Reviewer Comments and Proponent Responses

Project: Pine Point Mine Project
Board: Mackenzie Valley Environmental Impact Review Board
Organization: Pine Point Mining Limited

No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Smith's Landing First Nation - lands_admin@slfn196.com Heaton				
1	1 (Land/Community)	SLFN has strong ties to its territory. This land has sustained SLFN and has provided physical, mental, spiritual health for the people. In return, SLFN has managed and protected the land and resources by living a balanced life in line with Dëné Ch'anıe. As shown in Figure 1 (see letter), the proposed Project is within SLFN territory, and overlaps with areas of specific interest and historic use and occupancy for SLFN (including Paulette River). The proposed area of development also overlaps with an area where a small marginalized (and relocated) community called the Rocher River once existed. SLFN notes that it does not appear anywhere in the TOR as a noted community that maybe impacted by the proposed Project. This is important due to ancestral connection to the community. SLFN is a community that was and continues to be impacted by the legacy left by previous development and will undoubtedly be impacted by the proposed Project.	SLFN requires that the MVRB recognizes that the project is within the territory of SLFN in Section 1.1 and any other applicable sections of the TOR.	No response required
2	Due date extension request	Due date extension request		No response required
3	SLFN comments	SLFN comments on draft Terms of Reference	SLFN comments on draft Terms of Reference	No response required
4	2 (Traditional Lake Use Sectin 4.2.8)	NARRATIVE:	The scope of the line of inquiry for Traditional Land Use (Section 4.2.8) is	PPML will work with those Indigenous communities closest to the Project and with the greatest propensity to

		Harvesting is a key activity in Dëné culture. It is economic in nature, but the interaction is not transactional. Harvesting not only provide food and medicines but provide lessons and teachings on living a balanced Dëné Ch'anıe. The ability of SLFN members to confidently access healthy animals and clean water, has a direct effect on every aspect of SLFN society. Healthy animals and clean water encourage and allow people to spend time on the land, exercise and optimize rights, teach children intergenerational knowledge and practices, practicing culture, sharing, forming community connections, and actively reaffirming their identity as Dënésułiné. For SLFN this is health and healing. Damage to the land and resources in their territory is destructive to Dëné Ch'anıe as it disconnects members from one another, their history, culture, traditional values, and ancestors. The health of the Nation suffers greatly. COMMUNITY COMMENT: Area was always used prior to mine opening Harvesting through treaty rights. Paulette Creek is right through this area.Ancestors used to live there. Community gathering place. Avoidance really started to impact all First Nation communities. If they reopen, no possibility of reclamation ever. Damage too great to recover if this mine opens again. Lost area.	limited and SLFN is concerned that the current scope will not reflect the holistic nature of Indigenous land use and the broad reaching implications of disturbances to these activities. The existing and baseline conditions listed in Page 5 of 8 the TOR (Section 4.2.8) are focused on harvesting. Indigenous land use is complex and cannot be accurately reflected through harvesting activities alone. As such, this section should be expanded to reflect the complexity of Indigenous land use. Results of all VC assessments are integrated (quantitatively) to understand holistic effects (Section 4.3).Assesses cultural impacts of wage earning and traditional lifestyles.	experience impacts to undertake community-led Indigenous Knowledge studies specific to the Project area. Such studies will consider those items listed in Section 4.2.8 of the TOR, but are also free to identify other aspects of Indigenous land use in the Project area of importance.

5	4 (Key Lines of Inquiry Section 2.2.2)	The key lines of enquiry identified in Section 2.2.2 are too narrow and limited to guide an assessment that reflects Dëné Ch'anıe (see Supplemental table). Supplemental table includes columns on Value Aspects, Recommendation, TOR Concordance and Community Comments. 14 rows of different Value Aspects are included in the table.	It is recommended that the following additional key lines of enquiry be added to the TOR to guide the assessment undertaken by the Proponent. - Managing water to prevent further deterioration from the current condition (which reflects contamination and ongoing liability management from historical development). - Sustainable and healthy surface water and groundwater quantity and quality. - Sustainable and healthy wildlife populations - Sustainable and healthy fish populations - Sustainable and healthy plant populations (including, but not limited to, berries, food plants, medicinal plants) - Preventing negative impacts to cultural ways of life and the peaceful optimization of SLFN's Rights, and social and economic conditions.	PPML disagrees that these additional key lines of inquiry recommended by SLFN should be added to the TOR. These concepts are currently considered within the TOR under the following headings: • Surface and groundwater quality and quantity (Section 4.1.5) • Use of water by people (Section 4.2.1 of the TOR) • Fish and aquatic life (Section 4.2.2) • Vegetation (Section 4.1.6) • Moose, furbearers, and other wildlife (Section 4.2.4) • Boreal caribou (Section 4.2.5) • Indigenous land use (section 4.2.8) • Social and community conditions (Section 4.2.12).
6	5 (Fish)	Harvesting fish from the Slave River and its tributaries has a deep cultural and spiritual history for SLFN and is critical for SLFN to live a life guided by Dëné Ch'anıe. Many fish populations have migratory ranges that originate in the Slave River Delta and Great Slave Lake. It is SLFN's fear that fish populations, such as the long nose and white suckers that are harvested in the spring are being exposed to contamination from both the past mine and the proposed project. The following Figure (see letter) outlines the interconnectivity of the watershed and spawning routes. Every spring SLFN members have gathered on the Salt River at the Tthejëre Ghaɻlı reserve (located in	SLFN requests that the potential impacts of the Project on these Slave River populations and the resulting impacts on SLFN socioeconomic and cultural values be assessed.	Such studies will consider items such as those listed in the reviewer comment (i.e., fish movement, fish harvesting). PPML plans to assess effects to fish harvesting in the Indigenous Land and Resource Use assessment of the DAR. In the fish and fish habitat section of the DAR, the potential effects of the Project on the migratory fish populations, including fish health, in Great Slave Lake will be explored in the pathway analysis process. Pathways will be screened so that those pathways that have the potential to cause adverse residual effects to fish and fish habitat would be carried through to the assessment. Results from the surface water quality and hydrology assessments will be considered to determine the potential for residual adverse effects to fish populations in Great Slave Lake. The proposed study areas for fish and fish habitat are described in Section 4.2.1.5 of the

		red on the Salt River) to harvest both long nose and white suckers, which travel up the Slave River from the delta to spawn on the Salt River.		Developer's Assessment Proposal (also see response to GNWT-19), and includes the shoreline area of Great Slave Lake near the proposed Project. No direct or indirect Project effects would occur to the Slave River.
7	3 (Current Pollution Levels, Water Quality, Human Health, Groundwater, Monitoring Requirements for SLFN)	Birds and harvesting does happen but the quality has diminished. Berry picking available in area but again it's the quality. Woodland Caribou hunting has been affected. Trees dying along the creek. Lots of avoidance of area. Water major issue, contamination. No leakage or spillage into the GSL. Water containment using proper new technology. Why can't they spend the money to do this properly? Water flows all the way to the ocean and PPML needs to be responsible. Need water testing on the existing water. Dug outs need to be tested by SLFN and not industry. Drain the tailings ponds and line the new pits. We want to do the water testing independently of industry. Use our own people to get results to protect future. Collect and analyze our own data. Water in the pits needing to be tested. Water evaporation-- Rain and snow contaminants. What is being evaporated into the air? Pollution/contaminants in the air? Cumulative effects of the air contaminants .How does it affect traditional land?	SLFN requests that the responsible party address our concerns with respect historic liability, including the immediate remediation and reclamation of contaminated and destroyed areas of the site and to ensure the results of monitoring are shared with SLFN members using appropriate communication techniques and with a reasonable level of detail to meaningfully answer community questions. In addition, we request that the Proponent provide a more accurate assessment of potential risks from ingestion of surface water (untreated) and fish. It is recommended that the Proponent include a comparison of surface water quality predictions (Section 4.1.5) to both Health Canada (2021) "Guidelines for Canadian Drinking Water Quality" and US EPA (2015 updated to 2021) "National Recommended Water Quality Criteria Tables – Human Health for the consumption of Water + Organism". SLFN elders also recommend that Indigenous people in the area be trained and take responsibility for monitoring of the site. The Project TOR must clearly describe the requirement for PPML to describe the current condition and contaminant levels in the groundwater and surface water and provide an assessment of potential risks. Each of these recommendations should be	PPML has agreed to conduct a Human Health and Ecological Risk Assessment (HHERA) in the DAR; this has been included in the TOR. PPML will work with Indigenous groups on the selection of receptor locations. Baseline surface water quality as well as water quality predictions will be compared to drinking water guidelines; this has been included in the TOR. Soil quality will also be compared to relevant guidelines.

		Reclamation-Pits left over, Tailings ponds left, No clean up. Canada has a fiduciary responsibility to protect land and harvesting. Past, No organization of camp. Disposal issues with garbage and wastewater. Where did the water come from? No principles or values from management.	considered in sections of the TOR discussing the baseline conditions (Section 3.1). Include an Ecological Risk Assessment. SLFN members provide discrete receptor locations and Valued Components (VCs). Animal health is assessed holistically as a function of ecosystem health and linked to human health and culture of Indigenous people. SLFN members provide discrete receptor locations.Compares predicted soil quality to environmental and human health guidelines (CCME).	
8	6 Traditional Land Use, receptor locations for modeling Section 4)	The Dëné culture is constructed upon reciprocal relationships formed between the community and the land. Thus, the integrity of the culture is dependent on the health and well being of the land and resources. Prior to the original mine, Pine Point was an area used by SLFN. SLFN practiced their culture extensively here; some lived in the area, it was frequented as a travel corridor, community gathering site, and was used for harvesting. SLFN would like to be confident in the health of the area so they can return to using the area. SLFN members have identified several areas of cultural importance as well as areas that have changed over the years and are not healthy.	SLFN will identify these areas to the Proponent for consideration as discrete receptor locations in modelling and assessment studies as proposed in Section 4 of the draft TOR.	PPML agrees with the consideration of the travel corridors as receptor locations in the human health assessment.
9	7 (Culture, Ecological Risk Assessment (Section 4.1.14, 4.2.12)	Narrative: Dëné Ch'anıe guides SLFN members to make decisions about how to use and protect the integrity of the land and water to ensure the air, land, water, plants, animals, and people are healthy for time	The TOR clearly describes that a human health assessment will be completed (Section 4.1.14) but it is unclear if a full ecological risk assessment (ERA) is proposed. Therefore, SLFN recommends that a comprehensive ERA describing	An ecological risk assessment will be conducted in addition to the human health risk assessment and CCME 2021 guidance will be utilized.

		in-perpetuity. SLFN is currently experiencing significant cumulative impacts from development in its territory which has not only diminished and harmed the values of Dëné Ch'anıe but has challenged SLFN's ability to make informed decisions on the management of the land. Management of the land includes the use of Dëné Ch'anıe and western methodologies to understand if human and ecological health are in balance. Members of SLFN have explained that these elements are already out of balance due to impacts from development and require more information to develop culturally appropriate indicators with thresholds and limits.	and assessing potential risks to aquatic and terrestrial receptors (CCME 2021) be required. Supplemental documents indicate the Proponent has agreed to undertake an ERA; however, this must be identified in an updated and final TOR. Section 4.2.12 identifies some of the social indicators that should be used in assessing social and community conditions. Consideration must be given to identifying indicators of social and community health that reflect Dëné Ch'anıe system and values. Any assessment of SLFN Dënésułıné culture must occur through the lens of Dëné Ch'anıe and include changes to relationships as an indicator. Integrating health impact assessment methods, such as those published by the Government of Canada is one mechanism by which direct and indirect impacts to traditional land use can be assessed and are recommended.	The human health assessment, will include social and Indigenous indicators of health as per current Health Impact Assessment Guidance.
10	8 (Stewarding of land and water) 4.1.1-4.1.6, 4.2.1-4.2.8, 4.2.11-4.2.14, 4.3, 5.5	Narrative: The Dëné Ch'anıe value of land and the role of SLFN as stewards of the land for future generations leads to concerns over the energy that will be used to operate the Project, its origin, its contribution to climate change, and the impact that will have on SLFN traditional lands and resources. SLFN Elders feel strongly that the Proponent should consider less energy intensive technologies for extraction, processing, and infrastructure to decrease both emissions and use of non-renewable resources.	It is recommended that Section 5.5 require the Proponent to consider renewable energy sources when assessing alternate means to carry out the Project and consider the Dëné Ch'anie. It is recommended that Section 5.5 require the Proponent to consider renewable energy sources when assessing alternate means to carry out the Project and consider the Dëné Ch'anıe principles of protection and sustainability rather than economics when making design decisions.	No concerns

		Community comment: Power to operate mine.Where is it coming from Taltson?Going to use LNG for generators.This will lead to pollution. What's the energy corridor?Where are they getting it from to operate mine.Who will be impacted by this; will power bills go up in Fort Smith due to this?Clean energy like solar, wind, hydronic, geothermal should be used to generateWhat are the options?Do you think that Pine Point is leading the Taltson/Site C expansion?Always taking the easy way out; we need to protect the environment by being and using new technology.		
11	Clean Water4.1.5, 4.2.1-4.2.4, 4.2.8, 4.2.11, 4.2.14, 4.3	Water major issue, contamination. Contain water. No leakage or spillage into the GSL. Water containment using proper new technology. Why can't they spend the money to do this properly? Water flows all the way to the ocean and PPML needs to be responsible. RECOMMEND: Need water testing on the existing water. Dug outs need to be tested by SLFN and not industry. Drain the tailings ponds and line the new pits. We want to do the water testing independently of industry. Use our own people to get results to protect future. Collect and analyze our own data.Water in the pits needing to be tested.	Water: SLFN members provide discrete receptor locations for modelling and assessment. Include human consumption guidelines (Health Canada Drinking Water Quality Guidelines; US EPA National Recommended Water Quality Criteria - Human Health Criteria Table).	PPML do not agree that the TOR be revised based on this recommendation. For the DAR, PPML will establish assessment nodes for the surface water quality assessment based on a detailed understanding of the Project and its potential to affect surface water and groundwater quantity and quality, and the corresponding integrated surface water and groundwater model development. PPML will consider and incorporate feedback from SLFN and other interested parties on these assessment locations, but in order for the results to most representative of the Project effects, the final decision on the placement of the assessment nodes should fall with the technical team that is conducting the surface water quality modelling and assessment.

12	9. Stewarding of land and water) 4.1.1-4.1.6, 4.2.1-4.2.8, 4.2.11-4.2.14, 4.3	Narrative: SLFN recognizes that the land is a living thing and that what occurs in one area can have lasting impacts not only in that area, but globally. SLFN has a responsibility to understand the legacy, from cradle to grave, of any activity that occurs in our territory and to ensure the ethical use of mined minerals. Community comment: Open communication with PPML required for meaningful community. They shut down the mine in the 80's Why are they opening it up again? What's the hurry or rush to reopen? Why did they shut down the mine initially? Government never supported the treaty rights of the Nation trying to protect.Arsenic poisoning. Tailing's pond leaking into the lake back them. Contaminants making nature die off; complete denial from industry. Offerings for everything that is removed from the land. We want a indigenous co management board for responsibilityUnify the Dënésułıne community. Make it beneficial for all involved Ethical investment and sustainability What employment and economic opportunities will be available to the Nation should the Nation consider the Project appropriate?	SLFN requests a section outlining the purpose of the project, providing details on the following questions: What will happen to the minerals that are mined here? Where do they go? How are they used? Create SLFN Opportunities Agreement to address community expectations on ethical investment and sustainable legacy.	The DAR will include a section on the purpose of the project; see Section 5.5 of the TOR. The second recommendation is outside of the purview of the DAR and regulatory process. PPML will continue to engage with SLFN as the Project to advances on topics important to the community.
13	Clean land, 4.1.1, 4.1.3-4.1.6, 4.2.2-4.2.8, .2.11, 4.2.14, 4.3	Water evaporation-- Rain and snow contaminants.	Assess land contamination from groundwater and surface water runoff.	PPML does not expect an interactions pathway of groundwater and surface water runoff to land that results in contamination. The water management plan for the site

		What is being evaporated into the air?Pollution/contaminants in the air? Cumulative effects of the air contaminants.How does it affect traditional land? Reclamation-Pits left over, Tailings ponds left, No clean up. Canada has a fiduciary responsibility to protect land and harvesting. Past, No organization of camp. Disposal issues with garbage and wastewater Where did the water come from? No principles or values from management.	SLFN members provide discrete receptor locations. Compares predicted soil quality to environmental and human health guidelines (CCME).	and mitigation associated with this plan will be included and described. However, a localized effect may occur as part of an accident and malfunction from water transfers (e.g., pit to pit transfers) on the Project footprint. Accidents and malfunctions are included in Section 5.6 of the TOR.
14	Healthy Animals, 4.1.1-4.1.6, 4.2.1-4.2.8, 4.2.11, 4.2.14, 4.3	Too much pollution coming from too much industry. Close to mine site; less and less actual harvesting. Fish quality and contamination.Protect the fish; very important. Deformed fish already being found. Fish run up and down the Slave from Great Slave Lake (GSL). How do we protect the spawning and runs?Moose infected and not able to consume due to Fort McMurray. Moose hunting still in area closer to Fort Resolution Birds and harvesting does happen but the quality has diminished. Berry picking available in area but again it's the quality. Woodland Caribou hunting has been affected. Trees dying along the creek. Lots of avoidance of area. RECOMMEND:	Animals: Include an Ecological Risk Assessment. SLFN members provide discrete receptor locations and Valued Components (VCs). Animal health is assessed holistically as a function of ecosystem health and linked to human health and culture of Indigenous people	An ecological risk assessment will be conducted.

		Animals need to be tested. Are there animals even there? Studies are required. No animals = unhealthy environment. Fish need to be tested-sampling. Protect spawning areas.		
15	Clean Air, 4.1.1, 4.1.3-4.1.6, 4.2.2-4.2.8, 4.2.11, 4.2.14, 4.3	No current air monitoring. RECOMMEND: Air monitoring will be required by SLFN	Models deposition and assesses contamination of soil and water and risks to VCs. SLFN members provide discrete receptor locations Assesses near and far range transport of contaminants across SLFN traditional territory (RSA).	An air quality monitoring plan is likely to be required as a component of the licencing for the Project should it be approved. PPML is open to discussion regarding the placement of discrete receptor locations for monitoring based on Indigenous Knowledge.
16	Time on the land (for harvesting or recreation), 4.1.1-4.1.6, 4.2.1-4.2.8, 4.2.11, 4.2.14, 4.3	Area was always used prior to mine opening. Harvesting through treaty rights. Paulette Creek is right through this area. Ancestors used to live there. Community gathering place. Avoidance really started to impact all First Nation communities. If they reopen, no possibility of reclamation ever. Damage too great to recover if this mine opens again. Lost area.	Traditional land use studies must be holistic in nature and include all aspects of SLFN life and culture on the land, and not be limited to harvesting.	PPML will work with those Indigenous communities closest to the Project and with the greatest propensity to experience impacts to undertake community-led Indigenous Knowledge studies specific to the Project area. Such studies will consider those items listed in Section 4.2.8 of the TOR, but are also free to identify other aspects of Indigenous land use in the Project area of importance.
17	People practice healthy lives, 4.3	First time with a road into Fort Resolution. Impacts of the community started with addiction during this time. Bootlegging started to become an issue within the communities. Fort Resolution didn't want the mine to expand any larger Protest within Res to protect the traditional land	Results of all VC assessments are integrated (quantitatively) to understand holistic effects (Section 4.3). Assesses cultural impacts of wage earning and traditional lifestyles	The effects of environmental VC assessments will be considered in the assessment of potential effects on Indigenous Land Uses as presented in the DAR. The interaction of the wage economy with traditional lifestyles will be assessed through the socio-economic and culture components of the DAR.

18	Technology is used positively (alternatives, why is this necessary, what are mine products being used for), 5.5	Power to operate mine. Where is it coming from Taltson? Going to use LNG for generators. This will lead to pollution. What's the energy corridor? Where are they getting it from to operate mine. Who will be impacted by this; will power bills go up in Fort Smith due to this? Clean energy like solar, wind, hydronic, geothermal should be used to generate What are the options? Do you think that Pine Point is leading the Taltson/Site C expansion? Always taking the easy way out; we need to protect the environment by being and using new technology.	Identifies and assesses alternate technologies to decrease reliance on non-renewable sources and decrease emissions. Adopted DC values of protection and sustainability and limits economic focus.	An assessment of available technologies for generating power will be completed. It will include the potential for using renewable energy sources as appropriate.
19	Harvesting experiencesTraditional Food Security, 4.1.1-4.1.6, 4.2.1-4.2.8, 4.2.11, 4.2.14, 4.3	Marten (used to be very prevalent prior to mine, not sure if they are still around because there are no SLFN trappers using this area anymore) Traditional harvesting of moose, birds, berries, fish (sucker run come up Paulette Creek), and buffalo Fort Resolution had a buffalo ranch after the mine opened to generate food security	Results of all VC assessments are integrated (quantitatively) to understand holistic effects (Section 4.3) Assesses cultural impacts of wage earning and traditional lifestyles	The effects of environmental VC assessments will be considered in the assessment of potential effects on Indigenous Land Uses as presented in the DAR. The interaction of the wage economy with traditional lifestyles will be assessed through the socio-economic and culture components of the DAR.
20	Connection to the land, 4.1.1-4.1.6, 4.2.1-4.2.8, 4.2.11, 4.2.14, 4.3	What are they going to use these minerals for?Where is the ore going to? There is a social responsibility to know where the resource will be used and the legacy that it will bring.	Results of all VC assessments are integrated (quantitatively) to understand holistic effects (Section 4.3).Assesses cultural impacts of wage earning and traditional lifestyles.	The effects of environmental VC assessments will be considered in the assessment of potential effects on Indigenous Land Uses as presented in the DAR. The interaction of the wage economy with traditional lifestyles will be assessed through the socio-economic and culture components of the DAR.
21	Employment and economic opportunities, 4.2.11-4.2.13, 4.2.9	Make it beneficial for all involved Ethical investment and sustainability What employment and economic opportunities will be available to the	Create SLFN Opportunities Agreement to address community expectations on ethical investment and sustainable legacy	This recommendation is outside of the purview of the DAR and regulatory process. PPML will continue to engage with SLFN as the Project to advances on topics important to the community

		Nation should the Nation consider the Project appropriate?		
22	Stewarding of land and water, 4.1.1-4.1.6, 4.2.1-4.2.8, 4.2.11, 4.2.14, 4.3	Open communication with PPML required for meaningful community. They shut down the mine in the 80's Why are they opening it up again? What's the hurry or rush to reopen? Why did they shut down the mine initially?Government never supported the treaty rights of the Nation trying to protect. Arsenic poisoning. Tailing's pond leaking into the lake back them. Contaminants making nature die off; complete denial from industry. Offerings for everything that is removed from the land. We want a indigenous co management board for responsibility Unify the Dënésułıne community.	SLFN is provided answers to specific questions regarding the history and current state of the site.	PPML acknowledges the specific comments from SLFN noted above.
23	Member employment, 4.2.11, 4.2.12, 4.2.13	Mine investment. First time SLFN members getting into the wage economy (Cominco mine) Lots of income started to flow into the communities. Long hours. High pay. Lead to many social issues. Work camps. Alcohol and drugs will be introduced to the community. Indigenous cultural training required for workers. Liaison or FN employees. Meet a % of FN employees. Ensure our people get hired first.		No recommendation. PPML acknowledges the importance of the subjects in the reviewer's comment, and will address these concerns through the DAR and/or engagement

		Who is going to benefit from this mine reopen?Company, Res, Katlodeche, Metis Only 1-2% of FN were working at the old mine. Need to get First Nation into more admin positions and not just laborer's		
24	Traditional Governance	Land use protocol. Ceremony required. They never ever made the area as good as they found it. They abused the land . They never offered anything back to the land	PPML must follow appropriate governance and protocol requirements as described by SLFN.	PPML is committed to working with communities to understand appropriate governance and cultural protocols as the Project advances.
25	Healing historical trauma, 4.2.8-4.2.12, 4.3	Narrative: Land is spiritual, land is alive, it is the land, water and air. If this mine gets approved; everything needs to be done properly in the spirit of reconciliation with land. We must ensure that we protect the land and culture. Reclamation/restoration It should look like the camp was never there Community comment: Mine investment was the first time SLFN members getting into the wage economy (Cominco mine). Lots of income started to flow into the communities. Long hours. High pay. Lead to many social issues. Work camps. Alcohol and drugs will be introduced to the community. Indigenous cultural training required for workers.Liaison or FN employees. Meet a % of FN employees.Ensure our people get hired first.	Conduct ceremony to heal and honor the land and its gifts; ensure reclamation is a process of restoration and healing, leaving the land better than when it was pre-disturbance.	PPML appreciates the reviewer's comments, and will work with communities to understand appropriate cultural and ceremonial protocols applicable to the Project.

		Who is going to benefit from this mine reopen? Company, Res, Katlodeche, MetisOnly 1-2% of FN were working at the old mine. Need to get First Nation into more admin positions First time with a road into Fort Resolution. Impacts of the community started with addiction during this time. Bootlegging started to become an issue within the communities. Fort Resolution didn't want the mine to expand any largerProtest within Res to protect the traditional land		
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Mackenzie Valley Environmental Impact Review Board - Chuck Hubert				
1		Due dates for comments and responses revised.	Comment due date revised to September 17 with responses due October 8	No response required.
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Canadian Northern Economic Development Agency (CanNor) - Katie Bakker				
1	Editorial Section 1: Introduction, p.1	The first paragraph refers to both '…mining of zinc and lead deposits over five years…' and '…10-15 years of mine operations…' Section 1: Introduction, p.1	References to the anticipated length of mining operations should be made consistent in the first paragraph of the Introduction.	As described in the Project Description, mining is expected to occur over 10 to 15 years.
2	Editorial Section 2.1: Scope of Development, p.4	The sentences beginning with, 'This description of existing project components…', 'The information will be used in this EA…' and 'The onus is on the developer…' are duplicated in this section. Section 2.1: Scope of Development, p.4	Duplicated sentences in this section should be removed.	No response required

3	Editorial Section 2.3: Geographic Scope, p.7 Section 3: Overall approach to assessing impacts, p.7 Section 4: Assessing Impacts	In the last paragraph on page 7, the DAR is mentioned; this should be the DAP or Developer's Assessment Proposal. Similarly, Section 3 and Section 4 refer to the Developer's Assessment Proposal when the Developer's Assessment Report is intended. Section 2.3: Geographic Scope, p.7 Section 3: Overall approach to assessing impacts, p.7 Section 4: Assessing Impacts	ECCC recommends providing corrections for clarity.	PPML agrees with correcting the use of the Developer's Assessment Proposal (DAP) and the Developer's Assessment Report (DAR). The DAP outlined proposed methods and approaches and was submitted in the Environmental Assessment (EA) Initiation Package. The DAR will be the actual EA that will be submitted in the future.
4	Air Quality Section 4.1.1: Existing environment and baseline conditions - atmospheric environment p.14 Section 4.1.1: Changes to the atmospheric environment, p.15	Health Canada (HC) notes that the Terms of Reference (ToR) does not include a suggested list of contaminants of potential concern (COPCs) that should be considered. For example, HC would suggest COPCs with potential impacts to human health including, but not limited to fine particulate matter (PM2.5), coarse particulate matter (PM10), carbon monoxide (CO), ozone, sulfur oxides (SOx), nitrogen oxides (NOx), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), diesel particulate matter (DPM), metals, and any other toxic air pollutants (mobile, stationary and fugitive sources). Most of these COPCs are noted in HC's guidance on air quality (Health Canada 2016, referenced in Appendix A of the ToR). However, DPM is not included in the HC guidance and should be assessed for this project if construction and mine fleet are diesel powered. Please see Annex A in the the Government of Canada's Cover Letter	HC recommends that the proponent consider COPCs with potential impacts to human health, including but not limited to PM2.5, PM10, CO, ozone, SOx, NOx, PAHs, VOCs, DPM, metals, and any other toxic air pollutants (mobile, stationary and fugitive sources).	PPML agrees with this recommendation.

		for the following reference: Health Canada. 2016. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Air Quality. Section 4.1.1: Existing environment and baseline conditions - atmospheric environment p.14 Section 4.1.1: Changes to the atmospheric environment, p.15		
5	Air Quality Section 4.1.1: Existing environment and baseline conditions - atmospheric environment, p.14 Section 4.1.1: Changes to the atmospheric environment, p.15	The ToR requests a comparison of ambient air quality results with applicable territorial and federal standards. It is important to use the averaging period and the statistical form associated with each Canadian Ambient Air Quality Standards (CAAQS) numerical value. Additionally, any comparison against the CAAQS should be based on the principles of "keeping clean areas clean" and "continuous" improvement and in the context of air zones with the Air Quality Management System. Section 4.1.1: Existing environment and baseline conditions - atmospheric environment, p.14 Section 4.1.1: Changes to the atmospheric environment, p.15	For comparison purposes, HC recommends use of the averaging period and statistical form associated with each CAAQS numerical value. HC also suggests that any assessment against CAAQS should be based on the principles of "keeping clean areas clean" and "continuous" improvement and in the context of air zones with the Air Quality Management System.	Any comparison made to the CAAQS would be conducted using the appropriate numeric statistical form, e.g., 3-yr average of 98th percentile. PPML notes, however, that the CAAQS were never intended to be a metric against which theoretical dispersion modelling results should be compared for compliance purposes. Rather, they are to be evaluated against community monitoring stations (NAPS) stations in areas of higher population density. Comparisons made to the CAAQS should be considered as informational in nature, not as a compliance indicator.
6	Acoustics Section 4.1.2: Existing environment and baseline conditions - acoustic environment, p.16	The ToR requires an assessment of current ambient noise levels at receptor points. For clarity, HC suggests specifying the types of key receptor points that should be considered in the noise assessment. Additionally, the ToR	With respect to the noise assessment, HC recommends that the ToR require an assessment of current ambient noise levels at all key receptor points (including nearby communities, seasonal and permanent residences, work camps,	Noise data from previous baseline surveys in the area are available and could be used to establish / characterize current ambient noise levels. The proponent should be allowed to make a case for why existing baseline data are still valid / representative, rather than being automatically required to collect new baseline noise data.

		does not require a discussion of sources of uncertainty in the noise assessment. Section 4.1.2: Existing environment and baseline conditions - acoustic environment, p.16	any traditional land use areas), including the results of a baseline ambient noise survey and permissible noise levels for each receptor. HC also recommends that the ToR require a discussion of sources of uncertainty which should be identified and quantified.	In accordance with Health Canada guidance (2017), noise exposure at "workers' living quarters" should be considered an occupational health & safety issue and should not be modelled or assessed for the DAR. No concern about the other types of receptors recommended by the reviewer (i.e., nearby communities, seasonal and permanent residences, traditional land use areas). No concern about the reviewer recommendations re: discussing uncertainty in the DAR.
7	Acoustics Section 4.1.2: Changes to the acoustic environment, p.16	The ToR does not require a determination of expected increase in high annoyance and sleep disturbance. These are important indicators for determining potential health impacts of the project. Section 4.1.2: Changes to the acoustic environment, p.16	HC suggests that the ToR require a calculation of the baseline percent highly annoyed (%HA) and percent highly sleep disturbed (%HSD), and then determine the expected increase in high annoyance and sleep disturbance (using the equations presented in Health Canada (2017) Appendix F) and ISO/TS 15666:200313 (2013)). Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. Please see Annex A in the the Government of Canada's Cover Letter for the following reference: International Organization for Standardization (ISO). ISO/TS 15666:2003. Confirmed in 2013. Acoustics — Assessment of noise annoyance by means of social and socio-acoustic surveys.	No concern about evaluating potential for high annoyance (%HA) using equations and thresholds provided in Health Canada guidance (2017). Note that Health Canada guidance (2017) provides detailed methods for assessing noise-induced sleep disturbance using thresholds from the World Health Organization (1999; 2009). Recommend the assessment of sleep disturbance in the DAR make use of these World Health Organization thresholds. Recommend the DAR not be required to consider the %HSD metric, which is only mentioned superficially in the Health Canada guidance (2017).

8	Acoustics Section 4.1.2: Changes to the acoustic environment, p.16	The ToR requires that the proponent identify and justify the approach to characterize the effects of sound resulting from the project that may be adverse. For clarity, HC suggests additional details with respect to these requirements. Section 4.1.2: Changes to the acoustic environment, p.16	HC suggests that the proponent take into account the (1) distribution of the reference night-time sound events relative to the individual sound events expected at night at the location of each receptor and (2) expectations of peace and quiet for receptors (e.g. in a quiet rural area or during land use by indigenous peoples) and noise policies (e.g. processes for resolving and dealing with public complaints).	No concern about using Health Canada guidance (2017) to assess nighttime noise effects. No concern about using Health Canada guidance (2017) to account for expectations of peace and quiet at specific receptors.
9	Acoustics Section 4.1.2: Changes to the acoustic environment, p.16	The noise and vibration requirements do not consider the use of contour maps which would be beneficial to understanding where elevated noise levels may occur as a result of project-related activities. Contour maps should be of sufficient scale to capture any locations where elevated (i.e. above background) noise levels may occur as a result of project-related activities. All assumptions used in modelling noise, including a description of any noise related adjustments, should be presented in order to enable an evaluation of the applicability/appropriateness of those assumptions and the subsequent modelling results (see Health Canada, 2017 for details). Health Canada. 2017. Guidance for Evaluating Human Health Impacts in Environmental Assessment: Noise. Healthy Environments and Consumer Safety Branch, Health Canada, Ottawa, Ontario. Section 4.1.2: Changes to the acoustic environment, p.16	HC suggests that the ToR require appropriately scaled noise contour maps to identify noise levels at receptor locations.	No concern about providing noise contour maps in the DAR.

10	Acoustics Section 4.1.2: Changes to the acoustic environment, p.16	The ToR does not require a description of proposed noise mitigation measures, including potential complaint-response protocols or how communities will be engaged with respect to anticipated changes in noise levels. Section 4.1.2: Changes to the acoustic environment, p.16	HC suggests the following requirements: (1) identification of current and proposed noise mitigation measures and their effectiveness; (2) explain how a complaint-response protocol may be implemented and reported on to document any complaints and associated mitigation measures undertaken to resolve the complaints, including the nature of the noise produced (e.g. tonal, impulsive, highly impulsive and the timing of the noise event and; (3) explain how a community engagement plan may be implemented and reported on to proactively inform community members and Indigenous groups who may be affected by project-related noise, such as anticipated changes in noise levels.	No concern about discussing noise mitigation in the DAR. Development of procedures for documenting and addressing noise complaints should be part of the proponent's stakeholder engagement activities and should not be part of the noise section of the DAR.
11	Human Health Risk Assessment Section 4.2.14: Effects to Human Health, p.54-55	The ToR requires a human health and ecological risk assessment (HHERA) in response to HC's recommendation to include a human health risk assessment (HHRA). The ToR requires that the proponent use HC guidance, consider COPCs, include a traditional food exposure pathway and consider results of effects assessment of other parts of the environment. For clarity, HC suggests additional details with respect to these requirements. Section 4.2.14: Effects to Human Health, p.54-55	HC recommends that an HHRA be conducted using best practices (see Health Canada, 2019) and includes consideration of effects of various COPCs, and all exposure pathways for COPCs to adequately characterize potential biophysical risks to human health. For every COPC or exposure route that would be excluded and/or eliminated from the assessment of human health, there should be adequate scientific rationale provided. HC also recommends that a multimedia HHRA may need to be considered and conducted for any COPC with an identified risk and multiple pathways of exposure. Health Canada. 2019. Guidance for Assessment Human Health Impacts in	PPML agrees with the reviewer's comment.

			Environmental Assessments: Human Health Risk Assessment.	
12	Drinking and Recreational Water Quality Section 4.1.5: Surface and Groundwater Quality and Quantity, p. 19-25	The ToR requires that there be a quantitative description of the range of potential impacts to drinking water sources from the Project because of the changes described in section 4.1.5. However, there is no requirement to describe the locations of drinking water sources, including individual private wells or sources for onsite workers, and to identify drinking water treatment facilities locations. Additionally, the ToR does not require consideration of potential recreational water quality impacts. This information would help to support an assessment of potential impacts to human health due to drinking and recreational water quality. Section 4.1.5: Surface and Groundwater Quality and Quantity, p. 19-25	HC recommends that the ToR require (1) a description of locations of individual private wells that serve as drinking water sources; (2) identify and describe drinking water sources for onsite workers; (3) describe the location of drinking water treatment facilities, including their distance from project activities and capacity to remove potential COPCs resulting from project activities. HC also recommends that the Developers Assessment Report quantitatively describe the range of potential impacts to drinking and recreational water sources from the Project because of changes described in section 4.1.5.	No concern about providing the requested drinking water information in the DAR. No concern about describing potential effects to drinking and recreational water sources from the Project in the DAR.
13	Guidance Documents Appendix A: Guidance documents	The current reference, "Guidelines for Environmental Assessments on Human Health" in Appendix A does not link to a specific document and should be changed to reflect HC's participation in EAs with an updated link. Appendix A: Guidance documents	HC suggests changing the following guidance document reference (Guidelines for Environmental Assessments on Human Health) in Appendix A. The reference in Appendix A of the ToR should read, "Health Canada's Participation in Environmental Assessment under CEAA 2012" and link to the reference in Annex A of the the Government of Canada's Cover Letter.	PPML agrees with the proposed change to the reference.
14	Works in Navigable Waters Table 1: Scope of Development, p.4-5 Project Component - Water and water management	The Developers Assessment Proposal (DAP) provided few details about existing and new works (project components) needed for the Project that will occur in, on, across, through, and under navigable waterways. Without this information, it will be challenging for	Transport Canada recommends the TOR be amended to add a new bullet to: pp. 4-5 Table 1. Scope of Development Project Component - Water and water management	In the DAR, PPML will identify Project works that will be located in or around navigable waters. PPML will leave it with MVEIRB on whether this bullet gets added to this table.

		participants to understand in the Detailed Assessment Report (DAR) of the impacts of these works on navigable waters and their uses. For example, details such as the location, size, and purpose of the water intake in Great Slave Lake are needed to give context to the DAP's assessment of the water intake's impacts on navigability in Great Slave Lake. Table 1: Scope of Development, p.4-5 Project Component - Water and water management	Subjects to consider • Existing or new works needed for the Project that will be located in or around navigable waters, such as water intakes, bridges and barge landings.	
15	Canadian Navigable Waters Act Section 4.2.1: Impacts from the Project on the use of water by people, p.28	The Developers Assessment Proposal (DAP) provided few details about existing and new works (project components) needed for the Project that will occur in, on, across, through, and under navigable waterways. Under the Canadian Navigable Waters Act (CNWA), different categories of works, e.g., major vs. minor, are subject to different approval requirements. Having the proponent identify which works fall into which category will 1) assist the proponent in understanding its responsibilities under the CNWA, and 2) focus the assessment on the works that may have significant impacts on navigation. Section 4.2.1: Impacts from the Project on the use of water by people, p.28	Transport Canada recommends the TOR be amended to read: p. 28 Impacts from the Project on the use of water by people The Developer's Assessment Report will: • list all applicable water resource permits, licences, and authorizations that will be required from regulatory authorities. With respect to the listing of authorizations from the Canadian Navigable Waters Act (CNWA), for greater clarity, please distinguish between works that will require approval under the Act, works that will meet the Minor Works Order under the Act, works that will undergo a public resolution process as described in the Act and any works for which the proponent intends to request approval.	PPML suggests that this wording does not need to be added specifically to the TOR, as it is covered off by the last row in Table 1. In the DAR, PPML will outline all licences, permits, and authorizations needed for the Project.
16	Navigable Waters used for Recreation Section 4.2.9: Other Land Uses,	As the TOR are written, the focus of this DAR requirement appears to be terrestrial recreation. However,	Transport Canada recommends the TOR be amended to read:	PPML agrees with this recommendation.

	Existing Environment and Baseline Conditions, p.44	navigable waters provide important routes for a number of recreational activities. Given the importance of navigable waters to outdoor recreation, and to allow Transport Canada and other participants to fully understand the project's impacts on navigable waters used for recreation, the TOR should make it clear to the proponent that the DAR is also to provide information about recreational navigation routes. Section 4.2.9: Other Land Uses, Existing Environment and Baseline Conditions, p.44	p. 44 4.2.9. Other Land Uses Existing Environment and Baseline Conditions The developer will describe the following: … o important land and water recreational routes or trails	
17	Appendix A: Guidance Documents Transport Canada	A direct link would make it simpler for the proponent and other participants to find information on Transport Canada's Navigation Protection Program. Appendix A: Guidance Documents	Transport Canada recommends that a new weblink be added to the list of guidance documents: Appendix A: Guidance Documents Transport Canada Transport Canada Navigation Protection Program information and documents Please see Annex A in the the Government of Canada's Cover Letter for the reference.	No response required.
18	List of Abbreviations, p.iv	GHG - Green House should be one word (Greenhouse) List of Abbreviations, p.iv	ECCC recommends providing correction for clarity.	No response required.
19	Table 1 Section 2.1: Scope of Development, Table 1. Scope of Development, p.4	The second paragraph of Section 2.1 states that Table 1 outlines components by phase for the scope of development. This is not reflected in Table 1, which lists various components but does not specify that the assessment is to span the relevant phases of project development.	ECCC recommends clarifying that components are to be described for all phases of project development.	PPML will describe the Project as per the Project phases (i.e., construction, operations, and closure). PPML is amenable to this concept being included in Section 2.1. However, PPML disagrees that each Project component listed in Table 1 needs to be described by phase.

		Section 2.1: Scope of Development, Table 1. Scope of Development, p.4		
20	Water Management Section 2.2.2: Key Lines of Inquiry, p.7	The first bullet of section 2.2.2 describes the management of water so that it remains clean in the future. How will "clean" be defined? The second point is missing its bullet. Section 2.2.2: Key Lines of Inquiry, p.7	ECCC recommends defining the objective for water protection and adding a bullet to "lasting well-being".	PPML believes that "clean" is a subjective statement and difficult to define in a way that would be the same for all groups. PPML suggests that the wording be "managing water so that it remains safe and available for use in the future". Please also see the recommendation and response to CanNor-23.
21	Biophysical Baseline Data Section 3.1: Describe baseline conditions and the existing environment, p.8	Section 3.1 provides a qualitative descriptor of the requirements as being "...appropriate and necessary to understand the state of the existing human and biophysical environments…" An important aspect of baseline biophysical data is to ensure there will be the ability to detect changes from baseline, and this is predicated on having sufficient baseline data to characterize the range of natural variability. It would be constructive to include a paragraph to this effect. Section 3.1: Describe baseline conditions and the existing environment, p.8	ECCC recommends adding a paragraph explaining the need for sufficient baseline biophysical data to characterize natural variability and provide sufficient basis to detect change in future monitoring.	PPML disagrees that this needs to be added to the TOR. Baseline data requirements for the DAR are to support the assessment of effects. There are subsequent opportunities to collect additional data if required to support future monitoring programs. If the Project is approved, the baseline data adequacy to support monitoring programs can be accomplished through the water licence and land use permitting process with the MVLWB.
22	Aquatic Baseline Data Section 4.1.5: Surface and groundwater quality and quantity, p.20-24	Detailed minimum requirements are set out for water quantity (including descriptors and characterization of flow variability) but water quality requirements are outlined on a broad scale only (pdf page 25). Water quality information should similarly be fully characterized for limnology, chemistry, and biota. This is touched on briefly on pdf page 29, 4th bullet; the developer is to describe programs for characterizing future surface water and groundwater quality, such that assessment can be done of interrelated parts of the environment.	ECCC recommends that the ToR set out more detailed requirements for baseline data for the aquatic ecosystem (e.g. limnology, chemistry, biota), including the rationale for how the baseline dataset will support the detection of changes to surface and groundwater quality during project activities. This may be cross-referenced to section 5.8 Monitoring, evaluation and follow-up.	PPML notes that the following bullets are included in Section 4.1. with respect to water quality and limnology: • a description of existing quality of waterbodies and watercourses in the project area, including analysis of trends for waterbodies in the project area previously affected by mining • description of stratification within flooded open pits in the project area It is our understanding that water quality data would be collected and compiled for waterbodies and watercourses within the LSA to support the DAR. In situ physico-chemical water quality information (i.e., temperature, dissolved oxygen, pH, and conductivity) would also be compiled, with profiles for waterbodies where available.

		A detailed bullet should be included to describe linkages between the pre-development baseline data collected and the design of a monitoring study that will detect impacts/change. The Developer should demonstrate that baseline data collection has fully characterized natural variability for all the aquatic components. Some of this information is outlined in Section 4.2.1 Use of water by people, but this section does not touch on environmental change. Section 4.2.2 Fish and aquatic life does not include water quality. Including detailed direction on baseline data requirements is consistent with Appendix B: Assessment Methodology item 2, which states: "identify the natural range of the cumulative baseline conditions (where historic information is available), and the Project-specific baseline of current conditions...in light of the natural or existing variability for each". Section 4.1.5: Surface and groundwater quality and quantity, p.20-24		In terms of aquatic biota, the following bullet is in Section 4.2.2: • describe the lower trophic communities in the project area and their importance as a source of food for fish PPML will compile and present relevant information for waterbodies/watercourses within the LSA with the potential to be affected by the Project.
23	Water Management Section 4.3.1: Managing water so that it remains clean for the future, p.56	The Board states that the objective and intent of this section of the ToR is "to ask questions that will enable to the Review Board to understand how the developer plans to manage water in and around the project area in such a way that water remains clean and plentiful for future generations". It is not readily clear	ECCC recommends that the Board use "safe" rather than "clean" to describe water protection goals.	PPML agrees with ECCC.

		to ECCC what is meant by the word "clean" in this statement. In several places in the rest of that section, the word "clean" is used sometimes in conjunction with "safe" to qualify water. The words "clean" and "safe" are not necessarily interchangeable when describing water quality; the word clean can be interpreted literally to mean pure, free of any contaminants, etc., when in actuality some regulations allow the deposit of deleterious substances in water, provided the water remains safe. For clarity, the word 'safe' could be used, with or without reference to what it is safe for (i.e. uses). Section 4.3.1: Managing water so that it remains clean for the future, p.56		
24	Atmospheric Environment Section 4.1.1: Atmospheric environment, "Existing environment and baseline conditions – meteorological environment", p.8	The ToR states that "the developer's Assessment Report will: …identify potential for extreme weather events including precipitation, wind, and temperature". However, high concentrations of air contaminants are most likely to occur during stagnant conditions with strong surface-based temperature inversions. Section 4.1.1: Atmospheric environment, "Existing environment and baseline conditions – meteorological environment", p.8	ECCC recommends that the ToR also require identification of potential stagnation episodes with strong surface-based temperature inversions (duration, frequency of occurrence) in the DAR.	The meteorological data-set used to drive the dispersion modelling will be of sufficient duration to incorporate periods of stable atmospheric conditions. PPML agrees that stable conditions including strong temperature inversions/stagnation should be included in the TOR. Using a broad range of meteorological conditions to assess air quality is common practice.
25	Atmospheric Environment Section 4.1.1: Atmospheric environment, "Existing	The ToR states that "the developer's Assessment Report will: …provide dispersion modelling to establish a baseline case for existing pollutant	ECCC recommends that the ToR require dispersion modelling of sufficient complexity, e.g. CALPUFF, be provided in the DAR.	No concerns; CALPUFF based modelling is the anticipated approach to the air quality assessment.

	environment and baseline conditions – atmospheric environment", p.14	sources and odorous compounds in local and regional study areas". The complexity of dispersion modelling should be more precisely specified, as a screening level model will not be adequate to incorporate effects of the Great Slave Lake shoreline and land terrain on the near surface wind field. Section 4.1.1: Atmospheric environment, "Existing environment and baseline conditions – atmospheric environment", p.14		
26	Climate Change Modeling Section 3.1: Describe baseline conditions and the existing environment, p.9	The ToR states "This may require the need to use predicted future environmental conditions that account for a range of climate change scenarios, to reflect uncertainties." Best practice for considering uncertainty in future climate projections is to consider an ensemble of projections from a range of scenarios (low to high forcing) AND a range of models. Use of a range of scenarios is indicated in the draft TOR but range of models is not. Section 3.1: Describe baseline conditions and the existing environment, p.9	Since no single best model can be identified, ECCC recommends that text requesting use of a range of climate change models also be added. This could be added to pdf page 14 "This may require the need to use predicted future environmental conditions that account for a range of climate change scenarios and models, to reflect uncertainties."	No concerns.
27	Editorial Draft Terms of Reference	In some places the wording "climate change predictions" is used- this should be climate change projections if referring to output from climate models (i.e. they are projections of future change not predictions).	ECCC recommends switching climate change "predictions" to “projections” where appropriate.	No concerns.
28	Climate Change Section 5.7: Effects of the Environment on the	The ToR states "the DAR will: …describe climate change scenarios considering current trends and	ECCC recommends providing corrections for clarity and indicating	No concerns.

	Project, "Climate change", p.66	International Panel on Climate Change best climate predictions" This should be “Intergovernmental” Panel on Climate Change. It is also not readily clear to ECCC what is meant by IPCC “best climate predictions”. Section 5.7: Effects of the Environment on the Project, "Climate change", p.66	explicitly what is meant by IPCC best climate predictions.	
29	Climate Change Section 5.8: Monitoring, evaluation, and follow-up, "Accounting for climate change in monitoring and follow-up", p.67	The ToR states "The NWT is already experiencing changes in average temperature, shifts in the seasons and an increasing frequency of extreme weather events, fires, and other climate change impacts and slow low onset events" It is not clear what "slow low onset events" means. Section 5.8: Monitoring, evaluation, and follow-up, "Accounting for climate change in monitoring and follow-up", p.67	ECCC recommends the ToR clarify what is meant by "slow low onset events".	No concerns.
30	Migratory Birds Section 4.2.4: Wildlife Management and Monitoring Plan, p.35	Section 4.2.4 requires that a draft wildlife management and monitoring plan (WMMP), including considerations for migratory birds and waterfowl, be included in the Developers Assessment Report (DAR). The Department of Environment and Natural Resources (GNWT-ENR) is responsible for the implementation and enforcement of the Wildlife Act, which includes provisions for the requirement of a WMMP under section 95. GNWT-ENR guidance on process and content	ECCC recommends that the ToR require that migratory birds, including species at risk, be addressed in a separate management and monitoring plan in the DAR.	PPML recommends that a single Wildlife Mitigation and Monitoring Plan (WMMP) be developed, which includes migratory birds, so that all information pertaining to wildlife are presented in one place. This will make accessing this information easier than if information is presented in multiple documents. Dividing migratory birds and non-migratory birds into separate plans to follow the legislation will cause unnecessary duplication. It is common for management plans to respond to both federal and territorial legislation (such as a Mine Water Management Plan, or an Aquatic Effects Monitoring Plan). ECCC will have the opportunity to review and comment on the WMMP. The WMMP will require that ECCC is copied all submitted reports in addition to

		for a WMMP, included in Appendix A of the draft Terms of Reference, defines the scope of application and authority to territorially managed wildlife species. The WMMP guidance further states that "territorially managed wildlife species do not include fish, marine mammals or bird species covered under the Migratory Birds Convention Act." As legislative authority for migratory birds lies with ECCC, and the technical expertise lies outside GNWT-ENR (i.e. with ECCC, PCA and Indigenous organizations), migratory birds, including species at risk, should be addressed in a separate management and monitoring plan in the DAR. This plan can then also be carried forward into the regulatory phase. Given the concerns raised during scoping by parties for migratory birds, including species at risk (e.g. whooping crane), highlighted in sections 4.2.3 and 4.2.6 of the draft ToR, ECCC is of the opinion this will ensure that impacts of the project will be mitigated. In addition, this approach will aid the Board in ensuring their legal requirements under s.79 of the Species at Risk Act are met. Section 4.2.4: Wildlife Management and Monitoring Plan, p.35		required regulatory reporting triggers in the legislation. It should also be noted that the WMMP that will be submitted to support the DAR will be conceptual in nature, and this plan will be updated as necessary for permitting.
31	Project Boundaries Section 5.6: Potential Accidents and Malfunction, p.65-66	Due to the presence of hazardous materials or compressed gas on site, an accidental release can cause a toxic plume to travel long distances and	ECCC recommends that the ToR require the identification and justification of the spatial and temporal boundaries that may be impacted by accidents and	PPML disagrees that set spatial and temporal boundaries need to be defined for the accidents and malfunctions section, as the spatial extent of potential effects will differ

		impact valued components that are beyond the projects' spatial and temporal boundaries. The proponent is therefore encouraged to identify the spatial and temporal boundaries associated with accidents and malfunctions. Section 5.6: Potential Accidents and Malfunction, p.65-66	malfunctions in the DAR. The spatial boundaries identified for effects from potential accidents and malfunctions will generally be larger than the boundaries for the project effects alone, and may extend beyond Canada's jurisdiction.	between the different accident and malfunction scenarios considered.
32	Mitigation Measures Section 5.6: Potential Accidents and Malfunction, p.65-66	The proponent is encouraged to include mitigation measures for each accident and malfunction scenario identified to ensure that the risk has been avoided, reduced and/or eliminated. Section 5.6: Potential Accidents and Malfunction, p.65-66	ECCC recommends that the ToR require a description of any mitigation measures that may prevent potential accidents or malfunctions	PPML is amenable to the inclusion of a discussion of relevant mitigation and/or design features in the accident and malfunction scenarios.
33	Spill Contingency EA Initiation Package Volume 2. Spill Contingency Plan Framework. 3.3 Assess Hazard Draft Terms of Reference. Section 5.6: Potential Accidents and Malfunction, p.65-66	As described in section 3.3 of the spill contingency plan framework, outside emergency resources will be contacted if the spill cannot be handled by on-site personnel. It is therefore important that the proponent establishes a mutual aid agreement with response organizations and include them in the response planning efforts. - EA Initiation Package Volume 2. Spill Contingency Plan Framework. 3.3 Assess Hazard - Draft Terms of Reference. Section 5.6: Potential Accidents and Malfunction, p.65-66	ECCC recommends that the ToR require a description of mutual aid agreements in place in the event that a spill incident exceeds company resources and how these resources would be accessed in the DAR	Mutual aid agreements will be established for Spill Response and for other accident and malfunction response plans during the regulatory process. It is premature to discuss this requirement during environmental assessment, and this should not be a requirement of the Terms of Reference.
34	Power Demand by Activity Section 4.1.1: Atmospheric Environment, p.13-15	The DAR should include a description of power demand by activity, similar to what is found in the EA initiation package (Section 3.8.1.1), as well as a list of electrical load equipment to be operating at the project site.	ECCC recommends that the ToR require the proponent to include in the DAR an up-to-date estimate of power demand by activity as well as a list of electrical load equipment to be operating at the project site.	No concerns; details around this inventory are routinely required to evaluate emissions (air/noise) appropriately and are produced in the course of an environmental assessment

		ECCC needs the information for an independent assessment of the project electricity demand. Section 4.1.1: Atmospheric Environment, p.13-15		
35	Power Section 4.1.1: Atmospheric Environment, p.13-15	The DAR should include: • An up-to-date listing of stationary, mobile and back-up generators to be deployed on site by the proponent; • Estimated annual volume of natural gas and diesel consumption for power generation during the construction, operation and decommissioning phases; and • Sulfur content in diesel fuel to be used for power generation. ECCC needs the information for an independent assessment of the air and GHG emissions from on site power generation. Section 4.1.1: Atmospheric Environment, p.13-15	ECCC recommends that the ToR require the proponent to include the following information in the DAR: • Power rating, make and models of stationary, mobile and back-up generators to be deployed on site; • Estimated annual volume of natural gas (CNG) and diesel consumption for power generation during the construction, operation and decommissioning phases; and • Sulfur content in diesel fuel to be used for power generation.	No concerns; details around this inventory are routinely required to evaluate emissions (air/noise) appropriately and are produced in the course of an environmental assessment. PPML notes that exact makes and models are typically not available at time of initiating the EA, but reasonable assumptions will be made as per best practices.
36	ECCC Regulations Section 4.1: Predicted changes to the Environment, p.13	Given the project commencement beyond December 2021, it is imperative that the project proponent commits to comply with the applicable provisions under ECCC's Off-Road Compression-Ignition (Mobile and Stationary) and Large Spark Ignition Engine Emission Regulations. Section 4.1: Predicted changes to the Environment, p.13	ECCC recommends that the ToR require the proponent to incorporate into the DAR text indicating their commitment to comply with the relevant provisions under ECCC's Off-Road Compression-Ignition (Mobile and Stationary) and Large Spark Ignition Engine Emission Regulations.	No concerns.

37	Emissions Section 4.1.1: Atmospheric Environment, “Greenhouse Gas Emissions”, p.13	The draft ToR states that "the developer's Assessment Report will: ...provide a description of each of the Project’s main sources of greenhouse gas emissions by type; provide the estimated annual greenhouse gas emissions from each source; provide an estimate of yearly net greenhouse gas emissions, including an uncertainty assessment..." Although the Strategic Assessment of Climate Change (SACC) does not specifically apply under the Mackenzie Valley Resource Management Act, the SACC and the Draft Technical Guidance published by ECCC to support the SACC are a useful references. ECCC is therefore recommending the inclusion of additional emission estimate requirements in the ToR that will aid in the assessment of the project's contribution to GHG emissions. The SACC and Draft Technical guidance links can be found in Annex A of the Government of Canada's Cover Letter. Section 4.1.1: Atmospheric Environment, “Greenhouse Gas Emissions”, p.13	ECCC recommends that the ToR require the following information to be included in the DAR: • a description of each of the project's main sources of GHG emissions and their estimated annual GHG emissions over the lifetime of the project; • net GHG emissions by year for each phase of the project based on the project's maximum throughput or capacity; • direct GHG emissions, acquired energy GHG emissions, CO2 captured and stored, avoided domestic GHG emissions and offset credits, if applicable, per year for each phase of the project; • methodology, data, emission factors and assumptions used to quantify each element of the net GHG emissions; • emission intensity for each year of the operation phase of the project; • the quantity and a description of the "units produced" (tonnes of zinc-lead ore or other as appropriate) for each year of the operation phase of the project; • a discussion on the development of emissions estimates and uncertainty assessment; and • a description of large sources of GHG emissions that may be the consequence of accidents or malfunctions.	Stating the annual emissions over the life of the project in their various forms as recommended by ECCC (e.g., gross, net, etc.) is not a matter of concern; however, the need to align with the draft SACC technical guidance document introduces uncertainty and considerable additional effort. The draft technical guidance has not been approved for use to date and remains under review and is subject to change. PPML’s recommendation is to complete the GHG assessment using internationally accepted practices for the mining sector.
38	Carbon Sinks Section 4.1.1 Atmospheric Environment: “Greenhouse Gas Emissions”, p.13	The draft ToR states that "the developer's Assessment Report will: ...provide a qualitative description of the Project’s positive or negative impacts on carbon sinks".	ECCC recommends that the ToR require the proponent to include a qualitative and quantitative description of the project's positive or negative impact on carbon sinks. This information should include:	PPML disagrees that adherence to the draft technical guidance document referenced by ECCC should be include in the TOR. The draft technical guidance has not been approved for use to date and remains under review adn subject to change. PPML suggests that using it at this stage is premature. PPML proposes to quantify carbon

		Although the Strategic Assessment of Climate Change (SACC) does not specifically apply under the Mackenzie Valley Resource Management Act, the SACC and the Draft Technical Guidance published by ECCC to support the SACC are a useful references. ECCC is therefore recommending the inclusion of a quantitative description of the project's positive or negative impacts on carbon sinks in the ToR that will aid in the assessment of the project's impact on carbon sinks. The SACC and Draft Technical guidance links can be found in Annex A of the Government of Canada's Cover Letter. Section 4.1.1: Atmospheric Environment: "Greenhouse Gas Emissions", p.13	• a description of project activities in relation to significant landscape features such as topography, hydrology and regionally dominant ecosystems; • land areas directly impacted by the project, by ecosystem type (forests, cropland, grassland, wetlands, built-up land) over the course of the project lifetime; this includes the areas of restored or reclaimed ecosystem(s); • initial carbon stocks in living biomass, dead biomass and soils (by ecosystem type) on land directly impacted by the project over the course of the project lifetime; • fate of carbon stocks on directly impacted land, by ecosystem type: immediate emissions, delayed emissions (timeframe), and storage (e.g. in wood products); and • anticipated land cover on the impacted land areas after the project is in place.	sinks and sources explicitly using the methodology provided by the IPCC. The IPCC methods are appropriate for a project of this nature and offer a more practical approach to GHG evaluation than the current, draft technical guidance presented in the SACC.
39	Greenhouse Gas Emissions Section 4.1.1: Atmospheric Environment, "Greenhouse Gas Emissions",p.15	The draft ToR states that "the developer's Assessment Report will: ...describe how the Project may contribute to Canada's efforts to reduce greenhouse gas emissions, if applicable". Although the Strategic Assessment of Climate Change (SACC) does not specifically apply under the Mackenzie Valley Resource Management Act, the SACC and the Draft Technical Guidance published by ECCC to support the SACC are a useful references. ECCC is therefore recommending the inclusion of additional requirements in the ToR that will aid in the assessment of the project's	ECCC recommends that the ToR require the following information to be included in the DAR: • an explanation of how the project may impact Canada's efforts to reduce GHG emissions, if applicable, including how the project could result in GHG emission reductions in Canada (e.g. by replacing higher emitting activities); and • a discussion on how the project could impact global GHG emissions, if applicable. This could include, for example: o if there is a risk of carbon leakage if the project is not built in Canada, the Developer's Assessment	This is not a significant concern as this type of effort is ordinarily undertaken in projects where GHG evaluation is required.

		impact on Canadian and global emissions in this subsection. Furthermore, based on past project reviews, ECCC is of the opinion that comparison of a project's emissions to those of an entire province/territory and those of Canada is not beneficial. The SACC and Draft Technical guidance links can be found in Annex A of the Government of Canada's Cover Letter. Section 4.1.1: Atmospheric Environment, “Greenhouse Gas Emissions”,p.15	Report could include an explanation of the likelihood and possible magnitude of carbon leakage if the project is not approved; and o if the project may displace emissions internationally, the Developer’s Assessment Report could describe how the project is likely to result in global emission reductions. For example, a project that enables the displacement of high-emitting energy abroad with lower emitting energy produced in Canada could be considered as having a positive impact. ECCC recommends removal of the following requirement: "compare the Project’s emissions to that of the NWT and Canada".	
40	Greenhouse Gas Emissions Section 4.1.1: Atmospheric Environment, “Greenhouse Gas Emissions”, p.15	The draft ToR states that "the developer's Assessment Report will: ...describe how greenhouse gas emissions were considered when determining energy sources for project components and activities; describe efforts made to avoid, reduce, mitigate, or offset greenhouse gas emissions; identify alternative project design elements that would reduce emissions." The project schedule indicates the project's closure and reclamation is anticipated to end in 2052, goes beyond 2050, when Canada aims to achieve net-zero emissions. As such, ECCC recommends that the proponent develop a plan to reach net zero emissions. Although the Strategic Assessment of Climate Change (SACC) does not specifically apply under the	ECCC recommends that the ToR require a credible plan that describes the mitigation measures that will be taken to minimize GHG emissions throughout all phases of the project and achieve net-zero emissions by 2050 to be included in the DAR. The plan should demonstrate how the net GHG emission equation will equal 0 kt CO2 eq/year by 2050 and thereafter for the remainder of the lifetime of the project. Emphasis should be placed on minimizing net GHG emissions as early as possible and throughout the project lifetime. Additional guidance can also be found in the Draft Technical Guidance. The credible plan should include at a minimum the following information:	PPML disagrees that adherence to the draft technical guidance document referenced by ECCC should be included in the TOR. The draft technical guidance has not been approved for use to date and remains under review and is subject to change. PPML suggests that using it at this stage is premature. This represents a considerable amount of additional effort, not yet having been required for a project of this scope and complexity. PPML proposes to complete a qualitative BAT/BEP assessment. This would be supplemented with a credible net-zero plan that references the qualitative BAT/BEP assessment.

		Mackenzie Valley Resource Management Act, the SACC and the Draft Technical Guidance published by ECCC to support the SACC are a useful references. ECCC is therefore recommending the inclusion of additional requirements in the ToR that will aid in the assessment of the project's GHG effects and mitigation measures. The SACC and Draft Technical guidance links can be found in Annex A of the Government of Canada's Cover Letter. Section 4.1.1: Atmospheric Environment, "Greenhouse Gas Emissions", p.15	• the conclusions of the Best Available Technologies and Best Environmental Practices (BAT/BEP) Determination process to identify and select the technically and economically feasible technologies, techniques, or practices, including emerging technologies, to minimize GHG emissions throughout all phases of the project with a net-zero emission perspective. This should include at a minimum: o the list of all potential GHG mitigation measures that were considered in the BAT/BEP Determination process; o the list of potential GHG mitigation measures selected at the end of the process that are considered for implementation in all phases of the project (BAT/BEP and emerging technologies), including the following information: □ the potential percentage reduction in GHG emissions associated with each measure; □ the level of technology maturity (when the technology could be implemented); and □ the barriers to implementing the selected mitigation measures. o a rationale for eliminating each technology or practice that has not been selected for implementation; o subject to the public availability of information, a comparison of the project's projected GHG emission intensity to similar high-performing, energy-efficient projects in Canada and	

			internationally. If applicable, the comparison should explain why the emission intensity of the project is different. • a description of any additional mitigation measures considered for the project to achieve net-zero by 2050, if applicable. This can include: o implementation of CO¬2 capture and storage technologies; o if any, a description of the proponent's corporate-level GHG commitments and/or net-zero plan and an explanation on how it aligns with the project's net-zero credible plan; and o acquisition of offset credits. • the implementation schedule describing when the mitigation measures will be implemented, considering equipment replacement. This does not need to describe every technology or practice the project will implement over time to achieve net-zero emissions. In this case, the proponent must instead describe the process they will follow in order to make the decisions and investment needed to achieve net-zero emission by 2050. The implementation schedule must include relevant data sources, assumptions, information, and a discussion on factors associated with the schedule such as schedule dependencies, constraints, and risk; • the emissions reductions at specified intervals determined by the proponent, up to 2050. Explain how net GHG emissions reductions are maximized in the earlier years of the project's lifespan. ECCC recommends intervals to be every	

			five (5) years or as appropriate for the project; • a description of measures taken to mitigate the project's impact on carbon sinks, including measures to restore disturbed carbon sinks; • any other relevant information such as supportive actions that the proponent would need in order to be able to achieve net-zero emissions; and • a list of the federal, provincial or territorial GHG legislation, policies or regulations that will apply to the project.	
41	Storage tanks for petroleum liquids	ECCC's Oil, Gas and Alternative Energy Division is developing proposed regulations to reduce releases of volatile organic compounds (VOCs) from the storage and loading of petroleum liquids. The objective is to reduce the risks associated with the formation of smog and air pollution in Canada as well as from emissions of carcinogenic VOCs such as benzene. The proposed regulations are planned for publication in the Canada Gazette, Part I in 2022 for a 60-day public comment period. Based on the information provided in the Project Description, it is possible that gasoline storage tanks at the proposed Pine Point Mine Project could be subject to requirements under the proposed regulations (if finalized).	It is recommended that the developer review the information in the Government of Canada's discussion document, which can be found in Annex A of the Government of Canada's Cover Letter. Comments or questions regarding the proposed regulations can be directed to ECCC's Oil, Gas and Alternative Energy Division at covsecteurpetrolier-vocpetroleumsector@ec.gc.ca.	No concerns.
42	Karst Potential Section 4.1.5: Karst potential -	There is no information in the document regarding the assessment of karst	Recommendations for the proponent:	PPML does not agree that specific hydrostratigraphic units be included in the TOR, as the TOR requirement in

	"Existing environment and baseline conditions", p. 23/77	potential presence. Karst may have a strong impact on groundwater flow and dewatering water management. Section 4.1.5: Karst potential - "Existing environment and baseline conditions", p. 23/77	1. The proponent should provide a map for the Kasrt potential. 2. Discuss the role of karst with respect to surface water and its potential impact on mine dewatering. 3. Assess the risk of deep saline water upwelling from karst formations during mining activities and describe mitigation measures for the management of this water if necessary.	Section 4.1.5 of describing the hydrostratigraphy in the LSA for existing environment and baseline conditions includes all potential geologic units and their potential influence on groundwater. As part of the baseline characterization and the surface water and groundwater environmental assessment, PPML will consider each of the listed recommendations, as necessary, for the identified hydrostratigraphic units in the LSA.
43	Permafrost Section 4.1.5: Permafrost - "Changes from the Project on groundwater and surface water quality and quantity" , p.27/77	The presence and thawing of permafrost can have an impact on groundwater flow. Failure to take this into account can lead to erroneous predictions. Section 4.1.5: Permafrost - "Changes from the Project on groundwater and surface water quality and quantity" , p.27/77	NRCan suggests that the proponent should include permafrost in the conceptual and numerical hydrogeological model.	The area of the Project is in the discontinuous permafrost zone and from field work completed to date, very little permafrost has been identified. However, where applicable the PPML will include permafrost in the modelling.
44	Existing Open Pits Section 4.1.5: Existing open pits - "Existing environment and baseline conditions", p. 27/77	More information is needed regarding characteristics of existing flooded open pits. Existing pits may show contamination from past activities. To properly assess the cumulative effects of proposed mining activities, the existing conditions of these pits must be characterized. Section 4.1.5: Existing open pits - "Existing environment and baseline conditions", p. 27/77	NRCan suggests that, for existing flooded pit, the proponent should provide physico-chemical profile with metal(s) characterisation and compare the results with undisturbed areas.	PPML does not think this wording is required. For existing flooded pits where physico-chemical water column profile data exist, corresponding water chemistry data have been collected to allow the characterization of metals in the pit water. However, comparison of these data to “undisturbed areas” is challenging, as aside from Great Slave Lake, which is not a comparable waterbody to the flooded pits, there are limited natural waterbodies in the LSA (i.e., small lakes with similar depths to the flooded pits) to provide a meaningful comparison of water quality. Polar Lake, a small lake in the Buffalo River catchment within the LSA, may be a reasonable small lake that could be considered as an “undisturbed area”. PPML will continue to collect water quality data for the existing flooded pits, particularly as part of the Confirmation and Exploration Program. These data will include physico-chemical water column profiles and water chemistry data (which will include metals data).
45	General Comment Section 3: Overall	It is suggested that that some additional points be added to the introduction to	NRcan's suggestions for the proponent:	PPML does not think this specific wording is required as these concepts are covered in the TOR, but will leave it to

	approach to assessing impacts, p. 8	section 3 to ensure that sufficient information is provided that allows reviewers to understand how the Developer has reached their conclusions. Note some of the suggested wording has been used for other ToR. Section 3: Overall approach to assessing impacts, p. 8	(1) Information provided should be sufficient to understand the nature of specific impacts and how conclusions were reached; (2) The ToR should provide a clear traceable path of information from baseline conditions through identification of potential impacts, mitigation, residual impacts and determination of significance; (3) Supporting (or supplementary) documentation should be provided (e.g., separate volumes, appendices) and referenced within the ToR text.	the Review Board to determine its inclusion. Note that the general approach for the DAR is provided in the Developer's Assessment Proposal.
46	General Comment Section 3.3: Assess impacts to valued components, p. 9	It is suggested that this paragraph also include requirement for providing description of any methods/models utilized so that it is clear to the reviewer how conclusions were reached. Section 3.3: Assess impacts to valued components, p. 9	Suggested text to add: "The methodology (including any models) utilized in the assessment should be adequately described."	PPML is amenable to this inclusion. PPML plans to describe assessment methods within the DAR.
47	Editorial Section 4.1.4: Terrain, Geology and Soil -" Existing environment and baseline conditions – geology", p.18 2nd bullet	Description of surficial materials/surficial geology could also be included in this section. It is mentioned in the next section but it makes sense to have a complete description of surficial geology in the geology section as the geohazards mentioned are not restricted to bedrock. Section 4.1.4: Terrain, Geology and Soil -" Existing environment and baseline conditions – geology", p.18 2nd bullet	NRCan suggests that a description of surficial geology/ surficial materials should be included in description of geology.	PPML is amenable to having the bullet point related to surficial geology under the geology subheading in Section 4.1.4 of the TOR rather than the terrain and soil subheading. From PPML's understanding, the TOR does not prescribe the Table of Contents for the DAR.
48	Section 4.1.4 Terrain, Geology and Soil - "Existing environment and baseline conditions	The thermal condition (temperature) of the ground is important when characterising permafrost conditions and potential impacts and this should be added to the information compiled.	NRCan suggests that the bullet be revised: "describe permafrost including thermal condition (ground temperature) and ground ice content in the local study area, if applicable"	PPML does not think this wording is required in the TOR. The area of the Project is in the discontinuous permafrost zone and from field work completed to date, very little permafrost has been identified. Permafrost presence and

	– terrain and soil", p.18 4th bullet	Section 4.1.4 Terrain, Geology and Soil - "Existing environment and baseline conditions – terrain and soil", p.18 4th bullet		extent will be described using available field and published data
49	Section 4.1.4: Terrain, Geology and Soil - p. 19 Changes to terrain and soil, 12th bullet	Site preparation and construction can result in changes to ground stability. For example surface settlement or subisdence may occur if ice-rich permafrost is present and thaws in response to disturbance. It is suggested that "ground stability" be included along with slope stability. Section 4.1.4: Terrain, Geology and Soil - p. 19 Changes to terrain and soil, 12th bullet	NRCan's suggested revision for the bullet: "topography and slope and ground stability"	PPML agrees with this inclusion.
50	Editorial Section 4.1.5: Surface and Groundwater Quality and Quantity - Existing environment and baseline conditions. 2nd bullet, p.20 (metal leaching and/or acid-rock drainage (ML/ARD) from waste rock piles)	The bullet currently reads ”metal leaching and/or acid-rock drainage (ML/ARD) from waste rock piles”. Section 4.1.5: Surface and Groundwater Quality and Quantity - Existing environment and baseline conditions. 2nd bullet, p.20 (metal leaching and/or acid-rock drainage (ML/ARD) from waste rock piles)	NRCan suggests editing to read: ”metal leaching and/or acid-rock drainage (ML/ARD) from waste rock piles and tailings management facilities”.	PPML agrees with this inclusion.
51	Minimum requirements for groundwater characterization Section 4.1.5: Surface and Groundwater Quality and Quantity - "Existing environment and baseline conditions", p.21 1st bullet	Where present, permafrost can influence groundwater flow as frozen ground can act as a barrier to flow. A description of permafrost distribution (if applicable) should therefore be included in the requirements. Section 4.1.5: Surface and Groundwater Quality and Quantity - "Existing environment and baseline conditions", p.21 1st bullet	NRCan suggests that a bullet be added to the list: "Describe permafrost distribution (if applicable) and its influence on subsurface flow pathways"	PPML will describe the permafrost distribution and how it may influence subsurface pathways were applicable. The Project is in a zone of discontinuous permafrost zone and from field work (drilling) completed to date, very little permafrost has been identified.

52	Sediment Quality Predictions Section 4.1.5: Surface and Groundwater Quality and Quantity - Existing environment and baseline conditions, p.23 (Minimum requirements for groundwater characterization)	There does not appear to be any mention of sediment quality. Section 4.1.5: Surface and Groundwater Quality and Quantity - Existing environment and baseline conditions, p.23 (Minimum requirements for groundwater characterization)	NRCan requests that the Proponent include sediment quality predictions along with water quality predictions.	PPML is amenable to including reference to sediment quality in this section of the TOR. As a component of the surface water quality assessment, PPML would qualitatively assess potential effects to sediment quality in the receiving waterbodies by the Project through quantitative water quality modelling.
53	Permafrost Section 5.7: Effects of Environment on Project, p.66 (bullets following section title)	Permafrost, where present, can present a challenge for construction and operation of project infrastructure. Permafrost thaw in response to disturbance or climate change may have implications for integrity of project components and environmental effects. It is suggested that the effect of permafrost on the project components (where applicable) be included in the list. Section 5.7: Effects of Environment on Project, p.66 (bullets following section title)	NRCan suggests that an additional bullet be added to the list: "impacts related to permafrost (where applicable)"	Permafrost is limited at the site; however, PPML is amenable to this inclusion in the TOR.
54	Adaptive Management Plans Section 5.8: Monitoring, Evaluation and Follow-up, p.67	In the requirements for summarizing monitoring and adaptive management plans there is not requirement for the Developer to identify thresholds or criteria that will be used to determine when action is required. Although there is a requirement in the subsection regarding Accounting for Climate Change in monitoring plans, the definition of thresholds should apply to monitoring plans in general. It is therefore suggested that it be included in the requirements for monitoring and adaptive management plans.	ECCC and NRCan recommend that a requirement for monitoring and adaptive management plans be added into the ToR to include a description of thresholds or criteria that will be used to determine when action is required in the DAR.	PPML disagrees that the TOR should list the specific monitoring and management plans that will support the DAR. The need for specific plans will depend in part on the predicted effects of the Project. As per Table 5.1 of the DAP, the following conceptual plans are likely to be included with the DAR: • Conceptual Spill Contingency Plan • Conceptual Waste Management Plan • Conceptual Erosion and Sediment Control Plan • Conceptual Tailings and Waste Rock Management Plan • Conceptual Water Management Plan • Conceptual Closure and Reclamation Plan • Conceptual Air Quality Mitigation and Monitoring Plan (if required)

		Section 5.8: Monitoring, Evaluation and Follow-up, p.67		• Conceptual Aquatic Effects Monitoring Program • Conceptual Wildlife Monitoring and Management Plan • Conceptual Socio-economic Management Plan • Conceptual Engagement and Collaboration Plan Note that these will be conceptual plans where additional details will be developed and added following approval for the Project and as part of the permitting process. Although the plans are expected to include an adaptive management framework, where appropriate, triggers and thresholds will not be developed during the DAR or DAR review process, but will be developed for permitting.
55	Appendix B: p. IV, pt 8	It is important that reviewers understand all assumptions made in the models utilized by the Developer to measure impacts. This is critical to evaluate the validity of the analysis. Appendix B: p. IV, pt 8	NRCan suggests a revision for Pt 8: "describe techniques utilized in impact prediction, such as models, including any assumptions and where any uncertainty in impact prediction was identified"	PPML disagrees that this point related to listing model assumptions belongs here in the overall assessment methods. PPML will provide model assumptions in modelling reports, which will be provided in appendices or annexes to the main document. However, how overall model assumptions affect uncertainty will be described in the relevant Prediction Confidence and Uncertainty sections (see Section 4.1.1 of the DAP).
56	Geotechnical Stability Section 4.1.4: Terrain, Geology and Soil - Changes to terrain and soil, p.19 bullet 13	Site preparation and construction can result in changes to ground stability, which could then affect the geotechnical stability of engineered structures. For example, the project site is partly within paleokarst terrain, which if reactivated due to construction activities can be prone to ground surface subsidence. It is suggested that the influence of terrain hazards on the stability of engineered structures be considered in addition to climate, seismic, and precipitation scenarios. Section 4.1.4: Terrain, Geology and Soil - Changes to terrain and soil, p.19 bullet 13	NRCan suggests that the bullet should be revised to: "how the geotechnical stability of all engineered structures, including site access roads, will be ensured against: (1) a range of climate, seismic, and precipitation scenarios; and (2) any terrain hazards including potential permafrost degradation and potential karst-related ground subsidence."	PPML agrees with the recommendation.

57	Risk Control Measures Section 5.6: Potential Accidents and Malfunctions, p.65-66	In the requirements for summarizing potential accidents and malfunctions, there is currently no requirement for the Proponent to describe potential risk control measures for accidents/malfunctions, as well as to demonstrate that those measures can reduce risk below the risk acceptability criteria. Section 5.6: Potential Accidents and Malfunctions, p.65-66	NRCan suggests that an additional bullet be added to the list: "describe risk control measures for each potential malfunction/accident that exceeds acceptability criteria, and demonstrate that the control measure can reduce risks to acceptable levels."	As per the response to CanNor-32, PPML is amenable to the inclusion of a discussion of relevant mitigations and/or design features in the accident and malfunction scenarios.
58	Earthquake Hazards Section 4.1.4. Terrain, geology, and soil, p.17-19 Section 5.7. Effects of the Environment on the Project, p.66	Evaluation of Earthquake hazards Section 4.1.4: Terrain, geology, and soil, p.17- 19 Section 5.7: Effects of the Environment on the Project, p.66	NRCan suggests that the Proponent should provide an "earthquake hazard assessment" that includes a description of potential/expected ground shaking, earthquake sources, design and mitigation methods, etc. for the project.	PPML disagrees that earthquakes or seismic risk belong in Section 4.1.4 of the TOR, but, as they are an extreme event, are best addressed as indicated in Section 5.7 (Effects of the Environment on the Project). As indicated in Section 4.3.1 of the Developer's Assessment Proposal, PPML proposed to assess potential for seismic risks in this section.
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Fort Resolution Metis Government (FRMG) - Katy Dimmer				
1	Valued Components - 2.2.1 Valued Components, p.6	Valued components relevant to FRMG way of life and the way of life for future generations need to be included.	FRMG recommends the inclusion of culturally important species as well as cultural continuity and transmission of knowledge to the VC list.	PPML acknowledge the importance and value of these topics. Culturally important species will be included with the VCs for vegetation, wildlife, and fish. The transmission of knowledge will be included in the Culture VC. PPML suggests that, given that these important topics are considered within other linked VCs, no associated revision to the list of VCs presented in Section 2.2.1 is required
2	Valued Components - 2.2.1 Valued Components, p.6	Valued components relevant to FRMG way of life and the way of life for future generations need to be included.	FRMG recommends the inclusion of culturally important species as well as cultural continuity and transmission of knowledge to the VC list.	Duplicate comment. See above response.
3	Culture as a Key line of Inquiry - 2.2.2 Key lines of Inquiry	FRMG raised the need for Culture as a Key line of inquiry during both technical and community scoping sessions. Pine Point is a location of great cultural value and history for FRMG members	Please include Culture as a key line of inquiry in the Terms of Reference.	PPML recommends that the current KLOI "Lasting Well-being" be revised to provide more targeted KLOIs: 1) Impacts to Economic Conditions; 2) Impacts to Social Conditions; and 3) Impacts to Culture. In doing so, this will address the concerns raised here, highlighting the

		therefore any development in this area is likely to have a significant impact on FRMG member culture and way of life now and for future generations.		importance of culture as a key component of lasting wellbeing.
4	Culture as a Key line of Inquiry - 2.2.2 Key lines of Inquiry	FRMG raised the need for Culture as a Key line of inquiry during both technical and community scoping sessions. Pine Point is a location of great cultural value and history for FRMG members therefore any development in this area is likely to have a significant impact on FRMG member culture and way of life now and for future generations.	Please include Culture as a key line of inquiry in the Terms of Reference.	Duplicate comment. See above response.
5	Closure - 2.4 Temporal Scope, p. 8	FRMG is concerned with the inclusion of the phrase, "all phases of the Project lifespan including construction, operation, closure and reclamation, and extends until no potentially significant adverse impacts are predicted" (p.8). A mining company that predicts no operations level "significant" effects , could rationalize that it doesn't even need to look at closure using this rationale.	FRMG recommends a revision to the wording with the removal of the term "potentially significant" and change to "measurable adverse effect are predicted".	PPML disagrees with the comment. The TOR clearly indicates that the Project phases of construction, operation, and closure and reclamation be considered. Appendix B, #4 indicates that duration be used for classifying the residual effects, which will allow for the understanding of how long effects will last and if the effect is reversible or not. PPML's approach for temporal boundaries is provided in Section 6.5.2 of the DAP. The duration of effects may extend beyond specific phases of the Project, including closure, and is dependent on the physical, biological, social, and/or cultural properties and resilience of valued components.
6	Closure - 2.4 Temporal Scope, p. 8	FRMG is concerned with the inclusion of the phrase, "all phases of the Project lifespan including construction, operation, closure and reclamation, and extends until no potentially significant adverse impacts are predicted" (p.8). A mining company that predicts no operations level "significant" effects , could rationalize that it doesn't even need to look at closure using this rationale.	FRMG recommends a revision to the wording with the removal of the term "potentially significant" and change to "measurable adverse effect are predicted".	Duplicate comment. See above response.
7	IGO Engagement 3.0 Overall approach to assessing impacts	Clear direction needs to be provided to the Proponent that first right of refusal should be given to affected indigenous	Update the TOR to direct the proponent to involve affected IGOs, where desired by IGOs, in the development of the	PPML does not recommend additional language to this effect in Section 3.0 of the TOR. PPML has prepared the EA Initiation Package to include explicit discussion of the

		groups to collaborate on all aspects of the development of the DAR. FRMG notes that the TOR does not give specific guidance to to the Proponent to work with IGOs in determining the geographic and temporal scope.	temporal and spatial scope, VC identification, baseline data collection, effects identification and characterization, development of mitigation and monitoring measures, and determination of significance.	proposed approach to temporal and spatial scope, VC identification, baseline data collection, effects identification and characterization, development of mitigation and monitoring measures, and determination of significance. The intention of the EA Initiation Package submission is to receive comments from parties, including IGOs, on these approaches, and to integrate feedback on a collaborative final approach. PPML will undertake further engagement on the DAR, including Indigenous Knowledge studies that will help to inform the methodological approach to the DAR.
8	IGO Engagement 3.0 Overall approach to assessing impacts	Clear direction needs to be provided to the Proponent that first right of refusal should be given to affected indigenous groups to collaborate on all aspects of the development of the DAR. FRMG notes that the TOR does not give specific guidance to to the Proponent to work with IGOs in determining the geographic and temporal scope.	Update the TOR to direct the proponent to involve affected IGOs, where desired by IGOs, in the development of the temporal and spatial scope, VC identification, baseline data collection, effects identification and characterization, development of mitigation and monitoring measures, and determination of significance.	Duplicate comment. See above response.
9	Trends-over-time - 3.1 Describe baseline conditions and the existing environment, p. 8.; 3.8. Closure and Legacy Effects, p. 12.	FRMG has lived and is living with the legacy effects of previous mining operations in this location. For a robust assessment baseline data collection must also seek to determine sensitivity of valued components and trends-over-time. FRMG recognizes that legacy effects are discussed in section 3.8. Clear direction concerning legacy effects also needs to be included in section 3.1.	FRMG recommends inclusion of the term "baseline and trend-over-time conditions' be used here, and that the TOR require the proponent to develop an appopriate backcast for VCs that shows how they have changed over time to date. FRMG recommends a backcast to the pre-mining environment.	PPML disagrees that the TOR prescribe a backcast to pre-mining conditions for all VCs, and that wording related to legacy effects need to be included in Section 3.1. PPML plans to qualitatively describe existing conditions related to the legacy effects of the Cominco's historical mining operations where there is relevant information available.
10	Trends-over-time - 3.1 Describe baseline conditions and the existing environment, p. 8.; 3.8. Closure and Legacy Effects, p. 12.	FRMG has lived and is living with the legacy effects of previous mining operations in this location. For a robust assessment baseline data collection must also seek to determine sensitivity of valued components and trends-over-time. FRMG recognizes that legacy effects are discussed in section 3.8. Clear	FRMG recommends inclusion of the term "baseline and trend-over-time conditions' be used here, and that the TOR require the proponent to develop an appopriate backcast for VCs that shows how they have changed over time to date. FRMG recommends a backcast to the pre-mining environment.	Duplicate comment. See above response.

		direction concerning legacy effects also needs to be included in section 3.1.		
11	3.4 Identify Mitigation	FRMG is suportive of mitigation that is Specific, Measurable, Achievable, Realistic, and Timely. Language througout the TOR allows for the Proponent to describe what "might " be done, FRMg needs to know what will be done if a fullsome assessment is to be conducted. FRMG also notes that while avoidance and minimization is discussed in 3.4 and elsewhere offsetting and compensation is not. In the experience of FRMG avoidance and minimization is not always achievable. While FRMG would like to prioritixe avoidance of effects for the Project, all proposed means of mitigation need to be evaluated as part of the assessment and this may include compensation and offsetting measures.	Please update the TOR to require the Proponent to describe all proposed mitigation including compensation and offsetting; the description to include realistic timelines and methods for implementation.	PPML is amenable to the inclusion of offsetting in Section 3.4, following the mitigation hierarchy of avoid, minimize, reclaim, offset. Note, however, that the need for offsetting, may be determined through the residual effects analysis, classification, and determination of significance. PPML, however, does not agree that specific details regarding timelines and methods for implementation can be provided in the DAR as the approach for offsetting, if required, will involve regulatory and community engagement and will be part of the permitting phase of the Project.
12	3.4 Identify Mitigation	FRMG is suportive of mitigation that is Specific, Measurable, Achievable, Realistic, and Timely. Language througout the TOR allows for the Proponent to describe what "might " be done, FRMg needs to know what will be done if a fullsome assessment is to be conducted. FRMG also notes that while avoidance and minimization is discussed in 3.4 and elsewhere offsetting and compensation is not. In the experience of FRMG avoidance and minimization is not always achievable. While FRMG would like to prioritixe avoidance of effects for the Project, all proposed means of mitigation need to be evaluated as part of the assessment and this may	Please update the TOR to require the Proponent to describe all proposed mitigation including compensation and offsetting; the description to include realistic timelines and methods for implementation.	Duplicate comment. See above response.

		include compensation and offsetting measures.		
13	3.5. Assess impacts holistically and systemically	FRMG supports the direction to assess impacts holistically and systemically, however, it must also be recognized that different IGOs will have a different context and relation to both valued components and systems. For example, cultural impact assessments cannot be genericized across different groups and communities, and must be conducted for each impacted group rather than pooled. Further direction is required to ensure that this is acknowledged and the assessment is conducted according to best practice.	Please include direction to the Proponent to assess impacts to each IGO separately, in particular a Pan-Indigenous approach should not be applied to the assesssment of impacts to well-being, culture, socio-economic, and Indigenous land use nor should it be accepted by the board.	PPML agrees, and recognizes that each Indigenous group is different, and will undertake group-specific Indigenous Knowledge and Land Use studies with each, with an intent to characterize existing conditions and potential impacts to each separate group. PPML will also undertake socio-economic engagement with potentially impacted communities separately to identify unique socio-economic conditions and potential impacts. A single socio-economic assessment will be prepared for the Project, with community-specific considerations highlighted as appropriate and identified in collaboration with the community.
14	3.5. Assess impacts holistically and systemically	FRMG supports the direction to assess impacts holistically and systemically, however, it must also be recognized that different IGOs will have a different context and relation to both valued components and systems. For example, cultural impact assessments cannot be genericized across different groups and communities, and must be conducted for each impacted group rather than pooled. Further direction is required to ensure that this is acknowledged and the assessment is conducted according to best practice.	Please include direction to the Proponent to assess impacts to each IGO separately, in particular a Pan-Indigenous approach should not be applied to the assesssment of impacts to well-being, culture, socio-economic, and Indigenous land use nor should it be accepted by the board.	Duplicate comment. See above response.
15	Primary Sources - 3.6. Use and incorporation of Traditional Knowledge, p. 11	FRMG is concerned that the need for primary data collection for Traditional Knowledge has not been emphasized. Bullet 2 on page 11 in particular would allow the proponent to rely on secondary sources if they provide a rationale. Traditional knowledge is not static, changes over time and is context specific, therefore, secondary data alone	Please include instructions in the TOR for the Proponent to support affected Indigenous groups in the collection and analysis of Traditional Knowledge for the development of the DAR. FRMG also recommends that the summary table described in the 4th bullet of section 3.6 require reporting on how secondary Traditional Knowledge was confirmed as	PPML agrees, and will support Indigenous Knowledge studies for those Indigenous groups prioritized for engagement based on their proximity to the Project and propensity to experience impacts. PPML is already in discussions with communities on such studies, and will advance the discussion further once a final TOR has been prepared. Indigenous Knowledge obtained through secondary sources will be summarized, and presented to each associated Indigenous group for comment and

		will not be sufficient to inform the impact assessment and this must be made clear in the TOR. Further, any secondary sources used must also be confirmed with the knowledge holders themselves before it can be deemed "contextually appropriate."	contextually appropriate with Indigenous groups.	confirmation prior to inclusion in the DAR, within an agreed upon window of response.
16	Primary Sources - 3.6. Use and incorporation of Traditional Knowledge, p. 11	FRMG is concerned that the need for primary data collection for Traditional Knowledge has not been emphasized. Bullet 2 on page 11 in particular would allow the proponent to rely on secondary sources if they provide a rationale. Traditional knowledge is not static, changes over time and is context specific, therefore, secondary data alone will not be sufficient to inform the impact assessment and this must be made clear in the TOR. Further, any secondary sources used must also be confirmed with the knowledge holders themselves before it can be deemed "contextually appropriate."	Please include instructions in the TOR for the Proponent to support affected Indigenous groups in the collection and analysis of Traditional Knowledge for the development of the DAR. FRMG also recommends that the summary table described in the 4th bullet of section 3.6 require reporting on how secondary Traditional Knowledge was confirmed as contextually appropriate with Indigenous groups.	Duplicate comment. See above response.
17	3.7 Cumulative Effects	Any cumulative effects assessment will need to account for the context and state of valued components before Project specific effects are considered. Even a close to negligable effect could have a large magnitude of effect if a threshold for a VC has already been surpassed. The Proponent should also be working closing with FRMG and other Indigenous groups to define the significance of cumulative effects. FRMG members are living with cumulative effects and will have area specific knowledge on the current state and trends-over-time for valued components applicable to cumulative	FRMG recommends that section 3.7 be updated to include direction for the assessment of trends-over-time and accounting of the context and present state of valued components. Please include direction to the Proponent to collaborate with Indigenous groups on the determination of significance for cumulative effects. Please also include direction to incorporate environmental stressors such as climate change, flooding, and forest fires in the cumulative effects assessment.	PPML disagrees that Section 3.7 needs to be updated to include these concepts. Section 3.1 of the TOR indicates the need for describing the existing conditions – which aligns with the Base Case, as described in Section 4.1.3.3.1 of the Developer's Assessment Proposal, where it indicates that the description of the existing environment represents the cumulative effects of historical and current environmental pressures that have influenced the observed condition and patterns of a component. As identified by FRMG, this provides the important context for determining if a threshold is already exceeded prior to applying the Project, and other future developments. PPML plans to include climate change and associated natural factors (e.g., fire, floods, drought, insects) into the RFD Case and so is amenable to this inclusion into Section 3.7.

		effects assessment.FRMG notes that other stressors such as climate change, flooding, and forest fires will need to be part of assesment beyond future industrial development.		PPML will engage with Indigenous communities during the development of the DAR.
18	3.7 Cumulative Effects	Any cumulative effects assessment will need to account for the context and state of valued components before Project specific effects are considered. Even a close to negligable effect could have a large magnitude of effect if a threshold for a VC has already been surpassed. The Proponent should also be working closing with FRMG and other Indigenous groups to define the significance of cumulative effects. FRMG members are living with cumulative effects and will have area specific knowledge on the current state and trends-over-time for valued components applicable to cumulative effects assessment.FRMG notes that other stressors such as climate change, flooding, and forest fires will need to be part of assesment beyond future industrial development.	FRMG recommends that section 3.7 be updated to include direction for the assessment of trends-over-time and accounting of the context and present state of valued components. Please include direction to the Proponent to collaborate with Indigenous groups on the determination of significance for cumulative effects. Please also include direction to incorporate environmental stressors such as climate change, flooding, and forest fires in the cumulative effects assessment.	Duplicate comment. See above response.
19	Acid Generating Potential Tests - 4.1.4 Terrain, geology, and soil, p. 19	FRMG supports the inclusion of a description of the physical and chemical characteristics of mine rock, waste rock, and tailings as part of the assessment Report. FRMG requires assurances that this will be informed by acid generating potential tests.	Please include direction to conduct acid generating potential tests.	PPML disagrees that Section 4.1.4 of the TOR should specify the geochemical tests to be conducted. However, as indicated in Section 2.1.3.2 of the Project Description submitted with the EA Initiation Package, the potential for acid generation was tested by acid-base accounting analysis. As per the TOR, PPML will provide a characterization of the geochemical composition of expected mined materials in the DAR
20	Acid Generating Potential Tests - 4.1.4 Terrain, geology, and soil, p. 19	FRMG supports the inclusion of a description of the physical and chemical characteristics of mine rock, waste rock, and tailings as part of the assessment Report. FRMG requires assurances that	Please include direction to conduct acid generating potential tests.	Duplicate comment. See above response.

		this will be informed by acid generating potential tests.		
21	Seasonal base flow - 4.1.5. Surface and groundwater quality and quantity , p.21	The Proponent should be directed to describe the seasonal baseline flow and full range of seasonal and inter-annual variation for all streams and rivers potentially affected by the project and not just those located within the Project area.	Please reword the minimal requirements for surface watercharacterization to ensure that all potentially affected waterbodies are assessed even if they are outside of the Project area.	PPML would characterize all surface waterbodies (i.e., rivers, creeks, streams) within the local study area (LSA). The LSA includes waterbodies that are outside of the Project footprint, some of which may not be hydrologically connected. For example, waterbodies that may potentially experience air quality effects would be included in the LSA for surface water quantity and quality. As described in Section 4.2.1.3 of the Developer's Assessment Proposal, the LSA is anticipated to be large enough to capture direct and indirect effects on surface water flows and levels resulting from the Project.
22	Seasonal base flow - 4.1.5. Surface and groundwater quality and quantity , p.21	The Proponent should be directed to describe the seasonal baseline flow and full range of seasonal and inter-annual variation for all streams and rivers potentially affected by the project and not just those located within the Project area.	Please reword the minimal requirements for surface watercharacterization to ensure that all potentially affected waterbodies are assessed even if they are outside of the Project area.	Duplicate comment. See above response.
23	4.1.5. Surface and groundwater quality and quantity , p.22	Within the limits of available data the proponent should also use the predictions of climate models to describe how ground and surface water budgets may change within the proposed lifetime of the project. As it is now the opinion of climate change experts that we will continue to see warming global surface temperature under all emissions scenarios (see IPCC 2021, item B.1, pg SPM-17), the proponent should consider predicted future changes to the water balance due to a warming climate to be part of baseline conditions. PCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report	The TOR should direct the proponent to use an appropriate climate model and describe the choice of that model.	It would be inappropriate to select a single climate model to test climate change projections. Best practice is to examine the entire ensemble of models and scenarios, and use median or other metric to assess sensitivity to climate change.

		of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.		
24	4.1.5. Surface and groundwater quality and quantity , p.22	Within the limits of available data the proponent should also use the predictions of climate models to describe how ground and surface water budgets may change within the proposed lifetime of the project. As it is now the opinion of climate change experts that we will continue to see warming global surface temperature under all emissions scenarios (see IPCC 2021, item B.1, pg SPM-17), the proponent should consider predicted future changes to the water balance due to a warming climate to be part of baseline conditions. PCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.	The TOR should direct the proponent to use an appropriate climate model and describe the choice of that model.	Duplicate comment. See above response.
25	Climate change and ground-water model -	FRMG supports the requirement for the development of a 3-dimensional	Update the TOR to require the DAR to describe expected changes to the	As per FRMG-24, PPML would conduct climate change modelling which will consider multiple scenarios; this

	4.1.5. Surface and groundwater quality and quantity, pp. 22-24.	numerical groundwater flow model, however, the proponent should also be required to use the model and the results from the analysis of projected future climate conditions to discuss expected changes to the watershed baseline (which includes changing conditions caused by a warming of the global surface temperature) caused by project activities.	watershed baseline based on both the model and results from the analysis of projected future climate conditions.	would consider future climate for baseline watershed conditions.
26	Climate change and ground-water model - 4.1.5. Surface and groundwater quality and quantity, pp. 22-24.	FRMG supports the requirement for the development of a 3-dimensional numerical groundwater flow model, however, the proponent should also be required to use the model and the results from the analysis of projected future climate conditions to discuss expected changes to the watershed baseline (which includes changing conditions caused by a warming of the global surface temperature) caused by project activities.	Update the TOR to require the DAR to describe expected changes to the watershed baseline based on both the model and results from the analysis of projected future climate conditions.	Duplicate comment. See above response.
27	Adaptive Management for groundwater and surface water impacts - 4.1.5. Surface and groundwater quality and quantity p. 24	The 5th bullet on page 24 outlines the need for the DAR to describe mitigation for anticiapted and unanticipated effects to groundwater and surfacewater. To understand the potential impacts of the Project FRMG requires information on not only planned mitigations but also proposed adaptive measures including the thresholds that would trigger these measures.Further, thresholds must be informed by relevant values, particularly Indigenous land use.	Please update the TOR to include a requirement for the Proponent to work with Indigenous communities to identify thresholds for continency plans and adaptive measures.	PPML disagrees that the TOR should be updated to include this recommendation. In the DAR, PPML will include conceptual management and mitigation plans, where additional details will be developed and added following approval for the Project and as part of the permitting process (see CanNor-57). Although the plans are expected to include an adaptive management framework, where appropriate, triggers and thresholds will not be developed during the DAR or DAR review process, but will be developed for permitting. PPML will engage with Indigenous groups during the permitting phase of the Project.
28	Adaptive Management for groundwater and surface water impacts - 4.1.5. Surface and groundwater quality and quantity p. 24	The 5th bullet on page 24 outlines the need for the DAR to describe mitigation for anticiapted and unanticipated effects to groundwater and surfacewater. To understand the potential impacts of the Project FRMG requires information on not only planned mitigations but also	Please update the TOR to include a requirement for the Proponent to work with Indigenous communities to identify thresholds for continency plans and adaptive measures.	Duplicate comment. See above response.

		proposed adaptive measures including the thresholds that would trigger these measures.Further, thresholds must be informed by relevant values, particularly Indigenous land use.		
29	Climate change and vegetation - 4.1.6. Vegetation, p. 25	FRMG supports the inclusion of climate change considerations in describing baseline and existing conditions for vegetation and predicting future change however this should also be informed by modelling.	Please include a requirement to model impacts to vegetation from climate change.	PPML disagrees that modeling of global climate change on effects of local and regional vegetation should be in the scope of this assessment. PPML suggests instead that a review of recent scientific literature focused on modeling of climate changes to northern vegetation be completed instead to inform predictions of future change associated with the Project.
30	Climate change and vegetation - 4.1.6. Vegetation, p. 25	FRMG supports the inclusion of climate change considerations in describing baseline and existing conditions for vegetation and predicting future change however this should also be informed by modelling.	Please include a requirement to model impacts to vegetation from climate change.	Duplicate comment. See above response.
31	Impacts to Fish and Aquatic Life - 4.2.2. Fish and aquatic life, p. 28-29.	FRMG is concerned that the TOR does not identify changes to vegetation and wetlands explicitly as one of the potential project interactions impacting fish and fish habitat on p. 28 and 29.	Please include changes to vegetation and wetlands as a potential impact to fish and fish habitat.	All aquatic habitats are included in the fish and fish habitat assessment, including potentially fish-bearing wetlands and ponds. Changes to vegetation will also be considered where there will be the clearing of riparian vegetation. This approach is consistent with expectations to meet requirements to protect fish and fish habitat as outlined in the Fisheries Act.
32	Impacts to Fish and Aquatic Life - 4.2.2. Fish and aquatic life, p. 28-29.	FRMG is concerned that the TOR does not identify changes to vegetation and wetlands explicitly as one of the potential project interactions impacting fish and fish habitat on p. 28 and 29.	Please include changes to vegetation and wetlands as a potential impact to fish and fish habitat.	Duplicate comment. See above response.
33	Habitat supply modeling - 4.2.2. Fish and aquatic life, p. 28-29.	A description of habitat type should be informed by habitat supply modeling. This information could support identification of baseline data collection sites.	Include a requirement for habitat supply modeling for important fish species (including aquatic species at risk) as a way of determining project effects within the study area.	PPML disagrees that this should be added to the TOR. PPML will infer fish habitat using habitat suitability index (HSI) methods or a similar modelling approach for species and populations where there is expected to be residual effects to fish or fish habitat. For example, measured habitat variable data (e.g., bed substrate, stream width, habitat type) will be compared against literature-derived

				species-specific habitat requirements to predict whether a waterbody has the potential to support a fish species. In any cases where there is expected to be a residual effect on fish or fish habitat, PPML will consider evaluating the potential pathway by using quantitative methods.
34	Habitat supply modeling - 4.2.2. Fish and aquatic life, p. 28-29.	A description of habitat type should be informed by habitat supply modeling. This information could support identification of baseline data collection sites.	Include a requirement for habitat supply modeling for important fish species (including aquatic species at risk) as a way of determining project effects within the study area.	Duplicate comment. See above response.
35	Impacts to Fish - 4.2.2. Fish and aquatic life, p. 30.	Hydrological models required in section 4.1.5 of the TOR should inform the identification of impacts to fish, direction on this is not explicitly required.	Please explicitly require the use of hydrological models to inform impacts to fish.	The quantitative outcome of the surface water quantity model will be considered in the evaluation of flow changes for fish and fish habitat.
36	Impacts to Fish - 4.2.2. Fish and aquatic life, p. 30.	Hydrological models required in section 4.1.5 of the TOR should inform the identification of impacts to fish, direction on this is not explicitly required.	Please explicitly require the use of hydrological models to inform impacts to fish.	Duplicate comment. See above response.
37	Migratory Bird Areas - 4.2.3. Birds and their habitat, p. 31	Section 4.2.3 requires the mapping of areas of concentration of migratory birds. Habitat supply modeling should also inform this.	Include a requirement for habitat supply modeling for migratory birds as a way of determining project effects within the study area.	Habitat suitability index modelling will be completed for olive-sided flycatcher, yellow rail, whooping crane, and rusty blackbird using models that were developed in 2018 (Golder 2018). The habitat suitability index model for whooping crane and yellow rail will provide habitat estimates that can be applied to all waterbird species as the habitat types included in the model are water, wetland-shrub, and wetland-herb. Note that PPML requires data from ECCC on bird migration and staging areas before habitat modelling can be completed for determining these habitat types.
38	Migratory Bird Areas - 4.2.3. Birds and their habitat, p. 31	Section 4.2.3 requires the mapping of areas of concentration of migratory birds. Habitat supply modeling should also inform this.	Include a requirement for habitat supply modeling for migratory birds as a way of determining project effects within the study area.	Duplicate comment. See above response.
39	Traditional knowedge and baseline data	The TOR does not direct the Proponent to document baseline collection	Please include a requirement for the proponent to work with affected	PPML has, and will continue to provide opportunities for affected Indigenous groups to participate in the

	collection for Birds - 4.2.3 Birds and their habitat, pp. 31 and 32.	programs for bird habitat nor does it require or encourage the participation of Traditional Knowledge holders in baseline surveys. FRMG members need to be involved in migratory bird programs and data collection, especially data collection concerning Whooping Cranes.	Indigenous groups and provide opportunities to participate in all baseline studies and inventories of birds and other terrestial and aquatic life. The proponent should also be required to document how all baseline data was collected and how it was informed by IGO traditional knowledge.	appropriate environmental baseline studies for the Project. Indigenous Knowledge collected through the baseline study programs will be incorporated into baseline reporting where provided and agreed upon by the knowledge-holder(s). Given that this approach is not specific to bird surveys, PPML does not recommend a revision to the TOR in this section, and instead proposes to continue to carry out this work through the overall engagement process for the Project.
40	Traditional knowedge and baseline data collection for Birds - 4.2.3 Birds and their habitat, pp. 31 and 32.	The TOR does not direct the Proponent to document baseline collection programs for bird habitat nor does it require or encourage the participation of Traditional Knowledge holders in baseline surveys. FRMG members need to be involved in migratory bird programs and data collection, especially data collection concerning Whooping Cranes.	Please include a requirement for the proponent to work with affected Indigenous groups and provide opportunities to participate in all baseline studies and inventories of birds and other terrestial and aquatic life. The proponent should also be required to document how all baseline data was collected and how it was informed by IGO traditional knowledge.	Duplicate comment. See above response.
41	Traditional Knowledge and Habitat Identification - 4.2.4. Moose, Furbearers and other wildlife , pp. 33-34.	FRMG members have valuable Traditional Knowledge that could and should inform the identification of potentially affected wildlife habitat sites. The TOR should be strengthened to encourage the Proponent to work directly with affected Indigenous groups to identify and describe wildlife habitat sites potentially affected by the Project. Further, Unlike the birds section (4.23), this section does not reference the community-led Indigenous knowledge study, which will likely also include focus on moose, furbearers and other wildlife to provide important baseline and existing conditions information. Specific reference to this data source should be made in this section of the TOR.	Update section 4.2.4 to require the Proponent to document how any traditional knowledge provided informed the identification and description of habitat sites. Please also reword the secon bullet on page 34 so that both the GNWT and Indigenous Group have the opportunity to identify the need for a population survey for moose.	PPML agrees that text in bullet 1 on page 35 can be added to specify that PPML will work with Indigenous groups to identify and describe habitat sites. The DAR will include a section summarizing how Indigenous Knowledge was provided and how it informed the DAR broadly, including specific subcomponents. The GNWT has determined that a population survey of moose is required, and as indicated in the response to GNWT-28, PPML is willing to collaborate with GNWT-ENR on the logistics and approach to the survey. As such, the wording recommended by FRMG related to this bullet is not required.

42	Traditional Knowledge and Habitat Identification - 4.2.4. Moose, Furbearers and other wildlife , pp. 33-34.	FRMG members have valuable Traditional Knowledge that could and should inform the identification of potentially affected wildlife habitat sites. The TOR should be strengthened to encourage the Proponent to work directly with affected Indigenous groups to identify and describe wildlife habitat sites potentially affected by the Project. Further, Unlike the birds section (4.23), this section does not reference the community-led Indigenous knowledge study, which will likely also include focus on moose, furbearers and other wildlife to provide important baseline and existing conditions information. Specific reference to this data source should be made in this section of the TOR.	Update section 4.2.4 to require the Proponent to document how any traditional knowledge provided informed the identification and description of habitat sites. Please also reword the secon bullet on page 34 so that both the GNWT and Indigenous Group have the opportunity to identify the need for a population survey for moose.	Duplicate comment. See above response.
43	4.2.5. Boreal Caribou	Boreal Caribou are culturally important to FRMG members and FRMG members have important traditional knowledge about Boreal caribou populations in the Pine Point area. Overall, FRMG finds that section 4.2.5 does not explicitly support or encourage the consideration of traditional knowledge in baseline data collection and impact assessment. For this section overall, there is heavy emphasis on using best available information from ECCC / ENR, however there is no reference to Traditional Knowledge or the community-led Indigenous knowledge study. Without the Traditional Knowledge component, especially on the local Pine Point herd scale, which may not be captured in the GNWT's most recent boreal species	Please update section 4.2.5 to include requirements for any Traditionals knowledge shared to be used to inform current use of the area and impacts of the project on boreal caribou.	PPML agrees that any Indigenous Knowledge shared during the community-led knowledge studies will be used to inform current use of the area and impacts of the project on boreal caribou.

		status report, the baseline information will not be complete.		
44	4.2.5. Boreal Caribou	Boreal Caribou are culturally important to FRMG members and FRMG members have important traditional knowledge about Boreal caribou populations in the Pine Point area. Overall, FRMG finds that section 4.2.5 does not explicitly support or encourage the consideration of traditional knowledge in baseline data collection and impact assessment. For this section overall, there is heavy emphasis on using best available information from ECCC / ENR, however there is no reference to Traditional Knowledge or the community-led Indigenous knowledge study. Without the Traditional Knowledge component, especially on the local Pine Point herd scale, which may not be captured in the GNWT's most recent boreal species status report, the baseline information will not be complete.	Please update section 4.2.5 to include requirements for any Traditionals knowledge shared to be used to inform current use of the area and impacts of the project on boreal caribou.	Duplicate comment. See above response.
45	Key Questions 4.2.5 Boreal Caribou, p.61	FRMG was surprised that mitigations were not included as a key question. To better understand potential impacts to boreal caribou at pine point, FRMG needs to understand how the Proponent intends to avoid, minimize, or offset impacts to caribou and caribou habitat.	Please include the following as a key question in 4.2.5: "How will impacts to boreal caribou be mitigated?"	This information is already included in the TOR. The last bullet in Section 4.2.5 states that the caribou impact section will "describe how the developer will prevent or fully mitigate any impacts to boreal caribou that may use the project area and Wood Buffalo National Park".
46	Key Questions 4.2.5 Boreal Caribou, p.61	FRMG was surprised that mitigations were not included as a key question. To better understand potential impacts to boreal caribou at pine point, FRMG needs to understand how the Proponent intends to avoid, minimize, or offset impacts to caribou and caribou habitat.	Please include the following as a key question in 4.2.5: "How will impacts to boreal caribou be mitigated?"	Duplicate comment. See above response.

47	Contamination - 4.2.8. Indigenous Land Use, p.41	Existing observed and recorded sources and location/extent of contaminationshould be required as part of the description of the existing environment, with additional guidance that the DAR should identify with Indigenous groups areas subject to elevated contamination concerns, whether they are supported by scientific data or traditional Knowledge.	Update section 4.2.8 to guide the Proponent to work with affected Indigenous groups to identify areas subject to elevated contamination concerns.	PPML agrees that identification of areas of elevated contamination concern should be identified, if possible, through the Indigenous Knowledge studies conducted for the Project.
48	Contamination - 4.2.8. Indigenous Land Use, p.41	Existing observed and recorded sources and location/extent of contaminationshould be required as part of the description of the existing environment, with additional guidance that the DAR should identify with Indigenous groups areas subject to elevated contamination concerns, whether they are supported by scientific data or traditional Knowledge.	Update section 4.2.8 to guide the Proponent to work with affected Indigenous groups to identify areas subject to elevated contamination concerns.	Duplicate comment. See above response.
49	Food security and existing environment - 4.2.8. Indigenous Land Use, p.41	An additional line item should be added requiring examination of "country food security and food sovereignty and how this has changed over time" to the description of the existing environment.	Update section 4.2.8 to ensure that country food security and food sovereignty and how this has changed over time is described in the DAR description of the existing environment for Indigenous Land Use.	PPML agrees that food security should be addressed in the existing conditions section of the DAR, as identified through Indigenous Knowledge studies conducted for the Project.
50	Food security and existing environment - 4.2.8. Indigenous Land Use, p.41	An additional line item should be added requiring examination of "country food security and food sovereignty and how this has changed over time" to the description of the existing environment.	Update section 4.2.8 to ensure that country food security and food sovereignty and how this has changed over time is described in the DAR description of the existing environment for Indigenous Land Use.	Duplicate comment. See above response.
51	Rights and Effects on Indigenous Land Use - 4.2.8. Indigenous Land Use, p.42	FRMG members have constitutionally recognized Aboriginal rights that are not subject to Treaty. The TOR as worded only requires the DAR to include an assessment of impacts to Treaty rights. All rights must be assessed.	Revise the wording in the third bullet on page 42 to "Aboriginal and Treaty Rights"	PPML does not feel that the assessment of Indigenous Rights, including Treaty Rights, should be undertaken by the developer, and that this is best evaluated by Indigenous Peoples themselves. Consistent with the requests of other Indigenous groups commenting on the TOR (e.g., DKFN 29), PPML requests that this

				requirement be removed from the TOR. Specifically, PPML requests that the bullet “overall impacts on Indigenous Peoples’ ability to practice Treaty Rights” be removed from Section 4.2.8.
52	Rights and Effects on Indigenous Land Use - 4.2.8. Indigenous Land Use, p.42	FRMG members have constitutionally recognized Aboriginal rights that are not subject to Treaty. The TOR as worded only requires the DAR to include an assessment of impacts to Treaty rights. All rights must be assessed.	Revise the wording in the third bullet on page 42 to "Aboriginal and Treaty Rights"	Duplicate comment. See above response.
53	Experience and perception - 4.2.8. Indigenous Land Use, p.42	The 8th bullet on p. 42 for the list of effects on Indigenous Land Use only describes the need to document "perception." "Experience and perception" should always be used; it is not just perception it is also observed experience.	Please revise the 8th bullet on page 42 to include changes to Indigenous Groups/harvesters observed experience.	PPML agrees with this edit.
54	Experience and perception - 4.2.8. Indigenous Land Use, p.42	The 8th bullet on p. 42 for the list of effects on Indigenous Land Use only describes the need to document "perception." "Experience and perception" should always be used; it is not just perception it is also observed experience.	Please revise the 8th bullet on page 42 to include changes to Indigenous Groups/harvesters observed experience.	Duplicate comment. See above response.
55	Climate Change - 4.2.8. Indigenous Land Use, p.42	Further guidance is required for understanding climate change considerations on Indigenous land use.Guidance needs to be expanded to require the developer to estimate pre-project vs. during- and post-project zones of alienation likely due to a mixture of physical restrictions, observed changes, and perceived risks associated with climate change.	Expand TOR guidance require the developer to estimate pre-project vs. during- and post-project zones of alienation likely due to a mixture of physical restrictions, observed changes, and perceived risks associated with climate change. FRMG also recommends that multiple realistic climate change scenarios be required in any such analysis.	PPML disagrees. An assessment linking perceived risks related to multiple climate change scenarios in the past, present, and future, to zones where Indigenous land users will or will not use the land is outside the scope of the Project, and so should not be included in the TOR.
56	Climate Change - 4.2.8. Indigenous Land Use, p.42	Further guidance is required for understanding climate change considerations on Indigenous land use.Guidance needs to be expanded to	Expand TOR guidance require the developer to estimate pre-project vs. during- and post-project zones of alienation likely due to a mixture of	Duplicate comment. See above response.

		require the developer to estimate pre-project vs. during- and post-project zones of alienation likely due to a mixture of physical restrictions, observed changes, and perceived risks associated with climate change.	physical restrictions, observed changes, and perceived risks associated with climate change. FRMG also recommends that multiple realistic climate change scenarios be required in any such analysis.	
57	Impacts on Culture - 4.2.11. Culture , p. 45.	This section has no mention of the key role of engaging culture holders themselves in the cultural impact assessment here. that should be fixed. This is one area where developers most certainly are not best equipped to conduct these effects characterization exercises on their own.	FRMG encourages the Board not to use "closed" topics like this series of bullets, for the breadth of cultural impact issues". almost certainly, additional cultural impact concerns beyond these bullets will be raised. Suggest adding a catch all bullet at the end for "any other cultural impact concern raised by impacted communities".	PPML agrees that Indigenous Peoples are best positioned to discuss the important subject of culture. PPML will engage with communities to undertake Indigenous Knowledge studies led by the communities, which may include community-defined components of culture.
58	Impacts on Culture - 4.2.11. Culture , p. 45.	This section has no mention of the key role of engaging culture holders themselves in the cultural impact assessment here. that should be fixed. This is one area where developers most certainly are not best equipped to conduct these effects characterization exercises on their own.	FRMG encourages the Board not to use "closed" topics like this series of bullets, for the breadth of cultural impact issues". almost certainly, additional cultural impact concerns beyond these bullets will be raised. Suggest adding a catch all bullet at the end for "any other cultural impact concern raised by impacted communities".	Duplicate comment. See above response.
59	Indicators 4.2.12. Social and Community Conditions, p.47	we would recommend not emphasizing so many "indicators of disfunction" and focusing more on indicators of function, including Indigenous Social Determinants of health indicators recognized for the NWT (e.g., education levels, housing adequacy, affordability and crowding, adequacy of physical infrastructure, family structure, access to health care and social services, level of country foods in diet, levels of traditional activities, connectedness to community, etc., level of food sharing, youth-elder dynamics, time on the land, self reported well-being)	Please update indicators in the TOR to focus on indicators of function rather than disfunction.	PPML agrees that these Indigenous Social Determinants of Health should be applied to the TOR in place of the ‘social indicators of quality of life’ presented in the second bullet of the Existing Environment and Baseline Conditions section of Section 4.2.12. These Determinants also likely cover some of the other bullets in this section, which should be removed as appropriate to avoid redundancy in the TOR.

60	Indicators 4.2.12. Social and Community Conditions, p.47	FRMG would recommend not emphasizing so many "indicators of disfunction" and focusing more on indicators of function, including Indigenous Social Determinants of health indicators recognized for the NWT (e.g., education levels, housing adequacy, affordability and crowding, adequacy of physical infrastructure, family structure, access to health care and social services, level of country foods in diet, levels of traditional activities, connectedness to community, etc., level of food sharing, youth-elder dynamics, time on the land, self reported well-being)	Please update indicators in the TOR to focus on indicators of function rather than disfunction.	Duplicate comment. See above response.
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Dene Tha First Nation - Mathew Munson				
1	DTFN submission	Letter from Dene Tha First Nation	Letter from Dene Tha First Nation	No response required.
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
GNWT-Lands - Horatio_Sam-Aggrey@gov.nt.ca Sam-Aggrey				
1	Cover letter	Cover letter	Cover letter	No response required.
2	Boreal Caribou Range Planning Framework	Boreal Caribou Range Planning Framework	Boreal Caribou Range Planning Framework	No response required.
3	EA0607-002 INAC IR response	EA0607-002 INAC IR response	EA0607-002 INAC IR response	No response required.
4	Abandonment and Restoration Plan	Abandoonment and Restoration Plan - Teck Metals	Abandonment and Resotoration Plan - Teck Metals	No response required.
5	Boreal Caribou Report	Influence of Land Cover, Fire and Hman Disturbance on Habitat Selection by Boreal Caribou in the NWT	Boreal Caribou Report	No response required.
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Deninu K'ue First Nation (DKFN) - Minnie Whimp				
1	DKFN submission	DKFN submission	DKFN submission	No response required
2	All sections	All sections	Some bullet points seem to have a strikethrough (e.g., p. 24 last black bullet point and p. 27 last open bullet point).	No response required

			Please justify or harmonize the choice of these bullet symbols. Some paragraphs still have remains of change tracking (e.g., p. 50). Please accept all changes in the document. Other grammatical errors have been noted, so we recommend a thorough review of the final document.	
3	Section 1 Introduction page 1	The project includes the open pit and underground mining of zinc and lead deposits over five years	10-15 years of mine life is stated in other sections of the ToR. Please clarify the actual life of the mine.	As described in the Project Description, mining is expected to occur over 10 to 15 years.
4	2.1 Scope of development page 5	Transportation	Another subject to consider is the use of public roads (e.g., highways) for the movement of mined rock.	PPML notes that "transport of mine related materials to and from mine site" is included in Table 1 in Section 2.1
5	Section 2.1. Scope of Development, page 5	Power	While the project will use the NTPC network, it is our understanding that this network is being upgraded. The ToR should be clear on whether this upgrade is a direct result of the mine (i.e., should be included in the scope) or is being upgraded for other reasons.	Upgrades to the NWT power network are continually being considered by the GNWT. For example, the Review Board undertook an environmental assessment of the Taltson Expansion Project in 2007, long before the Pine Point Project was envisioned. PPML is in discussions with NTPC to obtain hydroelectric power, which can be provided by the existing Taltson Hydroelectric Plant without need for upgrades for the hydroelectric system. Questions regarding the plans for an expansion to the Taltson Hydroelectric Plant and associated transmission line should be directed to GNWT and NTPC, and do not belong in the DAR. Regardless, the DAP includes the Taltson Hydroelectric Expansion Project as a reasonably foreseeable development, and this will be included in the cumulative impacts scenarios.
6	Section 2.2.2. Key Lines of Inquiry, page 7	Managing water so that it remains clean in the future lasting well-being	This key line of inquiry is awkwardly worded. Please revise to provide clarity on what this actually means.	PPML suggests that the wording be "managing water so that it remains safe and available for use in the future". Please also see the response to ECCC-23 and NRCan-5.
7	Section 2.2.2. Key Lines of Inquiry, page 7	Of the listed species at risk assessed in this EA, the developer will pay particular	Here, and in other section of the ToR (e.g., 2.2.1 Valued Components), the specific reference to whooping cranes	The wildlife VCs that were selected for comprehensive assessment in the DAR are boreal caribou, wood bison, wolverine, gray wolf, little brown myotis, olive-sided

		attention to assessing and preventing any effect on whooping crane.	(and boreal caribou) has the unanticipated intention of undermining other species at risk in the project area that need to be assessed. While, whooping crane and boreal caribou are highly important, so are other species at risk and the terms of reference should not be seen as favouring one species over another. All species at risk need to be equally assessed.	flycatcher, common nighthawk, evening grosbeak, yellow rail, rusty blackbird, and whooping crane.
8	Section 3.7. Cumulative Effects Assessment, page 12	The developer will estimate the significance of residual project effects which may combine with cumulative environmental effects from other human activities and identify mitigations that already exist or would be required for cumulative effects beyond those for project specific effects.	This wording suggest that the developer only need to consider the cumulative effects of other projects, whereas the developer will need to consider the residual effects of other projects that act cumulatively with the residual effects of the Pine Point Mine. Likewise, the development will need to identify mitigations that already exist or would be required to address cumulative effects...	PPML agrees with DKFN's clarification.
9	Section 3.8. Closure and Legacy Effects, page 12	These legacy effects from past developments need to be considered in the description of baseline conditions.	Clearer direction is required on how these legacy effects are to be considered. These past legacy effects should be considered in the cumulative effects assessment, as well as the assessment of effects at the systems level.	No response required. Please also see responses to FRMG-9 and FRMG-17.
10	Section 4.1.5. Surface and groundwater quality and quantity, page 20	describe past and current surface water and groundwater quality baseline characterization programs including information about: - sampling site selection and locations - monitoring duration and frequency - sampling methods and analytical protocol, including quality assurance and quality control measures	We recommend adding to the bullet point list a list of parameters measured.	PPML do not have any concerns about listing the range of parameter groups and parameters included in the baseline characterization of surface waters and groundwaters. This detail would be provided as part of the baseline surface water and groundwater quality and quantity characterization.

11	Section 4.1.5. Surface and groundwater quality and quantity, page 20	- explain how baseline data were gathered at a scale and resolution that allows for the results about groundwater and surface water to be applied in the assessment of other parts of the environment.	This sentence is somewhat confusing, we recommend rephrasing it for better clarity.	PPML agree. The bullet can be revised to state, “provide rationale for how baseline data available for the Project are sufficient from a geographic scale and duration context to adequately represent the surface water and groundwater environment for the assessment”.
12	Section 4.1.5. Surface and groundwater quality and quantity, page 20	"Present a conceptual model of the hydrogeological and hydrological environment for the current conditions"	Further onsite investigations such as well drilling should be requested to help update aquifer mapping in the groundwater/surface water study area (LSA and RSA), specifically in the western region (Figure 3-1 of Volume 1 - Project Description; PPML, 2020). Wells could serve dual purpose and act as observation wells for helping characterize aquifer flow characteristics during pump testing.	PPML does not agree that the recommendation needs to be incorporated into the TOR. PPML will develop a model of the groundwater and surface water environment. The requirement of the TOR as stated implies that such a model will be developed in the DAR to the necessary standard using available data and, if necessary, through collecting additional data. should be to specify that the modeling of the groundwater will be used to assess affects of the project. The model will be developed to the necessary standard using available data and, if necessary, collecting additional data.
13	Section 4.1.5. Surface and groundwater quality and quantity, page 21	- provide baseline data for physicochemical parameters and relevant chemical constituents for surface water and groundwater	On page 27, there is a footnote saying "11Relevant physicochemical parameters include, at minimum, temperature, pH, electrical conductivity, dissolved oxygen, turbidity, total suspended solids, total hardness, and total dissolved solids. Relevant chemical constituents include, at minimum, major and minor ions, and total and dissolved trace metals." We recommend adding this footnote to the bullet point on page 21 as well.	PPML supports this recommendation.
14	Section 4.1.5. Surface and groundwater quality and quantity, page 21	- at minimum, the groundwater characterization and conceptual model development will: - (...) - provide baseline data for physicochemical parameters and relevant chemical constituents for surface water and groundwater	Even though groundwater and surface water are connected, we recommend the Developer present baseline groundwater quality data in the groundwater section and baseline surface water quality data in the surface water section. As such, we recommend changing the sentence for: "provide baseline data for physicochemical parameters and relevant chemical constituents for groundwater"	PPML agrees with this recommendation.

15	Section 4.1.5. Surface and groundwater quality and quantity, page 21	minimum requirements for the surface water characterization and conceptual model development include:	We recommend adding the bullet point "provide baseline data for physicochemical parameters and relevant chemical constituents for surface water" under surface water characterization.	PPML agrees with this recommendation.
16	Section 4.1.5. Surface and groundwater quality and quantity, page 21	minimum requirements for the surface water characterization and conceptual model development include: (...) - identification of contaminants of potential concern through screening against relevant guidelines (for example, CCME)	We recommend adding a list of all parameters that will be measured during the baseline study and the aquatic effects monitoring program, not only the "contaminants of potential concern" as some parameters (e.g., nitrate) could become a "potential concern" only after several years of operation. Baseline information on all nutrients and metals would be important. As such, we recommend adding the same footnote as on page 27, (i.e., "11 Relevant physicochemical parameters include, at minimum, temperature, pH, electrical conductivity, dissolved oxygen, turbidity, total suspended solids, total hardness, and total dissolved solids. Relevant chemical constituents include, at minimum, major and minor ions, and total and dissolved trace metals.")	The initial part of the recommendation is inferred in the TOR bullet, so no further text is recommended in the TOR. As part of the baseline characterization of surface water quality, PPML will provide a summary of all existing surface water quality data. From these data, PPML will screen the data to determine which of those parameters would be characterized as parameters or constituents of potential concern (COPC), which would be determined from comparing the data to relevant guidelines or other benchmarks – the COPCs would therefore represent those parameters that may adversely influence aquatic life, wildlife use, or human use should they be incrementally changed as a result of the Project. PPML has responded in DKFN-14 that it has no concerns with the footnote addition.
17	Section 4.1.5. Surface and groundwater quality and quantity, page 22	- within the limits of available data, describe impacts of historical mining or stresses on local and regional surface and groundwater quantity and quality, including if the system is in a state of equilibrium or may still be changing because of historical activities	We recommend the Developer presents trends in historical water quality, water quantity and water flows, if data is available.	This recommendation is inferred in the TOR bullet, but is dependent on the availability of historic data for regional surface and groundwater quantity and quality. PPML believes that the data limitations will restrict this description to a qualitative assessment; however, for these components, the data record will be reviewed, and any obvious trends will be described. No further text is recommended in the TOR.
18	Section 4.1.5. Surface and groundwater quality and quantity, page 22	"Present a 3-dimensional numerical groundwater flow model based on the conceptual model of the hydrogeological environment for current conditions and use that model to estimate changes related to the project"	Steady or transient state 3-dimentional flow models require detailed input values for calibration. Additional field testing (pumping test) should be performed to confirm seasonality of hydraulic head and hydraulic gradient for the various	PPML thanks the reviewer for the advice. PPML is currently undertaking a study of groundwater conditions and hydrologic characterization of the aquifers intersected using exploration drillholes and will continue this work into the summer of 2022. The hydrogeological model will be developed using inputs from this work. If needed,

			mined zones. Further characterization of aquifer hydraulic conductivity across the study area is also required as suggested in the analytical modelling completed by Tetratech (2020).	additional data will be collected to address any gaps in the data used to construct the model
19	Section 4.1.5. Surface and groundwater quality and quantity, page 23	"Describe methods used to assess the potential for ML/ARD for tailings, waste rock, and low-grade ore or other stockpiles and estimate the potential for mined materials (including waste rock, tailings and low-grade ore or other stockpiles) to be sources of MU ARD"	Further field testing should be required to characterize waste rock chemistry for a more accurate prediction of future groundwater and surface water quality. Such investigations could include deeper sampling (sonic drilling or other) of waste rock piles. Previous tests were completed at shallow depths (<1.5m; Tetratech. 2018) and; therefore; are less representative of total waste rock chemistry.	PPML will review the available rock chemistry data used to characterize the waste rock in terms of distribution of data (bother laterally and vertically) with respect to the waste rock management and interaction of waste rock with surface and groundwaters. If necessary, PPML will obtain additional data to support the analysis.
20	Section 4.1.5. Surface and groundwater quality and quantity, page 24	"Any plans to update the model during the life of the project to address future changes to the mine development and or water management plans" applied in the assessment of other parts of the environment.	The water quality prediction model should be compatible or should communicate with the 3-dimentionsional numerical groundwater flow model for accurate representation of groundwater conditions. Inputs should be shared between disciplines.	This recommendation is inferred in the TOR bullet, and no further text is recommended in the TOR. As described in Section 4.2.1.4 in the Developer's Assessment Proposal (KLOI-1: Impacts to Water Quality), PPML's assessment of potential changes to surface water and groundwater resulting from the Project will be completed by utilizing a numerical model that will integrate the site water balance and site water quality, the receiving environment surface water quantity and water quality, and the hydrogeological modelling component. Any update to the model during the lifespan of the project to address future changes to the mine development and or water management plans is expected to utilize the same (or updated as required) integrated modelling framework.
21	Section 4.1.5. Surface and groundwater quality and quantity, page 24	- determine the spatial extent of the effluent mixing zone in Great Slave Lake, if loadings of contaminants of potential concern are predicted to enter the lake by surface or groundwater pathways	We recommend the Developer prepare a plume model if any tailings or waste water is discharged to Great Slave Lake.	This recommendation is inferred in the TOR bullet. As described in Section 4.2.1.4 in the Developer's Assessment Proposal, PPML states that other water quality models may also be considered in the surface water quality assessment depending on the Water Management Plan developed to support the DAR. Should the Project discharge to Great Slave Lake, a near-field discharge dispersion model, such as CORMIX, would be considered.

22	Section 4.1.5. Surface and groundwater quality and quantity, page 24	- describe proposed programs for characterizing future surface water and groundwater quality. Include: - sampling site selection and locations - monitoring duration and frequency - sampling methodology, and analytical protocol, including quality assurance and quality control measures (...)	We recommend adding the list of parameters that will be measured with all available water quality guidelines to which those parameters will be compared to.	PPML do not have any concerns with this recommendation, but recommend that Project thresholds be included with guidelines for data comparison. This is included to account for any site-specific water quality objectives that may be derived as part of the surface water and groundwater quantity and quality assessment for the DAR.
23	Section 4.1.5. Surface and groundwater quality and quantity, page 24	- describe the plans to mitigate both anticipated and unanticipated adverse impacts on ground and surface waters including: (...) - strategies to manage cumulative effects due to past impacts on water quality and quantity in the Project area in addition to project-related effects	We recommend that current impacts (from other industries and activities in the mine regional study area) be added to the cumulative effects assessment and management strategy.	This is inferred in the TOR bullet, and no additional text is required. In the Developer's Assessment Proposal, PPML stated that the assessment of cumulative effects would include the Project and other current projects in the RSA, as well as previous and reasonably foreseeable developments, where there is potential for effects due to spatial overlap or interactions.
24	Sectin 4.2. 1. Use of water by people, page 27	- describe past, current, and planned water resource baseline characterization programs. Provide information about: - sampling site selection and locations - monitoring duration and frequency - sampling methodology, and analytical protocol, including quality assurance and quality control measures	We recommend adding the list of parameters that will be measured with all available water quality guidelines to which those parameters will be compared to.	PPML do not have any concerns with this recommendation, but recommends that Project thresholds be included with guidelines for data comparison.
25	Section 4.2. 1. Use of water by people, page 27	"Provide baseline data for physiochemical parameters and relevant chemical constituents 11 for water resources in the local and regional study areas"	Mixing of groundwater types (Golder, 2020) suggest hydraulic communication between the shallow and deep aquifers and the potential for groundwater-surface water interaction exist. Chemical constituents should be presented visually as piper plots or other, to distinguish possible water sources. PPML should consider the use of isotope analysis (180, 2H, 3H and l4C) to further distinguish the water sources (recharge) and the age of the water. Microbiological	PPML acknowledges and appreciates DKFN's recommendations. PPML's response, however, is that these recommendations do not require text additions to the TOR bullet.

			analysis (coliforms, E. coli) should also be included for potability analysis. Groundwater testing of deeper zone should be completed as suggested by Golder (2020).	
26	Section 4.2. 1. Use of water by people, page 28	- carry forward the assessment of potential adverse effects due to change in water quality and quantity to other valued parts of the environment as appropriate	We recommend adding water flows in addition to water quality and water quantity, as water flows are important for fish passage and migration.	This recommendation is inferred in the TOR bullet, as water flows (surface hydrology) is included in the "water quantity" aspect of the assessment. Water quantity assessment results are carried forward to the fish and fish habitat assessment, which will assess potential effects to fish passage and movement. No additional text is required.
27	Section 4.2.2. Fish and aquatic life, page 29	ground disturbance, altered drainage or instream construction activities.	Impacts to groundwater recharge of waterbodies in the assessment area need to be considered.	The results of the effects assessments for groundwater quality and quantity will be considered in the fish and fish habitat effects assessment
28	Section Existing environment and baseline conditions, Page 31	identify all federal species at risk, critical habitat and any potentially affected residences in the study areas; sites that are likely to be sensitive locations and habitat for birds; and environmentally significant areas. These include National Parks, Areas of Natural or Scientific Interest, Migratory Bird Sanctuaries, Important Bird Areasl4 or other priority areas or sanctuaries for birds, National Wildlife Areas, World Biosphere Reserves and provincially or territorially designated areas, such as Wildlife Areas.	Critical habitat can extend beyond the environmentally significant areas identified in the ToR (e.g., National Park, Migratory Bird Sanctuaries), therefore, we recommend changing the wording to: "These areas include, but are not limited to, National Parks....	We agree that the wording can be changed to "These areas include, but are not limited to, National Parks....
29	Section 4.2.8. Indigenous Land Use, page 40	-	A requirement should be included to assess impacts to income from trapping activities as a component of traditional land use.	PPML will consider the role of trapping activities in provision of livelihood for trappers in the discussion of the economic impacts of the Project.
30	Section 4.2.8. Indigenous Land Use, page 40	-	The developer should not be required to assess "overall impacts on Indigenous Peoples' ability to practice Treaty rights". The interpretation of Treaty rights is a complex legal and factual matter that the proponent is not qualified to address; it is a matter to be addressed as a component	PPML agrees that they are not in a position to assess overall impacts on the practice of Treaty rights, and that this is best evaluated by Indigenous Peoples themselves. PPML supports this comment, and the removal of this requirement from the TOR.

			of Crown consultation supported by the relevant VC baseline and assessment information.	
31	Effects to Other Land Uses, page 43	any predicted changes to recreation, hunting, and fishing activity in the project area, including new access (if any), changes to travel routes through the area or changes to the abundance and distribution of harvested species (consider the results of the wildlife and fish assessments)	The developer should also assess potential changes to the efficacy of reclamation efforts put forth on the Tailings Impoundment Area and the rail bed.	The Tailings Impoundment Area and the railbeds are not under PPML's control: Teck Resources and CIRNAC are responsible respectively. Any future remediation of the Tailings Impoundment Area and the rail bed will be subject to a public review process of their Closure and Reclamation Plans. Closure objectives and monitoring to confirm the effectiveness of closure will be included in the respective Closure and Reclamation Plans. PPML cannot speak to the outcome of these upcoming processes, except to assume that the Closure and Reclamation Plans will not be approved without engagement and collaborative planning with the DKFN and other affected groups. As such, this should not be a requirement of the Terms of Reference.
32	Section 4.2.11 Culture, page 45	Section 4.2.11 the ToR states that "the developer will work with Indigenous groups and communities to describe existing environment and baseline conditions for the aspects of Indigenous culture listed in that section of the ToR.	It is appropriate that the developer is required to work with Indigenous groups to develop this information; however, as noted above, a consultation plan would provide for a more transparent and enforceable mechanism to fulfill this aspect of the ToR, and this concept should be applied to other areas of the ToR.	PPML has developed an Engagement and Collaboration Framework for the DAR, and will continue to work with Indigenous communities to advance engagement and Indigenous Knowledge studies related to the Project.
33	Section 4.3.1. Managing water so that it remains clean for the future, page 56	Keeping water clean requires a holistic consideration of: • surface and groundwater quality and quantity,	We recommend adding water flows in addition to water quality and water quantity, as water flows are important for fish passage and migration. Please remove the comma after ..quantity", for consistency.	See response to DKFN-25. PPML has no concerns with the second recommendation.
34	Section 4.3.1. Managing water so that it remains clean for the future, page 57	- Will water around the mine (that is, the local and regional study areas) be safe and clean for people, fish, aquatic life, and wildlife during all project stages? - Will water in the project footprint area be	The first bullet point uses the expression "around the mine (that is, the local and regional study areas)" while the second sentence bullet uses ..the project footprint". We recommend using the same expression in both bullet points	PPML supports the recommendation that the two bullets reference the LSA (in which the Project footprint is a component) and the RSA or integrate the project phases into the one bullet. PPML notes that as per the Developer's Assessment Proposal, the Project phases comprise construction, operation, and closure and

		safe and clean for people, fish, aquatic life, and wildlife after the project has closed?	and/or to define what is the "project footprint".	reclamation. As a result, integrating these two bullets to one is preferred. Further, as responded to ECCC-20 and ECCC-23, PPML recommend that the phrase “safe and clean” in the bullet be revised to “safe”.
35	Section 4.3.1. Managing water so that it remains clean for the future, page 57	Will people still know that the water is clean, as a sign that the land is healthy?	This sentence is somewhat confusing. We recommend rephrasing it. For instance: "Will people still trust that the water is clean, and the land is healthy?"	The recommendation has a slightly different context to the TOR bullet as referenced, so PPML does not agree with the recommended text revision. The TOR infers that people perceive that “clean” water is the result of the land being healthy, so PPML simply requests the removal of the comma. As per previous responses, PPML also suggests that “safe” be used instead of “clean”.
36	Section 4.3.1., page 58	"How might the contingency options for managing unexpectedly high volumes of mine water impact other parts of the environment both during operations and after closure?"	Water treatment of mine affected water has not been proposed in the Environmental Initiation Package (Volume 2 - Waste Management Plan; PPML, 2020). There is potential for cumulative mine water impacts on the receiving environment, given the discussion of dewatering and re-injection of groundwater as part of water management and storage of waste rock (thicken tailings) in open mine pits (WRSF and TDA), presumed to be connected to groundwater. To keep "water clean", water capture and treatment should be discussed in some detail (cost and feasibility) in the contingency planning in the event indicator parameter guidelines (CCME) are exceeded.	PPML expects that as part of the discussion on contingencies in the DAR as a component of the water management plan that water treatment is one of the options considered for managing unexpected water quality and/or water quality issues. No additional text is required in the TOR bullet.
37	Section 5.5 Project purpose, needs,and alternatives, page 64	Section 5.5 requires the developer to describe alternative means of carrying out the Project that are technically and economically feasible.	We recommend that additional wording be added to the requirement that the developer describe criteria to determine the technical and economic feasibility of possible alternative means to include "assumptions made regarding economic feasibility in appropriate detail" to avoid	PPML does not believe that this wording is required in the TOR, as this concept is appropriately covered off in the Section 5.5 of the TOR.

			the developer unduly screening out alternative means that protect the well being of Indigenous communities in order to protect profit margins	
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
GNWT-Lands - Dr. Melissa Pink				
1	Section 1.1 'Past Mining'. Page 2	The last paragraph of Page 2 of the draft Terms of Reference (ToR) states "Lands in the area are managed by the Government of the Northwest Territories (GNWT) except for the historic railbed which is federal land."	The GNWT notes that some of the railbed is on territorial land (the portion of the railbed that is on Commissioner's land). The GNWT requests that the ToR refer to the railbed as being on federal and territorial land.	No comment.
2	Section 1.1 'Past Mining'. Page 2 Planned Project footprint	Given the need to delineate brownfield and greenfield areas on the project site, the GNWT considers it important for PPML to provide a map and / or other illustrative documents or shapefiles showing the footprint or coordinates of the proposed mine in relation to those of the previous Pine Point Mine Project and townsite. The GNWT believes that such information could be pertinent in advancing the discussions on areas of the proposed project site that could be considered brownfields and those that could be considered greenfields.	The GNWT recommends that the Board require PPML to provide map and / or other illustrative documents or shapefiles showing the footprint of the proposed project (recognizing that a final design may not be available at this time) in relation to the footprint of the previous mine and townsite.	There are already many such maps in the Developer's Assessment Proposal and there will of course be many more in the DAR to respond to the requirements of the TOR (such as the requirements to describe existing environment for vegetation, and the requirement to consider the effects of past activities on caribou).
3	Section 1.1 'Past Mining.' Page 2	The draft ToR states "About 50 open pits, waste rock piles, a network of roads, and a tailings facility remain on the property from that era. There has not been an active mine at Pine Point since 1988."	The GNWT recommends acknowledging the history of reclamation of the previous Pine Point mine and railbed in this section. Currently there is no specific indication in the TOR of the reclamation that has occurred and been approved by previous governments (federal and territorial). The GNWT recognizes that it is possible that the reclamation that was done in the 1990s may not be up to modern standards. The GNWT	PPML agrees that it may be helpful to include a baseline in the Terms of Reference so as to distinguish PPML's proposed activities from historical ones, as PPML will only be responsible for remediating impacts from its own activities, not historical ones.

			understands the developer would be responsible for remediating impacts from their project areas and activities. Appropriate baseline information collected would help inform all parties of the current conditions. A paragraph highlighting these aspects would increase clarity to the developer and public on the history of and current responsibility for such factors.	
4	Section 1.1 'Past Mining.' Page 2	The GNWT is talking with, and will continue to talk with PPML regarding site conditions. For the information of all parties, the GNWT is submitting to the Board for placement on the public registry a series of documents regarding the history of the site with respect to site conditions and previous remediation efforts. The GNWT will post additional documents as they are identified.	The GNWT recommends that the Board encourage the developer to put on record, any information on past reclamation activities that may have been carried out by its predecessor on the old Pine Point Mine site.	PPML agrees with the recommendation. However, neither PPML nor Osisko Metals are in possession of any information not already provided by the GNWT. PPML has been working with GNWT to identify historic documents, and appreciates the effort that GNWT has invested in this.
5	Section 1.2. 'Process of Developing the Terms of Reference.' Page 3	The third bullet on Page 3 reads "the Project partially overlaps and uses the location of the historic Pine Point mine, which has not been fully reclaimed"	The GNWT recommends stating: the Project partially overlaps and uses the location of the historic Pine Point mine, which the GNWT understands was remediated in the 1990s and may not be to modern standards.	PPML agrees with the GNWT suggestion
6	Section 1.2 'Process of Developing the Terms of Reference' Page 3	The third bullet on Page 3 reads "the Project partially overlaps and uses the location of the historic Pine Point mine, which has not been fully reclaimed"	The GNWT recommends stating: the Project partially overlaps and uses the location of the historic Pine Point mine, which the GNWT understands was remediated in the 1990s and may not be to modern standards.	PPML agrees with the GNWT suggestion
7	Section 2.2.1 'Valued Components.' Page 6. Section 4.1.5 'Surface and Groundwater Quality and Quantity.' Page 19.	Section 2.2.1 outlines that a preliminary list of valued components to be used in the assessment of biophysical, social, economic, and cultural impacts from the project includes surface water and	The GNWT supports the inclusion of surface water and groundwater quality and quantity and the use of water by people as a valued component.	PPML disagrees that surface water and groundwater quality and quantity be included as one valued component. PPML understands the interconnection between the surface and groundwater; however, they would have different measurement indicators and would have different analysis and assessment methods.

		groundwater quality and quantity and the use of water by people. Further, Section 4.1.5 acknowledges that: "The Review Board understands that there is a high level of connectivity between the surface and groundwater systems in the project area. Because of this connectivity, the Review Board believes that it is appropriate and necessary to consider the surface and groundwater system as a single valued component in this assessment." The GNWT supports the inclusion of surface water and groundwater quality and quantity and the use of water by people as a valued component, and that surface water and groundwater quality and quantity will be considered a single valued component, in accordance with the GNWT's recommendations in review of the Developer's Assessment Proposal.	The GNWT supports the consideration of surface water and groundwater quality and quantity to be a single valued component given the connectivity between the surface and groundwater systems.	
8	Section 2.2.2 'Key Lines of Inquiry.' Page 7.	Section 2.2.2 lists the key lines of inquiry to be addressed within the Developer's Assessment Report. The GNWT believes that the importance of water resources is an important element of the assessment.	The GNWT supports the inclusion of "managing water so that it remains clean in the future" as a key line of inquiry.	As per the response to CanNor-20 and -23, PPML believes that “clean” is a subjective statement adjective and difficult to define in a way that would be the same for all groups. PPML suggests that the wording be “managing water so that it remains safe and available for use in the future”.
9	Section 3.1 'Describe Baseline Conditions and the Existing Environment.' Page 8-9.	The GNWT supports the requirement to describe baseline conditions for each valued component in enough detail to accurately describe and assess potential impacts from the proposed development. However, the title of Section 3.1 and its content do not clearly align, causing some ambiguity in what is being requested by this section. The title asks the developer to describe the baseline	The GNWT recommends that the request for a description of the baseline conditions and the existing environment is presented in a separate section from the request for a description of potential changes in the future environment.	PPML agrees that the Section 3.1 of the TOR is somewhat confusing as written. PPML disagrees with the concept of providing a future baseline without the Project in a separate section. The concept of a future baseline is implicitly part of the assessment cases (see Section 4.1.3.3 of the Developer’s Assessment Proposal). PPML believes that assessing future risks associated with Cominco’s historic mining operations is outside the scope of the Project.

		conditions and the existing environment, in other words the present, but much of the content of this section is asking for a description of the environment in the future. Separating the requests for each of these descriptions would help emphasize the importance of each.		
10	Section 3.5 'Assess Impacts Holistically and Systemically.' Subsection - 'Secondary Pathways.' Page 11.	In relation to the assessment of effects, Section 3.5 states: "the developer should consider secondary pathways if they interact with other VCs, to evaluate the combined effects of multiple impacts from the project, as part of evaluating the systemic impacts of the project." The GNWT notes that this aligns with concerns raised in the review of the Developer's Assessment Proposal. Specifically, the GNWT noted that: "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."	The GNWT supports that the assessment of effects should consider secondary pathways if they interact with other valued components, to evaluate the combined effects of multiple impacts from the project as part of evaluating the systemic impacts of the project.	As per the TOR, PPML will consider secondary pathways in terms of larger interactions or systemic impacts. However, the definition of secondary pathways is that with the application of mitigation, the pathway could result in a measurable but minor environmental change relative to existing conditions or guideline values, but the change is sufficiently small that it would have a negligible residual effect on a VC (e.g., an increase in an air quality parameter that is negligible compared to the range of existing values and is well within the air quality guideline for that parameter). Therefore, the pathway would not be expected to contribute to effects of other existing, approved, or RFDs to cause a significant effect. Based on the definition, secondary pathways are unlikely to contribute to combined effects or systemic impacts as described in the draft TOR.
11	Section 3.7 'Cumulative Effects Assessment.' Page 12. Inclusion of natural factors when assessing cumulative effects/impacts	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	The GNWT recommends that the inclusion of impacts from natural processes, as well as impacts from past, present and reasonable foreseeable projects, be identified as a requirement when assessing cumulative impacts of the project.	PPML plans to include climate change and associated natural factors into the RFD Case and so is amenable to this inclusion into Section 3.7.

		limited to only the impacts from 'past, present and reasonably foreseeable future projects' as currently stated in Section 3.7 and other locations throughout the draft Terms of Reference. Both human disturbances, 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. Furthermore, the inclusion of natural factors when assessing cumulative effects/impacts was confirmed by the developer during the Technical Scoping Session.		
12	Section 3.9 'Climate Change.' First paragraph Page 12. Terminology	The draft Terms of Reference state "These effects have implications to the success of projects through a myriad of pathways including increased extreme weather events, fires, impacts to project infrastructure, shorter ice road seasons, melting permafrost, changes to wildlife, and many other ways." Permafrost thaws, it doesn't melt.	The GNWT recommends that "melt" be changed to "thaw" in the first paragraph of Section 3.9 on page 12.	PPML agrees with the recommendation.
13	Section 3.9 'Climate Change.' First paragraph, Page 12. Terminology	The draft Terms of Reference state "These effects have implications to the success of projects through a myriad of pathways including increased extreme weather events, fires, impacts to project infrastructure, shorter ice road seasons, melting permafrost, changes to wildlife, and many other ways." What is meant by "changes to wildlife"? Changes to what in wildlife (movement	The GNWT recommends the expansion of what is meant by "changes to wildlife" in the first paragraph of Section 3.9 on page 12.	PPML agrees with the GNWT that the wording is unclear.

		patterns, distribution, abundance, access to critical habitat, etc.)?		
14	Section 4.1.1 'Atmospheric Environment." First paragraph, Page 13. Terminology	The draft Terms of Reference state "The project may release emissions, dust and smells to the air." The project will release emissions, dust and odors to the air, as indicated in the developer's Identification of Potential Project-Interactions and Proposed Mitigations Measures report that was submitted as part of the environmental assessment initiation package for the Pine Point Project.	The GNWT recommends that "may" be changed to "will" in the first paragraph of Section 4.1.1 on page 13.	No concern.
15	Section 4.1.1 'Atmospheric Environment.' First paragraph, Page 13. Terminology	The draft Terms of Reference state "The project may release emissions, dust and smells to the air." The word "smell(s)" is not typical terminology used in air quality.	The GNWT recommends the replacement of "smells" with "odour" in the first paragraph of Section 4.1.1 on page 13.	No concerns.
16	Section 4.1.1 'Changes to the Atmospheric Environment.' Page 14. Fugitive Emission Sources	The draft Terms of Reference direct the developer to include in the Developer's Assessment Report a description of emission sources of air pollutants from the project including all point sources, mobile sources, and road sources. However, there is no explicit mention of fugitive emissions sources. The description of emission sources should include fugitive emission sources such as stockpiles and loading and unloading areas.	The GNWT recommends that the Terms of Reference should direct the developer to provide a description of air emission sources from the project including all point sources, fugitive sources, mobile sources, and road sources.	No concerns.
17	Section 4.1.1 'Greenhouse Gas Emissions.' Last paragraph, page 15. Reference to the Strategic Assessment of Climate Change	The draft Terms of Reference state that "Additional guidance related to greenhouse gas emissions and climate change is included in the draft Strategic Assessment of Climate Change prepared by Environment and Climate Change Canada."	The GNWT recommends the removal of "draft" from the reference to the SACC on page 15.	Agreed; no concern; although this strengthens the argument against using Draft Technical Guidance Document as proposed by ECCC.

		The Strategic Assessment of Climate Change (SACC) was finalized in 2020. Note that the draft Technical Guide Related to the SACC: Guidance on quantification of net GHG emissions, impact on carbon sinks, mitigation measures, net-zero plan and upstream GHG assessment is currently in draft form and open for public comment.		
18	Section 4.1.4 'Existing environmental and baseline conditions – terrain and soil.' Page 18.	The section identifies a number of aspects that are to be included in the DAR. The GNWT is very interested in understanding the baseline soil conditions in the areas for which project activities are planned. Currently, the TOR required PPML to • describe baseline concentrations of contaminants of concern based on historic and proposed mining within the local, regional, and downstream receiving environments. And further down: • describe the historical land use and the potential for contamination of soils and sediments. The GNWT agrees that any known or suspected areas of soil contamination should be identified in the DAR.	The GNWT recommends that these two bullets be revised to ensure that the baseline assessments associated with terrain and soil are clear that soil baseline will be collected. • describe baseline 'soil' concentrations of contaminants of concern based on historic and proposed mining within the local, regional, and downstream receiving environments. • describe the historical land use and the potential for soil contamination as a result of the proposed project.	For the soils baseline, PPML We should push with something like, we would be happywilling to review the baseline soil condition data that were used by the GWNT/DIAND to accept the land back from Cominco. Cominco described potentially contaminated areas in their Abandonment and Restoration Plans available on the LWBLand and Water Board document registry (MV2006L2-0003). WePPML would be happy toalso review the information that the GNWT used to confirm that these areas were adequately reclaimed prior to Cominco relinquishing the lands back to the GWNT/Crown.
19	Section 4.1.5 'Surface and Groundwater Quality and Quantity.' Pages 19-20. Identification of geographic scope	The minimum geographic scope for the surface and groundwater assessment should include the basins of the five watercourses in the vicinity of the Pine Point Project and the wetlands of the regional study area. A basin-wide	The GNWT recommends that the minimum geographic scope of assessment for surface and groundwater quality and quantity be identified in Section 4.1.5 and that it include Paulette Creek, Twin Creek, the Buffalo River,	PPML do not agree that this recommendation is needed. The Developer's Assessment Proposal stated that the LSA for the Project would be defined at a scale that contains most, or all, expected effects of the Project on the VCs and supporting intermediate components; therefore, the LSA for surface water and groundwater quantity and

		approach is important for assessing impacts to water so that cumulative impacts elsewhere in the basin can be accounted for. A basin-wide approach also allows for comparative monitoring of undisturbed parts of the basins (i.e. upstream of the Project) vs. disturbed parts of the basin (i.e. areas directly impacted by Project disturbances). Including wetlands in the regional study area, many of which are not inside the delineated basins of the creeks and rivers of the study area, is important in order to assess impacts to these features (e.g. impacts to wetland water level, connectivity and landscape wetness from dewatering or site water management practices). Furthermore, as done in Section 4.2.2, which specifies the minimum geographic scope of assessment for fish and aquatic life and habitat, the minimum geographic scope of assessment of surface and groundwater should likewise be identified in Section 4.1.5.	the Little Buffalo River, Birch Creek, and the basins of these five watercourses, as well as the wetlands and Great Slave Lake in the regional study area.	quality includes each of the listed creeks and rivers (except for Birch Creek and Little Buffalo River), as well as wetlands and the coastal fringe of Great Slave Lake. The extent of this proposed LSA is anticipated to be appropriate (and large enough) to capture direct and indirect Project effects on surface water flows and levels resulting from the Project. Birch Creek, as well as a 2 km extension of the LSA into Great Slave Lake and upstream extensions of the LSA to the Paulette Creek, Twin Creek, the Buffalo River watersheds are included in the RSA. PPML considers the proposed RSA is appropriate to capture the maximum potential effects from the Project. The Little Buffalo River is excluded from the LSA and RSA because it lies well outside the potential influence of the Project and RFDs.
20	Section 4.1.6 Vegetation. Subsection - 'Changes to Vegetation.' Page 26. Ecologically important plants	The third bullet point in Section 4.1.6, subsection "Changes in vegetation", instructs the developer to describe project impacts on any rare plants and plants of traditional, cultural, or economic importance but doesn't specify plants of ecological importance. An example of plants of ecological importance include plants/forage that are critical to caribou diet.	The GNWT recommends that the third bullet point under Changes to Vegetation be re-worded to read "impacts on any rare plants and plants of traditional, cultural, ecological or economic importance".	No concern with this change in wording
21	Section 4.1.6 Vegetation. Subsection - 'State of regeneration at	On Page 26, bullet 4 under the subsection labelled "State of regeneration at past disturbed sites at	The GNWT recommends that the Board clarify what it expects of the developer in terms of describing any known past	PPML believes that this information should be provided by the GNWT. PPML has searched available public records, including the Land and Water Board's document

	past disturbed sites at Pine Point mine property.' Page 26	Pine Point mine property" states " describe any known past reclamation or remediation efforts at the site". This site has gone through various reclamation or remediation activities that have focused on issues other than vegetation regeneration (for example, tailings management). Hence it is important to specify which reclamation or remediation efforts is being referred to.	reclamation or remediation efforts at the site and how these efforts have impacted the regeneration of vegetation on the site. If the Board wants a description of reclamation or remediation efforts geared toward revegetation, then the TOR should explicitly say so. If the goal is to have the developer describe all of the reclamation or remediation efforts on the site then the section on revegetation does not seem to be the logical place for this request.	registry, and cannot find a fulsome description of the results of the remediation and reclamation efforts undertaken in the past with respect to vegetation. Note that there are Abandonment and Restoration Plans on the Land and Water Board document registry site (MV2006L2-0013) from 1987, 1992, and 2006. PPML has also had several calls with the GNWT requesting any relevant information that they have in their files.
22	4.1.6 Vegetation - definitions of 'brownfield"	In the DAP, the developer refers to the Pine Point mine site as being located on a brownfield site, or as a brownfield site, or in predominantly a brownfield area. The ToR requires the developer to provide clear definitions of "greenfield" and "brownfield" with rationale for these descriptions. The GNWT notes that baseline archaeological studies at the Pine Point mine sites have demonstrated that large tracts of terrain within the historic mine property (the "brownfield" site) are not previously disturbed; this has implications for archaeological recommendations.	The GNWT recommends that in the definitions of brownfield and greenfield, the developer clarify that "brownfield" does not necessarily mean areas of disturbed terrain with respect to the need for an archaeological assessment. The issue of whether or not terrain is categorized as previously disturbed heavily influences assessments of heritage resource potential and subsequent recommendations. The GNWT also recommends that the definition of "brownfield" should align with heritage resource baseline studies which have demonstrated that there are intact landscapes within areas broadly described as "brownfield" on the historic mine property. These sites have potential to contain archaeological sites. Areas that have been modified through cutlines, for example, still contain significant tracts of undisturbed land with archaeological potential. The GNWT also recommends the developer identify how much of the site would be considered brownfield and how	The terms brownfield and greenfield were used as high-level descriptors to distinguish areas of historic mining from areas of the Project where mining was not undertaken. These terms will be replaced in the DAR with more specific descriptors that recognize the regeneration of disturbed areas, and that disturbed areas may also have heritage resources.

			much would be considered greenfield. If there is overlap between the two definitions, the developer should also indicate how much of the brownfield is not previously disturbed. The GNWT recognizes that there might not be a clear distinction between brownfield and greenfield sites in the area of the project. Where there might be a gradient of conditions at the site that do not necessarily fit into the definition of brownfield or greenfield, the GNWT recommends the proponent identify these, and describe them to the best of their abilities. If it is helpful, the GNWT recommends the proponent create a definition for these areas.	
23	Section 4.2.12 Social and Community Conditions Page 46-47	The GNWT notes that the Hamlet of Enterprise was not included in the list of potentially affected communities, whose existing municipal services and infrastructure could be impacted by the project. The GNWT believes that due to the existing railway infrastructure in the community, and Enterprise's proximity to the highway, it is important for the developer to assess the impacts of the project on the status and capacity of existing services and infrastructure in the community.	The GNWT recommends that Enterprise be added to the list of potentially affected communities listed in the 10th bullet on Page 47 (Section 4.2.12 "Social and Community Conditions", Subsection 'Existing Environment and Baseline Conditions'). The bullet should read 'status and capacity of existing services and infrastructure within potentially affected communities (including the Hamlet of Enterprise, Hay River, K'atl'odeeche First Nation, Fort Resolution, and Fort Smith).	PPML agrees that the community of Enterprise be included in the socio-economic assessment for the Project. Potential impacts will be screened, and baseline conditions will be described where a community has the potential to experience relevant Project effects, such as those identified in this comment.
24	Section 4.2.12 Social and Community Conditions Page 46-47	The draft TOR requires the developer to assess the impact of the project on municipal services such as water and sewer , and emergency response services (for example, ambulance services, and fire protection), and emergency services on the highway.	The GNWT recommends that the Board require the developer to assess, in all potentially affected municipalities, the impacts of the project on: a. the status and capacity of solid waste services and recreational facilities. b. community government human resource capacity.	PPML agrees with these additions.

		However, the draft TOR does not require the developer to assess the impact of the project on:; solid waste services and recreational facilities. Potentially affected communities are responsible for the continued delivering of these services and maintaining infrastructure through their available funding. Hence, any additional demand for these services has potential implications for human resources and their finances. The ToR should also require the developer to assess the impacts of the project on community government human resource capacity, the provision of municipal services and the maintenance of municipal infrastructure.		
25	4.2.12 Social and Community Conditions	The GNWT notes that the ToR makes numerous references to safety as well as potential social, community, and economic impacts to women, Indigenous Peoples, youth, Elders, LGBTQ+ and two spirited people, and vulnerable groups. The GNWT is supportive of this inclusion. Through EA, the GNWT supports 'Calls to Justice' 13.1 and 13.2; through review of the ToR, the GNWT believes that it supports the 'Calls for Justice'.	The GNWT encourages the developer, the Board, and all parties to review and consider the 'Calls to Justice' relevant to extractive and development industries.	PPML agrees to review and consider the Calls to Justice.
26	4.2.13 - Economy and Employment. In subsection - 'Effects on the economy and employment'. Page 51	This section asks the developer to describe "any socio-economic initiatives or agreements that aim to maximize benefits". Many initiatives and agreements are confidential to some extent. The GNWT would like the developer to describe as	The GNWT recommends replacing the original bullet with this suggested bullet: 1) "any current or forthcoming socio-economic initiatives or agreements, including a socio-economic agreement with the GNWT, that aim to maximize benefits to the NWT".	PPML agrees with the majority of the proposed edit, with the exception of the words "or forthcoming". This section is intended to describe the agreements and initiatives that PPML will be a party to and participating in to maximize benefits. Forthcoming agreements and initiatives that PPML is not yet aware of cannot be included here, as they are currently unknown and thus do not have formal agreement from PPML.

		much as they can, while noting that many of those agreements will be confidential. In Table 4-8 of the Developer's Assessment Proposal, the developer stated that “PPML will collaborate with the government to track socio-economic trends in the region and in communities, and will track, internally, appropriate indicators with the purview of a developer as defined by the forthcoming Socio-economic Agreement between PPML and the GNWT.” The GNWT would like this to include forthcoming efforts so that not only existing initiatives and agreements are taken into consideration.		
27	Section 4.2.4, Impacts from the Project on Moose and Furbearers, Other Wildlife and Wildlife Habitat. Page 34. Terminology	The draft Terms of Reference direct the developer to describe the effects sensory disturbances, including smells, may have on moose, furbearers, wildlife and wildlife habitat valued components. The word "smells" is not a typical terminology used in air quality	The GNWT recommends the replacement of "smell" with "odour" in the seventh sub bullet on page 34.	We agree that the word “smell” can be replaced with “odour”.
28	Section 4.2.4, Moose, Furbearers and Other Wildlife. Page 34.	The draft Terms of Reference includes "working with GNWT to determine if a population survey for moose is appropriate for the project area". GNWT's comment on the Developer's Assessment Proposal stated "The Board should ensure that baseline requirements in the TOR include a population estimate for the caribou and moose in the Pine Point area. PPML should work with ENR to conduct a survey to determine how many boreal caribou and moose occur within the project area." This clearly identifies that the GNWT sees a	The GNWT recommends the rewording of the bullet on page 34 that states "working with GNWT to determine if a population survey for moose is appropriate for the project area" to "work with the GNWT to conduct a population survey of moose and caribou in the study area". This revision would eliminate the need for the last bullet in this section "Population estimates of moose and caribou in the Project area should be discussed with GNWT."	As the GNWT sees the need for a population survey for moose and caribou, we agree that the point of collaboration between GNWT-ENR and PPML is on the logistics and approach to the survey, and not on the need for a survey. As such, we agree with the change to the wording for the bullet on page 34. This also eliminates the need for the last bullet in this section.

		need for a population survey of moose in the project area in order to assess the impacts of this project and that the point of collaboration/cooperation between ENR and the developer is on the logistics and approach to the survey and not on the need for the survey.		
29	Section 4.2.4. Moose, Furbearers and other wildlife. Subsection & Section 4.2.5 Boreal Caribou - Subsection - 'Existing Environment and baseline conditions.'	GNWT has identified several inconsistent references to the Human and Ecological Health Risk Assessment (HHERA) in the draft ToR. For example, on page 34 of the ToR, bullet 5 states "Current levels of contaminants in traditionally harvested food species should be ascertained and linked appropriately to the Human Health and Ecological Risk Assessment that was undertaken." Four bullets from the bottom of the same page, the document states "possible changes to contaminant concentrations (as per the proposed Human and Ecological Health Risk Assessment). [emphasis added] Reference is also made to the HHERA on page 36 in an inconsistent manner. Based on the text of the ToR, it is unclear whether the HHERA has already being conducted or whether it is yet to be carried out. Could the Board clarify what the exact status of the HHERA is?	The GNWT has confirmed that although PPML has committed to carry out the HHERA, this exercise has not yet been carried out. Therefore, the GNWT recommends that references to the HHERA in the document state "the proposed HHERA."	PPML agree with the proposed wording change
30	Section 4.2.5, Existing Environment and Baseline Conditions (Boreal Caribou). Page 35.	Page 35 of the draft Terms of Reference contains this paragraph "The DAR will provide the best information available from the Government of Northwest Territories (GNWT) Environment and Natural Resources (ENR) Branch regarding population size and trends for herds within appropriate spatial scales. Consideration and mention will be given	The GNWT recommends the rewording of the paragraph as follows: "The DAR will use the best information available, including data and reports from the Government of Northwest Territories (GNWT) Department of Environment and Natural Resources (ENR), to characterize population size, habitat metrics and trends for boreal caribou at	PPML agrees with the new wording for this paragraph.

		at multiple resolutions, in consultation with GNWT-ENR and Environment and Climate Change Canada. Consideration for measurement at the federal NT1 Range for boreal caribou, the Southern NWT Range Plan, the area east of Hay River and south of Great Slave Lake (as described in the developer's proposed RSA), and incorporating detailed collar information for a local Pine Point population(s) polygon, will be considered for cumulative and residual effects, in consultation with ENR. The developer should work with and consult Indigenous knowledge holders and territorial experts on appropriate survey methods for caribou and provide justification for the methodology used."	the following spatial 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 Regional Study Area, 4) the range of the local Pine Point caribou corresponding to a minimum convex polygon or kernel density contour (subject to further discussion with ENR) around the Pine Point collar locations and 5) the proposed LSA. This information will provide the basis for both the residual effects analysis and the cumulative effects analysis. Data from a population survey in the Pine Point area, consistent with the methods used by ENR in previous surveys, should also be used. The developer should work with and consult Indigenous knowledge holders on other survey approaches that may support baseline work.	
31	Section 4.2.5, Boreal Caribou. Subsection - 'Existing Environment and Baseline Conditions.' Page 35-36.	The second bullet on page 36 states "Evaluate effects at multiple spatial scales decided in consultation with ECCC and GNWT-ENR, likely at the NT1 range-scale, the southern NWT range planning region and the local Pine Point herd population-level". This description of the spatial scales is not consistent with that in the preamble to this section. The spatial scales listed should be consistent and prescriptive.	The GNWT recommends the revision of the second bullet on page 36 to state "Evaluate effects at multiple 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 Regional Study Area, 4) the range of the	PPML agrees that the second bullet on page 36 can use the wording recommended by GNWT and that bullet #10 on page 36 can be removed.

			local Pine Point caribou corresponding to a minimum convex polygon or kernel density contour (subject to further discussion with ENR) around the Pine Point collar locations and 5) the proposed Local Study Area. This information will provide the basis for both the residual effects analysis and the cumulative effects analysis." The GNWT also recommends the removal of bullet # 10 on this list on page 36 of this section.	
32	Section 4.2.5 Existing Environment and Baseline Conditions (Boreal Caribou). Page 35-36.	Baseline information for boreal caribou should include information about how collared caribou are using regenerated sites of different ages. This will provide a basis for understanding restoration and closure objectives and cumulative effects.	The GNWT recommends the addition of a bullet on page 36 indicating that the Developer's Assessment Report should: "Within the Local Study Area, link the baseline information on the state of regeneration at previously disturbed sites required in Section 4.1.6 of the Terms of Reference to use by collared caribou."	PPML will collect additional baseline data that will inform on the regeneration state of previously disturbed areas at the historic Pine Point mine. Collared caribou use of previously disturbed areas will be provided within the assessment.
33	Section 4.2.5, Existing Environment and Baseline Conditions (Boreal Caribou). Pages 35-36.	The last bullet point in Section 4.2.5, subsection "Existing environment and baseline conditions", instructs the developer to "consider the effects of ..."(emphasis added). This wording choice does not clearly indicate the need to fulfill the requirements identified in the bullet point, which are important to the cumulative effects assessment for caribou.	The GNWT recommends that the word "consider" be replaced with "include". The bullet point would read as "include the effects of past activities on caribou, changing climate..."	PPML agrees that the word “consider” can be replaced by “include”.
34	Section 4.2.8 'Indigenous Land use' - Subsection 'Existing conditions and baseline conditions'	The last bullet on Page 40 states the developer will describe the following: "past and present traditional activities in the region, including...." It is unclear how far back the developer should go in describing these activities. Is it the immediate past (after the closure of the	The scope of this request is the prerogative of the Board. The GNWT requests that the Board clarify the scope of its request (i.e. how far back in time does the developer need to go) regarding information on past traditional activities in the region.	PPML believes that Indigenous Peoples should have the opportunity to define the temporal extent of their past activities on the land through community-led Indigenous Knowledge studies, and does not feel that a single date is required or applicable for all groups, specifically with reference to past Indigenous use of the land and its resources.

		Pine Point mine) or pre development of the mine (i.e. earlier than the 1960s)?		
35	Section 4.2.8 'Indigenous Land Use' - Subsection -'Existing Conditions and baseline conditions.' Page 41 Subsection -'Effects on Indigenous Land Use.' Page 42	The fourth bullet on Page 41 requires the developer to describe " how climate change has already impacted traditional harvesting" Should this read " how climate change has already impacted traditional harvesting on the local study area"? On Page 42, the fifth bullet from the bottom requires the developer to assess the "impacts of climate change on Indigenous harvesting and land use (for example, ice conditions, weather predictability, or wildlife distribution and availability)". It is not clear if that means the developer should assess the impacts of the project on climate change and then the impact of climate change on Indigenous land use or something different.	The Board should clarify in the final TOR what it expects of the developer with respect to the impacts of climate change on Indigenous harvesting. Is the Board requesting that the developer predict how climate change, interacting with the effects of the project, is likely to impact traditional harvesting?	PPML agrees with this request for clarification.
36	4.3.2 - 'Lasting Well-being'. Subsection - 'Supporting Questions'	There are no questions regarding the mine's contractors/sub-contractors in the 'key questions' or 'supporting questions' sections. Contractors/sub-contractors may represent a tremendous amount of the economic benefits available from the project.	The GNWT recommends the inclusion of this additional question: "Will the project improve on the capacity of local businesses, providing goods and services to the mine and for similar future work?" so that local businesses are addressed at a systems level (4.3)	PPML agrees with this addition.
37	Section 4.3.2 'Lasting Well-being'. Subsection - 'Key Questions'. Page 59	The second bullet from the bottom of Page 59 (key questions on well-being to be answered in the DAR) reads -"How will this project act cumulatively with other projects in the area to affect social, health, cultural, and economic conditions?" The GNWT believes that it is important to also consider how the effects of the project will interact cumulatively with effects of past developments, to affect social, health, cultural, and economic conditions.	The GNWT recommends that the Board consider revising the question in the bullet to read "How will this project act cumulatively with the effects of past developments and other projects in the area to affect social, health, cultural, and economic conditions?	PPML suggests that the "effects of past developments" would be captured in the discussion of existing conditions (e.g., how past development influenced labour force conditions today), which is what the Project's effects are assessed against. Given this, PPML does not feel an edit to this bullet is required.

38	Section 5.2. 'Presentation of Material.' Page 63.	Section 5.2 identifies the Developers Assessment Report submission requirements, such as printed copies upon request and electronic documents in PDF format. The GNWT notes that any raw data included to support the Developer's Assessment Report should also be submitted in useable (i.e. unsecured) excel format to enable reviewers to conduct their own assessments, confirm the developer's conclusions, and any other relevant analysis.	The GNWT recommends the Terms of Reference require any raw data used in the Developer's Assessment Report be submitted in a useable excel format.	PPML prefers that this not be included in the TOR. In general, PPML is amenable to providing raw data in an electronic format when requested; however, PPML would prefer to not be tied to a blanket requirement for all data. For example, PPML may receive and use data from other parties that may be unwilling to share publicly.
39	Section 5.6, Potential Accidents and Malfunctions, page 65	The proposed project area is a previously developed site that has a long history of occupancy and activity. Technical, legal and regulatory risks can be associated with a site that has previous development history. PPML's development and operation of the site could potentially cause an unplanned release. The Terms of Reference should identify in the assessment of accidents and malfunctions, the potential for risks related to previous site development. This assessment would build on the baseline data collection requirements intended to capture legacy effects from past development.	The GNWT recommends that the first bullet in Section 5.6 is edited to state: Conduct a risk assessment using best practices for the project including planned and legacy: components, systems, hazards, and failure modes. The GNWT recommends that the TOR require that any risk assessments associated with accidents or malfunctions consider the impacts of such events in conjunction with the conditions that existed prior to the proposed activity (i.e. ambient baseline).	PPML agrees with GNWT that the risk assessment for accidents and malfunctions consider the current state of the site, which includes the historic Pine Point mine site.
40	Section 5.8, 'Monitoring, Evaluation, and Follow-Up.' Page 67.	In the second bullet of Section 5.8, the developer is asked to "describe how the project-specific monitoring will be compatible with the NWT Cumulative Impacts Monitoring Program or any other regional monitoring and research programs." However, this wording is slightly misleading. The NWT Cumulative Impacts Monitoring Program	The GNWT recommends that the bullet is re-worded as follows: "describe how the project-specific monitoring will be compatible with any regional monitoring and research programs".	PPML agrees with the proposed change.

		(NWT CIMP) is one source of monitoring and need not be singled out. NWT CIMP is able to provide advice and information regarding monitoring and research programs in the region. We encourage the developer to contact NWT CIMP for further information.		
41	[object Object]	The draft Terms of Reference state "The NWT is already experiencing changes in average temperature, shifts in the seasons and an increasing frequency of extreme weather events, fires, and other climate change impacts and slow low onset events." What is meant by "slow low onset events"?	The GNWT recommends that the Board clarify what it means by "slow low onset events".	PPML agrees with the GNWT's request for clarity on this phrase.
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Katlodeeche First Nation (KFN) - Peter Redvers				
1	Letter from Katl'odeeche First Nation	Letter from KFN	Letter from KFN	No resonse required
No	Topic	Reviewer Comment	Reviewer Recommendation	Proponent Response
Pine Point Mining Limited - Ozioma Adimonye				
1	Section 4.1.2 Noise and Vibration: "…provide current ambient noise levels…including the results of a baseline ambient noise survey"	Noise data from previous baseline surveys in the area are available and could be used to establish/characterize "current ambient noise levels".	The proponent should be allowed to make a case for why existing baseline data are still valid/representative, rather than being automatically required to collect new baseline noise data.	No response required
2	Section 4.1.2 Noise and Vibration: "…provide…permissible noise levels for each receptor"	There are no regulatory noise limits applicable to wildlife. As such, "permissible noise levels" at receptors can only be established with reference to regulatory guidance on human disturbance/annoyance.	Potential noise effects to wildlife should be assessed holistically within the wildlife section(s) of the DAR.	No response required
3	Section 4.1.3 Visual Changes: "…describe	Light levels are typically measured and assessed under dark skies. Given the	The requirement to characterize light effects for "different seasons" should be	No response required

	night-time illumination levels during different weather conditions and seasons"	high latitude of the Project site, it will be challenging to characterize night-time light levels during the summer season (when the night sky will not be very dark).	relaxed and the light assessment should focus on periods of time when the night sky is dark.	
4	Section 2.2.1 Valued Components: "Surface and ground water quality and quantity and the use of water by people … Indigenous land use … other land uses"	Surface and groundwater quality and quantity are distinct VCs that feed into the discussion of human uses of water, which are influenced by other factors. The assessment of impacts on Indigenous and other uses of the land combines the results of other discipline assessments to create a picture of how effects to the environment impact people.	PPML recommends that the use of water by people be a component of the Indigenous and other land use assessments, as the discussion of human use may be influenced by topics other than surface and ground water quality and quantity. PPML recommends that the VCs in question be revised to read: -groundwater quantity and quality -surface water quantity and quality -Indigenous land and water uses -other land and water uses	No response required
5	Section 4.2.1 Use of water by people. Existing environment and baseline conditions	Per the recommendation in Section 2.2.1, the use of water by people is not solely a discussion linked to surface and ground water quality and quantity. These are distinct considerations.	PPML recommends that bullet 1 in this section be incorporated into the Indigenous Land and Water Use VC.	No response required
6	Section 4.2.1 Use of water by people. Impacts from the Project on the use of water by people: "describe potential changes to navigable waters including" (includes three sub-bullets	Per the recommendation in Section 2.2.1, the use of water by people is not solely a discussion linked to surface and ground water quality and quantity. These are distinct considerations.	PPML recommends that this bullet, and the three sub-bullets, be incorporated into the Other Land and Water Use VC considering navigability requirements of Transport Canada.	No response required
7	Section 4.2.8 Effects on Indigenous Land Use: "overall impacts on Indigenous Peoples' ability to practice Treaty Rights"	The interpretation of Treaty Rights is important and complex, but is not likely effectively evaluated by any one developer through a regulatory process. PPML does not feel that the assessment of Indigenous Rights, including Treaty Rights, should be undertaken by the	PPML recommends that this bullet be removed from the TOR.	No response required

		developer, and that this is best evaluated by Indigenous Peoples themselves. Consistent with the requests of other Indigenous groups commenting on the TOR (e.g., DKFN 29), PPML requests that this requirement be removed from the TOR. Specifically, PPML requests that the bullet “overall impacts on Indigenous Peoples’ ability to practice Treaty Rights” be removed from Section 4.2.8.		
8	Section 4.2.9 Other Land Uses: "revenue from tourism, outfitting, or similar activities"	Tourism, outfitting, and similar commercial land use opportunities (e.g., aurora viewing, guiding) are often operated by small companies or individual operators. Requesting baseline information on the revenue that these small operates obtain from their business is inappropriate, and such information could not ethically be reported on in a public document.	PPML recommends that this bullet be revised to read "tourism, outfitting, or similar commercial activities".	No response required
9	Section 4.2.12 Social and Community Conditions: bullet "social indicators of quality of life…" (entire bullet and sub-bullet)	This bullet is limiting as written, and could be reworded to use a determinants of health approach.	PPML recommends that this bullet and sub-bullet be reworded to read "social and Indigenous determinants of health".	No response required
10	Section 4.2.12 Social and Community Conditions: bullet "the relationship between psychology and … on community" (entire bullet)	The psychological response to social and physical environments is a highly individual experience, and is not effectively discussed through the lens of a regulatory application. Soliciting information about such individual conditions such as psychology, and reporting on it in a public regulatory application, is likely neither appropriate nor ethical.	PPML recommends that this bullet be removed from the TOR as it is not appropriate for the purview of a regulatory filing.	No response required

11	Section 4.2.12 Social and Community Conditions: bullet "any social impacts of income inequity and uneven distribution of benefits within families nd communities"	Understanding how benefits would accrue to individual families is not possible at this time - the workforce for the Project has not been selected. Further, it is not possible at this stage to accurately assess how benefits are distributed within an individual family.	PPML recommends that this bullet be reworded to omit the words "within families".	No response required
12	Section 4.2.12 Social and Community Conditions: bullet "any emotional or stress factor…"	The emotional response to changes in daily activities is a highly individual experience, and is not effectively discussed through the lens of a regulatory application. Soliciting information about such individual conditions, and reporting on it in a public regulatory application, is likely neither appropriate nor ethical.	PPML recommends that this bullet be reworded to omit the words "emotional or".	No response required
13	Section 4.2.12 Social and Community Conditions: bullet "any need for government or the developer expenditure for new or expanded services, facilities, and infrastructure as a result of project-related impacts"	It is likely not possible for the developer to estimate expenditures required by government to develop or expand services, facilities, and infrastructure. Such estimates are made by government as part of their mandate to provide services to the population.	PPML recommends that this bullet be reworded to read "any need for new or expanded services, facilities, and infrastructure as a result of project-related impacts".	No response required
14	Section 4.2.13 Economy and Employment. Effects on the economy and employment "the developer will assess the potential economic effects of the project on each potentially-affected community and population"	It is not always possible to accurately predict how individual communities will respond to economic opportunities. While data can be presented at a community level to characterize a labour market and business base, it is unknown how the community will/can respond. Further, many efforts by the developer to target communities most impacted by the Project for benefits such as employment and contracting are broad, applying to	PPML recommends that this bullet be reworded to read "the developer will assess the potential economic effects of the project on potentially-affected communities".	No response required

		multiple communities. The wording as presented here suggests a separate economic assessment for each individual community. This is likely not effective within the context of a regulatory application.		
15	Section 4.2.13 Economy and Employment. Bullet "any socio-economic initiatives or agreements that aim to maximize benefits"	Many agreements between the developer and communities or other groups are confidential, and so the contents cannot be reported in a public document.	PPML recommends that this bullet be reworded to read "any non-confidential socio-economic initiatives or agreements that aim to maximize benefits".	No response required
16	Section 4.2.13 Economy and Employment. Bullet "how the project would affect gross domestic product at the federal and territorial levels, as well as the net economic benefits to the Canadian economy"	The incremental net economic benefit of any one project to the Canadian economy is extraordinarily small relative to the totality of economic activity. It is suggested that there is little utility in this national macroeconomic discussion for an individual mining project of modest size.	PPML recommends that this bullet be reworded to read "how the project would affect gross domestic product at the federal and territorial levels."	No response required
17	Section 4.2.13 Economy and Employment. Section beginning with "The Review Board supports the GNWT's suggested approaches to enhance …" and subsequent 14 bullets.	The approaches identified in this list of bullets represent operational practices that may be taken by a developer. They are not guidance on how to conduct the DAR. Operational practices to enhance the capacity of the labour force will be addressed in the social management plan prepared for the Project, but to state that the developer has to adopt these specific measures or be considered non-compliant with the TOR is not appropriate for a TOR for a regulatory application. The need for mitigation and benefit enhancement measures to address the issue of local benefit capture can be highlighted in a TOR, but it is not appropriate to prescribe specific measures at this stage.	PPML recommends that this section be removed from the TOR, as it is not appropriate to prescribe operational practices in a regulatory TOR. Rather, this section could read "identify mitigation and benefit enhancement measures, including operational practices, to enhance local benefit capture and uptake of economic opportunities associated with the Project".	No response required

18	Section 4.2.14 Human Health	This section goes beyond typical measures of human health, extending into the realm of wellbeing.	PPML suggests this be renamed "Health and Wellbeing"	No response required
19	Section 4.2.14 Human Health	There is significant redundancy between this section and Sections 4.2.8 Indigenous Land Use; 4.2.11 Culture; 4.2.12 Social and Community Conditions; and 4.2.13 Economy and Employment. This section includes much of the holistic analysis that is referenced as the assessment conducted in Section 4.3.2 Lasting Wellbeing, and therefore does not appear to be a discrete VC.	PPML recommends a review of Sections 4.2.8, 4.2.11, 4.2.12, 4.2.13, and 4.2.14 to identify areas of redundancy to avoid repetition and confusion within the DAR. PPML also suggests that this section be revisited by the Board and focused in light of the fact that it appears to be the holistic, integrated assessment required in Section 4.3.2 of the TOR.	No response required
20	Section 4.2.14 Human Health. Effects to human health: Bullet "potential effects (quantified) to mental health (for example, stress, depression, anxiety, sense of safety)"	It is unclear why the qualifier "quantified" has been added here. Much of the discussion around mental health is not quantifiable beyond reported rates (which are not typically reflective of the real extent of mental health issues). Much of the discussion is qualitative.	PPML recommends that this bullet be reworded to omit the word "(quantified)"	No response required
21	Section 3.1 "The developer will account for potential change in the future environmental baseline, based on existing climate trends and projections, in the developer's predictions of impacts.	Range of conditions that could be present during the life of the Project from a climate perspective is neither certain, nor appropriate for use in an environmental assessment as it is highly speculative	PPML suggests that the TOR limit the baseline conditions and basis for assessment to those conditions that have been measured. Anything else would be speculative. The federal Strategic Assessment of Climate Change document does not address this scenario.	No response required
22	Section 3.1 "the developer will describe how climate change ... predicted future environmental conditions that account for a range of climate	The iterative nature of this request leads to the possibility of many versions of an air quality and climate assessment. The uncertainty of the scenarios and the significant effort required to assess each makes this an unnecessary task.	PPML suggests that the TOR limit the baseline conditions and basis for assessment to those conditions that have been measured. Anything else would be speculative. The federal Strategic Assessment of Climate Change document does not address this scenario.	No response required

	change scenarios, to reflect uncertainties".			
23	Section 1 Introduction: "… over five years along a 70 km stretch of land on the south side of Great Slave Lake."	There are discrepancies in the Project timelines in the draft TOR. This reference to timeline is not necessary here in the third sentence of the Introduction (Section 1).	PPML suggests that the sentence read "The project includes the open pit and underground mining of zinc and lead deposits along a 70 km stretch of land on the south side of Great Slave Lake."	No response required
24	Section 1 Introduction: "...more than 10 years of closure and reclamation activities at the end of mine life."	PPML would like to clarify that, as per Section 1.1.5 of the Project Description, active closure and reclamation activities are expected to take approximately 5 years, followed by a 10 year period of passive care.	PPML suggest this text in Section 1 be revised to state "approximately five years".	No response required
25	Section 1 Introduction: "...organize existing material (including from the Developer's Assessment Proposal)…"	Based on discussions with MVEIRB staff, PPML's understanding is that the final TOR will be a list of requirements for the DAR but the structure of the DAR is up to PPML.	PPML suggest that MVEIRB include this point within the TOR for clarity.	No response required
26	Section 2.1 Scope of Development: "…Key Lines of Inquiry and Subjects of Note."	PPML notes that Subjects of Note are used in Section 2.1, but not elsewhere in the TOR.	PPML suggests that Subjects of Note be deleted from this section, or that the term be used consistently throughout the TOR.	No response required
27	Section 2.2.1 Valued Components: "...valued components to be used in the assessment of biophysical, social, economic, and cultural impacts from the Project…"	Based on conversation with MVEIRB staff, PPML understands that significance will only be determined for VCs in Section 4.2 of the TOR and not for VCs in Section 4.1.	PPML suggests that the TOR clearly acknowledge that not all VCS should be assessed for significance.	No response required
28	Section 2.2.2 Key Lines of Inquiry: "...stand-alone assessment to facilitate public evaluation for all identified key lines of inquiry."	Based on discussions with MVEIRB staff, it is PPML's understanding that even if these are considered standalone, they can be an overall summary that references other sections.	PPML suggests that "standalone" can mean that the sections can summarize relevant information form other sections rather than repeating unnecessary text.	No response required

29	Section 2.2.2 Key Lines of Inquiry: "managing water so that it remains clean in the future lasting well-being"	PPML believes that “clean” is a subjective statement and difficult to define in a way that would be the same for all groups.	PPML suggests that the wording be “managing water so that it remains safe and available for use in the future”.	No response required
30	Section 2.3 Geographic Scope (spatial boundaries): "… Little Buffalo River (with respect to impacts on wildlife, water quality, fish, and land users). •Birch Creek (with respect to wildlife, water quality, fish, and land users)."	The Developer’s Assessment Proposal stated that the LSA for the Project would be defined at a scale that contains most, or all, expected effects of the Project on the VCs; therefore, the LSA for aquatic components quality includes each of the listed creeks and rivers (except for Birch Creek and Little Buffalo River), as well as wetlands and the coastal fringe of Great Slave Lake. The extent of this proposed LSA is anticipated to be appropriate (and large enough) to capture direct and indirect Project effects on surface water flows and levels resulting from the Project. Birch Creek, as well as a 2 km extension of the LSA into Great Slave Lake and upstream extensions of the LSA to the Paulette Creek, Twin Creek, the Buffalo River watersheds are included in the RSA. PPML considers the proposed RSA is appropriate to capture the maximum potential effects from the Project. The Little Buffalo River is excluded from the LSA and RSA because it lies well outside the potential influence of the Project and RFDs on aquatic components.	PPML suggests that Little Buffalo River be excluded from the local study area of the DAR for aquatic valued components as it lies well upstream of where indirect or direct project effects are expected to occur. PPML has included Birch Creek within the RSA for aquatic components.	No response required
31	Section 3.1 Describe baseline conditions and the existing environment. "...with reclamation activities continuing for 15 years	PPML would like to clarify that, as per Section 1.1.5 of the Project Description, active closure and reclamation activities are expected to take approximately 5 years, followed by a 10 year period of passive care.	PPML suggest this text in Section 3.1 be revised to state "with reclamation and closure activities continuing for approximately five years".	No response required

	(to 2052) approximately."			
32	Section 3.2 Identify predicted changes to the environment: "The DAR should also characterize the magnitude, direction, extent, timing, likelihood, duration, and scale of predicted changes."	PPML questions the use of the "scale" criterion in Section 3.2. Is that covered by extent (i.e., geographic extent)? This seems like a new criterion in the classification; “scale” is also not used in Appendix B.	PPML suggests that "scale" be removed from the list of criteria in Section 3.2.	No response required
33	Section 3.3 Assess impacts on valued components.	Section 3.3 indicates that "The DAR will assess the potential impacts of the proposed development to valued components based on the predicted changes to the environment. This will include a description of the magnitude, direction, extent, timing, likelihood, duration, and scale of impact." This section implies that this assessment will be completed prior to the identification of applicable mitigation (in Section 3.4 of the draft TOR). PPML strongly disgrees that the assessment of effects should occur prior to the application of mitigation. Based on standard EA practices, the assessment and classification is conducted only on residual effects.	PPML suggests that it be clarified in the TOR that the analysis and classification is for residual effects only.	No response required
34	Section 3.4 Identify mitigation: "…describe the effectiveness of mitigation measures, and where mitigations have been implemented in a similar context"	PPML did not plan on providing information on the effectiveness of mitigations and does not believe this adds value to the DAR.	PPML suggests that this point be removed from the TOR or it is clarified that this will be done through a brief na rrative. The effectiveness of mitigations is incorporated into the residual affects assesssment.	No response required
35	Section 3.5 Assess impacts holistically and	PPML's understanding is that the “systems thinking” referenced in Section	PPML recommends that the third paragraph of Section 3.5 indicate that the	No response required

	systemically: "Use systems thinking to integrate impacts of the whole development on multiple VCs"	3.5 of the TOR is specific to the three key lines of inquiry in Section 4.3. PPML anticipates that these sections will be plain language summaries of relevant sections of the DAR pulled together into a cohesive story. These sections are expected to be fairly high level and include references to other sections for additional details. These sections are not expected to include new or additional analyses.	systems thinking is specific to the the three key lines of inquiry in Section 4.3.	
36	Section 4.1.4 Terrain, geology and soil: describe landforms, terrain, soils, and sediments within the local and regional study areas, including sediment stratigraphy.	Sediments and sediment stratigraphy as they relate to waterbodies are assessed by aquatics components and not terrestrial components.	Suggest that "sediments" and "sediment stratigraphy" is moved to water quality surface and groundwater quality and quantity section (4.1.5)	No response required
37	Section 4.1.4 Terrain, geology and soil: Changes to terrain and soil •how the geotechnical stability of all engineered structures, including site access roads will be ensured against a range of climate, seismic, and precipitation scenarios	PPML would like to clarify the following. These are standard design input parameters for engineered structures. All engineered structures will be designed by a P.Eng and will be stamped. At the EA stage, many of the designs are not fully completed and would completed in the lead up to construction either during the permitting phase or post-permitting depending on when the structure is required to be constructed. This level of information may be addressed qualitatively at the level appropriate to the level of engineering at the EA stage.	PPML suggests that the TOR indicate that this will be done through a qualitative approach.	No response required
38	Section 4.4.4 Terrain, geology and soil: Changes to terrain and soil •how the geotechnical stability of	PPML would like to clarify the following. These are standard design input parameters for engineered structures. All engineered structures will be designed by a P.Eng and will be	PPML suggests that the TOR indicate that this will be done through a qualitative approach.	No response required

	the mine rock management areas, open pits, backfilled pits, and underground openings will be ensured, and for over what extent of time	stamped. At the EA stage, many of the designs are not fully completed and would completed in the lead up to construction either during the permitting phase or post-permitting depending on when the structure is required to be constructed. Engineered designs would be submitted to the board prior to construction for approval. The information would be developed to a sufficient level required for the assessment of effects for the EA.		
39	Section 4.1.4 Terrain, geology and soil: In addition, this section should focus on the karst terrain as is relates to groundwater flow and interactions with surface water, as this is an important consideration in this environmental assessment.	PPML would like to clarify that the terrain and soils section will consider results from the hydrogeology/surface water sections to evaluate changes to terrain and soils, but the analysis will not be completed here.	PPML recommends that this bullet be reworded to reflect this distinction.	No response required
40	Section 4.2.1 Use of water by people: •provide all water quality requirements that will need to be met, or that the developer is proposing to meet, in the local and regional study areas during all phases of development	There is some redundancy in the DAR requirements in this bullet and in the following 4th bullet. The water quality requirements stated in this bullet will be guided by the "applicable guidelines, objectives or standards for water consumption use, aesthetics, recreational or other."	PPML suggest blending these bullets to state, "provide all water quality requirements for groundwater and surface water quality and quantity that will need to be met, or that the developer is proposing to meet, in the local and regional study areas during all phases of development, which will form the basis to compare Project-related changes"	No response required
41	Section 4.2.2 Fish and aquatic life: • describe fish present in the project areas... spatial and temporal scales, which	PPML recognizes that much of the requirements listed here as from the Tailored Impact Statement Guidelines Template for Designated Projects Subject to the Impact Assessment Act and the Nuclear Safety and Control Act.	PPML would like to clarify that for this section in the DAR, a high-level summary will be provided based on information that is available, but much of this information will not be available in detail.	No response required

	are critical to identifying effects to population persistence and ecological processes	Much of this information will not be available for the Project area as it has not been heavily researched compared to southern areas in Canada. Collection of baseline information to this level is beyond the scope of baseline studies to be conducted by a single proponent for an EA.		
42	Section 4.2.2 Fish and aquatic life: • describe fish present in the project areas. Include a description of: seasonal and annual trends in abundance	Abundance data for fish are not available for the Project area and baseline sampling has been focused on presence/absence and not quantitative estimates of abundance. Quantitative estimates of abundance are beyond the scope of a baseline study to support an EA.	PPML suggests that the requirement for seasonal and annual trends in abundance be removed form the TOR.	No response required
43	Section 3.7 Cumulative Effects Assessment: " For each predicted impact the developer will assess the potential for cumulative effects …"	This section starts off with "for each predicted impact…." which is confusing with the context for the rest of the paragraph.	PPML suggest removing "for each predicted impact" from the start of the paragrpah.	No response required
44	Section 3.7 Cumulative Effects Assessment: "The developer will estimate the significance of residual project effects which may combine with cumulative environmental effects from other human activities"	PPML does not plan to assess significance for all VCs. Also PPML suggests that significance be determined for the RFD Case.	PPML suggest that the wording be adjsuted to reflect these points.	No response required
45	Section 4.1 Predicted Changes to the Environment	Based on discusion with MVEIRB staff, it is PPML's understanding that VCs listed in Section 4.1 of the draft TOR do not need to be assessed for significance.	PPML suggested that the TOR reflect this point.	No response required

46	Section 4.1.6 - Vegetation: How climate change has affected vegetation in the area in the past, at present and predicted future changes	PPML believes that modelling of vegetation changes as a consequence of climate change is beyond the scope of an assessment for a mine, as it would involve considerable work and high levels of uncertainty and is above and beyond what is required for an effects assessment by a proponent.	PPML suggests limiting evaluation of past, present, and predicted future changes to regional vegetation to a scientific studies/literature review and summary. PPML suggests that the TOR be reworded to suggest this.	No response required
47	Section 4.1.1 Atmospheric environment: predict the fate of emissions resulting from all project sources for emissions using atmospheric dispersion and regional air quality modelling	PPML disagrees that regional air quality modelling should be conducted by a single proponent. Regional air quality modelling is considerable effort and should be conducted through a regional approach and not by a single proponent. PPML believes this is beyond the scope of an EA.	PPML recommends that "regional air quality modelling" be removed from the TOR.	No response required
48	Section 4.1.5 Surface and groundwater quality and quantity: Because of this connectivity, the Review Board believes that it is appropriate and necessary to consider the surface and groundwater system as a single valued component in this assessment	PPML disagrees that surface water and groundwater be included as one valued component. PPML understands the interconnection between the surface and groundwater; however, they would have different measurement indicators and would have different analysis and assessment methods.	PPML suggests that surface water and groundwater be discrete valued components. The results of their assessments (changes to their measurement indicators) will be linked and inform each other, as well as for the assessment of other valued components and KLOIs in the DAR.	No response required
49	Section 4.1.5 Surface and groundwater quality and quantity: The impacts of changes to groundwater and surface water quality and quantity on each of these valued parts of the environment…	The TOR implies that surface water and groundwater are separate valued components.	No change is necessary as PPML prefer that surface water and groundwater be considered as separate valued components in the DAR.	No response required

50	Section 4.1.5 Surface and groundwater quality and quantity: provide baseline data for physicochemical parameters and relevant chemical constituents for surface water and groundwater	Not applicable here – this bullet is about GW characterization	PPML suggest the removal of "surface water and" from this bullet.	No response required
51	Section 4.1.5 Surface and groundwater quality and quantity: stage hydrographs for lakes, including Great Slave Lake, that might be affected by the Project showing the full range of seasonal and inter-annual water level variations	With the proposed limited volume of freshwater to be drawn from any freshwater resource, which may include Great Slave Lake, by the Project for the life span of the project and the potential for limited discharge relative to the volume to the receiving environment, which may flow into Great Slave Lake, relative to the volume of Great Slave Lake, it is PPML's assertion that the volume and water level of Great Slave Lake will not be remotely measurably affected by the Project	PPML suggest the removal of "…, including Great Slave Lake,…." from this bullet, and replace with "...lakes within the LSA that subsequently drain to Great Slave Lake…".	No response required.
52	4.1.5 Surface and groundwater quality and quantity: within the limits of available data, describe impacts of historical mining or stresses on local and regional surface and groundwater quantity and quality …	PPML is of the opinion that this requirement will be limited to a qualitative evaluation, due to the limited availability of data that appropriately characterize the changes to surface water and groundwater in the Project footprint resulting from previous mining and other activities from pre-existing conditions.	PPML suggest the following revision, "within the limits of available data, qualitatively describe impacts of historical mining….."	No response required
53	Section 4.1.5 Surface and groundwater quality and quantity: predicted changes caused by project activities to surface water and groundwater quality …	PPML consider that the implication of being required to model physico-chemical parameters (e.g., pH, temperature, and DO) to project changes to these prameters in the DAR will increase the complexitiy of surface water quality and groundwater quality	PPML suggest the removal of "physicochemical parameters and" from the bullet.	No response required

	changes to physicochemical parameters and chemical constituents	modelling deemed appropriate for the DAR. The complexity of the modelling would be expected to increase the uncertainity in their model projections. Surface water and groundwater models that are proposed for the DAR, which are consistent with those used in other northern EAs, will therefore focus on chemical constituents.		
54	Section 4.1.5 Surface and groundwater quality and quantity: describe proposed programs for characterizing future surface water and groundwater quality…	As per Table 5-1 of the Developer's Assessment Proposal, PPML planned to provide a conceptual Aquatic Effects Monitoring Program, but did not plan on preparing a conceptual Groundwater Management Plan to support the DAR. For both surface water and groundwater, the specific locations and detailed methods will be addressed during the development of the plans in the permitting phase, assuming the EA is approved. The EA will address the principles of the monitoring and how the monitoring will be used to compare actual changes to the predicted effects.	PPML recommends that Section 4.1.5 of the TOR be revised to indicate that proposed programs/plans for groundwater and surface water will be described conceptually based on the level of detail that is available, recognizing that detailed plans will subsequently be prepared to support permitting.	No response required
55	Section 4.1.5 Surface and groundwater quality and quantity: assessment of upset conditions (e.g., extreme flow conditions, delayed availability of pits for water storage, unexpectedly high groundwater infiltration rates into operational	PPML is concerned that this requirement may imply that identified upset conditions within the water management plan are fully assessed, which would generate a substantial amount of additional modelling effort that would be developed from broad-based assumptions with potentially high uncertainties. PPMLs preference is to address this requirement through qualitative assessments, and within the Accidents and Malfunctions section.	PPML suggest that the text be revised to emphasise the requirement for only a qualitative description of potential effects from upset conditions with respect to water management to surface water and groundwater.	No response required
56	Section 4.1.6 Vegetation: the current levels of anthropogenic	The typical process would be to map and describe anthropogenic disturbance to quantify with area summaries and	PPMl suggests that the word "quantification" be removed from the TOR.	No response required

	and natural disturbance affecting vegetation and other ecological communities, including a description and quantification of the current extent of …	describe distribution of fragmentation qualitatively. Quantitative assessment such as Fragstats adds very limited value.		
57	Section 4.1.6 Vegetation: •wetlands potentially affected by the Project (including muskeg, fens, marshes, peat lands, bogs)	Wetlands will be described according to the Canadian Wetland Classification System which includes bog (muskeg/peatlands), fens (muskeg/peatlands), swamps, marshes and shallow open water wetland types.	PPML suggest that the wording in the TOR be adjusted.	No response required
58	Section 4.2 Assessing impacts to individual valued components	Based on discussions with MVEIRB staff, it is PPML's understanding that the VCs listed in Section 4.2 will be assessed for significance but not those in Section 4.1.	PPML suggests that MVEIRB clarify this in the TOR.	No response required
59	Section 4.2.3 Birds and their habitat: • provide estimates of the abundance and distribution, and information on the life history of migratory and non-migratory birds	PPML plans to use existing information and not baseline surveys to support this requirement.	PPML suggest that the text be revised to include "based on data from existing sources" to this bullet.	No response required
60	Section 4.2.3 Birds and their habitat: • provide maps showing areas of highest concentrations of species and identify areas of concentration of migratory birds, including sites used for migration, staging,	PPML plans to use existing data to support this requirement.	PPML suggest that the text be revised to include "based on data from existing sources" to this bullet.	No response required

	breeding, feeding, and resting			
61	Section 4.2.4. Moose, Furbearers and other wildlife: impacts to moose and other furbearers of importance to Indigenous groups ... carry results into assessment of effects to Indigenous Land Use (4.2.8)	PPML notes that the ability to harvest for traditional use is listed under Section 4.2.4 of the TOR (Moose, Furbearers and other wildlife). PPML, however, understand that the TOR does not prescribe the overall document structure of the DAR. PPML plans to assess harvesting in the Indigeneous Land Use section.	PPML will leave this to MVEIRB as to whether this bullet should be moved.	No response required
62	Section 4.2.7. Whooping Crane: ...The developer will show how it has used this new data ... Describe if and how this information has been used to support the evaluation of Project and project component siting decisions and impact predictions	The draft TOR says above "explore with ECCC and Parks Canada the potential for additional surveys that…", but then says that "the developer will show how it has used this new data…". PPML suggests that this presupposes the outcome of the discussion.	PPML suggest adding an “if collected” to the bullet.	No response required
63	Section 4.3: Using a holistic lens and systems thinking	As disussed with MVEIRB staff, PPML anticipates that the key line of inquiry sections will be plain language summaries of relevant sections of the DAR pulled together into a cohesive story. These sections are expected to be fairly high level and include references to other sections for additional details. These sections are not expected to include new or additional analyses.	PPML suggests that this clarification be considered.	No response required
64	Section 4.3.1. Managing water so that it remains clean for the future: •Will water around the mine (that is, the local	PPML disagrees that "clean" should be used as it is a subjective term.	PPML recommends the removal of the word "clean".	No response required

	and regional study areas) be safe and clean for people, fish, aquatic life, and wildlife during all project stages?			
65	Section 5.3. Use of information from developer's EA Initiation package… will provide a table in the DAR of all commitments and mitigation measures made during early engagement and in the Developer's Assessment Proposal.	PPML disagrees that the" commitments" in the EA Inititation Package should be tabulated. These commitments will be superseded by the DAR and this is extra effort that is not required.	PPML suggests that this be removed from the TOR.	No response required
66	Section 5.6. Potential Accidents and Malfunctions: the developer will first discuss impacts in relation to valued components from an accident or malfunctions as though it has happened	PPML recommends that this wording be adjusted. PPML will consider potential effects on VCs from an accident or malfunction.	PPML suggests that the wording be adjusted for the developer to discuss the potential effects of the accident and malfunction scenario on VCs.	No response required
67	Section 5.7 Effects of the Environment on the Project: •describe climate change scenarios considering current trends and International Panel on Climate Change best climate predictions	"best" is not appropriate wording.	PPML suggests that the wording be changed from "best" to "currently available".	No response required
68	Section 5.8. Monitoring, evaluation, and follow-	PPML agrees with the inclusion of a description of proposed monitoring	PPML suggests that to reduce redundancy and to focus the efforts for	No response required

	up: The DAR will include a section that summarizes proposed follow-up, monitoring and adaptive management plans and programs.	associated with the Project. However, PPML believes that it should be included in the discipline sections so that it is directly tied to the residual effects analysis and uncertainty sections. Having it in another section as well increases effort, redundancy, and volume of the DAR.	the DAR, the TOR not include the requirement for a standalone monitoring section.	
69	Sec 6 Concl.: The early collaboration work done by PPML has helped focus the analysis of impacts from the Project on the issues that matter most to Indigenous governments and organizations, and potentially affected communities.	PPML struggles to understand how the EA Initiation Package has helped focus the issues and narrow the DAR. Instead it seems to have expanded the issues and resulting TOR.	PPML suggests that MVEIRB reconsider whether the conclusion should be reworded.	No response required
70	Appendix B: Assessment Methodology: 4. identify potential interactions of the Project with valued components and any potential direct and indirect impacts, identifying all analytical assumptions or where professional judgement was used.	Similar to Section 3.3, this section indicates that the effects are assessed and classified before mitigation. PPML strongly disgrees that the assessment of effects should occur prior to the application of mitigation. Based on standard EA practices, the assessment and classification is conducted only on residual effects.	PPML suggests that it be clarified in the TOR that the analysis and classification is for residual effects only.	No response required
71	Appendix B: Assessment Methodology. (d) ... "The developer will also include a separate cumulative effects section that provides a summary of the	PPML agrees with the inclusion of cumulative effects within the DAR. However, PPML believes that cumulative effects should be included in the discipline sections (i.e., in the RFD Case). Having it in another section as well increases effort, redundancy, and volume of the DAR.	PPML suggests that to reduce redundancy and to focus the efforts for the DAR, the TOR not include the requirement for a standalone cumulative effects section.	No response required

	predicted cumulative effects."			