groundwater and surface hydrology in the Jay DAR, and the determination of significance only be carried out for the biological receptors and not carried backwards into water quality (a physical receptor).</p>
6	<p>Water Quality as Measurement Endpoint for Vegetation, Wildlife, Human Health and Wellbeing, and TLRU DAP, Table 4-1, pages 18-20</p>	<p>Comment Table 4-1 in the DAP identifies water quality as a measurement indicator for fish and fish habitat, which is a VC, but not for vegetation (which includes wetlands), wildlife, nor traditional land and resource use (TLRU), which are each also VCs. The GNWT is concerned with the exclusion of water quality as a measurement indicator for vegetation, wildlife, human health & wellbeing and TLRU. Vegetation, wildlife, human health & wellbeing and TLRU, which use and rely on water (e.g., drinking, recreation), are components that could be affected by changes to water quality similar to fish. For example, impacted surface and/or groundwater water quality could degrade the health of local wetland vegetation which could impact wildlife that eat and drink from it, as well as deter TLRU (e.g., recreation, fishing, etc.). Water quality should therefore be considered a valid measurement indicator for achievement of assessment endpoints for these VCs. The GNWT notes that the DAP consideration of human health and wellbeing effects does not clearly link human health and wellbeing to important biophysical components of the environment and provides no measurement indicators for assessment.</p> <p>Recommendation The GNWT recommends that surface water, groundwater, and drinking water quality be included as a measurement indicator for vegetation, wildlife, human health and wellbeing, and TLRU.</p>	<p>June 24: It seems that the reviewer is confusing measurement indicators with pathways. Measurement indicators are defined in Section 4.1.2.2 of the Developer's Assessment Proposal. For example, the measurement indicators for vegetation are as follows: • ecosystem availability (amount) • ecosystem and wetland distribution (arrangement and connectivity) • ecosystem condition (e.g., plant community composition, plant species at risk, proliferation of invasive species) These measurement indicators are appropriate for determining changes in vegetation communities. It is agreed that water quality changes may affect vegetation communities – this is considered in the effects pathways. In Table 9 of the Interactions and Mitigation document, there is a pathway that links changes in surface water quality to vegetation: Changes in surface water quality from contact with surface facilities and additional infrastructure could adversely affect soil chemistry and the condition of upland, wetland and riparian ecosystems. At this point, the pathway is classified as no pathway or secondary, but the classification would be confirmed based on additional information regarding Project design and the results of the water quality assessment and the HHERA (which PPML has agreed to completing [see response to Comment 1]). This is similar for wildlife, human health, traditional and non-traditional land use, and community well-being, where changes to water quality is a pathway for consideration but does not need to be a measurement indicator itself.</p>
7	<p>Effects Pathways DAP, Section 4.1.7, pages 32-34</p>	<p>Comment Tables 4 to 6 in the Identification of Potential Project-Interactions and Proposed Mitigation Measures Report identifies pathways for effects to surface and groundwater quality and quantity as either no pathway, primary or secondary. According to Section 4.1.7 of the DAP, secondary pathways will not be carried forward to residual effects analysis and Table 4-8 in the DAP explains that Project-environment interaction may be assessed as either primary or secondary depending on the outcome of environmental modeling work and confirmation of Project design details. According to Tables 4 to 6, there are pathways for effects to surface and groundwater from specific mine components (i.e., open pits, underground mines, tailings and waste rock deposition areas) are identified as either 'secondary or primary' or 'secondary'. The GNWT is concerned with the exclusion of secondary pathways from residual effects analysis and the classification of effects from specific mine components on surface and groundwater as 'secondary or primary' or 'secondary'. This is because the degree of interaction of tailings, groundwater and surface water and associated effects on each other are unclear and will require further evaluation to better understand the connectivity and transport of contaminants between these systems to justify the selection of a specific pathway type and level of analysis. Given that the determination of a pathway type and exclusion from further detailed residual analysis will be made without reviewer input, a more conservative method would be to include secondary pathways related to water in the residual effects analysis. Alternatively, given the interconnectivity of groundwater and surface water, and the direct contact each can have with major mine components, it is more appropriate for the effects pathways to be considered primary.</p> <p>Recommendation The GNWT recommends both primary and secondary pathways related to surface and groundwater components be included in the residual effects analysis until sufficient evidence is developed to justify otherwise. The GNWT recommends pathways for effects to surface and groundwater from specific mine components be identified as primary pathways, including: o Development of open pits or underground mines on groundwater quality. o Seepage from waste rock deposition areas on groundwater quality. o Changes in groundwater quality from open pits, underground mines and tailings on surface water and sediment quality. The GNWT recommends further justification of effects pathways be included in the DAR, including: o A detailed description of groundwater to surface water</p>	<p>June 24: PPML disagrees that secondary pathways should be included in the residual effects analysis. The pathways analysis approach is outlined in Section 2.1 of the Interactions and Mitigation document. This approach to classify pathways has been used in other environmental assessments in the NWT, such as the Dominion Diamond Jay Project (DDEC 2014), the Government of the Northwest Territories (GNWT) Tli?cho All-Season Road (Golder 2017), and the Diavik A21 Below Pit Mining Project (DDMI 2019), as well as in other jurisdictions across Canada. As described in Section 4.1.7 of the Developer's Assessment Proposal, secondary pathways are interactions that with the implementation of mitigation could result in a measurable minor environmental change but would have a negligible residual effect on a VC or intermediate component. Therefore, the pathway is not expected to contribute to effects of other existing, approved, or reasonably foreseeable projects to cause a significant effect. PPML proposes a tabular approach for secondary pathways as described in Section 4.1.7 of the Developers' Assessment Proposal. As noted in Section 2.1 of the Interactions and Mitigation document and Section 4.1.7 of the Developer's Assessment Proposal, the final classification of pathways will take place once PPML has a better understanding of Project design and mitigations, and based on outcomes of modelling completed for the Project. PPML will take a precautionary approach where appropriate to manage uncertainty in the effectiveness of mitigation or where the confidence in the pathway classification is low. PPML disagrees that the pathways listed by the GNWT need to automatically be considered as primary; this determination</p>

		<p>and surface water to groundwater interactions and how this will impact water quality and quantity. o A description of tailings pore water geochemistry and how this may interact with groundwater quality. o Groundwater contaminant transport modeling to inform chemical loads predictions to surface water and to assess potential effects to surface water.</p>	<p>needs to be made based on better understanding of the Project and interactions between components that will occur during the preparation of the DAR. As the predicted magnitude of residual effects is negligible, secondary pathways are not considered to be priority issues for the Project EA and review process. Importantly, there is strong evidence and confidence in the outcome that pathways assessed as secondary will not contribute greater than negligible residual effects to VCs and intermediate components. The Environmental Assessment Initiation Guidelines for Developers of Major Projects indicates that the purpose of the EA Initiation Package is to allow for a "more focussed and effective DAR" that is focused "on the assessment of priority impacts". Taking the GNWT's recommendation to include secondary pathways into the residual effects analysis would not be narrowing the focus of the DAR but instead increasing the scope from recent EAs in the NWT, leading to a larger, more repetitive document with additional effort for pathways expected to cause negligible effects. This would involve additional time and effort for both the proponent and reviewers. References DDEC (Dominion Diamond Ekati Corporation). 2014. Jay Project Developer's Assessment Report. November 2014. DDMI (Diavik Diamond Mines (2012) Inc.). 2019. DDMI Water Licence W2015L2-0001 Amendment Request for the A21 Below Pit Mining Project. http://registry.mvlwb.ca/Documents/W2015L2-0001/Diavik%20-%20WL%20Amendment%20Application%20-%20A21%20Underground%20-%20Application%20and%20Supporting%20Documents%20-%20Nov%208_19.pdf Golder (Golder Associates. Ltd.). 2017. Adequacy Statement Response EA1617-01. Tli'cho All-Season Road Project. Prepared for the Government of the Northwest Territories. 13 April 2017. Available at: https://reviewboard.ca/upload/project_document/EA-1617-01_Developer_s_Adequacy_Statement_Response.PDF</p>
8	Measurement Indicators for Heritage Resources, listed in Table 4-1, page 19 in the DAP.	<p>Comment Table 4-1 lists "Measurement Indicators" as follows: • Number of archaeological sites; • Quality of documented sites. There are more suitable measurement indicators of the protection of heritage resources.</p> <p>Recommendation The GNWT recommends that the "measurement indicator" should be whether a) appropriate archaeological studies are conducted, and b) that identified archaeological sites within the Project area are avoided as a result of Project re-design or mitigated in the case where site avoidance is not feasible, according to specifications outlined by the Culture and Heritage Division of the GNWT.</p>	<p>June 24: Archaeological sites are protected under the NWT Archaeological Sites Act. Conducting the appropriate archaeological studies and avoiding these sites are legal requirements, and an archaeological site cannot be disturbed without an appropriate permit from GNWT. Further, land use permits typically include conditions to protect archaeological sites. Measurement indicators represent attributes of the biophysical and human environment that can be measured and used to characterize changes to VCs (Section 4.1.2.2 of the Developer's Assessment Proposal). Adhering to the legislation is a legal requirement and does not represent an attribute of the environment and does not fit the definition of a measurement indicator. As such, these suggestions should not be included in the list of measurement indicators.</p>
9	DAP Table 4-18 Assessment Methods for Social and Economic Conditions - Temporal Boundaries	<p>Comment The temporal boundaries and assessment cases do not explicitly discuss how historic activities and cumulative social, health, and cultural effects will be incorporated into the assessment.</p> <p>Recommendation The GNWT recommends that assessment methodologies for cumulative health, social and cultural effects be included in the methodology. This is consistent with the definition of cumulative effects under Part 6 of the MVRMA and the discussion of cumulative effects in Chapter 6 of the Report of EA and Reasons for Decision for EA 1819-01 (Diavik PK to Pits).</p>	<p>June 24: PPML will undertake a cumulative effects assessment that includes a consideration of cumulative effects of reasonably foreseeable developments on health, social, and economic conditions. It is anticipated that the discussion of cumulative effects to culture will be a subject of Indigenous Knowledge studies led by communities and supported by PPML.</p>
10	Inclusion of natural factors when assessing cumulative effects DAP, Section 3.1, page 11; Technical Scoping Summary, page 6	<p>Comment The Canadian Council of Ministers of the Environment (CCME) defines cumulative impacts as changes in the environment caused by multiple interactions among human activities and natural processes that accumulate across space and time. Consideration of cumulative impacts during the assessment of any Project should not be limited to only the impacts from 'the Project and other previous, existing and reasonably foreseeable developments' as currently stated the first paragraph of Section 3.1 of the DAP. Both human disturbance, such as mining development, and natural factors, such as forest fires and climate change, can have equally important and compounding impacts on the environment and valued components. The inclusion of natural factors when assessing cumulative effects was confirmed by the developer during the Technical Scoping Session.</p> <p>Recommendation The GNWT recommends that it be made clear in the TOR that all potential contributing factors both from human development and natural processes, are included when assessing cumulative impacts by the Project.</p>	<p>June 24: PPML understands how to assess cumulative effects. Cumulative effects represent the sum of all natural and human-induced influences on the physical, biological, social, cultural, and economic components of the environment through time and across space. Some changes may be human-related, such as increasing industrial and mineral development, and some changes may be associated with natural phenomena, such as extreme rainfall events and periodic harsh and mild winters. Where information is available, the cumulative effects assessment estimates or predicts the contribution of effects from the Project and other developments on VCs, in the context of natural changes in the system.</p>
11	Spatial Boundaries DAP, Section 4.1.3.1, page 21 DAP, Figures 4-3 and 4-4, pages 50-51	<p>Comment The DAP proposes the spatial boundary for surface and groundwater quality and quantity to include the identified local study area (LSA) and regional study area (RSA) in Figure 4-3 and 4-4. GNWT is concerned that the Project site LSA is a large area with many components (i.e., 47 deposits proposed to be mined as open pits, 8 deposits proposed to be mined underground, in addition to wells, waste piles, historical developments such as the Teck waste pile, etc.). It is not clear how each component and their interaction with each other is being considered, nor if the area of effect of each component within the study areas are understood. The boundaries of effect from specific mine components should be considered within the LSA including their interaction with each other to better understand effects within the Project area rather than just the effect on</p>	<p>June 24: PPML is unclear what the concern is related to the proposed LSA for the aquatics components as shown in Figure 4-3 of the Developer's Assessment Report. As described in Section 4.1.3.1 of the Developer's Assessment Proposal, the LSA is defined at a scale that contains most, or all, of the expected effects of the Project on a VC and supporting intermediate components; as such, more detailed data are typically collected in the LSA to describe environmental conditions. The LSA includes Project activities and components/facilities that would be expected to cause</p>

		<p>the total Project area as a whole. Recommendation The GNWT recommends the TOR require that the DAR outline how the spatial scale of potential impact contributions from individual components were used to inform the cumulative assessment for the LSA.</p>	<p>direct and indirect effects on aquatic components (e.g., open pits, underground mines, waste rock piles, and tailings management facilities); this area also includes existing bush roads, cutlines, and the historic railbed. In general, LSAs selected for aquatic components consider the watersheds where Project effects may occur. In the area of the Project, watercourses flow northward to the southern shore of Great Slave Lake. As such, the LSA encompasses the lower watersheds of these tributaries and the confluence with Great Slave Lake. As indicated in the Developer's Assessment Proposal, the western and eastern boundaries of the proposed aquatics LSA are defined by the western boundary of the Twin Creek watershed and the eastern boundary of the Paulette Creek watershed, respectively. The northern extent of the LSA includes a 10-m buffer north of the shoreline of Great Slave Lake and the outlets of the Twin Creek, Buffalo River, and Paulette Creek. The southern extent of the LSA includes Highway 6, connecting the western and eastern boundaries. The LSA is proposed to be aligned for groundwater, surface water quantity, water quality, and fish and fish habitat. The proposed LSA for aquatics components is anticipated to be large enough to capture direct and indirect effects on groundwater flow and quality, surface water quantity, water quality, and fish and fish habitat resulting from the Project. The interactions between all Project components and facilities and groundwater flow and quality, surface water quantity, water quality, and fish and fish habitat will be assessed in the DAR. As indicated in the Developer's Assessment Proposal, predictive groundwater, hydrological, and water quality modelling will be completed to support the EA; Project activities and components/facilities will be incorporated into the models. To be clear, the assessment of all Project components and activities and their interactions with aquatic (and terrestrial) VCs and intermediate components represents a Project-specific cumulative effects assessment at the scale of the LSA.</p>
<p>12</p>	<p>Far Future Temporal Boundary DAP, Section 4.1.3.2, Temporal Boundaries, pages 22-23 DAP, Tables 4-8 to 4.10</p>	<p>Comment Tables 4-8 to 4-10 in the DAP identify that the temporal boundary for surface and groundwater quality and quantity will focus on the period that begins at the start of construction and ends with the completion of closure and reclamation with the consideration for potential effects during post-closure, where relevant. Further, it is noted that groundwater modeling for quality and quantity assessments will look at baseline conditions, the maximum areal extent of the Project and far future scenario when groundwater reaches steady state conditions (i.e., typically 100 years after end of operations). However, the surface water quantity and quality will only be assessed in terms of construction through closure and reclamation with the consideration for potential effects during post-closure, where relevant. The GNWT is concerned with the potential exclusion of a far future scenario for consideration in the surface water quality and quantity assessment. In the TOR for EA0607-002 Tamerlane Ventures Inc.'s Pine Point Pilot Project (2006), temporal boundaries for the effects assessment extend until effects are no longer expected to occur. Given that groundwater may interact with and impact surface water, the temporal boundary for surface water should extend at least as long as that for groundwater into the far future. Recommendation The GNWT recommends a far future temporal boundary for the effects assessment of surface water quality and quantity be included, similar to groundwater.</p>	<p>June 24: PPML has indicated in Tables 4-8 to 4-10 that they will consider and assess effects in post-closure as appropriate. PPML is continuing to advance the detailed Project design which in turn provides inputs for modelling. As the modelling is completed, a final determination will be made of the temporal scope for all components. However, PPML will, of course, consider effects extending past closure where appropriate.</p>
<p>13</p>	<p>Past development activities and impacts DAR, Section 5.0, Proposed Structure for the Developer's Assessment Report, page 91</p>	<p>Comment Section 5 outlines the proposed structure of the DAR and outlines the proposed content for the four volumes that will make up the DAR. One of those volumes should address past development activities and impacts in order to ensure concerns around cumulative impacts are adequately and clearly addressed in a holistic manner. Recommendation Past development activities and impacts do not need to be raised to the level of a key issue, but should be a separate SON, in addition to being addressed in various other sections of the DAR, or should have a stand-alone section in the DAR.</p>	<p>June 24: PPML disagrees that past development activities need a stand-alone SON in the DAR. Cumulative effects of past, present, and future activities will be considered in the assessment of effects for all applicable valued and intermediate components and does not need to be addressed in a stand-alone section. This would add repetition and additional volume to the DAR without adding value. As previously indicated, the Environmental Assessment Initiation Guidelines for Developers of Major Projects indicates that the objective of the EA Initiation Package is to focus the DAR.</p>
<p>14</p>	<p>Cumulative Effects Assessment - temporal scale for boreal caribou DAP, Section 4.1.3.2, page 23</p>	<p>Comment Page 23 of the DAP indicates that the spatial scale for cumulative effects assessment extend 5-7 years into the future to accommodate closure, reclamation, and associated monitoring activities. For most VCs this seems appropriate, but for boreal caribou, the temporal scale of the assessment should be extended to 40 years past closure to account for habitat recovery times. Recommendation The GNWT recommends that the TOR for the DAR include an extended temporal scale for the cumulative effects assessment for boreal caribou to account for habitat regeneration following disturbances associated with the proposed mine.</p>	<p>June 24: Section 4.1.3.2 of the Developer's Assessment Proposal indicates that the minimum temporal boundary for the effects assessment is defined by the Project phases of construction, operation, and closure and reclamation. Based on the current mine plan, active closure and reclamation, and associated monitoring activities, are expected to occur over a period of about five to seven years. As per Section 4.1.3.2, the actual temporal boundaries that will be used in the assessment are component specific and will include the Project phases described above. For example, Project effects on wildlife begin during the construction phase with the removal and alteration of habitat (i.e., results in direct and indirect changes) and continue through the operation and closure and reclamation phases, and post-closure until effects are reversed or determined to be irreversible (i.e., permanent). Therefore, effects on wildlife will be analyzed and predicted from construction through closure and</p>

			reclamation and typically beyond, which generates the maximum potential spatial and temporal extent of effects and provides confident and ecologically relevant effects predictions. For caribou, the assessment would include evaluating effects until habitat disturbed and reclaimed by the Project is predicted to re-establish as caribou habitat (> 40 years of age).
15	Assessment Cases DAP, Section 4.1.3.3, page 23 Page 5 – Technical Scoping Summary	<p>Comment Teck Metals Ltd (Teck) is actively working in the Project Area but it is not clear if they will be considered in the base case; Teck is not on the list of Reasonably Foreseeable Developments. Pine Point Mining Limited's (PPML) monitoring plans will need to be designed to be sensitive enough to differentiate between impacts due to Teck's past activities and PPML's current and future activities. Additional information is required to determine how PPML and Teck will interact, overlap or avoid each other in terms of the existing impacts and responsibilities, noting that Teck's current responsibilities in the Pine Point Area are those related to the Pine Point Tailings Impoundment Area.</p> <p>Recommendation The GNWT recommends including Teck in the Reasonable Foreseeable Development Case.</p>	June 24: The Teck Metals tailings management facility will be considered within the Base Case, which includes the combined effects from approved previous and existing developments and activities within the spatial assessment boundaries of intermediate and valued components. Any potential future plans for the site can be included as a Reasonably Foreseeable Development if warranted.
16	Temporal boundary of the Base Case DAP, Section 4.1.3.3.1, page 24	<p>Comment The temporal boundary being proposed for the Base Case appears to be a single point in time (the present), whereas the temporal boundaries for the Application and RFD Cases include the Project lifespan from construction to reclamation. Using a single point in time as the temporal boundary for the Base Case does not allow for the inclusion of natural processes that could occur during the same timespan to be used for the other Assessments Cases. Incorporating the assessment of natural processes that may occur over the lifespan of the Project is necessary to understand and assess cumulative effects. In particular, a natural process that should be included in the Base Case is the continued natural re-vegetation of previously disturbed areas, given the assumed absence of further disturbance for this Case. In order to appropriately compare the Base Case to the Application and RFD Cases the same temporal boundary is required for all Assessment Cases.</p> <p>Recommendation The GNWT recommends that the same temporal boundary is used for all three Assessment Cases and that impacts of natural processes are included for all Cases, including the natural re-vegetation that could occur in the absence of further disturbance.</p>	June 24: The Base Case represents existing conditions prior to application of the Project. Existing conditions reflect the previous and existing human and natural related disturbances (e.g., fire, insects) that have resulted in the observed patterns on the present landscape. This includes the existence of natural regeneration of disturbances and the likely responses of wildlife to those conditions. The information characterized in existing conditions provides context for assessing the changes from the Project in the Application Case and future developments in the RFD Case relative to the Base Case.
17	Reasonably Foreseeable Developments for cumulative effects assessment for caribou DAP, Table 4-3, page 26	<p>Comment The list of proposed RFDs needs to be tailored to the particular VC and spatial scale under consideration. The proposed list is not appropriate for boreal caribou being assessed at the NT1 range.</p> <p>Recommendation The GNWT recommends that the TOR for the DAR stipulate a list of reasonably foreseeable development for assessing cumulative effects on boreal caribou at the NT1 range. OMIT: Yellowknife City Gold, and Giant Mine Remediation Project, and to ADD: Digaa Enterprises (forestry), the Mackenzie Valley Highway Project, Canadian Zinc mine and all-season road, and the smaller scale forestry operation in Jean Marie River. Cumulative effects assessment at smaller spatial scales should include those Projects that fall within those areas.</p>	June 24: PPML agrees to these changes to the list of Reasonably Foreseeable Development.
18	Baseline Conditions DAP, Section 4.1.6, page 31	<p>Comment Section 4.1.6 of the DAP outlines the proposed baseline conditions that will be used for the effects assessment refer to existing environmental conditions, and comprise the current physical, biological, social, economic, and cultural setting, including outcomes from past mining activities and the brownfield nature of the Project site. The proposed Project considers baseline conditions to include impacts from the past historical development. A better understanding of baseline conditions, impacts from historical development, and the acceptability of those existing conditions for the Proponent's proposed development is needed.</p> <p>Recommendation The GNWT recommends that the DAR include a complete description of baseline characteristics for all biophysical VCs, including surface and groundwater, spatially and temporally across the site and what information remains to be collected/understood to address uncertainties during the EA process or after the EA. Baseline characteristics for soil should also be required, as it has the potential to impact various VCs.</p>	June 24: As indicated in Section 1.1 of the Existing Environment summary, PPML will complete a comprehensive characterization of existing environmental conditions for each biophysical and human component in the DAR for the Project. This includes groundwater, surface water, and soil.
19	Unidentified areas of contamination DAP, Section 4.3.2, pages 90-91	<p>Comment The developer should be prepared to encounter engineered structures that were part of previous work and Cominco's remediation strategy. Examples of these structures include the N-32 dump and several artesian wells from what are believed to be old drill holes from the former Pine Point exploration work within the area. Encounters with these engineered structures could release capped contamination. In addition to this, there are several open spill files with the Department of Environment and Natural Resources that suggest remnants from past incidents have not been completely addressed. As a result, the GNWT suspects that the developer may need to prepare for encounters with contamination.</p> <p>Recommendation The DAP refers to accidents and malfunctions that are unplanned events caused by industrial or natural hazards. The GNWT recommends that encounters with unidentified areas of contamination, or alteration of engineered structures that were part of previous work and/or Cominco's remediation strategy, should be considered in the list of potential accidents and malfunctions that will be included in the DAR and a plan to address these situations when they arise be presented.</p>	June 24: PPML agrees to include encounters with unidentified areas of contamination, or alteration of engineered structures that were part of previous work and/or Cominco's remediation strategy, into the accidents and malfunctions in the DAR.
20	Proposed Valued Components - Wood Bison DAP, Table 2-1, Page 6	<p>Comment The PPML study area is outside of the range of Wood Bison in the NWT, and therefore the GNWT suggests it be omitted from the list of VCs (other than ensuring that the Wildlife Management and Monitoring Plan (WMMP) developed for this Project states that if bison are observed in the Project area, they are to be reported to GNWT-ENR).</p> <p>Recommendation The Review Board and developer should omit wood bison as a VC from the assessment.</p>	June 24: PPML agrees to omit wood bison as a VC.
21	Proposed Valued Components - Northern Leopard Frog DAP, Table 2-1, Page 8	<p>Comment The range of Northern Leopard Frog in the NWT does not overlap the study area, therefore the GNWT suggests that it be omitted from the assessment.</p> <p>Recommendation The Review Board and developer should omit northern leopard frog as a VC from the assessment.</p>	June 24: PPML agrees to remove northern leopard frog as a VC.

22	Proposed Valued Components - Moose Missing from the DAP	<p>Comment Given its cultural and ecological significance, moose should be added as a VC to the assessment, particularly given that Traditional Land Use is being proposed as a VC. This VC should be assessed with a comprehensive level of assessment.</p> <p>Recommendation The Review Board should add "Moose" as a VC to the TOR for this EA. PPML should apply a comprehensive level of assessment to this VC.</p>	<p>June 24: PPML agrees to include moose as a VC.</p>
23	Assessment of the impacts of increased access leading to harvest DAP, various places including Table 4-14, pages 70-71	<p>Comment In the DAP, PPML indicated that their treatment of the pathway of "changes in human access and harvest" would depend on reviewer feedback. The GNWT is of the view that PPML should assess this pathway as a primary pathway for both boreal caribou and moose due to its implications for wildlife management implications and cultural use of these resources.</p> <p>Recommendation The Review Board should ensure that the TOR identify that the pathway of "changes in human access and harvest" be assessed as a primary pathway for both boreal caribou and moose (recommended addition to VC list).</p>	<p>June 24: Yes, PPML indicated that this could be a primary pathway based on feedback from communities and other parties. PPML agrees to include this as a primary pathway.</p>
24	Assessment Measurement indicators & Spatial scale of assessment - Boreal Caribou DAP, various locations including Table 4-1, page 18	<p>Comment The GNWT agrees that boreal caribou needs to be assessed as a KLOI. In the DAP, there are four (4) proposed measurement indicators for the Boreal Caribou in Table 4-1, one of which is listed as the ECCC 65% threshold for undisturbed habitat. The GNWT is of the view that the assessment of measurement indicators and cumulative effects assessment need to be conducted at five scales: 1) the NT1 range (using the ECCC threshold), 2) the southern NWT planning region identified in the GNWT's Framework for Boreal Caribou Range Planning (using the region specific threshold identified in that plan) 3) the area east of the Hay River and south of Great Slave Lake as proposed by PPML as the RSA, 4) the range of the local Pine Point boreal caribou corresponding to a minimum convex polygon or kernel density contour (subject to further discussion with the GNWT) around the Pine Point collar locations and 5) the proposed LSA.</p> <p>Recommendation The GNWT recommends the TOR for the residual effects and the cumulative effects assessment in the DAR stipulate that the measurement endpoints for boreal caribou of a) habitat availability, b) habitat distribution and c) animal survival and reproduction be assessed at five spatial scales including: 1) the NT1 range (using the ECCC threshold), 2) the southern NWT planning region identified in the GNWT's Framework for Boreal Caribou Range Planning (using the region specific threshold identified in that plan) 3) the area east of the Hay River and south of Great Slave Lake as proposed by PPML as the RSA, 4) the range of the local Pine Point caribou corresponding to a minimum convex polygon or kernel density contour (subject to further discussion with the GNWT) around the Pine Point collar locations and 5) the proposed LSA.</p>	<p>June 24: As per the response to ECCC-27, PPML agrees to have further discussions with GNWT-ENR and ECCC on the spatial scales to be assessed in the DAR for boreal caribou.</p>
25	Habitat characterization for boreal caribou DAP, Table 4-14, page 71	<p>Comment In the DAP, PPML identified that they would develop a Habitat Suitability Index Model for boreal caribou. While this is a helpful approach in instances where there are limited data on habitat use, for boreal caribou, the GNWT believes that its already-developed Resource Selection Functions (RSF) (Demars et al 2020) generated for boreal caribou in the NWT will provide a suitable basis for assessing habitat use and availability.</p> <p>Recommendation PPML should use the GNWT's RSF models as the basis for its habitat assessment.</p>	<p>June 24: PPML agrees to use the GNWT RSF model.</p>
26	Baseline information for assessment of vegetation and boreal caribou habitat	<p>Comment In assessing the significance of the impacts to boreal caribou habitat, there will likely be much discussion surrounding the habitat thresholds for the NT1 range and Southern NWT Boreal Caribou Study area. As was discussed in the information sessions and in the regulatory files for PPML's Confirmation and Exploration Program (CEP) (on the Mackenzie Valley Land and Water Board (MVLWB) registry), there is collar data as well as community knowledge that boreal caribou are using regenerating habitats that would qualify as "disturbed" based on the satellite imagery used to generate the metrics of disturbed habitats. As such, to facilitate an appropriate assessment of the significance of impacts to habitat at the scale of the local Pine Point boreal caribou study area (being recommended by the GNWT), as well as appropriate expectations to support closure and restoration expectations, PPML should include as baseline information in its DAR, a comprehensive on-the-ground inventory of regeneration status of the historical linear features in the portion of the LSA that overlaps with the area used by collared boreal caribou.</p> <p>Recommendation PPML should include as baseline information in its DAR, a comprehensive on-the-ground inventory of regeneration status of the historical linear features in the portion of the LSA that overlaps with the area used by collared boreal caribou to provide a basis for understanding restoration and closure objectives. If the Review Board believes this could be captured in the TOR, then the GNWT recommends that it be included.</p>	<p>June 24: PPML disagrees that specific methods need to be prescribed in the TOR but is willing to further discuss with GNWT and other parties the approach to characterizing the regeneration status of historical linear disturbances in the LSA. See the response to DKFN-2. As indicated in Table 4-14 of the Developer's Assessment Proposal, the assessment endpoint for boreal caribou is a self-sustaining and ecologically effective caribou population. The measurement indicators used to provide information about changes to the assessment endpoint will include habitat availability (quantity and quality), Environment and Climate Change Canada's threshold for undisturbed caribou habitat for critical habitat identification (i.e., 65% undisturbed habitat; ECCC (2020)), habitat distribution (arrangement and connectivity), and animal survival and reproduction (including population trend, abundance, and distribution). The site-specific vegetation status on existing disturbance where caribou have been observed will be at too fine of a scale to assess the measurement indicators for caribou. PPML will incorporate GNWT-ENR caribou collar data and their Resource Selection Function (RSF) model (provided June 2021), which incorporates local caribou location data and habitat selection patterns, to predict how the Project may affect caribou habitat and individuals at the local scale of the Pine Point boreal caribou herd. The relative importance of these regenerating areas for caribou are expressed in the RSF model and habitat maps which are based on collar data.</p>
27	Assessment Methods for Caribou - Information Sources DAP, Table 4-14, pages 68-71	<p>Comment The GNWT has identified additional sources of information that PPML should use in its assessment of boreal caribou.</p> <p>Recommendation PPML should also include as information sources in its assessment: 1) the NWT Framework for Boreal Caribou Range Planning (2019); 2) ENR's 2021 Boreal caribou predictive annual and seasonal RSF rasters; DeMars, C., Hodson, J., Kelly, A., Lamontagne, E., Smith, L., Groenewegen, K., Davidson, T., Behrens, S., Cluff, D., and Gurarie, E. 2020 (unpublished draft). 3) Influence of land cover, fire and human disturbance on habitat selection by boreal caribou in the NWT. Department of Environment and Natural Resources, Government of the Northwest Territories. Yellowknife, NT. 234 pp.; and 4) various annual reports produced by ENR's South Slave office containing caribou demographic data for the Pine Point and Buffalo Lakes study areas (to be requested from South Slave office).</p>	<p>June 24: PPML agrees to review and use these sources of information in the caribou assessment.</p>

28	Table 4-15 Assessment methods for wildlife - information sources DAP, Section 4.2.1.9, Table 4-15, pages 73-76	<p>Comment The GNWT may have additional information that PPML could use to inform the assessment of wildlife.</p> <p>Recommendation PPML should submit a data request to the Wildlife Management Information Systems for location records of VCs within the study area and contact the South Slave office for relevant monitoring reports and demographic data they have for VCs in the study area.</p>	<p>June 24: PPML agrees to submit the data request.</p>
29	DAP 3.1 Proposed Key Lines of Inquiry	<p>Comment Currently, the developer’s consideration of potential health and wellbeing effects are incorporated as a VC into the broader KLOI “Social and Economic Conditions” and methodologically will be assessed via the pathway analysis approach outlined in Volume 4. The GNWT recognizes this is a strong first step but notes that the discussion of effects pathways as well as potential mitigations in the proposed Projects needs considerable fleshing out, including the consideration of best practices and guidance related to similar Projects in similar jurisdictions, the incorporation of biophysical and cultural pathways, effective mitigation tools, and how to ensure sustainable benefits for long-term community wellbeing. Potential effects to health and wellbeing are important to communities, people and the GNWT. In the technical scoping session on May 5, 2021, community members and IGOs indicated that they desired health and wellbeing components of the EA receive increased analysis in the environmental assessment. In this session, the GNWT suggested that the developer and review board consider health and community wellbeing as a KLOI, rather than a VC, in order to ensure that these issues receive adequate attention early on in the process. KLOI are areas that get more attention early on in the EA. This will avoid costly delays further down in the EA process where missing data and analyses in this area could result in significant information requests, additional research and data collection, and longer discussions during the technical hearings and public hearings. In addition to meeting emerging best practices in EA and impact assessment in Canada, requesting a focus on health and wellbeing aligns with the recognition that the NWTs EA process values the integrated and holistic relationship between the health of the environment and the health of the people and that there is the potential for multiple effect pathways to influence community wellbeing. This approach is consistent with the integrated approach described in the Review Board’s Socio-economic impact assessment guidelines (2007), the 2020 Review Board Perspectives Paper on Evolving Environmental Impact Assessment in the Mackenzie Valley and Beyond (see pages 13-16 and specifically note Figures 4 & 5), and the recently released guidance for assessing health, social and economic effects under the Impact Assessment Act (specifically, see section 5.1.3: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/analyzing-health-social-economic-effects-impact-assessment-act.html).</p> <p>Recommendation KLOI-4: Impacts to Social and Economic Conditions currently dilutes human health and social effects under a broad KLOI that combines these issues with economic conditions. The GNWT recommends that Health and Wellbeing be considered it’s own KLOI.</p>	<p>June 24: PPML recognizes the importance of health and wellbeing to people, communities, and governments. The inclusion of health and wellbeing as a valued component of the KLOI Social and Economic Conditions was not intended to diminish the importance of the subject, but rather to group it from an organizational perspective. The level of analysis conducted on the VC would be no less thorough as it is a component of a KLOI. However, PPML acknowledges the desire to have this important topic highlighted as a standalone KLOI. PPML will include the KLOI Effects on Health and Wellbeing, separate from the KLOI Effects on Social and Economic Conditions. This will result in a shift of the current health and wellbeing-related VC and associated indicators out of the latter KLOI.</p>
30	DAP Table 4-18 Assessment Methods for Social and Economic Conditions - Residual Effects Analysis	<p>Comment The residual effects analysis recognizes that Project benefits are expected but may not be realized by all individuals, speaking to some of the health and social equity issues that emerge in resource development.</p> <p>Recommendation The GNWT recommends that health and social equity be considered in the assessment methodology and incorporated into the assessment of effect pathways and into the development of mitigations.</p>	<p>June 24: PPML is in agreement with the recommendation. The consideration of how the Project’s effects could be realized differently by different subgroups within communities will be considered in the discussion of Project effects and associated mitigations related to health and social conditions.</p>
31	KLOI-4: Impacts to Social and Economic Conditions - Initiation Package only references the MMIWG in Doc005_1912547, section 4.1.4 ‘Input from Engagement’ in relation to safety of women, and concerns of indigenous communities. GNWT would like to see an expanded commitment related to Gender put into	<p>Comment The GNWT would like gender to play a significant role in the assessment of the Pine Point project. This would include incorporating and implementing where appropriate the Calls to Justice for the Extractive and Development Industries (#s 13.1 - 13.5) from the Missing and Murdered Indigenous Women and Girls Inquiry (MMIWG), as well as considerations for women and 2SLGBTQIA like hiring, training, and procurement priorities, and targeted monitoring and mitigations that are developed collaboratively with impacted communities.</p> <p>Recommendation The GNWT recommends the developer identify any specific commitments to gender parity in employment, training and procurement, and commit to collaborate with the GNWT and organizations such as the Native Women’s Association of the NWT. The GNWT recommends the developer describe the anti-harassment policy and procedures will be put in place, and how they will be communicated and enforced on site to employees. The GNWT also recommends the developer describe 1) any considerations that have been made to accommodate women (and single parents) ability to participate in the workforce; 2) efforts to create opportunities for women, remove barriers to working on site, and facilitate advancement of women within their organization. Regarding the Calls for Justice (13.1, 13.2, 13.4, & 13.5) – The MMIWG Inquiry has calls for justice specifically for extractive and development industries. The NWT has a role in assessments and approvals that incorporate gender based impact assessments and is anticipating increased demands on social infrastructure. The GNWT recommends the developer provide information on how they have addressed these calls to justice and describe considerations that have been made to incorporate relevant Calls for Justice beyond those made upon the Extractive and Development Industries (13.1-13.5).</p>	<p>June 24: PPML is in agreement with the recommendation. A Gender Based Analysis + (GBA+) lens will be applied to the Project’s socio-economic assessment. Where Project effects have the potential to vary depending on the unique, intersectional identity factors of subgroups of the population, this will be identified and assessed, and appropriate mitigation or enhancement measures will be proposed.</p>
32	General	<p>Comment An holistic approach to determinants of health should be undertaken.</p> <p>Recommendation The GNWT recommends that the developer 1) include a consideration for the potential health effects - both biophysical and social - during each phase of the Project, as well as how these effects may change over time; 2) the developer take into consideration community understandings of health and wellbeing in relation to potential interactions with the Project; and 3) that the developer describe potential pathways and receptors for human health and wellbeing effects, as well as community-based strengths and resilience that are rooted in Indigenous Knowledge. This approach is consistent with</p>	<p>June 24: PPML is in agreement with the recommendation. As noted above, PPML will create a KLOI Effects on Health and Wellbeing. This will include both biophysical and social determinants of health. This will involve engagement with communities regarding community understanding of health and wellbeing, and reference to health-related information provided through community-led Indigenous Knowledge studies</p>

		<p>the integrated approach described in the Review Board's Socio-economic impact assessment guidelines (2007), the 2020 Review Board Perspectives Paper on Evolving Environmental Impact Assessment in the Mackenzie Valley and Beyond (see pages 13-16 and specifically note Figures 4 & 5), and the recently released guidance for assessing health, social and economic effects under the Impact Assessment Act (specifically, see section 5.1.3: https://www.canada.ca/en/impact-assessment-agency/services/policy-guidance/practitioners-guide-impact-assessment-act/analyzing-health-social-economic-effects-impact-assessment-act.html). This is also consistent with questions and comments posed by GNWT in the May 5 technical scoping sessions.</p>	
33	<p>KLOI-4: Impacts to Social and Economic Conditions - Proposed Value Components to be used in the Developer's Assessment Report; Doc005_1912547 'Valued Components', Table 2-1; Addition to entry titled "Community Health and Wellbeing"</p>	<p>Comment The GNWT is taking steps to include more community-based measures of cultural wellbeing to the general measures of wellbeing already tracked. This approach is consistent with the 2020 Review Board Perspectives Paper on Evolving Environmental Impact Assessment in the Mackenzie Valley and Beyond. Traditional activities and languages are core to almost every definition of cultural wellbeing, and will be relevant to social impacts of the mine.</p> <p>Recommendation The GNWT recommends the developer add detail to this VC addressing use of traditional languages on site and in communities. The GNWT also recommends the developer identify any commitments to supporting traditional activities, which include but are not limited to: hunting, trapping, language, traditional sport, etc.</p>	<p>June 24: Indigenous language, and participation in traditional activities will be considered as indicators within the assessment. Where commitments related to such indicators are made, this will be stated in the discussion of mitigation and benefit enhancement measures.</p>
34	<p>KLOI-4: Impacts to Social and Economic Conditions - Proposed Value Components to be used in the Developer's Assessment Report; Doc005_1912547 'Valued Components', Table 2-1; Addition to entry titled "Housing, Service and Infrastructure"</p>	<p>Comment Housing is a concern for all mines in the NWT, which can cause large changes to the housing market. This Project, being in close proximity to local communities, will likely have a relatively large effect on the demand and supply of housing (when compared to other remote mines).</p> <p>Recommendation The developer should include information on the expected housing demand for the areas in close proximity to the Project and consider how this will interact with other potential project effects (social determinants of health, project benefits or opportunities, etc.)?</p>	<p>June 24: Housing will be considered in the assessment of Project effects on social conditions. Further, housing and crowding as facets of both physical and social determinants of health will be addressed in the assessment.</p>
35	<p>KLOI-4: Impacts to Social and Economic Conditions - Proposed Value Components to be used in the Developer's Assessment Report; Doc005_1912547 'Valued Components', Table 2-1; Requesting a new entry titled "Net Effect on Government"</p>	<p>Comment Pine Point will be relatively unique, in that employees may be able to live in local communities and work at the mine site. This will greatly change the impacts that local communities experience.</p> <p>Recommendation The GNWT recommends the developer identify potential impacts or opportunities with respect to local infrastructure and program and services. In particular, please address how an increased local population working at the mine but living in nearby communities will have on local infrastructure and program and services. The GNWT requests the developer identify where they plan to collaborate with the GNWT on socio-economic benefits and opportunities.</p>	<p>June 24: Population-based pressure on services and infrastructure will be considered in the assessment of Project effects on social conditions.</p>
36	<p>Approach to KLOI-4; Doc005_1912547 section 4.2.2.3, Table 4-18, 'KLOI-4: Impacts to Social and Economic Conditions'; Addition to 'Information Sources'</p>	<p>Comment The GNWT would like to be made aware of any socio-economic commitments the developer has made to date, who they were made to, and any other details about current commitments (if they are not confidential).</p> <p>Recommendation The Information sources section states that "the conceptual Socio-economic Management Plan, developed as part of the Project, including a list of commitments" will be a source. The GNWT recommends that in the DAR, the developer expand upon the list and what it currently contains.</p>	<p>June 24: The Socio-economic Management Plan for the Project will include a list of commitments with associated details. This will be available to the GNWT as part of the DAR submission.</p>
37	<p>KLOI-4: Impacts to Social and Economic Conditions - Proposed Value Components to</p>	<p>Comment Forecasts that account for employment and procurement opportunities over time, in the different major phases of the Project, will benefit training and planning efforts around construction, production and closure.</p> <p>Recommendation The GNWT recommends that the developer provide information on employment and procurement opportunities forecasted for the different mining phases [construction, production, closure].</p>	<p>June 24: Employment and procurement opportunities by phase will be presented in the economic assessment for the Project.</p>

	<p>be used in the Developer's Assessment Report; Doc005_1912547 'Valued Components', Table 2-1; Addition to entry titled "Economic Development and Government Revenues"</p>		
38	<p>KLOI-4: Impacts to Social and Economic Conditions - Doc005_1912547, 4.1.2.2. 'Assessment Endpoints and Measurement Indicators'</p>	<p>Comment The GNWT already monitors indicators (or assessment endpoints) that allow for comparison and uniform statistics across Projects. The GNWT would like these terms of measurement to be agreed upon whether by the developer on its own, or by way of a Socio-Economic Agreement. Recommendation The GNWT recommends that the developer form definitions for assessment endpoints (i.e. person years of employment) or to agree to develop those definitions in collaboration with the GNWT. For Employment, the following definitions should be included: A) Regional B) Hiring preference/priority C) NWT Indigenous D) NWT resident E) Indigenous Community</p>	<p>June 24: Definitions for these criteria will be provided in the economic assessment for the Project.</p>
39	<p>KLOI-4: Impacts to Social and Economic Conditions - Valued Component: Employment and Education; Doc005_1912547 section 4.2.2.3, Table 4-18, 'KLOI-4: Impacts to Social and Economic Conditions'; Addition to 'Spatial Boundaries'</p>	<p>Comment The developer's report focuses on employment in South Slave Region. The GNWT wants to better understand the effect the mine will have on employment in the entire territory. It is anticipated that the South Slave region and Indigenous residents would be prioritized for employment before other NWT residents. Recommendation The communities listed are generally limited to the South Slave region. The GNWT recommends that the DAR includes commitments and plans for training, employment and procurement to the NWT Residents in the rest of the NWT. The GNWT also recommends that the developer add considerations for the primarily impacted communities, NWT resident & businesses, NWT indigenous residents, and how these groups will be prioritized for employment.</p>	<p>June 24: PPML will give first priority for economic opportunities to those local communities most impacted by the Project. As a second priority, PPML will extend opportunities to Northern Indigenous Peoples and businesses, and other Northern residents and businesses. Benefit enhancement measures aimed at maximizing the uptake of employment and contracting opportunities by local and NWT residents and businesses will be identified in the economic assessment for the Project.</p>
40	<p>KLOI-4: Impacts to Social and Economic Conditions - Proposed Value Components to be used in the Developer's Assessment Report; Doc005_1912547 'Valued Components', Table 2-1; Addition to entry titled "Employment and Education"</p>	<p>Comment These requests revolve around employment and training opportunities. Much of the information would be useful for baseline information, to measure the effect the mine has on the territory. All of the information on economic impacts would be relevant to a Socio-Economic Agreement. Recommendation The GNWT recommends the developer add further detail to the valued component addressing education level requirement of jobs offered (Entry-level, Semi-Skilled, Skilled, Management, Professional). The GNWT also recommends the developer add detail reflecting the level of commitment to train NWT Resident employees for advancement within PPML. The GNWT recommends the developer provide detail on the points of pick up and the method of travel to and from the Project site.</p>	<p>June 24: The Project's labour force requirements by skill level, and exemplary positions and associated levels of training, will be identified in the economic assessment for the Project. Arrangements such as workforce training and transportation will also be identified.</p>
41	<p>KLOI-4: Impacts to Social and Economic Conditions - Assessment Endpoints and Measurement Indicators</p>	<p>Comment The GNWT already monitors indicators related to training that allow for comparison and uniform statistics across projects. The GNWT would like these terms of measurement to be agreed upon, whether by the developer on its own, or by way of a Socio-Economic Agreement. Recommendation The GNWT recommends that the developer consider the following list of approaches to enhance the capacity of the labour force, and to increase skills relative to the labour market: A) Supervisor and mentor training; B) On-the-job training and advancement opportunities for all employees; C) Participation in apprenticeship and trades training and ensuring the necessary work hours for employees to achieve trade and/or occupation certification; D) On site apprenticeship and trades training opportunities including a salary and time off while away taking technical training; E) On-site literacy, financial management, WHMIS and SHE (safety, health and environment training) training programs, health and wellness; F) Training programs schedule, including literacy, so potential employees will be ready and prepared to take advantage of immediate employment opportunities; G) Training for new employees; H) Professional development opportunities for all employees to facilitate career advancement; I) Programs and initiatives that address barriers to hiring and retaining employees including Local Study Area LSA residents, women in non-traditional jobs, and/or single parents that support their participation in the workforce; J) Cultural awareness and diversity training to recognize, respect and support cultural differences; K) Approach to addressing limited training capacity in the communities and access to training; L) Ability to meet NWT hiring goals based on LSA/NWT communities' employment pool and degree of workplace readiness; M) Training, recruitment and retention approaches/incentives; N) Identification of potential training and development partners.</p>	<p>June 24: PPML is in agreement with the recommendation to consider the approaches listed here.</p>

42	KLOI-4: Impacts to Social and Economic Conditions - Assessment Endpoints; Doc005_1912547 section 4.1.2.2, Table 4-1, 'Proposed Assessment Endpoints and Measurement Indicators for Valued Components'	<p>Comment The GNWT already monitors indicators related to employment that allow for comparison and uniform statistics across projects. The GNWT would like these terms of measurement to be agreed upon, whether by the developer on its own, or by way of a Socio-Economic Agreement.</p> <p>Recommendation These recommendations mirror the recommendations to 'Proposed Assessment Endpoints and Measurement Indicators for Valued Components' above, but focus on measurement indicators. For certain recommendations, it might be more prudent to add detail to the measurement indicators rather than to the valued components. The GNWT uses specific assessment endpoints that it uses across multiple Projects. The GNWT recommends the developer confirm whether they will collect and publicly report annually on: A) hiring by hiring priority and job category in total numbers and percentage of total hires; B) hiring by Northwest Territories community in total numbers and percentage of total hires; C) total employment in person years by hiring priority and job category in total numbers and percentage of the workforce; D) total employment in person years by Northwest Territories community in total numbers and percentage of the workforce; E) total number of NWT resident employees who resigned or who were laid off, fired or otherwise terminated in the previous year; F) participation in and results of training activities G) the gross value of goods and services purchased during the calendar year by major category of purchase in relation to each phase of the Project. ('Purchases' based on the gross value of all purchases of goods and services including both goods and services produced in the Northwest Territories and goods and services produced outside the Northwest Territories that are purchased through NWT Businesses); and H) a business forecast and assessment for the upcoming year.</p>	<p>June 24: PPML will engage with the GNWT on the appropriate metrics required for annual reporting. Such annual reporting will occur outside of the DAR process into Project construction and operations.</p>
43	DAP - Baseline information for boreal caribou and moose (proposed VC) Section 4.2.18 and 4.2.1.9	<p>Comment As detailed in the GNWT's submissions into the MVLWB process for PPML's CEP, the GNWT started monitoring boreal caribou in the Pine Point and Buffalo Lake areas in 2015 using GPS collars, with the goal of having at least 15 active collars in each of these areas on an annual basis. The GNWT also monitors boreal caribou to the west of the Hay River in the Hay River Lowlands study area, and monitored in the Cameron Hills area up until 2010. The GNWT data indicate that boreal caribou in the Pine Point area may represent a small local population with little chance for rescue from adjacent local populations if their numbers decline. Boreal caribou monitoring programs across the South Slave administrative region indicate relatively little movement of boreal caribou from east to west across the Hay River, as well as little spatial overlap between boreal caribou collared in the Pine Point area and those collared west of Buffalo Lake. This suggests that boreal caribou in the Pine Point area represent a small local population within the broader NWT boreal caribou range. Annual spring classification surveys of boreal caribou conducted in the Pine Point area between 2018-2020 have recorded 42-63 boreal caribou in the area. As spring composition surveys are not designed to estimate abundance, the GNWT is of the view that an abundance survey of this group of animals is required to provide comprehensive baseline data regarding the size and structure of this population. In comments to PPML on the MVLWB registry regarding the CEP, the GNWT recommended that PPML work with the GNWT-ENR to conduct a population survey to determine how many boreal caribou occur within the project area, and in PPML's responses on the ORS, they indicated that they were willing to discuss this. The GNWT suggests that such a survey could also be designed to provide current baseline for moose (proposed VC) in the Pine Point area, which should also be included in the DAR.</p> <p>Recommendation The GNWT recommends that baseline requirements in the TOR include a population estimate for the boreal caribou and moose in the Pine Point area. PPML should work with ENR to conduct a population survey to determine how many boreal caribou and moose occur within the project area.</p>	<p>June 24: PPML is planning to work with the GNWT and Indigenous groups close to the area of the Project to conduct a population survey to determine how many boreal caribou occur with the Project area as part of the Confirmation and Exploration Program. PPML will discuss with GNWT the addition of moose.</p>
44	Direct Discharge of Effluent Technical Scoping Session Summary	<p>Comment On page 10 of the Technical Scoping Session Notes, MVLWB staff asked "Where will impacts to ground and surface water be assessed? Where is downstream? Are we monitoring in the pits? Or where the water comes out?" and the response from PPML notes: "One of the key concepts here is that we don't propose discharge of any water outside of the disturbed areas (i.e. the pits or re-injected underground)." However, it is the GNWT's understanding that direct discharge is part of the scope of the Project. For example, Table 6 in Volume 4 identifies a primary effects pathway to be "Direct discharge of mine water, as well as surface runoff, groundwater inflow and seepage from the Project will cause changes to surface water quality in receiving and downstream aquatic environments."</p> <p>Recommendation The GNWT recommends the TOR be clear that direct discharge of mine water to the receiving environment is part of the proposed Project scope for this EA.</p>	<p>June 24: PPML is currently planning a Confirmation and Exploration Program (CEP) to collect additional information related to groundwater and surface water movement at the site. The Water Licence application for the CEP is under review by the Mackenzie Valley Land and Water Board. This information will feed into the development of the water management plan for the Project. Currently, PPML anticipates that all water will be managed at the site (existing open pits and injection wells) and there will be no discharge of mine water to the receiving environment. However, as additional engineering and mine design work is required to confirm this, PPML included the potential for mine water discharge in the EA Initiation Package. Obviously, if a mine water discharge is part of the Project, the effects of this activity will be included in the assessment.</p>
45	Use of Spatial Projections Technical Scoping Summary	<p>Comment On page 15 of the technical scoping summary one of the GNWT statements was captured as "Want to work with PPML to make sure that we're using the same spatial scale for disturbance estimates." This should read "Want to work with PPML to make sure that we're using the same spatial Projections for disturbance estimates."</p> <p>Recommendation The Review Board should replace "spatial scale" with "spatial Projection" in the 4th paragraph on page 15 of the scoping summary. PPML should work with the GNWT to ensure that it is using the same spatial Projection (Canada Albers Equal Area Conic) used by the GNWT in developing disturbance estimates.</p>	<p>June 24: NA</p>
46	Multiple scales of assessment for caribou Technical Scoping Summary, page 13	<p>Comment The report doesn't quite capture what the GNWT speaker was conveying regarding the appropriate scales for assessment.</p> <p>Recommendation The Review Board should revise this section to replace [local, LSA, NT1 range, Southern NWT Planning region, RSA (that we think is relevant but could be expanded to include a range around the Pine Point animals)] with [NT1 Range, Southern NWT Planning Region, the proposed RSA, a Pine Point group scale derived from a minimum convex polygon around the collar locations for these animals, and the proposed LSA].</p>	<p>June 24: NA</p>
47	Technical	<p>Comment The federal rail bed should not be referred to as the only contaminated site in</p>	<p>June 24: NA</p>

	Scoping Summary, Appendix B	the project area as the rail bed on Commissioner's Land is also considered a contaminated site. Through the technical scoping meeting, it was raised that there may be an opportunity to complete remediation on the Federal section of the rail bed. The GNWT may want to consider partnering to complete remediation on the GNWT sections of the rail bed as well. The GNWT also notes that additional baseline assessments, such as soil assessments, are needed to adequately characterize site conditions. Recommendation There is no recommendation associated with this comment, which was provided as additional context to the Technical Scoping Summary.	
48	Technical scoping summary, p. 18 FRMG reaffirmed importance of looking at cumulative effects for the human environment, including the quantification of land loss; sometimes we focus too much on absolute impacts and need to also consider relative or perceived impacts as well (for example, 1% loss of	Comment The GNWT agrees: the DAP is lacking the notion of "perceived" effects or perception of the area (safety, quality, health). This was repeatedly discussed in the Report of Environmental Assessment and Reasons for Decision for EA1819-01. If subsistence activities become abandoned, language and culture will suffer. Recommendation The GNWT recommends adding to KLOI-3: perceptions of impacts on the safety, quality, and health of the area This addition should be assessed through Changes in the intangible values associated with TLRU as defined in Table 4-1.	June 24: Perceptions of safety, quality, and health of the environment may be shared by communities through engagement, or community-led Indigenous Knowledge studies. Where such perceptions are shared by communities, they will be documented in the appropriate KLOI or SON, and considered in the analysis of potential effects.
49	Technical scoping summary, p. 18 FRMG requested culture (cultural landscapes and cultural continuity, beyond bones and stones) be identified as a KLOI, or at least as a discrete valued ecosystem component.	Comment The GNWT agrees that culture should be identified as a VC and can fit within KLOI-4. Intangible long-term effects on the cultural wellbeing of present and future generations need to be assessed. This requires the consideration of the elements of cultural wellbeing that communities identified as being valuable to them. If cultural activities suffer, language and identity will suffer. Recommendation The GNWT recommends adding as a VC to KLOI-4: - Cultural Identity or Cultural Wellbeing (use and transmission of language and knowledge, continuity of traditions, community cohesion) The assessment approach of KLOI-4 already has focus in this direction.	June 24: Elements of culture as identified as priority areas for Indigenous Peoples through community-led Indigenous Knowledge studies or other engagement with communities will be incorporated into KLOI 4. PPML will revise the list of VCs to reflect this. It is PPML's position that communities are best positioned to address the subject of cultural effects from development.
50	Wildlife Management and Monitoring Plan	Comment The GNWT has notified the developer that a Tier 3 WMMP will be required for the proposed Pine Point Mine. As part of the process of approving the WMMP, the Developer has been notified that a draft WMMP ought to be included as part of its DAR. Section 4.2.2 of the WMMP Guidelines stipulate that in cases where a Project is referred to EA and WMMP is required "During the scoping phase of the EA/EIR, the GNWT will recommend to the Review Board that the TOR for the development require submission of a draft WMMP with the DAR." Recommendation The Review Board should ensure that the TOR include the requirement to include a draft WMMP with the DAR as a basis for understanding the Developer's proposed approach for mitigation and monitoring impacts to wildlife and wildlife habitat.	June 24: PPML agrees to include a Tier 3 conceptual WMMP with the DAR.
51	Volume 3, section 3.4.3.3.	Comment Clarity on health rates methodology. Recommendation The GNWT recommends that the health rates methodology distinguish between the potentially impacted communities in the RSA and the NWT overall so as to accurately assess baseline conditions.	June 24: Where available, information on health rates in socio-economic study area communities will be disaggregated from the territorial-level statistics.

Katlodeeche First Nation: Patrick Riley

ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	Valued Components - Table 2-1 Proposed Valued Components to be used in DAR - Fish and Fish Habitat pg 6	Comment Birch Creek is an important traditional and subsistence fishery that lies within 3 kilometres of active PPML leases and claims, especially when considering figure 4-3 on pg 64 and noting the proximity of the Birch Creek watersheds to the aforementioned leases and claims. It is also a source of small game harvest for KFN members, namely beaver and muskrat. Recommendation KFN recommends to the board that Birch be added as a valued component in the assessment of Fish and Fish Habitat and Water quality and quantity.	June 24: Birch Creek was not included in the proposed aquatics local study area, as based on the current Project Description, it was not expected to be affected by the Project. Birch Creek, however, was included in the proposed aquatics regional study area. Due to the fact that Project effects were not anticipated on this watercourse, the Birch Creek Fish Community was not included as a valued component (VC) for the fish and fish habitat assessment. However, PPML recognizes the concern raised by KFN. PPML will consider adding Birch Creek to the EA through a screening process which considers the potential for effects to VCs. PPML is continuing to advance the detailed Project design and will have a better understanding of Project effects based on the updated Project Description and modelling that will be completed to support the DAR.
2	Valued Components - Table 2-1 Proposed Valued	Comment KFN members have harvested moose along the Buffalo river since time immemorial and thus it is an important subsistence and cultural species. Moose in the area have an expansive range with seasonal movements with a population that has been affected by predation as a result of habitat change.	June 24: PPML agrees to include moose as a VC.

	Components to be used in DAR - Wildlife pg 6	Recommendation KFN recommends to the board that Moose be added as a valued component in the assessment of Wildlife.	
3	3.1 Proposed Keys Line of Inquiry - 1: Impacts to Water Quality pg 11	Comment Section 3.1 of the DAP includes Impacts to water quality as a KLOI but only in reference to surface water quality. Impacts to groundwater quality and quantity and surface water quantity are identified as Subjects Of Note. The connection between surface and groundwater closely connected especially seen in prevalent marshlands and during common flooding events. Recommendation KFN recommends that all water, be it quality or quantity be included under a single KLOI.	June 24: The terminology related to KLOI and SON comes from MVEIRB. However, PPML reiterates that those components selected as SONs will still have a thorough and comprehensive assessment (including cumulative effects). Please see Section 4.2 of the Developers Assessment Proposal for methods for KLOIs and SONs. PPML disagrees with packaging all water, including groundwater, surface water quantity, and surface water quality as a single KLOI. The interactions between these components are an integral part of the assessment; however, having them as separate sections allows a more clear and transparent approach and leads to less confusion for readers/reviewers. The surface water quality KLOI links the results from groundwater quantity and quality and surface water quantity to water quality. The water quality KLOI will consider the results of the groundwater and surface water hydrology assessments, contained within SON Impacts to Groundwater Quantity and Quality and SON Impacts to Surface Water Quantity.
4	4.1.3.2 Temporal Boundaries pg 23	Comment Active closure and reclamation and associated monitoring activities are expected to occur over a period of about 5 to 7 years. With respect to KLOI 2 - Impacts to Caribou. Due to long natural recovery time of caribou habitat, specifically the regrowth of lichen, this temporal boundary should be extended for Boreal Caribou. Recommendation KFN Recommends that the Temporal Boundary be extended to 50 years to better assess the cumulative effects associated with Boreal Caribou and Boreal Caribou habitat.	June 24: Section 4.1.3.2 of the Developer's Assessment Proposal indicates that the minimum temporal boundary for the effects assessment is defined by the Project phases of construction, operation, and closure and reclamation. Based on the current mine plan, active closure and reclamation, and associated monitoring activities, are expected to occur over a period of about five to seven years. As per Section 4.1.3.2, the actual temporal boundaries that will be used in the assessment are component specific and will include the Project phases described above. For example, Project effects on wildlife begin during the construction phase with the removal and alteration of habitat (i.e., results in direct and indirect changes) and continue through the operation and closure and reclamation phases, and post-closure until effects are reversed or determined to be irreversible (i.e., permanent). Therefore, effects on wildlife will be analyzed and predicted from construction through closure and reclamation and typically beyond, which generates the maximum potential spatial and temporal extent of effects and provides confident and ecologically relevant effects predictions. For caribou, the assessment would include evaluating effects until habitat disturbed and reclaimed by the Project is predicted to re-establish as caribou habitat (> 40 years of age).
5	3.1 Proposed Keys Line of Inquiry - 1: Impacts to Social and Economic Conditions pg 11	Comment While Indigenous Communities like KFN will experience both Social and Economic Conditions, these impacts will be experienced in vastly different ways. Social impacts will tend to have a much more adverse impact, related to health and wellbeing. Recommendation KFN recommends that KLOI 4 be split into two separate KLOIs one focusing on the Impacts to Social Conditions and one referring to the Impacts to Economic conditions.	June 24: As per the response to GNWT-29, PPML will include the KLOI Effects on Heath and Wellbeing, separate from the KLOI Effects on Social and Economic Conditions. This will result in a shift of the current health and wellbeing-related VC and associated indicators out of the latter KLOI.

Mackenzie Valley Environmental Impact Review Board: Chuck Hubert

ID	Topic	Reviewer Comment/Recommendation	Proponent Response
1	General File	Comment  Request by Pine Point Mining to extend response date to June 23. Request granted. Recommendation GENERALFILE	