Environment and Climate Change Canada
Environnement et Changement climatique Canada

Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
P.O. Box 2310
Yellowknife, NT X1A 2P7

ECCC File: 6100 000 011/001
NIRB File: 08MN053

November 23, 2018

Via email at: info@nirb.ca

Tara Arko
Director, Technical Services
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU X0B 0C0

Dear Tara Arko:

RE: 08MN053 – Baffinland Iron Mines Corporation – Mary River Phase 2 Development – FEIS Addendum Information Requests

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Impact Review Board (NIRB) regarding the above-mentioned Final Environmental Impact Statement Addendum Information Requests and is submitting comments via email. ECCC's specialist advice is provided based on our mandate, in the context of the *Canadian Environmental Protection Act*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act,* and the *Species at Risk Act*.

The Information Requests are provided in the attached table.

Should you require further information, please do not hesitate to contact me at (867) 669-4746 or Gabriel.Bernard-Lacaille@canada.ca.

Sincerely,

Susanne Forbrich
Regional Director

Attachment: Information Request Table

cc: Georgina Williston, Head, Environmental Assessment North (NT and NU)
ECCC Review Team
Lou Kamermans, Approvals Manager, Baffinland Iron Mines Corporation

Table 1. Environment and Climate Change Canada's Information Requests regarding Baffinland's Mary River Phase 2 Proposal 08MN053 submitted to the Nunavut Impact Review Board

IR #	IR Directed to	Subject	Reference	Issue/Concern	Information Request
1	Proponent	Pre-construction surveys for the wind energy project	TSD 02 - Project description, Appendix E TSD 12 - Bird Baseline and Impact Assessment Environment Canada. 2007a. Wind Turbines and Birds – A Guidance Document for Environmental Assessment. http://publications.gc.ca/site/eng/458437/publication.html Environment Canada. 2007b. Recommended Protocols for Monitoring Impacts of Wind Turbines on	Wind turbines are planned as a power alternative for the proposed development. Two sites will be selected and include the installation of a single turbine (one at each site). Appendix E of the Project Description describes a pre-construction phase to the wind energy component that will include a number of environmental surveys (i.e. baseline surveys), including some for migratory birds and species at risk. Environment and Climate Change Canada (ECCC) has guidance on preliminary information necessary to determine site sensitivity of proposed wind energy projects and the relative level of effort anticipated in determining and mitigating potential adverse effects to birds (EC 2007a, 2007b). Wind power projects have the potential to adversely affect wildlife, particularly migratory birds. Proper siting of wind energy facilities is a key factor in mitigating adverse environmental effects. It is unclear if and how the site sensitivity of this wind energy project component was determined and whether baseline information was collected to confirm this assessment. It also unclear how forthcoming information (possibly collected after the Environmental Assessment [EA] process) will be incorporated to inform the project design.	ECCC requests that the Baffinland Iron Mines Corporation (the Proponent): 1. Describe the migratory bird and species at risk surveys that were collected to specifically inform the site sensitivity for the wind energy project. 2. Provide details on what specific pre-construction phase surveys for migratory birds and species at risk are planned and when these surveys will be conducted. These surveys should be consistent with ECCC guidance (EC 2007a, 2007b) including the level of effort required given predicted site sensitivity. 3. Describe how mitigation or monitoring requirements identified as

			Birds. http://publications.gc.ca/collections/collection_2013/ec/CW66-364-2007-eng.pdf		a result of pre-construction phase surveys will be incorporated in the project design.
2	Proponent	Climate Change Projections	TSD 6 - Climate Change Assessment	The Proponent indicates that because the end date of the proposed Project is the mid-2030s, they focus on 'near-term' and 'mid-term' climate change projections. A range of seasonal and annual projections are provided for temperature (Table 3.2, p.26) and precipitation (Table 3.3, p.28; Figure 3.2, p.29) for two time periods: 2016-2035 and 2046-2065. The range of projections from a multi-model ensemble (min, max, median) for three Representative Concentration Pathways (RCPs 2.6, 6.0 and 8.5) are provided in Tables 3.2 and 3.3. However, in their discussion of relevant time horizons for the project, the Proponent notes that: "*An exception is potential environmental impacts from the waste rock stockpile, which could occur long after the proposed Project closure in 2038. Therefore, a discussion of potential long-term climate change impacts on the waste rock stockpile is provided in Section 3.4.6.*" (TSD 06, p. 20) In Section 3.4.6. (TSD 06, p. 29-30), a median temperature projection from an ensemble of different climate models for 2081-2100 for RCPs 8.5 is provided. This approach does not give adequate consideration to the inherent uncertainty in climate projection and is unlikely to	ECCC requests that the Proponent provide and utilize a broader range of climate projections (low, medium, high RCP scenarios) appropriate for the region from an ensemble of models and RCPs for the 2081-2100 time period to evaluate the potential implications of future climate change on the Project and related environmental conditions.

				capture the full range of potential change by end of century (i.e. some models project higher or lower temperature increases than the median projection given). Therefore, evaluations of the implications of potential future climate change on the Project and the environment (e.g. permafrost conditions) should be based on the broader range of projections (for the low, medium and high RCP scenarios) provided by an ensemble of different climate models.	
3	Proponent	Power Generation	TSD 06 - Climate Change Assessment	The Proponent plans to increase the generation capacity by 5.25 MW (from 16.75 MW to 22.0 MW) at Milne Port to meet increased demand of the Phase 2 expansion. It is understood that increased greenhouse gas (GHG) and criteria air contaminant (CAC) emissions will occur from electricity generation from the diesel sets. Fuel consumption is provided for scope 1 emissions (mobile equipment and stationary sources) in an aggregated manner (Table 2.3). However, the specific details of the new diesel generators themselves were not provided. Such information is needed to assess the fuel efficiency (and resulting GHG emissions) and CAC emissions of the planned diesel generator sets.	ECCC requests that the Proponent provide specific information on the planned diesel generator sets to be installed at Milne Port as listed below: a) The model and sizes b) Expected fuel consumption and greenhouse gas emissions for both the approved project and Phase 2 expansion. c) Criteria air contaminant emissions and whether the new stationary diesel generator sets will be certified higher than the current Tier 2 emission standards employed at the power plant.

4	Proponent	CSED - Locomotive Emissions	TSD 07: Atmospheric Assessments	Appendix A1 and A2 have results for locomotive emissions from a train idling at the mine site and Milne Port. However, emissions from locomotives that are powering a train between the mine site and Milne Port has not been addressed.	ECCC requests that the Proponent provide an estimate of the locomotive emissions for all rail transport associated with the Phase 2 expansion.
5	The Proponent	Canadian Ambient Air Quality Standards (CAAQS)	TSD 7 – Atmospheric Assessment Report	The Atmospheric Assessment Report (TSD 7) compares the air quality model predictions to various air quality standards from Nunavut, the Northwest Territories, Alberta, British Columbia, and Ontario. Modelling data may be used to compare predicted concentrations to ambient standards, including national standards such as the Canadian Ambient Air Quality Standards (CAAQS), in order to estimate the contribution of the project to local air quality. In order to assess the impact of a proposed project on ambient air quality levels, ECCC recommends that modelled predictions be compared to the most stringent federal, provincial or territorial air quality standards applicable to the given area. In many cases, the CAAQS will be the most stringent levels for key air pollutants, especially for longer term projects with emissions after 2025. While the monitors used to report on CAAQS achievement are usually located in population centers, air zones are designed to cover all geographic areas within a jurisdiction and the resulting management levels and actions may be applied across an air zone, even in remote areas. In addition, air pollutants can travel long distances and affect communities far from the initial source. The Proponent has not compared the model predictions to the SO_2, NO_2, or $PM_{2.5}$ CAAQS. The CAAQS for these substances are:	ECCC requests that the Proponent 1. Provide a comparison of modelled ambient concentrations of NO_2, SO_2, and $PM_{2.5}$ to the CAAQS in the local study areas, assessing the locations, spatial distribution, and frequency of exceedance. 2. Assess whether the currently proposed mitigation strategy for reducing NO_2, SO_2, and $PM_{2.5}$ will be sufficient to reduce concentrations below the CAAQS.

Pollutant	Averaging Time	Numerical Limit	Statistical Form for Comparison with Model Predictions
Fine particulate matter	24-hour	27 ug/m3	98th percentile of 24-hour average concentrations for the modelled years
	Annual	8.8 ug/m3	Average of all 1-hour concentrations for the modelled years
Nitrogen Oxides (NOx)	1-hour	42 ppb	98th percentile of daily maximum 1-hour concentrations for the modelled years
	Annual	12 ppb	Average of all 1-hour concentrations for the modelled years
Sulphur Dioxide	1-hour	65 ppb	99th percentile of daily maximum 1-hour concentrations for the modelled years
	Annual	4.0ppb	Average of all 1-hour concentrations for the modelled years

<u>Additional information:</u>

Federal, provincial and territorial governments are working collaboratively to improve air quality through the implementation of the Air Quality Management System (AQMS). CAAQS are intended to be the drivers for air quality improvements across the country in order to protect human

				health and the environment. They are supported by air quality management levels, which call for progressively more rigorous actions by jurisdictions as air quality levels within designated air zones approach or exceed the CAAQS, thereby ensuring that the CAAQS are not treated as "pollute-up-to" levels.	
6	Proponent	Particulate concentrations and particulate deposition predictions (dust)	TSD 7 – Atmospheric Assessment Report 2017 Mary River Project Terrestrial Environment Annual Report, Dust Fall Monitoring Program p. 3-30	In TSD 07 Addendum No. 2 Section 3.4 Insignificant Sources, the Proponent indicates the following: • Several small sources of emissions were deemed insignificant • Wind erosion of the stockpiles was deemed insignificant and not modelled due to low wind speeds measured onsite (not at the top of stockpiles). • Vehicle traffic and associated dust from haul trucks and graders was included in the assessment, dust associated with all other vehicles on the road was not included Table 1-1 of the Phase 2 Proposal shows that the ore stockpiles will be increasing from 4 Mt to 7.8 Mt. An ore stockpile that is doubled in size and is in close proximity to water bodies would be a source of fugitive dust (wind erosion). Since the ore stockpiles footprint does not appear to be increasing, it is assumed that the added tonnage would increase the height of the fine ore stockpile and therefore increase the potential for wind erosion. The levels of dust and the impacts to air quality have been an ongoing issue at the Mary River Mine. These issues were discussed in ECCC's comment on the 2017 NIRB Annual Report as well as in ECCC's submission regards the Production Increase Proposal. Dust data presented in the 2017 Mary River	ECCC requests that the Proponent 1. Include emission quantification and modelling of all sources of dust, including but not limited to all vehicle traffic, ore dust from locomotive loading and transport, and wind erosion of all stockpiles using winds at the height of stockpile not at ground level to update their effects assessment accordingly. 2. Reevaluate and update the dust management plan and propose new mitigation measures that target both road dust as well as dust from mine activities that will arise from the Phase 2 expansion.

				Project Terrestrial Environment Annual Monitoring Report shows that: • Dustfall at Milne Port exceeded predictions of the original Environmental Impact Statement (EIS). The highest dustfall was noted near the ore stockpiles and near the camp where dust is generated by both traffic and the nearby ore piles. • Dustfall within 30 m and 1 km on either side of Tote rode was above EIS predictions in 2017. • 2017 dustfall was less than 2016 dustfall, yet 2017 dustfall was still greater than the dustfall predictions in the original EIS. • Photo 1 in the report clearly shows a dust cloud blowing off the ore stacker at the Milne Inlet Port Based on the dust data provided in the 2017 annual report, the Proponent has not adequately captured all of the potential dust sources associated with the increase to 12 Mtpa. The annual report shows that dust fall is greater than was predicted in the original EIS, that wind does play a role in contributing to total dust, and the small vehicle traffic does contribute to the dust measured along the Tote Road. Based on the 2017 annual report, the current dust mitigation plan is not sufficient at reducing dust associated with the project. The dust management and monitoring plan should be reevaluated and further mitigation measures proposed to reduce dust from both road sources (including the rail line) and mining sources. Furthermore, the Phase 2 expansion includes the rail transport of ore yet the air quality model does not include the emissions for dust from the open rail cars or dust deposited on the outside of the rail cars during loading. These sources	3. Reevaluate and update the dust monitoring and management actions to reflect the additional activities in the Phase 2 expansion and ensure that the monitoring plan will be able to evaluate predictions made in the Phase 2 FEIS. 4. Consolidate all dust monitoring, mitigation and management plans in one standalone and single report.

				were not included in the FEIS for Phase 2. The current model does not include all of the potential sources to properly account for all dust associated with the Phase 2 expansion.	
7	Proponent	Dust metal speciation	TSD 7 – Atmospheric Assessment Report	Particulate emissions and dust generated from different sources have different metal components. Dust from a graveled road will have a different composition than the dust from crushing or handling ore or rock containing ore. Predictions of metal concentrations in the dust are important not just for the assessment of impacts to air quality but also to assess impacts on water quality and the terrestrial environment. The original EIS provided a speciation profile for the dust and Total Suspended Particulate (TSP), however the Phase 2 Atmospheric Assessment Report does not have a metal speciation profile for each of the dust sources. Since only total dust deposition and Total Particulate Concentrations are presented, the report concludes that road dust composition is the same as the dust from ore crushing. Without knowing the metal composition of the dust, ECCC cannot determine the overall effects of the project's dust on the receiving environment.	ECCC requests that the Proponent 1. Characterize all dust and total suspended particulate sources broken down into each metal associated with each source (e.g. metal speciation of the dust and total suspended particulate sources). 2. Provide predicted metal depositions associated with Total Suspended Particulate and dust deposition from all dust sources
8	Proponent	Incineration	TSD 7 – Atmospheric Assessment Report FEIS Addendum – Main Document	The Proponent states in the Atmospheric Assessment that the amount of waste incinerated is staying at 2000 kg/day (same amount as in the original EIS). Table 1-1 of the Main Document Project Description indicates that the accommodation complex is increasing from 500 beds to 710-800. It is unclear as to whether the waste management plan will have to be adjusted for the increase in camp size.	ECCC requests that the Proponent clarify if the amount of waste being incinerated will increase due to increased workers onsite. If the amount of waste incineration is increasing, ECCC recommends the

					frequency of incineration stack testing be increased from 5 years to every 3 years.
9	Proponent	Management/ Effects of calcium chloride for dust suppression	TSD 7 – Atmospheric Environment 2017 Mary River Project Terrestrial Environment Annual Report, Dust Fall Monitoring Program p. 3-30	The modelling of dust deposition at the mine site includes mitigation of dust via the application of calcium chloride and water. The potential effects of the use of calcium chloride as a dust suppressant should be assessed as well as the potential effects to adjacent waterbodies. Based on information provided in the 2017 Terrestrial Annual Report, Baffinland used over 80,000 kg of calcium chloride for dust suppression over 28 application events in the summer of 2017. The application of calcium chloride to roads for dust suppression can cause effects to waterbodies in the vicinity of the road and therefore management actions should be taken to mitigate effects. Given the regular application of calcium chloride, an evaluation of potential effects and a management plan should be developed.	ECCC requests that the Proponent develop a management plan to mitigate potential effects to adjacent waterbodies from the application of calcium chloride for dust suppression.
10	Proponent	Management and Monitoring of dust deposition to water bodies.	TSD 13 – Surface water Assessment - Section 3.5	In section 3.5.2 of the Surface Water Assessment (TSD 13), the Proponent states that dust deposition and sedimentation into waterbodies in the Mine area is expected to decrease because of the Phase 2 expansion. However, the FEIS states that dust deposition and sedimentation are expected to increase along the Northern Transportation Corridor during the three year construction period, and dust at Milne Port is anticipated to increase due to the expansion of activities at the port. The Proponent does not provide follow-up to these statements except to acknowledge their existing management plans.	ECCC requests that the Proponent 1. Provide information on how mitigation has reduced dustfall deposition and sedimentation in waterbodies since the previously documented dust exceedances, and how these methods will

				As noted in the Surface Water Assessment, there have previously been issues related to sedimentation along the haul road and the Tote Road (Section 3.5.2.2) which resulted in the Proponent applying additional measures to protect fish and fish habitat. In addition, the 2017 Terrestrial Annual Monitoring Report indicated that dust fall at Milne Port has exceeded predictions. These exceedances were attributed to the ore stockpile and traffic. The 2017 report also indicated that the dustfall deposition associated with the Tote Road exceeded predictions up to 1 km on either side of the road. Based on historical dust issues, the predictions for dust to increase in the short term in the transportation corridor, and long term impacts at Milne Port, additional monitoring at these locations should be provided to manage and mitigate any impacts to waterbodies.	be sufficient to mitigate the expected further increases in dust due to the Phase 2 Project. 2. Provide information on how dust deposition and subsequent impacts to water quality will be monitored and mitigated along the transportation corridor and at Milne Port.
11	Proponent	Effluent for dust suppression	TSD 13 – Surface Water Assessment, Section 3.5.1.5 – New Stormwater Pond at Temporary Ore Transfer Area	The Phase 2 Proposal includes the construction of a temporary ore transfer area at km 57 of the North Railway, which will operate for one to two years during construction. At this location, ore will be transferred from trucks to a storage area and then onto the partially completed rail system to transport the ore to Milne Port. This new transfer area will require the development of a stormwater pond to capture runoff from the ore stockpiles. The Proponent proposes to use the water from the stormwater pond for dust suppression along the North Transportation Corridor, if water licence criteria are met. Runoff from the ore stockpiles may contain substances which would be harmful to aquatic life if there is runoff from roads at stream crossings from dust suppression spraying.	ECCC requests that the Proponent identify criteria that would be used to determine whether runoff from the ore transfer area stockpiles is suitable for dust suppression along the North Transportation Corridor.

12	Proponent	Impacts to Phillips Creek	TSD 13 – Surface Water Assessment - Section 3.5.2.6	The Proponent acknowledges that additional development at Milne Port will contribute to the generation of dust in the Port area and states that they evaluated the potential effects of dust generation to local waterbodies (primarily Phillips Creek). The subsequent discussion provides information on the potential increases in Total Suspended Solids (TSS) within Phillips Creek, but provides no predictions for any increases in metal concentrations within Phillips Creek. As Milne Port functions as an ore handling facility it would be expected that the dust would contain high metals that could then be deposited into adjacent waterbodies.	ECCC requests that the Proponent provide information on the expected water quality impacts on Phillips Creek due to dust deposition in the Milne Port Area, including predicted metal concentrations.
13	Proponent	Missing Reference	TSD 16 Ice Study Updates Appendix 1 – Page 2; 11	In the Ice Study Update document (TSD 16), some reference links seem to be broken. These references should be provided. Specifically, in Appendix 1 – Page 2, at the end of sentence "*The form of the ice is an additional indicator of the development and severity of ice conditions* (***Erreur ! Source du renvoi introuvable)***" and at the end of a sentence in Appendix 1 – page 11 "*There were many examples of vessels encountering severe ice conditions within the allowable access windows and other situations where vessels were denied access to areas of light ice conditions. It is to circumvent these limitations in the ZDS that the more flexible AIRSS was created (**section Erreur ! Source du renvoi introuvable**).*"	ECCC requests that both missing references be provided and included in further revisions to the Ice Study Updates (TSD 16).
14	Proponent	Outdated Reference	TSD 19 – Fuel Spill Modelling	On page 39 of the Fuel Spill Modelling report there is reference to the physical and chemical properties of IFO-180 fuel oil from the Environment and Climate Change Canada laboratories in Ottawa (ESTD, Environment Canada, 2010). The citation in the text is outdated and was not listed in the reference section of the report. The appropriate and current location of the data is on the Open Government data portal under Physicochemical Properties of Petroleum Products at the following URL;	ECCC requests that the Proponent update the reference to the physical and chemical properties of IFO-180 fuel oil.

				https://open.canada.ca/data/en/dataset/53c38f91-35c8-49a6-a437-b311703db8c5 . Please cite as Emergencies Science and Technology Section, Environment and Climate Change Canada, 2018.	
15	Proponent	Ammonium nitrate (AN) storage	TSD 28 - Explosives Management Plan (Appendix AE) - Section 2.4 Raw Materials Storage	Ammonium nitrate dissociates in water to form ammonia, which is toxic to aquatic organisms and fish. Storage areas should have secondary confinement and be located away from water sources. The amounts of explosives that will be present on site is substantial and will be delivered through shipping via Milne Inlet. Additional attention should be given to potential spills of ammonium nitrate during shipping as well as to the applicability of an E2 plan for the amounts stored on land. Ammonium Nitrate Prill (solid) will be stored in bulk within a dedicated storage area. AN Prill will be stored in 1 Tonne flexible intermediate bulk containers (FIBC) approved for storage of this material loaded into shipping containers. If stored in this manner there will be 20 Tonnes of AN Prill stored in each container. According to Table 7-2 (Maximum Cumulative Quantities of Explosives and Ammonium Nitrate at Project Sites) the maximum quantity at site at any time of pre-packaged explosives and ammonium nitrate are 800,000 kg and 2,000,000 kg, respectively.	ECCC requests that the Proponent review the planned quantities of ammonium nitrate that are to be present on the project site for more than 72 consecutive hours and determine the applicability of an E2 Plan as per ECCC's Environmental Emergency Regulations at https://www.canada.ca/en/environment-climate-change/services/environmental-emergencies-program/regulations/list-exploding-hazardous-substances.html ECCC also requests that the Proponent conduct and provide fate and behavior modelling for ammonium nitrate for any potential large-volume spills to water during transport to the project site and/or for potential spills to water on the project site.

16	Proponent	Shoreline Classification	TSD 28- Management and Monitoring Plans – Oil Pollution Emergency Plan – Appendix C – Shoreline Characterization and Sensitive Zones	In Appendix C of the Oil Pollution and Emergency Plan, the Proponent provides a map of the sensitive shoreline areas in Milne Inlet, which could inform spill response in case of an emergency. Further, three zones are shown on the map but no explanations are given to what these zones represent. During the Early Revenue Phase Proposal review, it came to the attention of ECCC that the Proponent had conducted and amassed a significant amount of Arctic shoreline categorization data. This data, and its representation in a map format, could provide valuable data to inform spill response procedures based on the sensitivity of various coastal areas to spills.	ECCC requests that the Proponent provide the results on their shoreline classification data surveys so that this data can inform the effects assessment of potential spills of fuel/oil on water.
17	Proponent	Monitoring for dust and impacts to water quality along the transportation corridor	TSD 28 - Appendix T - Management and Monitoring Plans Section 1.6.3. TSD 28 - Appendix S. Surface Water and Aquatic Ecosystems Management Plan	The Proponent has not provided updates to the Aquatic Effects Monitoring Plan (AEMP) as part of the Phase 2 Proposal, stating that, "*the Aquatic Effects Monitoring Plan is focused on monitoring the aquatic environment in the immediate mine area to detect effects from multiple stressors. The Phase 2 Proposal doesn't present any meaningful changes to the potential aquatic effects at the mine and no changes to the management plan are expected to be required.*" Table 18 of TSD 28 outlines the required updates to management plans. However, the current monitoring does not include any aquatic monitoring along the Northern Transportation Corridor as part of the AEMP or Surveillance Network Program (SNP). Milne Port includes several SNP stations but no monitoring of the aquatic environment is included. Table 9.4 - Mary River Mine Site Water Quality Monitoring Locations in Section 9 of Appendix S should be updated with monitoring sites along the rail alignment. Based on the anticipated increased dust deposition and sedimentation along the Northern Transportation Corridor as	ECCC request that the Proponent provide an updated Aquatic Effects Monitoring Plan and that this plan monitors for potential impacts to aquatic ecosystems across the whole project (mine site, Milne Port, and transportation corridor including the Northern Railway).

				part of construction, and increased TSS as part of the increased stockpile and processing at Milne Port, the adequacy of the AEMP to capture all impacts should be re-evaluated.	
18	Proponent	Wastewater treatment capacity and redundancy	Main Addendum - Project Description, Section 4.1.3 Page 4.6 TSD2 Water Licence application Project Description Appendix D Section 4.7 Fresh Water Supply, Sewage and Wastewater Management Plan, Rev 5 (Issue date March 29, 2018) Sewage Treatment Plant O & M Manual	The Fresh Water Supply, Sewage and Wastewater Management Plan does not indicate whether there is sufficient capacity and redundancy in the wastewater treatment system for Phase 2 camp occupancy. The main Addendum document indicates that sewage treatment capacity will be expanded at the Milne camp but does not provide details. TSD 28 Management & Monitoring Plans identifies that an update will be needed to describe sewage disposal plans for temporary camps, but this does not cover the permanent expansion. ECCC notes that the recent modification request in the Water Licence Amendment Application includes a new sewage treatment plant, and that there will be an application for a third system (Section 4.7 Sewage Disposal). Details are not provided, nor any discussion of impacts of increased discharges. Potential changes to the level of treatment provided by the new systems should be identified, as well as any effects to the aquatic environment associated with additional nutrient loadings from treated wastewater discharges.	ECCC requests that the Proponent identify how additional camp wastewater treatment needs will be met, and if there will be any potential changes to receiving environments due to increased discharges as well as if additional mitigation measures will be required.

19	Proponent	Section 6 (Oily Water/ Wastewater Treatment)	TSD 28 – Appendix D-Fresh Water Supply, Sewage and Wastewater Management Plan, Rev 5 (dated March 29, 2018): Section 6 (Oily Water/Wastewater Treatment)	It is not clear whether Section 6 (Oily Water/Wastewater Treatment) has been updated to incorporate information associated with the Phase 2 Proposal. As Phase 2 involves a significant increase in fuel storage and use, Section 6 should describe the potential maximum volumes of oily water/wastewater, treatment capacity, monitoring and contingency measures associated with the Phase 2 Proposal.	ECCC requests that the Proponent provide updates to Section 6 describing the potential maximum volumes of oily water/wastewater, treatment capacity, monitoring and contingency measures associated with Phase 2 expansion.
20	Proponent	Total petroleum hydrocarbons	TSD 28 – Appendix D-Fresh Water Supply, Sewage and Wastewater Management Plan, Rev 5 (dated March 29, 2018) Table 6-1, 6-2 and 6-3	At locations where fuels and/or hydrocarbon containing wastes are used or managed, it would be more relevant to monitor for total petroleum hydrocarbons (TPH), rather than for oil and grease. Oil and grease is more relevant to discharges from sources where biological lipids are included, while TPH identifies mineral sources of hydrocarbons such as in fuels. This is also consistent with what is being regulated at other facilities. Additionally, the limit of 15 mg/L for TPH is considerably higher than other limits in Nunavut and the Northwest Territories, which are set at 5 mg/L.	ECCC requests that the Proponent include Total Petroleum Hydrocarbons (TPH) as a monitoring parameter for oily water treatment facilities, bulk fuel storage facilities, and landfarm facilities. ECCC recommends that discharge limits be reduced to 5 mg/L for TPH.
21	Proponent	Metal and Diamond Mining Effluent Regulations (MDMER)	TSD 28 - Management and Monitoring Plans	The management plans should be updated to incorporate the *Metal and Diamond Mining Effluent Regulations* (MDMER), which have replaced the Metal Mining Effluent Regulations (MMER). Note that regulated limits for existing mines will be lowered in 2021.	ECCC requests that the Proponent update references of the MMER to MDMER.

22	Proponent	Table 1 (List of Management, Mitigation and Monitoring Plans Applicable to the Phase 2 Proposal)	TSD 28: Management and Monitoring Plans	Table 1 (List of Management, Mitigation and Monitoring Plans Applicable to the Phase 2 Proposal) of TSD 28 incorrectly indicates that the Landfill Maintenance and Operations Manual does not require updating. Table 1 should be corrected to agree with Table 11, which identifies the required updates for the Landfill Maintenance and Operations Manual.	ECCC requests that the Proponent 1. Revise Table 1 to include the updates that are required for the Landfill Maintenance and Operations Manual. These updates are identified in Table 11. 2. Update the Landfill Maintenance and Operations Manual accordingly.
23	Proponent	Environmental Protection Plan	TSD 28, Table 2 Appendix A (Environmental Protection Plan)	The Environmental Protection Plan (EPP) was not updated as part of the submission. Instead Table 2 of TSD 28 identifies the updates to the plan that will be required to support the Phase 2 Proposal. However, several elements of the plan are not discussed in the table, including: • Dust management/suppression during construction and operation of the North Railway • There is insufficient detail on water quality monitoring during the construction of the ore dock. As the ore dock construction will constitute an entirely new section of the EPP it is insufficient to summarize information in the table. The actual plan should be provided for review. • There is no mention of any updates to the EPP that may be required as a result of the infrastructure changes and increased processing and ore storage at Milne Port.	ECCC requests that the Proponent update the Environmental Protection Plan (EPP) to include: • Dust management/ suppression during construction and operation of North Railway • Details on water quality monitoring during construction of the ore dock • Updates to the EPP related to changes at Milne Port

24	Proponent	Interim Closure and Reclamation Plan	TSD 28, Table 4 Appendix C, Interim Closure and Reclamation Plan	The interim closure and reclamation plan was not updated as part of the submission. Table 4 of TSD 28 identifies the updates to the plan that will be required to support the Phase 2 Proposal. However, potential updates associated with the changes to Milne Port are not included in the table.	ECCC requests that the Proponent provide a description of the changes to the Interim Closure and Reclamation Plan that will be required as part of the changes at Milne Port during the Phase 2 Project.