

Potential conditions under the *Canadian Environmental Assessment Act, 2012*

The Impact Assessment Agency of Canada is contemplating the following potential conditions in relation to the Marathon Palladium Project (the Designated Project) located in Ontario for recommendation to the Minister of Environment and Climate Change (the Minister) for inclusion in a Decision Statement issued under the *Canadian Environmental Assessment Act, 2012*. If the Minister decides that the carrying out of the Designated Project is unlikely to cause significant adverse environmental effects as defined under subsections 5(1) and 5(2), or if the Minister decides that the Designated Project is likely to cause significant adverse environmental effects and the Governor in Council decides such effects are justified in the circumstances, the Designated Project would be allowed to proceed, and any conditions established by the Minister under the *Canadian Environmental Assessment Act, 2012* would become legally binding.

Pursuant to section 184 of the *Impact Assessment Act*, a Decision Statement issued by the Minister under subsection 54(1) of the *Canadian Environmental Assessment Act, 2012* is deemed to be a Decision Statement issued under subsection 65(1) of the *Impact Assessment Act*, other than for the purposes of section 70.

1 Definitions

- 1.1 *Agency* means the Impact Assessment Agency of Canada.
- 1.2 *Baseline* means the environmental conditions prior to initiating construction of the Designated Project.
- 1.3 *Construction* means the phase of the Designated Project during which the Proponent undertakes the site preparation, building or installation of any components of the Designated Project, including periods during which these activities may temporarily cease.
- 1.4 *Contact water* means any water, including seepage or surface runoff, that has come into contact with any mine site components.
- 1.5 *Days* means calendar days.
- 1.6 *Decommissioning* means the phase of the Designated Project during which the Proponent permanently ceases commercial production and commences removal from service of any components of the Designated Project, and continues until the Proponent completes the reclamation of the site of the Designated Project.
- 1.7 *Designated Project* means the Marathon Palladium Project as described in section 4 of the Joint Review Panel Report.

- 1.8 *Designated Project area* means the geographic area occupied by the Designated Project, delineated in “site study area” in Figure 4-1 and Figure 4-2 of the Joint Review Panel Report.
- 1.9 *Environment and Climate Change Canada* means the Department of the Environment as established under subsection 2(1) of the *Department of the Environment Act*.
- 1.10 *Environmental assessment* means “environmental assessment” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.11 *Environmental effects* means “environmental effects” as described in section 5 of the *Canadian Environmental Assessment Act, 2012*.
- 1.12 *Environmental impact statement* means the 2012 document entitled *Marathon Platinum Group Metals-Copper Project Environmental Impact Statement- Main Report* (Canadian Impact Assessment Registry Reference Number 54755, Document Number 224) and the 2021 document entitled *Marathon Palladium Project Environmental Impact Statement Addendum* (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727).
- 1.13 *Fish* means “fish” as defined in subsection 2(1) of the *Fisheries Act*.
- 1.14 *Fish habitat* means “fish habitat” as defined in subsection 2(1) of the *Fisheries Act*.
- 1.15 *Fisheries and Oceans Canada* means the Department of Fisheries and Oceans as established under subsection 2(1) of the *Department of Fisheries and Oceans Act*.
- 1.16 *Follow-up program* means “follow-up program” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.17 *Health Canada* means the Department of Health as established under subsection 2(1) of the *Department of Health Act*.
- 1.18 *Heritage value* means the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations.
- 1.19 *Indigenous groups* means the following Aboriginal Peoples: Biigtigong Nishnaabeg, Ginoogaming First Nation, Jackfish Métis Association, Métis Nation of Ontario, Michipicoten First Nation, Netmizaaggamig Nishnaabeg, Pays Plat First Nation, and Red Sky Métis Independent Nation.
- 1.20 *Joint Review Panel Report* means the report submitted on August 2, 2022 by the Joint Review Panel established by the Federal Minister of the Environment and Climate Change (Canadian Impact Assessment Registry Reference Number 54755, Document Number 1301).
- 1.21 *Listed species at risk* means a species that is listed on the List of Wildlife Species at Risk set out in Schedule 1 of the *Species at Risk Act*.
- 1.22 *Migratory bird* means “migratory bird” as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994*.

- 1.23 *Mitigation measures* means “mitigation measures” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.24 *Monitoring* means collecting, analyzing, and using information to measure the environmental effects of the Designated Project and/or to verify the accuracy of the environmental assessment and/or determine the effectiveness of any mitigation measure.
- 1.25 *Offsetting plan* means “offsetting plan” as described in Schedule 1 of the *Authorizations Concerning Fish and Fish Habitat Protection Regulations* and “compensation plan” as described in subsection 27.1 of the *Metal and Diamond Mining Effluent Regulations*.
- 1.26 *Ontario Ministry of Citizenship and Multiculturalism* means the Ministry of Citizenship and Culture established under Ontario’s *Ministry of Citizenship and Culture Act, RSO 1990*.
- 1.27 *Ontario Ministry of the Environment, Conservation and Parks* means the Ministry of the Environment established under Ontario’s *Ministry of the Environment Act, RSO 1990*.
- 1.28 *Ontario Ministry of Mines* means the Ministry of Northern Development, Mines and Forestry established under Ontario’s *Ministry of Northern Development, Mines and Forestry Act, RSO 1990*.
- 1.29 *Ontario Ministry of Natural Resources and Forestry* means the Ministry of Natural Resources established under Ontario’s *Ministry of Natural Resources Act, RSO 1990*.
- 1.30 *Operation* means the phase of the Designated Project starting when commercial production begins and continuing until the start of decommissioning. This phase includes periods when commercial production may temporarily cease.
- 1.31 *Participate* means to directly or indirectly assist or support initiatives through the provision of resources, including knowledge, time, data, access and other means that are economically and technically feasible and within the care and control of the parties participating.
- 1.32 *Post-closure* means the phase of the Designated Project when decommissioning and final reclamation activities other than follow-up program monitoring are complete.
- 1.33 *Progressive reclamation* means reclamation which is carried out by the Proponent concurrently with all phases of the Designated Project to progressively return any physically disturbed areas to a state as close to the baseline as possible, as soon after the disturbance as technically feasible.
- 1.34 *Proponent* means Generation PGM Inc. and its successors or assigns.
- 1.35 *Qualified individual* means someone who, through education, experience and knowledge relevant to a particular matter, provides the Proponent with advice within their area of expertise. Knowledge relevant to a particular matter may include community and Indigenous knowledge.
- 1.36 *Record* means “record” as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.
- 1.37 *Relevant authorities* means federal, provincial and/or municipal authorities that are in possession of specialist or expert information or knowledge, or that have a responsibility for the

administration of a law or regulation, with respect to the subject matter of a condition set out in this document.

- 1.38 *Reporting year* means January 1 to December 31 of the same calendar year.
- 1.39 *Structure, site or thing of historical, archeological, paleontological or architectural significance* means a structure, site or thing that is determined by a qualified individual, on the basis of heritage value, to be associated with an aspect of the history or culture of the people of Canada, including Indigenous Peoples.
- 1.40 *Water frequented by fish* means “water frequented by fish” as defined in subsection 34(1) of the *Fisheries Act*.

Potential Conditions

These conditions may be established for the sole purpose of the Decision Statement issued under the *Canadian Environmental Assessment Act, 2012*. They do not relieve the Proponent from any obligation to comply with other legislative or other legal requirements of the federal, provincial, or local governments. Nothing in this document shall be construed as affecting what may be required of the Proponent to comply with all applicable legislative or legal requirements. In this document, a reference to a statute will include every amendment to it, every regulation made under it, every amendment made to a regulation made under it and any law enacted in substitution for, or in replacement of, it.

2 General conditions

- 2.1 The Proponent shall ensure that its actions in meeting the conditions set out in this document during all phases of the Designated Project are considered in a careful and precautionary manner, promote sustainable development, are informed by the best information and knowledge including policies, guidelines and directives, and community and Indigenous knowledge, available at the time the Proponent takes action, are based on methods and models that are recognized by standard-setting bodies, are undertaken by qualified individuals, and have applied the best available economically and technically feasible technologies.
- 2.2 The Proponent shall ensure that its actions in meeting the conditions set out in this document are taken in a way that is consistent with any applicable recovery strategy and action plans for listed species at risk.

Consultation

- 2.3 The Proponent shall, where consultation is a requirement of a condition set out in this document:
- 2.3.1 provide a written notice of the opportunity for the parties being consulted to present their views and information on the subject matter of the consultation;
 - 2.3.2 provide all information available and relevant to the scope and the subject matter of the consultation and a reasonable period of time agreed upon with the parties being consulted, not to be less than 15 days, to prepare their views and information;

- 2.3.3 undertake an impartial consideration of all views and information presented by the parties being consulted on the subject matter of the consultation; and
 - 2.3.4 advise as soon as feasible the parties being consulted on how the views and information received have, or have not, been integrated into the subject matter of the consultation by the Proponent, and provide a justification.
- 2.4 The Proponent shall, where consultation with Indigenous groups is a requirement of a condition set out in this document, discuss with each Indigenous group with respect to the manner with which to satisfy the consultation requirements referred to in condition 2.3, including:
- 2.4.1 methods of notification;
 - 2.4.2 the type of information and the period of time to be provided when seeking input;
 - 2.4.3 the process to be used by the Proponent to undertake impartial consideration of all views and information presented on the subject of the consultation; and
 - 2.4.4 the period of time and the means to advise Indigenous groups of how their views and information were considered by the Proponent;
- 2.5 Where seeking consensus is a requirement of a condition set out in this document, the Proponent shall report, as part of the annual report in condition 2.10 their efforts to seek consensus with the specified party in relation to the subject matter of the condition, including:
- 2.5.1 whether consensus has been achieved, or if consensus has not been achieved:
 - 2.5.1.1 a description of the actions and steps the Proponent has taken to seek consensus; and
 - 2.5.1.2 a summary of the views of the specified party in relation to the Proponent's efforts to seek consensus. The Proponent shall provide the specified party with the opportunity to provide a summary of their views, in their own words, for inclusion in the annual report.

Follow-up programs

- 2.6 The Proponent shall, where a follow-up program is a requirement of a condition set out in this document, determine, as part of the development of each follow-up program and in consultation with the parties being consulted during the development, the following information, unless otherwise specified in the condition:
- 2.6.1 the methodology, location, frequency, timing and duration of monitoring associated with the follow-up program;
 - 2.6.2 the scope, content and frequency of reporting of the results of the follow-up program to the parties consulted for the development of the follow-up program;
 - 2.6.3 the minimum frequency at which the follow-up program must be reviewed and, if necessary, updated;
 - 2.6.4 the levels of environmental change relative to baseline that would require the Proponent to implement modified or additional mitigation measure(s), including

instances where the Proponent may require Designated Project activities causing the environmental change to be stopped;

- 2.6.5 the technically and economically feasible mitigation measures to be implemented by the Proponent if monitoring conducted as part of the follow-up program shows that the levels of environmental change referred to in condition 2.6.4 have been reached or exceeded in order to return environmental changes to levels below those referred to in condition 2.6.4; and
 - 2.6.6 the specific and measureable end points that must be achieved before the follow-up program can end. Those end points should indicate that the accuracy of the environmental assessment has been verified and/or that the mitigation measures are effective.
- 2.7 The Proponent shall update the information determined for each follow-up program pursuant to condition 2.6 during the implementation of each follow-up program, at the minimum frequency determined pursuant to condition 2.6.3 and in consultation with the parties being consulted during the development of each follow-up program.
- 2.8 The Proponent shall provide the details of the follow-up programs referred to in conditions 3.13 through 3.17, 4.5, 5.3, 6.3 through 6.5, 6.7, 6.10, 7.8, 7.9, 9.2, 10.6, 10.8.4, and 11.2.3, including the information determined for each follow-up program pursuant to condition 2.6, to the Agency and to the parties being consulted during the development of each follow-up program prior to the implementation of each follow-up program. The Proponent shall also provide any update made pursuant to condition 2.7 to the Agency and to the parties being consulted during the development of each follow-up program within 30 days of the follow-up program being updated.
- 2.9 The Proponent shall, where a follow-up program is a requirement of a condition set out in this document:
- 2.9.1 implement the follow-up program according to the information determined pursuant to condition 2.6;
 - 2.9.2 conduct monitoring and analysis to verify the accuracy of the environmental assessment as it pertains to the particular condition and/or to determine the effectiveness of any mitigation measure;
 - 2.9.3 determine whether modified or additional mitigation measure(s) are required based on the monitoring and analysis undertaken pursuant to condition 2.9.2;
 - 2.9.4 if modified or additional mitigation measure(s) are required pursuant to condition 2.9.3, develop and implement these mitigation measure(s) as soon as feasible and monitor them pursuant to condition 2.9.2. The Proponent shall notify the Agency within 24 hours of any modified or additional mitigation measure being implemented. If the Proponent implements any additional or modified mitigation measure not previously submitted to the Agency pursuant to condition 2.6, the Proponent shall submit a detailed description of the measure(s) to the Agency within 7 days of their implementation; and
 - 2.9.5 report all results of the follow-up program to the Agency no later than March 31 following each reporting year during which the follow-up program is implemented and, subject to information determined pursuant to 2.6.2, to the parties being consulted during the development of the follow-up program.

Annual reporting

- 2.10 The Proponent shall prepare an annual report for each reporting year that sets out:
- 2.10.1 the activities undertaken by the Proponent to comply with each of the conditions set out in this document;
 - 2.10.2 how the Proponent complied with condition 2.1;
 - 2.10.3 for conditions set out in this document for which consultation is a requirement, how the Proponent considered any views and information that the Proponent received during or as a result of the consultation;
 - 2.10.4 the information referred to in conditions 2.6 for each follow-up program and any update to that information made pursuant to condition 2.7;
 - 2.10.5 the summary of available results of the follow-up program requirements identified in conditions 3.13 through 3.17, 4.5, 5.3, 6.3 through 6.5, 6.7, 6.10, 7.8, 7.9, 9.2, 10.6, 10.8.4, and 11.2.3;
 - 2.10.6 for any plan that is a requirement of a condition set out in this document, any update(s) to the plan that have been made during the reporting year; and
 - 2.10.7 any modified or additional mitigation measure implemented or proposed to be implemented by the Proponent, as determined pursuant to condition 2.9.
- 2.11 The Proponent shall submit the annual report referred to in condition 2.10 to the Agency, including a plain language executive summary in both official languages, no later than March 31 following the reporting year to which the annual report applies.
- 2.12 The first reporting year for which the Proponent shall prepare an annual report pursuant to condition 2.10 shall start on the day the Minister of the Environment issues the Decision Statement pursuant to subsection 54 (1) of the *Canadian Environmental Assessment Act, 2012*.

Information sharing

- 2.13 The Proponent shall publish on the Internet, or any medium which is publicly available, the annual reports and the executive summaries referred to in conditions 2.10 and 2.11, the reports related to accidents and malfunctions referred to in conditions 15.7.4 and 15.7.5, the communication plan for accident and malfunction referred to in condition 15.8, the schedules referred to in conditions 16.1 and 16.2, and any update or revision to the above documents, upon submission of these documents to the parties consulted for the respective conditions. The Proponent shall keep these documents publicly available for 25 years following the end of operation, or until the end of decommissioning of the Designated Project, whichever comes first. The Proponent shall notify the Agency and Indigenous groups of the availability of these documents within 48 hours of their publication.
- 2.14 When the development of any plan is a requirement of a condition set out in this document, the Proponent shall submit the plan to the Agency prior to construction, unless otherwise required through the condition.

Change of Proponent

- 2.15 The Proponent shall notify the Agency and Indigenous groups in writing no later than 30 days after the day on which there is any transfer of ownership, care, control or management of the Designated Project in whole or in part.

Change to the Designated Project

- 2.16 If the Proponent is proposing to carry out the Designated Project in a manner other than described in condition 1.7, the Proponent shall notify the Agency in writing in advance of carrying out the proposed activities. As part of the notification, the Proponent shall provide:
- 2.16.1 a description of the proposed change(s) to the Designated Project and the environmental effects that may result from the proposed change(s);
 - 2.16.2 any modified or additional measure to mitigate any environmental effect that may result from the proposed change(s) and any modified or additional follow-up requirement; and
 - 2.16.3 an explanation of how, taking into account any modified or additional mitigation measure referred to in condition 2.16.2, the environmental effects that may result from the proposed change(s) may differ from the environmental effects of the Designated Project identified during the environmental assessment.
- 2.17 The Proponent shall submit to the Agency any additional information required by the Agency about the proposed change(s) referred to in condition 2.16, which may include the results of consultation with Indigenous groups and relevant authorities on the proposed change(s) and environmental effects referred to in condition 2.16.1 and the modified or additional mitigation measures and follow-up requirements referred to in condition 2.16.2.

3 Fish and fish habitat

- 3.1 The Proponent shall conduct field-scale geochemical testing of waste rock and process solids to verify the magnitude and onset of potential metal leaching, including platinum group metals and mercury, and acid rock drainage in waste rock and tailings during construction and operation.
- 3.2 The Proponent shall implement measures to mitigate the adverse environmental effects of generated mine rock and process solids on fish and fish habitat during all phases of the Designated Project taking into account the geochemical testing conducted pursuant to condition 3.1. In doing so, the Proponent shall:
- 3.2.1 only use non-potentially acid generating and non-metal leaching materials, including mine rock, for construction purposes;
 - 3.2.2 stockpile non-potentially acid generating mine rock not being used for construction in the mine rock storage area;
 - 3.2.3 store potentially acid generating and metal leaching process solids separately from all other process solids in the process solids management facility;
 - 3.2.4 permanently store all potentially acid generating mine rock in a saturated state prior to the onset of any acid rock drainage;

- 3.2.5 store all potentially acid generating and metal leaching mine rock in the process solids management facility and open pits during operation, unless not technically feasible. If the Proponent must store potentially acid generating and metal leaching mine rock outside these locations during operations, the Proponent shall ensure that the temporary storage area is located within the catchment area of the process solids management facility or open pit, has sufficient capacity for the volume of potentially acid generating and metal leaching mine rock, and that the storm water management pond has sufficient capacity for the volume of leachate collected from the temporary storage area;
- 3.2.6 limit seepage from the process solids management facility by:
 - 3.2.6.1 installing, prior to the deposition of any process solids into the facility, and maintaining, during all phases of the Designated Project, a liner that limits seepage, on the upstream face of the perimeter embankments of the facility that is tied to the bedrock; and
 - 3.2.6.2 grouting any fractured bedrock prior to the deposition of any process solids into the facility.
- 3.3 The Proponent shall comply with *the Metal and Diamond Mining Effluent Regulations* and the pollution prevention provisions of the *Fisheries Act*;
- 3.4 The Proponent shall collect contact water from the Designated Project area, including seepage from the process solids management facility and any temporary storage areas for potentially acid generating and metal leaching mine rock, and water associated with the mine rock storage area, during all phases of the Designated Project and treat in accordance with the *Fisheries Act* before it is deposited into the receiving environment.
- 3.5 When treating contact water pursuant to condition 3.4, and releasing it into the receiving environment the Proponent shall:
 - 3.5.1 operate a diffuser at the contact water outlet into Hare Lake whenever contact water is being released;
 - 3.5.2 release contact water into Hare Lake only under ice-free conditions to mitigate impacts on stratification;
 - 3.5.3 determine, in consultation with Fisheries and Oceans Canada, Ontario Ministry of Environment, Conservation and Parks, and other relevant authorities, contact water discharge rate limits into Hare Lake applicable when there is a potential for anoxia in the lake, and adhere to these discharge limits; and
 - 3.5.4 connect the pit lakes with the receiving environment only once water quality in the pit lakes complies with the pollution prevention provisions of the *Fisheries Act*.
- 3.6 The Proponent shall implement measures to mitigate Designated Project-related effects on surface water quantity and levels during all phases of the Designated Project. In doing so, the Proponent shall:

- 3.6.1 maximize the recycling of contact water from the water management pond for use in processing ore in the processing plant to the extent that it is technically and economically feasible;
 - 3.6.2 identify, prior to construction and in consultation with Biigtigong Nishnaabeg and other Indigenous groups and relevant authorities, any technically and economically feasible measures to supplement water for Stream 6 (Angler Creek) and implement these measures during construction and operation in such a manner that other natural water sources are not adversely affected, unless otherwise authorized;
 - 3.6.3 develop, prior to construction and in consultation with Biigtigong Nishnaabeg and relevant authorities, and implement, during operation, a protocol for withdrawing water from Biigtig Zibi during low-flow conditions that is in accordance with provincial and federal requirements. As part of the development of the protocol, the Proponent shall:
 - 3.6.3.1 establish low-flow thresholds;
 - 3.6.3.2 identify the actions the Proponent will take to modify water withdrawal rates when low-flow thresholds are reached; and
 - 3.6.3.3 establish the methodology, location, frequency, and duration of flow monitoring in the Biigtig Zibi during operation.
- 3.7 The Proponent shall develop, prior to construction, and implement, during all phases of the Designated Project, erosion and sediment control measures, including applicable measures described by Fisheries and Oceans Canada's *Measures to Protect Fish and Fish Habitat*, to prevent harmful alteration, disruption, or destruction of fish habitat, and death of fish. The Proponent shall submit the measures to the Agency prior to implementing them. In doing so, the Proponent shall:
- 3.7.1 include measures to mitigate scouring and erosion in downstream watercourses, including in subwatersheds 103 and 112 identified in Figure 8-1 of Joint Review Panel Report;
 - 3.7.2 take into account current and future climate scenarios relevant to the Designated Project, including periods of flooding, heavy rainfall and frost, when designing and implementing these measures; and
 - 3.7.3 maintain and regularly inspect, subject to safety requirements, all erosion and sediment control measures, and document and repair any defective or damaged control measure as soon as circumstances permit.
- 3.8 The Proponent shall implement measures to protect fish and fish habitat when undertaking activities in or near water, including applicable measures described by Fisheries and Oceans Canada's *Measures to Protect Fish and Fish Habitat*. The Proponent shall implement these measures during all phases of the Designated Project. In doing so, the Proponent shall:
- 3.8.1 carry out any construction activities in fish habitat during timing windows of least risk for Ontario's northwest region for species present in the local study area, as identified in Ontario's *In-Water Work Timing Window Guidelines*, unless not technically or economically feasible. If the Proponent must carry out any such construction activity outside of any timing window of least risk, the Proponent shall do so in such a way that

- the work does not cause harmful alteration, disruption, or destruction of fish habitat, and death of fish, unless otherwise authorized;
- 3.8.2 develop, prior to construction and in consultation with Biigtigong Nishnaabeg and other Indigenous groups and relevant authorities, and implement, prior to conducting any authorized Designated Project activity requiring the removal of fish habitat, a protocol to salvage and relocate fish in a manner that complies with any authorization issued under the *Fisheries Act* and provincial requirements; and
- 3.8.3 when using explosives, ensure an overpressure of 50 kPa is not exceeded in fish habitat to avoid lethal or sub-lethal effects on fish and do so in locations that are not fish habitat, unless not technically feasible.
- 3.9 The Proponent shall establish and maintain during construction and operation a minimum 30 metre buffer zone along all fish habitat that are not being overprinted as part of the Designated Project, and shall not conduct any work within this buffer zone that disturbs vegetation, unless not technically or economically feasible. If the Proponent must conduct any such work in that buffer zone, the Proponent shall develop and implement additional measures to protect fish and fish habitat, including conducting the work within the timing windows of least risk referred to in condition 3.8.1, where technically and economically feasible.
- 3.10 The Proponent shall develop, to the satisfaction of Fisheries and Oceans Canada and in consultation with Biigtigong Nishnaabeg, other Indigenous groups, and other relevant authorities, including provincial authorities, and implement any offsetting plan related to the harmful alteration, disruption, or destruction of fish habitat, and death of fish associated with the carrying out of the Designated Project activities. The Proponent shall submit the approved offsetting plan(s) to the Agency prior to implementation. As part of the offsetting plan, the Proponent shall include:
- 3.10.1 a detailed description of monitoring measures to be implemented to verify the effectiveness of offsetting and the modified or additional measures to be implemented should monitoring indicate offsetting objectives are not met.
- 3.11 The Proponent shall, for any fish habitat offsetting measure proposed in any offsetting plan referred to in condition 3.10 that may cause adverse environmental effects not considered in the environmental assessment, develop and implement, following consultation with Biigtigong Nishnaabeg, other Indigenous groups and relevant authorities, measures to mitigate those effects. The Proponent shall submit these measures to the Agency before implementing them.
- 3.12 The Proponent shall conduct, prior to construction and in consultation with Indigenous groups, Fisheries and Oceans Canada, Ontario Ministry of Natural Resources and Forestry and other relevant authorities, surveys to confirm the presence of Northern brook lamprey (*Ichthyomyzon fossor*) in Streams 1, 2 and 3. In doing so, the Proponent shall:
- 3.12.1 identify the methodology, location, frequency, timing and duration of surveys based on current available science for capturing ammocoetes; and
- 3.12.2 use the results of the surveys to inform the Proponent's proposed offsetting plan referred to condition 3.10.

- 3.13 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, other Indigenous groups and relevant authorities, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on groundwater quality and quantity. In doing so, the Proponent shall:
- 3.13.1 monitor groundwater quality for all parameters predicted in Appendix D4 Hydrogeology Updated Effects Assessment Report of the Environmental Impact Statement addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727), including platinum group metal concentrations, and groundwater quantity prior to construction;
 - 3.13.2 update groundwater modeling and effects predictions in Appendix D4 Hydrogeology Updated Effects Assessment Report of the EIS Addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727), including groundwater travel times, based on monitoring data collected pursuant to condition 3.13.1 prior to construction;
 - 3.13.3 monitor for changes in groundwater levels and flows in response to the dewatering of the open pits during operation; and
 - 3.13.4 monitor, during all phases of the Designated Project, groundwater quality, levels and flows as pumped volumes in wells located upgradient, downgradient and cross gradient of the mine rock storage area, process solids management facility and open pits and in wells located along the predicted flow paths of any seepage from these mine features.
- 3.14 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, other Indigenous groups and relevant authorities, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on surface water quantity. In doing so, the Proponent shall:
- 3.14.1 monitor water levels in Hare Lake, Terru Lake in subwatershed 102, Lake 8 in subwatershed 102, Lake 12 in subwatershed 103, Lake 5 in subwatershed 105, unnamed lakes in subwatershed 104, station S-24 outlet of subwatershed 113 to the Biigtig Zibi, and station S-25 at the outlet of subwatershed 110 to the Biigtig Zibi prior to construction;
 - 3.14.2 monitor flow rates at stations S-8 on the stream in subwatershed 104 flowing to the Biigtig Zibi, S-9 upstream of inlet to Hare Lake, S-10 on the inlet to Hare Lake, S-11 on the Hare Lake outlet creek, station S-24 at the outlet of subwatershed 113 to the Biigtig Zibi, and station S-25 at the outlet of subwatershed 110 to the Biigtig Zibi prior to construction;
 - 3.14.3 develop rating curves for the relationship between water levels and flow rates for station S-24 at the outlet of subwatershed 113 to the Biigtig Zibi and station S-25 at the outlet of subwatershed 110 to the Biigtig Zibi based on the monitoring data collected pursuant to conditions 3.14.1 and 3.14.2;

- 3.14.4 monitor, from the beginning of construction through the end of post-closure, water quantity, levels, flow gauging and depth and flow profiling at point-source discharge locations and receiving water bodies, including Lake 1, Lake 2, Lake 8, Malpa Lake, Hare Creek, Stream 6 (Angler Creek), and flow or water level as indicated at locations identified in Table 1 of *Responses to Information Request #7: Hydrological Monitoring and Follow-up* submitted in Responses to Information Request Package of August 20, 2021 (Package 5) (Canadian Impact Assessment Registry Reference Number 54755, Document Number 950);
- 3.14.5 implement modified or additional mitigation measures pursuant to condition 2.6.5 if the results of the monitoring referred to in condition 3.14.4 are greater than what was predicted during the environmental assessment or indicate at any time that either of the following triggers have been reached:
 - 3.14.5.1 increases in flow have exceeded 100-year flood flows as referenced in Table 6.9 in Appendix D3 of the Environmental Impact Statement addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727); or
 - 3.14.5.2 the difference in daily flows between reference stations and non-reference stations has exceeded 20% for two consecutive months.
- 3.15 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, other Indigenous groups, Environment and Climate Change Canada, and other relevant authorities, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on surface water quality. The Proponent shall seek consensus with Biigtigong Nishnaabeg on the content of the follow-up program and its implementation. As part of the follow-up program, the Proponent shall:
 - 3.15.1 monitor water quality for the parameters measured during the 2008-2012 and 2013-2019 sampling campaigns in Marathon Palladium Project- Water Quality Baseline Report Update (Canadian Impact Assessment Registry Reference Number 54755, Document Number 722), platinum group metals, methylmercury and benthic communities prior to construction in Hare Lake, Biigtig Zibi, Stream 6 (Angler Creek), and Stream 5 (Hare Creek);
 - 3.15.2 monitor water quality in Hare Lake, Biigtig Zibi between the Designated Project and the mouth of Lake Superior, Stream 5 (Hare Creek) between the Designated Project and its outlet at Port Munro, and Stream 6 (Angler Creek) between the Designated Project and its outlet at Sturdee Cove during all phases of the Designated Project, including:
 - 3.15.2.1 total ammonia and un-ionized ammonia in Hare Lake; and
 - 3.15.2.2 dissolved oxygen and methylmercury in Hare Lake, Biigtig Zibi and Stream 6 (Angler Creek);
 - 3.15.3 monitor water quality of contact water stored in water management ponds, including phosphorus, total suspended solids, mercury, total and dissolved concentrations of all other heavy metals, chemical reagents used in processing, alkalinity, total ammonia, acidity, dissolved organic carbon, total dissolved solids, nitrate, pH, conductivity,

chloride, sulphate, total hardness, temperature, un-ionized ammonia, and platinum group metals;

- 3.15.4 monitor water quality in the mine rock catch basins during decommissioning; and
 - 3.15.5 monitor water quality of the pit lakes, from the beginning of filling until the end of post-closure, and conduct water quality modelling of each pit lake separately during filling.
- 3.16 The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, and implement during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on the thermal regime of Hare Lake, including the seasonal processes of temperature stratification and mixing.
- 3.17 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, other Indigenous groups and relevant authorities, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish and fish habitat, including lake sturgeon (*Acipenser fulvescens*) and its habitat. The Proponent shall seek consensus with Biigtigong Nishnaabeg on the content of the follow-up program and its implementation. As part of the follow-up program, the Proponent shall:
- 3.17.1 identify fish species to be monitored in addition to lake sturgeon (*Acipenser fulvescens*) and including species of interest to Indigenous groups;
 - 3.17.2 characterize the morphology of lake sturgeon (*Acipenser fulvescens*) habitat in the lower rapid area of Biigtig Zibi, including the shape of the riverbed, width of the cross axial profile and substrate composition prior to the start of any Designated Project activities that could impact Biigtig Zibi;
 - 3.17.3 monitor fish species identified pursuant to condition 3.17.1 from operation through post-closure in Hare Lake, Biigtig Zibi between the Designated Project and the mouth of Lake Superior, Stream 5 (Hare Creek) between the Designated Project and its outlet at Port Munro, and Stream 6 (Angler Creek) between the Designated Project and its outlet at Sturdee Cove, unless the species does not occur in that water body; and
 - 3.17.4 monitor the morphology characterized pursuant to condition 3.17.2 during construction and operation.

4 Migratory birds

- 4.1 The Proponent shall carry out the Designated Project, including vegetation clearing and blasting, in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Guidelines to avoid harm to migratory birds*.
- 4.2 The Proponent shall schedule vegetation clearing required for the Designated Project outside of the applicable regional nesting periods for the Designated Project area. In the event that vegetation clearing outside regional nesting periods is not technically or economically feasible,

the Proponent shall ensure it continues to carry out vegetation clearing in a manner described in condition 4.1 by developing and implementing additional mitigation measures.

- 4.3 The Proponent shall deter migratory birds, including migratory birds that are listed species at risk, from using the process solids management facility, from the beginning of its operation until a vegetation cover is established during decommissioning as part of reclamation. In doing so, the Proponent shall:
 - 4.3.1 maintain the embankments of the process solids management facility free of vegetation; and
 - 4.3.2 employ visual or auditory deterrents to discourage migratory birds from using the facility.
- 4.4 The Proponent shall implement, at the time transmission lines are built, measures to increase the visibility of the transmission lines over Canoe Lake for migratory birds and migratory birds that are listed species at risk, taking into account the Avian Power Line Interaction Committee's *Suggested Practices for Avian Protection on Power Lines*. The Proponent shall maintain these measures at all times until the transmission lines are decommissioned.
- 4.5 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Environment and Climate Change Canada, and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures to avoid harm to migratory birds, including migratory birds that are listed species at risk, their eggs and nests. The Proponent shall implement the follow-up program during all phases of the Designated Project. In doing so, the Proponent shall:
 - 4.5.1 conduct pre-construction habitat characterization for Canada warbler (*Cardellina Canadensis*), eastern wood-pewee (*Contopus virens*), olive-sided flycatcher (*Contopus cooperi*), evening grosbeak (*Coccothraustes vespertinus*), eastern whip-poor-will (*Antrostomus vociferous*), and common nighthawk (*Chordeiles minor*);
 - 4.5.2 determine need for additional modelling for habitat suitability to verify the accuracy of the environmental assessment on Canada warbler (*Cardellina Canadensis*) as summarized in Table 10 in *Supporting Information Document 25 from Environmental Impact Statement - Supporting Information Documents* (Canadian Impact Assessment Registry Reference Number 54755, Document Number 234) and if it is determined there is a need, conduct the additional modelling;
 - 4.5.3 monitor migratory birds, including eastern whip-poor-will (*Antrostomus vociferous*), common nighthawk (*Chordeiles minor*), forest bird and waterfowl populations, during construction and operation at locations identified based on baseline surveys conducted as part of the environmental assessment as indicated in Appendix 1, and Tables 8 and 9 in *Supporting Information Document 25 from Environmental Impact Statement - Supporting Information Documents* (Canadian Impact Assessment Registry Reference Number 54755, Document Number 234) and pre-construction habitat characterization results in 4.5.1;
 - 4.5.4 monitor the process solids management facility for use by migratory birds, including waterfowl, from the beginning of its operation until a vegetation cover is established during decommissioning as part of reclamation; and

- 4.5.5 monitor bird collisions with Designated Project transmission lines and building windows during construction and operation. If the number of window strikes recorded exceeds 50 bird deaths in a year, the Proponent shall implement modified or additional mitigation measures.

5 Greenhouse gas emissions

- 5.1 The Proponent shall implement measures to reduce Designated Project-related greenhouse gas emissions during all phases of the Designated Project. As part of these measures, the Proponent shall:
 - 5.1.1 develop and implement an anti-idling policy for all vehicles and motorized equipment operating within the Designated Project area. The Proponent shall require that all persons abide by this policy, unless not technically feasible or not feasible for health or safety reasons or under the circumstances described in condition 7.3.1.4; and
 - 5.1.2 monitor fuel usage of Designated Project-related vehicles and mobile motorized equipment through fuel tracking policies to identify anomalies in fuel use and implement measures to mitigate any identified anomalies, including by reducing distances travelled by these vehicles and mobile equipment.

- 5.2 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, and implement, during all phases of the Designated Project, a greenhouse gas management plan to reduce the Designated Project-related greenhouse gas emissions during each phase of the Designated Project. The Proponent shall take into account applicable provincial and federal guidance on greenhouse gas reduction strategies when developing and implementing the plan. As part of the development of the plan, the Proponent shall:
 - 5.2.1 identify the sources of greenhouse gas emissions applicable to each phase of the Designated Project covered by the greenhouse gas management plan;
 - 5.2.2 for each source of emissions identified pursuant to condition 5.2.1, identify the greenhouse gas emission mitigation measures applicable to that source in addition to the measures taken to comply with condition 5.1, including emerging technologies and practices at a sufficiently advanced stage of technological development to become technically and economically feasible over the life of the Designated Project. The Proponent shall use the Best Available Technologies / Best Environmental Practices Determination process in Table 2 of the Government of Canada's *Strategic Assessment of Climate Change* and other available guidance documents published by Environment and Climate Change Canada when identifying these measures;
 - 5.2.3 in identifying measures pursuant to condition 5.2.2, demonstrate how the following measures have been considered:
 - 5.2.3.1 employment of electrical assistance for haul trucks, carbon dioxide capture in construction concrete and processed solids stream, utilization of low carbon fuels, and utilization of electric off-road vehicles;

- 5.2.4 determine how each technically and economically feasible technology or practice identified pursuant to condition 5.2.2 will be implemented by the Proponent over the life of the Designated Project, including consideration of when any equipment associated with the Designated Project that contributes to the emission of greenhouse gases will need to be replaced with equipment of lower greenhouse gas intensity;
 - 5.2.5 establish greenhouse gas emission reduction targets for specific sources that take into account how the Proponent plans to implement the technologies and practices in the manner referred to in condition 5.2.4;
 - 5.2.6 review the plan, in consultation with Environment and Climate Change Canada, at a minimum frequency of every five years from the commencement of operations for the life of the Designated Project. If the Proponent updates the plan, the Proponent shall submit any updated plan to the Agency and to Environment and Climate Change Canada within 30 days of the revision of the plan. As part of each review of the plan, the Proponent shall:
 - 5.2.6.1 review the technologies and practices referred to in condition 5.2.2 and update the plan if it identifies other emerging technologies and practices that are at a sufficiently advanced stage of technological development to become technically and economically feasible over the life of the Designated Project; and
 - 5.2.6.2 determine whether the reduction targets referred to in condition 5.2.5 need to be revised and, if so, revise the targets and provide a justification for the revision.
- 5.3 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, and implement, during all phases of the Designated Project, a follow-up program with respect to greenhouse gas emissions from the Designated Project. As part of the development of the follow-up program, the Proponent shall identify the sources of greenhouse gas emissions that will be quantified. As part of the implementation of the follow-up program, the Proponent shall:
- 5.3.1 quantify annually, during all phases of the Designated Project, greenhouse gas emissions from the Designated Project for each source of greenhouse gas emissions identified during the development of the follow-up program, including the methodology, assumptions and all supporting data used for quantifying the emissions. In doing so, the Proponent shall;
 - 5.3.1.1 use methods outlined in the Government of Canada's most-recent *Greenhouse Gas Quantification Requirements*, or, where emission source methods are not specified for a certain activity, methods consistent with the *2006 IPCC Guidelines for National Greenhouse Gas Inventories*; and
 - 5.3.1.2 justify the methodology used to quantify emission from any activity not specified in the Government of Canada's *Greenhouse Gas Quantification Requirements*;
 - 5.3.2 quantify annually, during operation, greenhouse emissions intensity in accordance with equation 2 of the Government of Canada's *Strategic Assessment of Climate Change*; and

- 5.3.3 justify, when reporting the results of the follow-up program, any discrepancy between the greenhouse gas emissions quantified pursuant to condition 5.3.1 and the predicted emissions estimated during the environmental assessment included in Table 6.2-4 of the Environmental Impact Statement (Canadian Impact Assessment Registry Reference Number 54755, Document number 224)

6 Health and socio-economic conditions of Indigenous peoples

- 6.1 The Proponent shall implement, during construction and operation, measures to mitigate fugitive dust emissions attributable to the Designated Project, including from Designated Project roads, concentrate handling facilities and mine rock storage facilities, haul trucks and rail cars, and stockpiles, taking into account the best management practices outlined in *Technical bulletin – Management Approaches for Industrial Fugitive Dust Sources* published by the government of Ontario. As part of these measures, the Proponent shall:
 - 6.1.1 load trucks and rail cars with ore concentrate in a covered environment;
 - 6.1.2 locate the primary crusher within an enclosed area that isolates it from the surrounding environment and operate a dust collection system to filter the dust out of the air when operating the crusher;
 - 6.1.3 use water sprays on aggregate crushing systems as necessary to suppress fugitive dust;
 - 6.1.4 cover the crushed-ore stockpile to prevent the formation of fugitive dust from wind; and
 - 6.1.5 ensure all diesel engines found on mine off-road equipment required for the Designated Project are compliant with, at a minimum, Canada’s Tier IV emissions standards for off-road compression ignition engines and are maintained in accordance with engine maintenance instructions provided by the manufacturer to meet the emissions standards.
- 6.2 The Proponent shall identify, prior to construction and in consultation with Biigtigong Nishnaabeg, any groundwater springs used by Biigtigong Nishnaabeg that could be adversely impacted by the Designated Project within the local study area for hydrology identified in Figure 2.4-3 of Appendix 6 of the Joint Review Panel Report.
- 6.3 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, other Indigenous groups and relevant authorities, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on the health of Indigenous Peoples caused by changes in concentrations of contaminants of potential concern in water, including Hare Lake and any groundwater springs identified pursuant to condition 6.2. The Proponent shall seek consensus with Biigtigong Nishnaabeg on the content of the follow-up program and its implementation. As part of the follow-up program, the Proponent shall:
 - 6.3.1 review the locations of the existing groundwater monitoring well network used to comply with condition 3.13 and add additional wells as needed to monitor predicted groundwater flow paths from the mine rock storage area, process solids management facility and open pits to the groundwater springs;

- 6.3.2 identify contaminants of concern to be monitored and locations for monitoring, including within Hare Lake and any groundwater springs, and monitor the identified contaminants at these locations; and
 - 6.3.3 if water quality monitoring results exceed the thresholds in Health Canada's Guidelines for Canadian Drinking Water Quality, predictions made in Appendix D4 Hydrogeology Updated Effects Assessment Report of the Environmental Impact Statement addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727) or in the human health risk assessment described in Appendix D10 of the Environmental Impact Statement addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727), the Proponent shall update the human health risk assessment using the results of monitoring and implement modified or additional measures pursuant to condition 2.6.5.
- 6.4 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, other Indigenous groups, Environment and Climate Change Canada, Ontario Ministry of Environment, Conservation and Parks and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of the mitigation measures as it pertains to the adverse environmental effects on the health of Indigenous Peoples caused by changes to air quality. The Proponent shall implement the follow-up program beginning prior to construction and continuing until the end of decommissioning. As part of the follow-up program, the Proponent shall:
- 6.4.1 identify locations that shall be monitored including:
 - 6.4.1.1 locations where parameters are predicted to exceed the standards and criteria set out in the Canadian Council of Ministers of the Environment's *Canadian Ambient Air Quality Standards* and Ontario's *Ambient Air Quality Criteria* as indicated by the air quality modelling described in section 5.3 of Appendix D1 of the Environmental Impact Statement addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727), and any updates to that modelling done pursuant to condition 6.4.4; and
 - 6.4.1.2 locations within areas used by Indigenous groups for traditional purposes, as determined in consultation with Indigenous groups;
 - 6.4.2 prior to construction, analyze the silt content of unpaved roads;
 - 6.4.3 monitor, beginning one-year prior to construction and continuing through decommissioning, benzo(a)pyrene, benzene, dustfall, crystalline silica, total suspended particulates and metals, particulate matter (PM₁₀), fine particulate matter (PM_{2.5}) and nitrogen dioxide at locations identified pursuant to condition 6.4.1. The Proponent shall monitor particulate matter (PM₁₀), fine particulate matter (PM_{2.5}) and nitrogen dioxide continuously;
 - 6.4.4 should the monitoring referred to in condition 6.4.2 and 6.4.3 indicate values for benzo(a)pyrene, benzene, dustfall and crystalline silica that exceed the values predicted in section 6 of Appendix D1 of the Environmental Impact Statement addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727) or should the Proponent analyze that silt content is higher than 5.8 percent, update

the air quality modelling described in section 5.3 of Appendix D1 of the Environmental Impact Statement addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727) with these updated values; and

- 6.4.5 implement additional or modified mitigation measures and update the human health risk assessment described in Appendix D10 of the Environmental Impact Statement addendum (Canadian Impact Assessment Registry Reference Number 54755, Document Number 727) if monitoring referred to in condition 6.4.3 indicates that nitrogen dioxide concentrations exceed the Canadian Council of Ministers of the Environment's *Canadian Ambient Air Quality Standards* or if any other parameters exceed the concentrations predicted in either the environmental assessment or the thresholds set out in the Canadian Council of Ministers of the Environment's *Canadian Ambient Air Quality Standards* or the Ontario's *Ambient Air Quality Criteria*.
- 6.5 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, other Indigenous groups, Health Canada, Ontario Ministry of the Environment, Conservation and Parks, and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on the health of Indigenous Peoples caused by changes in concentrations of contaminants of potential concern in country food, including vegetation, fungi, and fish and other wildlife. The Proponent shall seek consensus with Biigtigong Nishnaabeg on the content of the follow-up program and its implementation, and shall implement the follow-up program during all phases of the Designated Project. In doing so, the Proponent shall:
 - 6.5.1 determine, in consultation with Indigenous groups, the species to monitor (including vegetation, fungi, and fish and other wildlife used as country food), and the contaminants of potential concern to monitor in the species identified, including:
 - 6.5.1.1 mercury in identified species;
 - 6.5.1.2 methylmercury in the tissue of fish; and
 - 6.5.1.3 polycyclic aromatic hydrocarbons in vegetation, including blueberries during construction and operation;
 - 6.5.2 monitor, beginning prior to construction and continuing through post-closure, methylmercury in the tissue of fish identified in condition 6.5.1;
 - 6.5.3 monitor all other contaminants of potential concern in species identified pursuant to condition 6.5.1 other than methylmercury in fish, only if measured concentrations of contaminants of potential concern exceed predicted values in water pursuant to condition 6.3, or air pursuant to condition 6.4; and
 - 6.5.4 if the results of country food monitoring referred to in condition 6.5.2 or 6.5.3 indicate that contaminants of potential concern are increasing over time, the Proponent shall update the human health risk assessment using the results of monitoring and implement modified or additional measures.
- 6.6 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg and other relevant authorities, measures to mitigate adverse impacts on the socio-economic conditions of Biigtigong Nishnaabeg from changes to the environment caused by the Designated Project. Measures shall include those that mitigate the adverse socio-economic impacts on

Biigtigong Nishnaabeg harvesters and trappers related to the loss of or changes to access to trapping and harvesting sites, including the Community Trapline. The Proponent shall seek consensus with Biigtigong Nishnaabeg on the identification and implementation of measures and shall implement the measures during all phases of the Designated Project.

- 6.7 Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, and implement during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures described in condition 6.6 as it pertains to adverse environmental effects on the socio-economic conditions of Indigenous groups from changes to the environment caused by the Designated Project. The Proponent shall seek consensus with Biigtigong Nishnaabeg on the content of the follow-up program and its implementation. As part of the follow-up program the Proponent shall monitor:
 - 6.7.1 the ability of harvesters and trappers to relocate to new harvesting and trapping sites;
 - 6.7.2 changes in harvesting and trapping yields within the local study areas for fish, vegetation and wildlife in Figure 2.4-2 of Appendix 6 of the Joint Review Panel Report; and
 - 6.7.3 the socio-economic costs associated with the results of monitoring in condition 6.7.1 and 6.7.2, including the financial costs incurred by Biigtigong Nishnaabeg as a result of having to relocate trapping activities away from their existing Community Trapline and the effectiveness of mitigation measures in condition 6.6 in mitigating these costs.
- 6.8 The Proponent shall conduct pre-construction surveys, in consultation with the Métis Nation of Ontario, Red Sky Métis Independent Nation and Jackfish Métis Association, to confirm the extent and nature of harvesting practices by these Indigenous groups in the local study areas for fish, vegetation and wildlife identified in Figure 2.4-2 of Appendix 6 of the Joint Review Panel Report.
- 6.9 The Proponent shall develop, prior to construction and in consultation with Pays Plat First Nation, Métis Nation of Ontario, Red Sky Métis Independent Nation and Jackfish Métis Association, and implement measures to mitigate adverse environmental effects on the socio-economic conditions of Indigenous groups from changes to the environment caused by the Designated Project. The Proponent shall take into account the results of the surveys referred to in condition 6.8, and the impacts determined during the environmental assessment when developing and implementing these measures.
- 6.10 The Proponent shall develop, prior to construction and in consultation with Pays Plat First Nation, Métis Nation of Ontario, Red Sky Métis Independent Nation and Jackfish Métis Association, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects on the socio-economic conditions of these Indigenous groups from changes to the environment caused by the Designated Project. The Proponent shall implement the follow-up program during all phases of the Designated Project.
- 6.11 The Proponent shall communicate to the Indigenous groups named in condition 6.7 and 6.10, the results of the follow-up programs that pertain to each Indigenous group and shall determine, in consultation with each group, the procedures, including timing and methods, for sharing this information.

7 Current use of lands and resources for traditional purposes

- 7.1 The Proponent shall implement measures to avoid the introduction and spread of invasive and noxious vegetation within the Designated Project area during all phases of the Designated Project. In doing so, the Proponent shall:
- 7.1.1 monitor the Designated Project area for invasive and noxious plants using methods and a monitoring frequency determined in consultation with Biigtigong Nishnaabeg, other Indigenous groups and relevant authorities; and
 - 7.1.2 remove the plants identified through monitoring in condition 7.1.1 without the use of herbicides.
- 7.2 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg and other Indigenous groups, mitigation measures to reduce ambient lighting within the Designated Project area to mitigate adverse environmental effects of the Designated Project, including on the current use of lands and resources for traditional purposes and migratory birds. The Proponent shall implement these measures during all phases of the Designated Project. As part of these measures, the Proponent shall:
- 7.2.1 optimize lighting design to reduce the total amount of lighting needed;
 - 7.2.2 use directional lighting that targets only the areas where lighting is required;
 - 7.2.3 use shielded fixtures to reduce glare and light leakage in directions where light is not required; and
 - 7.2.4 place light fixtures on poles or buildings at the lowest possible height, without interfering with operational and safety requirements.
- 7.3 The Proponent shall develop in consultation with Biigtigong Nishnaabeg and other Indigenous groups, and implement measures to mitigate the impacts of noise from the Designated Project on the current use of lands and resources for traditional purposes. As part of these measures, the Proponent shall:
- 7.3.1 reduce noise-generating activities between 11 p.m. and 7 a.m., including by:
 - 7.3.1.1 prohibiting all Designated Project-related truck traffic from utilizing Highway 17 and the town of Marathon transportation corridors described in section 6.2.2.1 and Figure 5.3-1 of the environmental impact statement (Canadian Impact Assessment Registry Reference Number 54755, document number 224);
 - 7.3.1.2 operate compactors and bulldozers in areas outside the southern portion of the process solids management facility;
 - 7.3.1.3 ensuring the frequency of haul trucks arriving in the southern portion of the process solids management facility does not exceed an average of four per hour; and
 - 7.3.1.4 requiring that all other heavy equipment in the southern portion of the process solids management facility idle while haul trucks are dumping ore.
 - 7.3.2 restrict noise-generating activities at the rail load-out facility such that:

- 7.3.2.1 rail coupling only occurs between 7 a.m. and 7 p.m.;
 - 7.3.2.2 a maximum of three coupling events occur per hour;
 - 7.3.2.3 other noise-generating activities occur between 7 a.m. and 11 p.m.; and
- 7.3.3 prohibit employees and contractors associated with the Designated Project from slamming haul truck tailgates within the Designated Project area, and install signage at the entrance of the Designated Project area informing employees and contractors of this prohibition.
- 7.4 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg and other Indigenous groups, and implement a communication plan to share information with Indigenous groups on adverse environmental effects of Designated Project activities as they relate to impacts on Indigenous health and the current use of lands and resources for traditional purposes. The Proponent shall implement and maintain the communication plan during all phases of the Designated Project. The communication plan shall include:
- 7.4.1 a description of how the Proponent shall maintain, at the request of Indigenous groups, the existing environmental committees established by the Proponent for the purpose of engaging with Indigenous groups;
 - 7.4.2 procedures, including timing and methods, for sharing information on the following:
 - 7.4.2.1 the location and timing of Designated Project activities, including blasting, that may affect quality of experience related to current use of lands and resources for traditional purposes caused by changes in noise within the Designated Project area;
 - 7.4.2.2 the results of the follow-up and monitoring programs referred to in conditions 3.13 through 3.17, 4.5, 6.3 through 6.5, 7.8, 7.9, 9.2, 10.6, 10.8.4 and 11.2.3, including any potential health risks, in plain language, and the modified or additional mitigation measures developed and implemented by the Proponent pursuant to condition 2.6 for each follow-up program; and
 - 7.4.3 procedures for Indigenous groups to provide feedback to the Proponent about adverse environmental effects on current use of lands and resources for traditional purposes related to noise caused by the Designated Project, and procedures for the Proponent to document and respond in a timely manner to the feedback received and demonstrate how issues have been addressed, including through the implementation of additional or modified mitigation measures. The Proponent shall acknowledge receipt of any complaints within 48 hours.
- 7.5 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg and relevant authorities, and implement, during construction and operation, measures to mitigate the adverse effects of the Designated Project on Biigtigong Nishnaabeg as a result of restricted access to the Camp 19 Road segment that passes through the Designated Project area.
- 7.6 The Proponent shall, if requested by Biigtigong Nishnaabeg, participate, in a Biigtigong Nishnaabeg fish hatchery program. If requested to participate in such a program, the Proponent shall consult with Biigtigong Nishnaabeg, Ontario Ministry of Natural Resources and Forestry and other relevant authorities, on the nature of its participation, at a time determined in consultation with Biigtigong Nishnaabeg.

- 7.7 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg and other Indigenous groups, and implement measures to mitigate adverse environmental effects of the Designated Project on the harvesting of vegetation for traditional purposes, including impacts on the sharing of intergenerational traditional knowledge related to vegetation harvesting.
- 7.8 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, and other Indigenous groups, and implement, during construction and operations, a follow-up program to verify the accuracy of the environmental assessment as it pertains to adverse environmental effects of the Designated Project on current use of lands and resources for traditional purposes related to noise-generating activities, including near-surface blasting activities.
- 7.9 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, Pays Plat, and other Indigenous groups, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of any mitigation measures, including measures in condition 3.6, as it pertains to adverse environmental effects of the Designated Project on current use of lands and resources for traditional purposes and the cultural heritage of Indigenous groups related to Stream 6 (Angler Creek), not already addressed by follow-up programs referred to in conditions 3.14, 3.15 and 3.17.

8 Physical and cultural heritage and structures, sites or things of historical, archaeological, paleontological or architectural significance

- 8.1 The Proponent shall complete, prior to construction and in consultation with Biigtigong Nishnaabeg and Pays Plat First Nation, an additional stage 2 archaeological assessment in accordance with Ontario's *Standards and Guidelines for Consultant Archaeologists* of the area surrounding the location of the discharge structure, if the final location of the discharge structure is in the area of archaeological potential on Hare Lake identified in Map 4 of the Supporting Information Document No. 27 of the environmental impact statement (Canadian Impact Assessment Registry Reference Number 54755, document number 227).
- 8.2 The Proponent shall develop, in consultation with Biigtigong Nishnaabeg and Pays Plat First Nation and Ontario Ministry of Citizenship and Multiculturalism, and implement measures to mitigate adverse environmental effects of the Designated Project on any structures, sites or things of historical, archaeological, paleontological or architectural significance identified through the stage 2 archaeological assessment referred to in condition 8.1.
- 8.3 For any previously unidentified structures, sites or things of historical, archaeological, paleontological or architectural significance discovered within the Designated Project area by the Proponent, or brought to the attention of the Proponent by a Biigtigong Nishnaabeg and Pays Plat First Nation or another party during any phase of the Designated Project, the Proponent shall:
- 8.3.1 immediately halt work at the location of the discovery, except for actions required to be undertaken to protect the integrity of the discovery;
 - 8.3.2 delineate an area around the discovery as a no-work zone;

- 8.3.3 inform the Agency and Indigenous groups within 24 hours of the discovery, and allow Indigenous groups to monitor archaeological works;
 - 8.3.4 have a qualified individual, whose expertise pertains to the requirements of Ontario's *Heritage Act*, conduct an assessment at the location of the discovery; and
 - 8.3.5 consult with Biigtigong Nishnaabeg, Pays Plat First Nation and relevant authorities on the manner by which the Proponent shall comply with all applicable legislative or legal requirements and associated regulations and protocols respecting the discovery, recording, transferring and safekeeping of previously unidentified structures, sites or things of historical, archaeological, paleontological or architectural significance.
- 8.4 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg, and implement measures to address the adverse effects caused by the construction and operation of the Designated Project on cultural heritage and resulting impacts on mental health. The Proponent shall implement the measures during all phases of the Designated Project. In doing so, the Proponent shall develop and implement measures that:
- 8.4.1 facilitate, beginning prior to construction, the intergenerational transfer of knowledge related to the Community Trapline, Stream 6 (Angler Creek) and woodland caribou (*Rangifer tarandus caribou*), including historical and current uses and cultural, social, and spiritual knowledge;
 - 8.4.2 create or expand on existing physical spaces for the transfer of intergenerational knowledge among Biigtigong Nishnaabeg community members. In doing so, the Proponent shall consider the creation or expansion of land-based educational infrastructure, outdoor classrooms or a fish hatchery learning facility; and
 - 8.4.3 complement or enhance existing or planned programs related to the mitigation measures developed in 8.4.1 and 8.4.2 by consulting relevant authorities responsible for these programs.
- 8.5 The Proponent shall participate, prior to construction and at the request of relevant authorities, in the replacement of the Biigtigong Nishnaabeg Community Trapline. The Proponent shall consult Biigtigong Nishnaabeg and relevant authorities responsible for the replacement of the trapline on the nature of its participation.

9 Wildlife

- 9.1 The Proponent shall implement measures, during all phases of the Designated Project, to mitigate interactions between wildlife and Designated Project employees and contractors within the Designated Project area. In doing so, the Proponent shall:
- 9.1.1 mitigate the risks of collisions between vehicles and black bear (*Ursus americanus*), , grey wolf (*Canis lupus lycaon*), beaver (*Castor canadensis*), American martin (*Martes Americana*), moose (*Alces alces*), and woodland caribou (*Rangifer tarandus caribou*). In doing so the Proponent shall determine, in consultation with Biigtigong Nishnaabeg, other Indigenous groups and relevant authorities, and maintain during all phases of the Designated Project:

- 9.1.1.1 speed limits on Designated Project roads, that take into account the potential for collisions with wildlife. The Proponent shall post these speed limits on Designated Project roads and require all persons to abide by these speed limits;
 - 9.1.1.2 maximum vegetation height and vegetation composition along the Designated Project roads to increase sight lines for drivers and visibility of wildlife; and
 - 9.1.1.3 maximum snow bank heights along Designated Project roads and size and spacing of escape pathways through which wildlife can exit the plowed roads in winter;
 - 9.1.2 store waste, including food refuse and substances toxic to wildlife, in such a manner that it is inaccessible to wildlife, including black bears (*Ursus americanus*), and dispose of this waste outside of the Designated Project area in a manner consistent with legislative or regulatory requirements;
 - 9.1.3 prohibit employees and contractors associated with the Designated Project from fishing, hunting, trapping, gathering and using recreational vehicles for any purposes not associated with the Designated Project, within the Designated Project area, or using the Designated Project area to access lands outside the Designated Project area for fishing, hunting, trapping, gathering and using recreational vehicles, unless an employee or contractor is provided access by the Proponent as a member of an Indigenous group for traditional purposes or for exercising Aboriginal rights, to the extent that such access is safe;
 - 9.1.4 develop and implement a protocol for documenting interactions between wildlife and Designated Project employees and contractors, including collisions with wildlife on Designation Project roads. As part of the protocol, the Proponent shall require employees and contractors to self-report observed interactions with and fatality of wildlife, and shall require all employees and contractors to apply this protocol; and
 - 9.1.5 develop, in consultation with Biigtigong Nishnaabeg, other Indigenous groups and relevant authorities, and implement training for employees and contractors associated with the Designated Project on practices that reduce wildlife-human interactions within the Designated Project, including collisions with wildlife on Designated Project roads.
- 9.2 The Proponent shall develop, prior to construction and in consultation with Biigtigong Nishnaabeg and other Indigenous groups and relevant authorities, and implement, during all phases of the Designated Project, a follow-up program to verify the accuracy of the environmental assessment and the effectiveness of measures as it pertains to human interactions with wildlife in the Designated Project area. In doing so, the Proponent shall:
- 9.2.1 monitor the information reported pursuant to condition 9.1.4, including collisions with wildlife on Designation Project roads; and
 - 9.2.2 if multiple collisions are identified in a specific area or location, implement modified or additional measures.

10 Species at risk

- 10.1 The Proponent shall conduct, in consultation with Environment and Climate Change Canada and Ontario Ministry of Environment, Conservation and Parks, pre-construction surveys to determine whether tri-colored bat (*Perimyotis subflavus*) is present within the Designated Project area.
- 10.2 The Proponent shall give preference to avoiding vegetation clearing required for the Designated Project during periods when little brown myotis (*Myotis lucifugus*) and Northern myotis (*Myotis septentrionalis*) are establishing and occupying maternity roosts. Where the Proponent plans to undertake vegetation clearing during these periods, the Proponent shall conduct pre-vegetation clearing surveys to identify if any active hibernacula or maternity roost site is present in any of the areas to be cleared using methods determined in consultation with Ontario Ministry of Environment, Conservation and Parks.
- 10.3 The Proponent shall develop, in consultation with Environment and Climate Change Canada and Ontario Ministry of Environment, Conservation and Parks, and implement modified or additional measures to protect tri-colored bat (*Perimyotis subflavus*), little brown myotis (*Myotis lucifugus*) or Northern myotis (*Myotis septentrionalis*), if the Proponent discovers the presence of tri-colored bat (*Perimyotis subflavus*) through surveys in condition 10.1, or active hibernacula or maternity roosting sites for little brown myotis (*Myotis lucifugus*) or Northern myotis (*Myotis septentrionalis*) within the Designated Project area through surveys referred to in condition 10.2 or during site clearing.
- 10.4 The Proponent shall have a qualified individual with knowledge of bat biology, identify measures to mitigate sensory disturbance from blasting on bats, taking into account British Columbia's *Best Management Practices for Bats in British Columbia*, and implement these measures during blasting activities. In doing, the Proponent shall have the qualified individual:
 - 10.4.1 ensure that sound concussion, shock wave and peak particle velocity resulting from blasting do not exceed the thresholds listed in British Columbia's *Best Management Practices for Bats in British Columbia* at the location of any occupied maternity roosts or hibernacula.
- 10.5 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada and Ontario Ministry of Environment, Conservation and Parks, and other relevant authorities, a compensation plan for any loss of little brown myotis (*Myotis lucifugus*), Northern myotis (*Myotis septentrionalis*), or tri-colored bat (*Perimyotis subflavus*) habitat, including active maternity roosting and hibernacula sites, as a result of Designated Project activities. The Proponent shall implement the compensation plan beginning at the start of construction through post-closure.
- 10.6 The Proponent shall develop, in consultation with Indigenous groups, Environment and Climate Change Canada, Ontario Ministry of Environment, Conservation and Parks and other relevant authorities, and implement, during construction and operation, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to the adverse effects of the Designated Project on little brown myotis (*Myotis lucifugus*), Northern myotis (*Myotis septentrionalis*), and tri-colored bat (*Perimyotis subflavus*).

10.7 The Proponent shall mitigate, during all phases of the Designated Project and in consultation with Biigtigong Nishnaabeg and other Indigenous groups, Environment and Climate Change Canada, Ontario Ministry of the Environment, Conservation and Parks and other relevant authorities, adverse environmental effects on woodland caribou (*Rangifer tarandus caribou*) and its habitat. In doing so, the Proponent shall:

10.7.1 give preference to avoiding the destruction or alteration of habitat over minimizing the destruction or alteration of habitat, to minimizing the destruction or alteration of habitat over restoring altered or destroyed habitat on-site, and to restoring altered or destroyed habitat on-site over offsetting; and

10.7.2 develop, prior to construction, and implement, during construction and operation, a caribou monitoring and response protocol to determine when woodland caribou (*Rangifer tarandus caribou*) are within 500 meters of the Designated Project area, and suspend or delay tree clearing, blasting, drilling and crushing activities when woodland caribou (*Rangifer tarandus caribou*) is observed within 500 meters of the Designated Project area. The Proponent shall resume activities only once woodland caribou (*Rangifer tarandus caribou*) are no longer within 500 meters of the Designated Project area.

10.8 The Proponent shall develop, prior to operation, and in consultation with Biigtigong Nishnaabeg, other Indigenous groups, Environment and Climate Change Canada, Ontario Ministry of the Environment, Conservation and Parks and other relevant authorities, and implement a compensation plan for woodland caribou (*Rangifer tarandus caribou*) critical habitat that will be altered or destroyed by the Designated Project and which has not been mitigated pursuant to condition 10.7 and 11.2. When developing the compensation plan, the Proponent shall take into account Biigtigong Nishnaabeg's Caribou Strategy, Environment and Climate Change Canada's *Operational Framework for Conservation Allowances* and the Ontario Ministry of the Environment, Conservation and Parks requirements under section 17 of Ontario's *Endangered Species Act*. As part of the compensation plan, the Proponent shall:

10.8.1 describe the habitat-based measures to be implemented, including measures to address the loss of intra-range connectivity during construction and operations. In doing so, the Proponent shall:

10.8.1.1 include an offset ratio that demonstrates how the level of risk, severity of effects, vulnerability of species or habitat, time lags, probability of success, and the quality of the proposed offsetting measures were considered;

10.8.1.2 give preference to measures that support intra-range connectivity over inter-range connectivity and inter-range connectivity over measures that support general habitat compensation;

10.8.1.3 identify areas within the Coastal Range where intra-range connectivity can be improved and any economically and technically feasible measures that the Proponent shall implement in these areas to improved intra-range connectivity;

10.8.2 describe the non-habitat measures to be implemented by the Proponent if residual effects cannot be fully offset with habitat-based measures. In doing so, the Proponent shall consider, in consultation with Indigenous groups, Environment and Climate Change

Canada and Ontario Ministry of the Environment, Conservation and Parks, participating in research, monitoring or community-based programs such that participation has an additive effect on program outcomes and addresses impacts associated with the Designated Project;

- 10.8.3 identify the performance indicators to be used by the Proponent to evaluate the effectiveness of habitat-based and non-habitat-based compensation measures; and
- 10.8.4 develop the follow-up program to evaluate the effectiveness of the mitigation measures included in the compensation plan using the performance indicators described in condition 10.8.3.

11 Reclamation

11.1 The Proponent shall conduct progressive reclamation of areas disturbed by the Designated Project. As part of progressive reclamation, the Proponent shall:

11.1.1 identify, in consultation with Indigenous groups, Environment and Climate Change Canada, and other relevant authorities, including provincial authorities, a diverse mixture of native plant species for revegetation that prioritizes reforestation and includes:

- 11.1.1.1 trees and shrubs;
- 11.1.1.2 species of value to migratory birds, including migratory bird species at risk and waterfowl, including Canada warbler (*Cardellina Canadensis*), eastern wood-pewee (*Contopus virens*), olive-sided flycatcher (*Contopus cooperi*), evening grosbeak (*Coccothraustes vespertinus*), eastern whip-poor-will (*Antrostomus vociferous*), and common nighthawk (*Chordeiles minor*);
- 11.1.1.3 species of value to moose (*Alces alces*) and other mammals of interest to Indigenous groups, as identified by Indigenous groups;
- 11.1.1.4 species of value to woodland caribou (*Rangifer tarandus caribou*)
- 11.1.1.5 species of interest to Indigenous groups, as identified by Indigenous groups; and
- 11.1.1.6 species known to aid in the reestablishment of ecosystems by improving the physical environment through their contributions to shade, litter accumulation, and moisture retention.

11.2 The Proponent shall develop, prior to operation, and in consultation with Biigtigong Nishnaabeg, other Indigenous groups, Environment and Climate Change Canada, Ontario Ministry of Mines, and other relevant authorities, a final reclamation plan for the Designated Project, taking into account Ontario Ministry of Mines requirements for a closure plan and Ontario's *Best Management Practices for Mineral Exploration and Development Activities and Woodland Caribou in Ontario*. The Proponent shall seek consensus with Biigtigong Nishnaabeg on the content of the final reclamation plan and its implementation. The Proponent shall implement the plan during decommissioning and post-closure. As part of the final reclamation plan, the Proponent shall:

11.2.1 establish the performance standards to be used by the Proponent to evaluate the effectiveness of final reclamation activities, including standards that require:

- 11.2.1.1 restoration of natural drainage patterns within the Designated Project area to as close to baseline as technically and economically feasible;
 - 11.2.1.2 self-sustaining ecosystems, including even-aged conifer forest;
 - 11.2.1.3 habitat for moose (*Alces alces*) and other mammals of interest to Indigenous groups, as identified by Indigenous groups;
 - 11.2.1.4 habitat for woodland caribou (*Rangifer tarandus caribou*), including habitat within the Designated Project area that connects with adjacent woodland caribou (*Rangifer tarandus caribou*) habitats outside the Designated Project area and that is as close to the baseline forest stand as technically feasible;
 - 11.2.1.5 habitat for migratory birds, including migratory bird species at risk, forest birds and waterfowl, that are informed by forest bird and waterfowl survey results collected pursuant to condition 4.5; and
 - 11.2.1.6 habitat for little brown myotis (*Myotis lucifugus*) and Northern myotis (*Myotis septentrionalis*);
- 11.2.2 identify and describe final reclamation measures to be implemented, including how these measures will address performance standards identified in condition 11.2.1, including:
- 11.2.2.1 revegetating with species identified pursuant to condition 11.1.1;
 - 11.2.2.2 planting of jack pine or spruce seedlings at a minimum density of 1,000 stems per hectare, or conducting aerial seeding of jack pine at 20,000 viable seeds per hectare, or using an alternative revegetation method in all suitable locations for reclamation of woodland caribou (*Rangifer tarandus caribou*) habitat within the Designated Project area, to a state as close to the baseline forest stand as technically feasible;
 - 11.2.2.3 identifying any technically and economically feasible alternative location for discharging water from the north pit lake into the Biigtig Zibi during post-closure. If a technically and economically feasible alternative location is identified, the Proponent shall notify the Agency in writing pursuant to condition 2.16 of their proposed change to the Designated Project before implementing the alternative. If a technically and economically feasible alternative is not identified, the Proponent shall report to Biigtigong Nishnaabeg and the Agency on the options considered and why they were determined not to be technically or economically feasible; and
- 11.2.3 develop a follow-up program to verify the effectiveness of the reclamation measure referred to in 11.2.2, including whether performance standards referred to in condition 11.2.1 are met.

12 Indigenous Monitors

- 12.1 The Proponent shall retain, prior to construction, the services of Indigenous monitors to participate in follow-up monitoring set out in condition 3.13 through 3.17, 4.5, 6.3 through 6.5, 6.7, 6.10, 7.9, 9.2, 10.6, 10.8.4, and 11.2.3. Prior to retaining the services of Indigenous monitors, the Proponent shall undertake a collaborative process to determine, in consultation with Biigtigong Nishnaabeg and other Indigenous groups, the scope, purpose, objectives, and details of the participation of Indigenous monitors and shall provide this information to the Agency prior to construction. In doing so, the Proponent shall determine:

- 12.1.1 how each Indigenous monitor shall be involved in follow-up monitoring related to their area of interest, including the location, frequency, timing and duration of their participation. If opportunities for Indigenous monitor participation in specific monitoring do not exist, provide justification for why; and
- 12.1.2 how the Proponent shall support the participation of Indigenous monitors, including through the provision of training, equipment and access to the Designated Project area.

13 Independent expert review committee

- 13.1 The Proponent shall establish, prior to construction and in consultation with Indigenous groups and relevant authorities, and implement, during all phases of the Designated Project, an independent expert review committee to review and advise on the design, construction (including dam raises) and decommissioning of the process solids management facility. The Proponent shall invite Indigenous groups, relevant authorities and qualified individuals in tailing facility design and operation from the fields of geotechnical engineering, hydrogeology, and geochemistry to participate in all independent expert review committee meetings and consult them on the development of the Terms of Reference for the committee. The Proponent shall make reasonable efforts to come to agreement on the Terms of Reference with committee participants. The Proponent shall submit the final Terms of Reference to the Agency prior to construction. As part of the Terms of Reference, the Proponent shall include:
 - 13.1.1 the frequency, timing and location of the committee meetings during each phase of the Designated Project and the means by which the Proponent shall document meeting minutes;
 - 13.1.2 the means by which the Proponent shall consult the committee regarding the design, construction and decommissioning of process solids management facility;
 - 13.1.3 the means by which the Proponent shall support Indigenous group participation in the committee;
 - 13.1.4 the information that the Proponent will shared with the committee related to the design, construction (including dam raises) and decommissioning of the process solids management facility, including when and how the information will be shared;
 - 13.1.5 the means by which the Proponent shall document the activities of the committee, including all views and information received through the committee from committee participants; and
 - 13.1.6 how the Proponent shall consider all views and information received through the committee from committee participants;
 - 13.1.7 the means by which the Proponent shall share the information documented by the Proponent pursuant to condition 13.1.5 with committee members, Indigenous groups and with the Agency, including when and how this information shall be shared; and
 - 13.1.8 the means by which the Proponent shall review, in consultation with committee members, the Terms of Reference throughout construction and operation to determine whether administrative or management improvements are required to increase the efficiency and effectiveness of the committee.

- 13.2 The Proponent shall advise the Agency pursuant to condition 2.16, if it is proposing any changes to the design, construction, or decommissioning of the process solids management facility beyond what is described pursuant to condition 1.7, including any changes resulting from recommendations of the Independent Expert review committee in condition 13.1.

14 Environmental Monitoring Committee

- 14.1 The Proponent shall participate, during all phases of the Designated Project and at the request of relevant federal authorities, in any Environmental Monitoring Committee (EMC), should one be established in relation to the Designated Project.
- 14.2 The Proponent shall provide to the EMC, upon request, information relating to the mitigation measures and follow-up programs set out in this document. If requested by the EMC, the Proponent shall also provide non-proprietary data files of the results of the follow-up programs.
- 14.3 When provided with a written recommendation by the EMC, the Proponent shall provide a response in writing to the EMC, which sets out whether the Proponent accepts the recommendation, and if it does not, the reasons for not accepting the recommendation.
- 14.4 The Proponent shall report to the Agency, as part of the annual report referred to in condition 2.10, or more frequently if required by the Agency, on the Proponent's actions with respect to the EMC and the associated outcomes of the Proponent's actions.
- 14.5 The Proponent shall allow access to the Designated Project area, to the extent that such access is safe, to any monitor(s) established as part of the EMC. The Proponent shall communicate with monitor(s) regarding coordination of monitoring activities.

15 Accidents and malfunctions

- 15.1 The Proponent shall update, prior to construction, the climate change projections for the Designated Project described in Section 2 of *Supporting Information Document 8 – Greenhouse Gas and Climate Change Assessment* from *Environmental Impact Statement - Supporting Information Documents* (Canadian Impact Assessment Registry Reference Number 54755, Document Number 227) using methods described in the Government of Canada's *Strategic Assessment of Climate Change*, and available associated technical guidance and the Canadian Standards Association's *Technical Guide: Development, interpretation, and use of rainfall intensity-duration-frequency (IDF) information: Guideline for Canadian water resources practitioners* (CSA PLUS 4013-12, 2019) and use these projections to inform the final design measures to prevent accidents and malfunctions pursuant to condition 15.4.1.
- 15.2 The Proponent shall conduct, prior to construction, a quantitative risk assessment of the likelihood and severity of potential hazards associated with a potential chemical release of mill process chemicals during transport using a risk matrix system or other equivalent approach, and assign risk ratings.
- 15.3 The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and shall mitigate any adverse environmental effect from accidents and malfunctions that does occur.

- 15.4 The Proponent shall identify, prior to construction and in consultation with Indigenous groups and relevant authorities, measures to be implemented to prevent accidents and malfunctions, and shall implement these measures during all phases of the Designated Project. In doing so, the Proponent shall:
- 15.4.1 finalize the detailed design of the Designated Project, taking into account the updated projections in condition 15.1, including by ensuring that the mine rock storage area catch basins and associated pumps are designed in a manner that minimizes the risk of overflows to Biigtig Zibi; and
 - 15.4.2 identify and implement measures to reduce the risk of chemical release during transport based on the quantitative risk assessment results referred to in condition 15.2.
- 15.5 The Proponent shall develop, prior to construction and in consultation with Indigenous groups, the Town of Marathon and relevant authorities, an accident and malfunction response plan in relation to each phase of the Designated Project. The accident and malfunction response plan for each phase shall include:
- 15.5.1 a description of the types of accidents and malfunctions that may cause adverse environmental effects during that phase, including a process solids management facility dam breach and a worst-case scenario chemical release during transport based on the results of the quantitative risk assessment referred to in condition 15.2;
 - 15.5.2 the measures to be implemented in response to each type of accident and malfunction referred to in condition 15.5.1 to mitigate any adverse environmental effect caused by the accident or malfunction, including an evacuation plan for a potential process solids management facility dam breach developed in consultation with Biigtigong Nishnaabeg and any other Indigenous groups that may be affected that includes:
 - 15.5.2.1 an up-to-date map highlighting the areas that could be flooded during a dam breach; and
 - 15.5.2.2 the frequency with which the evacuation plan shall be reviewed in consultation with Biigtigong Nishnaabeg and any other Indigenous groups that may be affected, and updated as necessary;
 - 15.5.3 for each type of accident and malfunction referred to in condition 15.5.1, the roles and responsibilities of the Proponent and each relevant authority in implementing the measures referred to in condition 15.5.2, including those of third party contractors and municipal departments.
- 15.6 The Proponent shall maintain the accident and malfunction response plan referred to in condition 15.5 up-to-date during the applicable phase of the Designated Project. The Proponent shall submit any updated accident and malfunction response plan to the Agency, Indigenous groups and the relevant authorities involved in its implementation within 30 days of the plan being updated.
- 15.7 In the event of an accident or malfunction with the potential to cause adverse environmental effects, including an accident or a malfunction referred to in condition 15.5.1, the Proponent shall immediately implement the measures appropriate to the accident or malfunction, including any measure referred to in condition 15.5.2, and shall:

- 15.7.1 implement the communication plan referred to in condition 15.8;
- 15.7.2 notify relevant authorities with responsibilities related to emergency response (including environmental emergencies) in accordance with applicable legislative and regulatory requirements;
- 15.7.3 notify, as soon as possible and pursuant to the communication plan referred to in condition 15.8, Indigenous groups of the accident or malfunction, and notify the Agency in writing no later than 24 hours following the accident or malfunction. When notifying Indigenous groups and the Agency, the Proponent shall specify:
 - 15.7.3.1 the date and time when and location within the Designated Project area where the accident or malfunction occurred;
 - 15.7.3.2 a summary description of the accident or malfunction;
 - 15.7.3.3 a list of any substance potentially released into the environment as a result of the accident or malfunction;
 - 15.7.3.4 the relevant authorities notified pursuant to condition 15.7.2;
- 15.7.4 submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction occurred. The written report shall include:
 - 15.7.4.1 a detailed description of the accident or malfunction and of its adverse environmental effects;
 - 15.7.4.2 a description of the measures that were taken by the Proponent to mitigate the adverse environmental effects caused by the accident or malfunction;
 - 15.7.4.3 any view from Indigenous groups and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects and the measures taken by the Proponent to mitigate these adverse environmental effects;
 - 15.7.4.4 a description of any residual adverse environmental effect and any modified or additional measure required by the Proponent to mitigate residual adverse environmental effects; and
 - 15.7.4.5 details concerning the implementation of the accident or malfunction response plan referred to in condition 15.5.2.
- 15.7.5 submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred, taking into account the information submitted in the written report pursuant to condition 15.7.4, that includes:
 - 15.7.5.1 a description of the changes made to avoid a subsequent occurrence of the accident or malfunction;
 - 15.7.5.2 a description of the modified or additional measure(s) implemented by the Proponent to mitigate and monitor residual adverse environmental effects and to carry out any required progressive reclamation; and
 - 15.7.5.3 all additional views from Indigenous groups and advice from relevant authorities received by the Proponent since the views and advice referred to in condition 15.7.4.3 were received by the Proponent.
- 15.8 The Proponent shall develop, in consultation with Indigenous groups, a communication plan for Designated Project accidents and malfunctions. The Proponent shall develop the communication

plan prior to construction and shall implement and keep it up to date during all phases of the Designated Project. The plan shall include:

- 15.8.1 the types of accidents and malfunctions requiring the Proponent to notify the Indigenous groups;
- 15.8.2 the timing and manner by which Indigenous groups shall be notified by the Proponent of an accident or malfunction and of any opportunity for the Indigenous groups to assist in the response to the accident or malfunction; and
- 15.8.3 the contact information that Indigenous groups may use to communicate with the Proponent and the contact information for each Indigenous group that the Proponent shall use to provide notification.

16 Schedules

- 16.1 The Proponent shall submit to the Agency and Indigenous groups a schedule for all conditions set out in this document no later than 60 days prior to the start of construction. This schedule shall detail all activities planned to fulfill each condition set out in this document and the commencement and estimated completion month(s) and year(s) for each of these activities.
- 16.2 The Proponent shall submit to the Agency and Indigenous groups a schedule outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of construction. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities.
- 16.3 The Proponent shall submit to the Agency and Indigenous groups in writing an update to schedules referred to in conditions 16.1 and 16.2 every year no later than March 31, until completion of all activities referred to in each schedule.

17 Record keeping

- 17.1 The Proponent shall maintain all records relevant to the implementation of the conditions set out in this document. The Proponent shall retain the records and make them available to the Agency throughout construction and operation and for 25 years following the end of operation or until the end of decommissioning of the Designated Project, whichever comes first. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.
- 17.2 The Proponent shall retain all records referred to in condition 17.1 at a facility in Canada and shall provide the address of the facility to the Agency. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location.
- 17.3 The Proponent shall notify the Agency of any change to the contact information of the Proponent.