KEMESS UNDERGROUND PROJECT (PROJECT)

TABLE OF CONDITIONS FOR AN ENVIRONMENTAL ASSESSMENT CERTIFICATE

Definitions

Aboriginal Groups	Takla Lake First Nation, Tsay Keh Dene Nation and Kwadacha Nation.
Aboriginal Interests	Asserted or determined Aboriginal rights, including title.
Application	Application from AuRico Metals Inc., dated May 2016, to the Environmental Assessment Office applying for an environmental assessment certificate, pursuant to Section 16 of the <i>Environmental Assessment Act</i> , accepted for review on May 11, 2016.
Care and Maintenance	The period when Construction or Operations cease for more than 90 days. For the purposes of the conditions in this Certificate, Care and Maintenance is not a Project phase.
Certificate	This Environmental Assessment Certificate
Closure	The phase of the Project where all development and production ceases. Mining facilities and infrastructure are decommissioned and/or removed from the mine site. Final reclamation activities of land and watercourses are conducted.
Construction	The phase of the Project during which physical alteration of land, vegetation or any other aspect of the natural environment occurs. For the purposes of this Schedule B, Construction: (i) does not include any activities conducted solely for investigative purposes under a valid permit or authorization, replacing four modular units of the camp kitchen in place at the time of the issuance of this Certificate and upgrades to the interior of the camp bunkhouses or replacement of up to four bunkhouse units in place at the time of the issuance of this Certificate, and (ii) includes upgrading, repairing, replacing, or removing, any existing work or infrastructure except for those identified in (i).
Document	A plan, program or other document required by this Certificate.
Holder	AuRico Metals Inc. or, if this Certificate has been transferred in accordance with the conditions below, the person to whom this Certificate has been transferred in accordance with such conditions.
Operations	The phase of the Project beginning with the commercial operation date of the Project, which is the date on which commercial mill production is achieved.
Post Closure	The phase of the Project following the completion of the closure and reclamation activities during which maintenance and monitoring of the

	mine site occurs. Reclamation programs are monitored for effectiveness. Long-term management, maintenance, and monitoring programs for the mine site are implemented.
Project	Kemess Underground Mine Project
Qualified Professional	A person who has training, experience and expertise in a discipline relevant to the field of practice set out in the condition, and who is registered with the appropriate professional organization, is acting under that organization's code of ethics and is subject to disciplinary action by that organization.
Northern Section of the ORAR	Northern 168 km portion of the Omineca Resource Access Road from the junction of the Thutade and Finaly Osilinka Forest Service Roads.

Acronyms

BCWQG British Columbia Water Quality Guidelines

EAO Environmental Assessment Office

ECCC Environment and Climate Change Canada

EMC Environmental Monitoring Committee

ENV Ministry of Environment

FLNRO Ministry of Forests, Lands and Natural Resource Operations

HMSP BMG Health and Medical Services Plan Best Management Guide for

Industrial Camps (Northern Health Authority, March 2015)

IEM Independent Environmental Monitor

MEM Ministry of Energy and Mines

ORAR Omineca Resource Access Road

SBEB Science Based Environmental Benchmark

No. Condition 1. **Document Review and Implementation** Where a condition of this Certificate requires the Holder to provide a Document, the Holder must provide the Document to EAO in the timeframe referenced in such condition, unless otherwise approved by EAO. EAO may, within 45 days of receiving a copy of such Document, advise that: a) the Holder may proceed to implement the Document with or without revisions; b) a revised Document must be provided for approval of EAO prior to a specified activity or milestone. If EAO advises pursuant to paragraphs (a) or (b) that changes are required to a Document, then the Holder must follow the instructions of EAO in that regard. If EAO does not advise on a) or b) within 45 days of EAO receiving a Document, the Holder may proceed to implement the Document. The Holder may, or EAO may require the Holder to, revise any Document if the Holder or EAO determines that the implementation of the Document is not: a) meeting one or more objectives of the Document set out in the relevant condition of this Certificate: b) having the effects contemplated or intended, as set out in the Document itself; c) consistent with the Certificate; or d) consistent with changes in industry best practices or technology. 2. **Plan Development** Where a condition of this Certificate requires the Holder to develop or update a Document, any such Document must, at a minimum, include the following information: a) purpose and objectives of the Document; b) Roles and responsibilities of the Holder, Project personnel and contractors; c) names and if applicable, professional certifications and professional stamps/seals, for those responsible for the preparation of the Document; d) schedule for implementing the Document throughout the relevant Project phases; e) means by which the effectiveness of the mitigation measures will be evaluated including the schedule for evaluating effectiveness; adaptive management plan to address effects of the Project if those effects: are not mitigated to the extent contemplated in the Application; or ii) are not predicted in the Application; g) schedules and methods for the submission of reporting to specific agencies, Aboriginal Groups and the public and the required form and content of those reports; and h) process and timing for updating and revising the Document, including any

consultation with agencies and Aboriginal Groups that would occur in connection with such updates and revisions.

3. Consultation

Where a condition of this Certificate requires the Holder to consult a particular party or parties regarding the content of a Document, the Holder must, to the satisfaction of EAO:

- a) provide written notice to each such party that:
 - i) includes a copy of the Document;
 - ii) invites the party to provide its views on the content of such Document; and
 - iii) indicates:
 - if a timeframe providing such views to the Holder is specified in the relevant condition of this Certificate, that the party may provide such views to the Holder within such time frame; or
 - 2. if a timeframe providing such views to the Holder is not specified in the relevant condition of this Certificate, specifies a reasonable period during which the party may submit such views to the Holder;
- b) undertake a full and impartial consideration of any views and other information provided by a party in accordance with the timelines specified in a notice given pursuant to paragraph (a);
- c) provide a written explanation to each party that provided comments in accordance with a notice given pursuant to paragraph (a) as to:
 - How the views and information provided by such party to the Holder have been considered and addressed in a revised version of the Document; or
 - ii) Why such views and information have not been addressed in a revised version of the Document;
- d) maintain a record of consultation with each such party regarding the Document; and
- e) provide a copy of such consultation record to EAO, the relevant party, or both, promptly upon the written request of EAO or such party.

4. Compliance Reporting

The Holder must submit a report to EAO and Aboriginal Groups on the status of compliance with this Certificate at the following times:

- a) At least 30 days prior to the start of Construction;
- b) On or before January 31 in each year after the start of Construction;
- c) At least 30 days prior to the start of Operations; and
- d) On or before January 31 in each year after the start of Operations;
- e) At least 30 days prior to the start of Closure; and
- f) On or before January 31 in each year after the start of Closure until the end of Closure.

The reports must be in a form satisfactory to EAO. EAO may adjust or extend this

	reporting requirement by providing written notice to the Holder.	
5.	Compliance Verification	
	The Holder must provide any document, data or information requested by EAO, for the purposes of compliance inspection and verification.	
6.	Project Status Notification	
	The Holder must notify EAO and Aboriginal Groups, in writing, three months prior to commencing Construction, Operations, Closure and Post-Closure.	
	Should the primary contact for the Project change, the Holder must notify EAO, in writing, within 30 days of such change and provide the physical address, email address and phone number(s) of the new primary contact.	
7.	Compliance Notification	
	The Holder must notify EAO: a) As soon as practical; and b) In any event, no more than 72 hours, after the Holder determines that the Holder has not, or may not have, fully complied with that particular Certificate condition.	
8.	Compliance Notification to Other Parties	
	Where a condition of this Certificate requires a Document to be developed, the Holder must notify any such party required by the condition to be consulted with during the development of the Document: a) As soon as practical; and b) In any event, no more than 72 hours, after the Holder determines that the Holder has not, or may not have, fully complied with this Certificate.	
9.	Independent Environmental Monitor	
	The Holder must retain the services of a Qualified Professional to act as an Independent Environmental Monitor (IEM). The IEM will: a) Observe and record for, and report to EAO on compliance with the Certificate, and	
	b) Provide information to EAO, MEM, ENV, FLNRO and Aboriginal Groups, as directed by EAO. When providing information or reports to EAO, the IEM must not provide such information or reports to the Holder in advance of providing such information or reports to EAO.	
	The Holder must retain the IEM throughout all Project phases. Prior to the start of Construction, the Holder must develop terms of engagement for the IEM and provide a copy to EAO and the EMC. EAO may require changes to the terms of engagement in relation to items a) to f) below.	
	The terms of engagement must include, at a minimum, the following for each Project phase: a) The role, responsibilities and qualifications of the IEM;	
	b) The roles, responsibilities and qualifications of any staff or other persons that	

- will assist the IEM with performing the IEM's roles and responsibilities (each an "IEM Support");
- c) The nature and frequency of monitoring;
- d) The process whereby the IEM or an IEM Support will make recommendations to the Holder to take mitigative or corrective actions to address any non-compliance or potential non-compliance with this Certificate;
- e) The process by which these recommendations will be communicated to EAO and the Holder; and,
- f) The details of a report to be submitted to EAO upon completion of the Project phase. The report must be written by the IEM and include, but is not necessarily limited to:
 - i) A record of all non-compliances with this Certificate;
 - ii) A record of the recommendations made by the IEM to the Holder to prevent or address any non-compliance with this Certificate;
 - iii) A record of whether any such recommendations from the IEM were implemented and the corresponding outcome of implementation;
 - iv) A record of all stop work orders issued to prevent or address a noncompliance with this Certificate and any other Provincial or Federal legislation or authorization applicable to the Project;
 - v) Assessment on the effectiveness of the mitigation measures for the Project phase; and
 - vi) Recommendations on how to achieve and maintain compliance with the conditions of the Certificate for the next Project phase.

And be otherwise satisfactory to the EAO (including with respect to the qualifications of IEM support).

10. Modification of Document Submission Deadlines

Where a condition of this Certificate requires the Holder to submit a Document, the Holder may submit to EAO a proposal (Proposal) to modify the deadline for submission of some or all Documents required by this Certificate. The Proposal must be provided to EAO no less than 30 days prior to the earliest submission deadline required by the Certificate conditions of the Documents included in the Proposal. Prior to submitting the Proposal, the Holder must consult with the parties identified in each relevant condition about the proposed deadline modifications. The deadlines in the conditions of this Certificate remain in effect unless EAO approves the Proposal(s).

11. **Aboriginal Group Monitors**

The Holder must provide opportunities for one full time position of an Aboriginal Monitor from each of the Aboriginal Groups to the satisfaction of EAO during Construction and Operations. Each Aboriginal Monitor reports information directly to and subject to safety requirements established by the Holder, and receives direction for the activities to monitor from the respective Aboriginal Group. The Holder must:

- a) Provide Documents required by this Certificate to the Aboriginal Monitors for review consistent with the review timelines identified in the conditions requiring the Documents in addition to the other parties identified in each condition requiring Documents;
- b) Provide training opportunities for Aboriginal Monitors so that the Aboriginal Monitors have the ability to support effective participation in monitoring activities: and

c) Provide opportunities for the Aboriginal Monitor to conduct environmental monitoring for the Project.

The Holder must develop the terms of engagement for the Aboriginal Monitors in consultation with Aboriginal Groups and to the satisfaction of EAO. The Holder must provide the terms of engagement to EAO and Aboriginal Groups 45 days prior to starting Construction. Such terms of engagement must include, at a minimum, the following:

- a) Project site access protocol;
- b) The role of the Aboriginal Monitor including, but not limited to:
 - i) Conducting environmental monitoring activities of the Project as determined by the Aboriginal Monitor and Holder;
 - ii) Liaising with the Aboriginal Groups' communities; and
 - iii) Participating in EAO compliance inspections upon invitation from EAO.

12. **Environmental Monitoring Committee**

The Holder must establish and maintain an environmental monitoring committee (EMC) for all phases of the Project.

The Holder must invite participation from Aboriginal Groups, ENV, MEM, FLNRO, EAO, and other agencies where relevant to particular topics being discussed. The purpose of the EMC is to facilitate information sharing and provide advice to the Holder on the ongoing development of the Project and mitigation measures in a coordinated and collaborative manner.

The Holder must develop an EMC Terms of Reference, in consultation with Aboriginal Groups, EAO, ENV, MEM and FLNRO. The terms of reference must include:

- a) frequency, timing and location of meetings;
- b) documentation of EMC meetings;
- c) methods for the EMC to obtain relevant advice and expertise;
- d) how the EMC can coordinate with other regulatory processes to ensure efficiency and reduce unnecessary overlap with other regulatory processes; and
- e) an approach to periodically evaluate the need for and effectiveness of the EMC.

The Terms of Reference must describe the means by which, through the EMC, the Holder must:

- a) at a minimum, annually canvass the EMC for issues to be discussed;
- b) provide the results of all the environmental monitoring activities required through this Certificate to the EMC;
- c) discuss adaptive management measures that may address adverse effects not remediated by implementing Documents required by this Certificate;
- d) coordinate review of Documents required by this Certificate when review by the parties in the EMC is required by this Certificate;
- e) discuss the following topics:
 - i) initial dilution zone;
 - ii) Project tailings storage facility design, operations and monitoring;
 - iii) closure planning and water management;
 - iv) water quality monitoring;

- v) feasibility study of extended beach at closure including rationale and other factors considered in determining the appropriate beach size;
- vi) mitigation for accidents and malfunctions including those identified as "failure modes with low environmental risk" in Appendix 22-A of the Application;
- vii) wildlife Management and Monitoring Plan; and
- viii) compliance activities of EAO.

The Holder must provide the terms of reference to EAO for review within 90 days of the issuance of the Certificate.

13. **Construction Environmental Management Plan**

The Holder must retain one or more Qualified Professionals to develop a construction environmental management plan. The plan must be developed in consultation with MEM, ENV and Aboriginal Groups.

The construction environmental management plan must include the means by which the following will be addressed:

- a) access management;
- b) human-wildlife conflict;
- c) invasive plants management;
- d) erosion and sediment control;
- e) waste management;
- f) emergency response; and
- g) spill prevention and response for hydrocarbon storage and leaks or other accidental emissions from machinery or equipment.

The Holder must provide the construction environmental management plan to EAO, MEM, ENV and Aboriginal Groups for review a minimum of 45 days prior to the planned commencement of Construction.

The plan, and any amendments thereto, must be implemented to the satisfaction of a Qualified Professional throughout Construction to the satisfaction of EAO.

14. Care and Maintenance Plan

The Holder must retain one or more Qualified Professionals to develop a plan for when Construction or Operations cease for more than 90 days (Care and Maintenance). This plan must cover Care and Maintenance periods for indefinite or definite time frames. The plan must be developed in consultation with MEM, ENV, FLNRO and Aboriginal Groups.

The plan must include, at a minimum, the means by which the following will be addressed:

- a) spill prevention and response for hydrocarbon storage and leaks or other accidental emissions from machinery or equipment;
- b) sediment and erosion control;
- c) building maintenance;
- d) mitigation of adverse wildlife effects and wildlife monitoring:
- e) access management; and
- f) a list of Documents required by this EAC that this plan cancels and replaces for as long as this plan is being implemented.

The plan must identify and describe how each conditions in this Certificate will either:

- a) apply in full or in part during Care and Maintenance; or
- b) cease to apply during Care and Maintenance.

The Holder must provide the plan to EAO, MEM, ENV, FLNRO and Aboriginal Groups for review a minimum of 60 days prior to the planned commencement of Construction. This plan must be updated in consultation with MEM, ENV, FLNRO and Aboriginal Groups prior to any Care and Maintenance period as described above.

The plan, and any amendments thereto, must be to the satisfaction of EAO and implemented during any Care and Maintenance period longer than 90 days between the start of Construction and the completion of Operations under the supervision of a Qualified Professional.

15. **Feasibility Study for Tailings Beach**

Prior to construction of the tailings beach, the Holder must retain a Qualified Professional to conduct geochemical characterization to determine whether subaerial tailings are suitable for the tailings beach and determine what final beach configuration options are available. This study must include standard and appropriate static and kinetic testing procedures of Black Lake intrusives and Takla lithologies. This study must determine the volume of sand that can be generated as suitable subaerial beach material during the final years of Operations.

The Holder must provide the results of the study to Aboriginal Groups and MEM within 30 days of the completion of the study and discuss the results of the study, and the justification for the closure beach width with the EMC identified in condition 12.

16. Water Management

During Construction, Operations and Closure:

- a. The Holder must treat effluent from the Project tailings storage facility for metals and selenium as required to ensure downstream water quality, as monitored in accordance with paragraph (b) of this condition meets:
 - i. the British Columbia Water Quality Guidelines (BCWQG); or
 - ii. Science Based Environmental Benchmarks (SBEB), if accepted by ENV for one or more contaminants.
- b. The Holder must monitor surface water quality downstream of the point of discharge of the Project tailings storage facility at a location determined by a Qualified Professional, in consultation with ENV and Aboriginal Groups, to be suitable for monitoring.
- c. Despite paragraph (a) of this condition, the Holder may exceed the BCWQG or SBEB referred to in that paragraph if the Holder:
 - i. notifies ENV, EAO and Aboriginal Groups within 48 hours of any results identifying an exceedance being received from the testing facility; and
 - ii. takes measures to meet downstream water quality as described in (a) and (b) in the manner directed, within the time period required, and using

methods approved, by ENV.

17. Accidents and Malfunctions Communication Plan

The Holder must develop a communication plan for accidents and malfunctions. The plan must be developed in consultation with FLNRO, MEM, ENV, Northern Health Authority and Aboriginal Groups.

The plan must include at least the following:

- a) The types of accidents and malfunctions requiring notification by the Holder and the timeframe of notifications (inlcuding updates subsequent to the initial notification) to each Aboriginal Group community and other users of the area that could be affected;
- b) Information to be included in the notifications required by bullet a), and subsequent notifications, include but are not limited to:
 - i) Health advisories:
 - ii) Remedial action being taken by the Holder; and
 - iii) Details of subsequent monitioring.
- c) The manner by which Aboriginal Groups, communities or other users of the area must be notified by the Holder of an accident or malfunction, and of any opportunities for the Aboriginal Groups, communities and other users of the area to assist in response to the accident or malfunction; and
- d) The contact information of the representatives of the Holder and the Aboriginal Groups, communities and other users of the area to which the Holder must provide notification and a plan to regularly update this information.

The Holder must provide this draft plan to FLNRO, MEM, ENV, Northern Health Authority, Aboriginal Groups and EAO for review a minimum of 45 days prior to the planned commencement of Construction.

The plan, and any amendments thereto, must be developed and implemented throughout Construction, Operations, Closure and Post Closure to the satisfaction of EAO.

18. Accidents and Malfunctions Administration Plan

The Holder must develop an administration plan for accidents and malfunctions. The plan must be developed in consultation with FLNRO, MEM, ENV, Northern Health Authority and Aboriginal Groups.

The plan must include at least the following:

- a) How the Holder will mitigate the risk of the accidents and malfunctions identified as "failure modes with low environmental risk" in Appendix 22-A of the Application (low environmental risk accidents) including:
 - i) identification of where and how low environmental risk accidents are addressed in other Documents required by this Certificate or other regulatory requirements; and
 - Mitigation measures to address potential adverse effects from low environmental risk accidents that are not addressed through other

Documents required by this Certificate or regulatory requirements;

- b) Requirements for the Holder to manage the risk of, monitor and report on Project-related accidents along the ORAR, including identifying:
 - i) response measures for fires or explosions involving Project vehicles;
 - ii) safety measures to be followed by drivers of Project vehicles; and
 - iii) safety and emergency response equipment to be incorporated into Project vehicles.

The Holder must provide the draft plan to FLNRO, MEM, ENV, Northern Health Authority, Aboriginal Groups and EAO a minimum of 90 days prior to the planned commencement of Construction.

The plan, and any amendments thereto, must be developed and implemented throughout Construction, Operations and Closure to the satisfaction of EAO.

19. **Selenium in Waste Rock Creek**

Prior to any discharge into Waste Rock Creek, the Holder must establish a methodology to EAO's satisfaction to identify the selenium concentrations described in 1 and 2 below in consultation with ENV and Aboriginal Groups.

At the time of Project discharge from the Project tailings storage facility into Waste Rock Creek, the selenium concentrations of the discharge water must meet the lesser of 1) concentrations in Waste Rock Creek at the point of discharge at the time immediately prior to any discharge from the Project tailings storage facility, or 2) conditions of selenium concentrations in Waste Rock Creek as described in section 11.4.3 of the Application.

20. Amazay Lake Monitoring Plan

The Holder must retain a Qualified Professional to develop a plan for monitoring water quality of Amazay Lake. The plan must be developed in consultation with FLNRO, MEM, ENV and Aboriginal Groups.

The plan must include at least the following:

- a) Surface Water Quality Monitoring
 - i) Monitoring locations on Amazay Lake and its tributaries;
 - ii) Frequency of monitoring;
 - iii) Plan to compare water quality monitoring results collected prior to Operations with water quality monitoring results collected during Construction, Operations, Closure and Post-closure;
 - iv) Consideration of conditions when the monitoring may not be required; and
 - v) Adaptive management if the monitoring indicates adverse effects on surface water quality due to the Project as determined by a Qualified Professional.
- b) Groundwater Quality Monitoring to detect potential groundwater movement from the underground cave/subsidence zone towards Amazay Lake
 - i) Monitoring locations;
 - ii) Monitoring methods (e.g. overburden or shallow bedrock; dataloggers

in groundwater monitoring wells);

- iii) Frequency and duration of monitoring;
- iv) Methods for which the monitoring results must be incorporated into the closure plans; and
- v) Adaptive management if the monitoring indicates adverse effects on groundwater quality due to the Project as determined by a Qualified Professional.

The Holder must provide this draft plan to FLNRO, MEM, ENV, Aboriginal Groups and EAO for review a minimum of 45 days prior to the planned commencement of Construction.

The Holder must not commence Construction until the plan has been approved by EAO, unless otherwise authorized by EAO.

The plan, and any amendments thereto, must be implemented to the satisfaction of a Qualified Professional throughout all Project phases to the satisfaction of EAO.

21. Staged Discharge

During Construction, the Holder must retain a Qualified Professional to ensure that the water discharged from the Project tailings storage facility to Attichika Creek is staged on a monthly basis to a volume proportional to the Attichika Creek monthly streamflow and the discharge is restricted to the open water months.

22. Fish and Aquatic Effects Monitoring Plan

The Holder must retain a Qualified Professional to update the Fish and Aquatic Effects Monitoring Plan in section 24.7 of the Application. The plan must be developed in consultation with FLNRO, ENV and Aboriginal Groups.

The plan must include at least the following:

- a) The means by which the Holder will monitor for concentrations of bioaccumulative contaminants in bull trout in Thutade Lake;
- b) Monitoring locations, frequencies and duration for the monitoring required by bullet a):
- c) Study parameters of fish health metrics and observations;
- d) Comparison of fish and aquatic effects monitoring plan results to water quality monitoring results;
- e) How and with who the results of the study will be shared; and
- f) Remedial actions that must be implemented if the study finds excessive concentrations of bio-accumulative contaminants in bull trout in Thutade Lake are Project-related as determined by a Qualified Professional.

The Holder must provide this draft plan to FLNRO, ENV, Aboriginal Groups and EAO for review a minimum of 45 days prior to the planned commencement of Construction.

The plan, and any amendments thereto, must be implemented to the satisfaction of a Qualified Professional throughout Construction, Operations and Closure and to the satisfaction of EAO.

23. Effluent Diffuser and Initial Dilution Zone

Prior to installation of the effluent diffuser the Holder must demonstrate to the EMC how the design of the effluent diffuser to be installed in Attichika Creek has maximized effectiveness as determined by a Qualified Professional, using creek flow characteristics to minimize distance of the initial dilution zone from the discharge point on Attichika Creek.

The effluent diffuser must be designed so that the initial dilution zone of the discharge does not compromise salmonid spawning habitat as determined by a Qualified Professional.

The Holder must retain a Qualified Professional to develop a plan for monitoring fish and fish habitat use within the initial dilution zone in Attichika Creek. The plan must be developed in consultation with ENV, FLNRO and Aboriginal Groups.

The plan must include at a minimum:

- Details (locations, frequency and duration) of monitoring prior to and after installation of the discharge pipeline into Attichika Creek to determine if bull trout or rainbow trout are avoiding the intial dilution zone;
- b) If results of monitoring indicate an adverse effect from the effluent discharge to fish habitat use, the Holder must identify and implement additional mitigation strategies to reduce such effect which may include offsetting as defined in ENV's Mitigation Policy; and
- c) Details on how the monitoring results will be reported to EAO, ENV, FLNRO and Aboriginal Groups.

The Holder must provide this draft plan to FLNRO, ENV, Aboriginal Groups and EAO for review a minimum of 45 days prior to the planned commencement of Construction.

The plan, and any amendments thereto, must be implemented throughout Construction, Operations and Closure under the supervision of a Qualified Professional and to the satisfaction of EAO.

24. **Ecosystems Management Plan**

The Holder must retain a Qualified Professional to update the Ecosystems Management Plan in section 24.4 of the Application. The updated plan must be developed in consultation with MEM, ENV, FLNRO, and Aboriginal Groups, as well as ECCC with respect to the Attichika wetland.

The updated plan must include at a minimum:

- a) The means by which the mitigation measures listed in section 24.4.4 and monitoring measures listed in section 24.4.5 of the Application will be implemented:
- b) The means by which the wetland management and monitoring will be implemented including at a minimum:
 - i) Monitoring prior to and during Construction and Operations, as determined by a Qualified Professional to identify impacts to the Attichika wetland from the discharge pipeline within the access corridor;

- ii) Monitoring prior to and during Construction and Operations as determined by a Qualified Professional to detect potential changes to hydrologic function and plant species composition in the Attichika wetland;
- iii) Adherence with best management practices related to road and utility corridors construction to mitigate effects of the discharge pipeline construction in the Attichika wetland. Best management practices must be consistent with those identified in Wetland Ways: Interim Guidelines for Wetland Protection and Conservation in British Columbia, Wetland Stewardship Partnership, March 2009 (or as replaced or updated from time to time); and
- iv) Adaptive management for any Project impacts to the Attichika wetland if those impacts are not mitigated to the extent contemplated in section 13.5.3.3 of the Application or are not predicted in the Application.

The Holder must provide the plan to MEM, ENV, FLNRO, ECCC, Aboriginal Groups and EAO a minimum of 45 days prior to the planned commencement of Construction.

The Holder must not commence Construction until the plan has been approved by EAO, unless otherwise authorized by EAO.

The plan, and any amendments thereto, must be implemented to the satisfaction of a Qualified Professional throughout Construction, Operations and Closure and to the satisfaction of EAO.

25. Wildlife Management and Monitoring Plan

The Holder must retain a Qualified Professional to update the Wildlife Management and Monitoring Plan in section 24.19 of the Application. The updated plan must be developed in consultation with MEM, FLNRO, ECCC and Aboriginal Groups. The updated plan must include at a minimum:

- a) The means by which the mitigation measures listed in Table 15.6-23 of the Application will be implemented;
- b) Mitigation for species at risk individuals, residences, including hibernacula and other important habitats as determined by a Qualified Professional;
- c) Mitigation for noise associated with blasting that may affect wildlife;
- d) The following specific mitigations:
 - directed/focused lighting rather than broad area lighting and shielding lights to minimize stray light. Lighting in non-essential areas must be used only when necessary for safety of employees;
 - ii) maintaining buffers from sensitive wildlife areas as determined by a Qualified Professional which must be consistent with A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia (2014, or as replaced or updated from time to time), or specified in FLNRO approved Ungulate Winter Range General Wildlife Measures:
 - iii) except for safety or spill related emergencies, follow disturbance related FLNRO approved Ungulate Winter Range General Wildlife Measures and disturbance related measures identified in A Compendium of Wildlife Guidelines for Industrial Development Projects in the North Area, British Columbia (2014, or as replaced or updated from time to

time)

- iv) Using guidance provided in Environmental Assessment Standard Guidance for the Western Toad, Environment and Climate Change Canada/Canadian Wildlife Service (ECCC 2016), and in consultation with ECCC for any updates to guidance:
 - The means by which pre-clearing surveys of western toads will be conducted by a Qualified Professional;
 - No-disturbance buffers around any identified breeding habitats for western toads found during pre-construction surveys;
- Mitigation measures to reduce adverse effects to wildlife cause by increased traffic on Project roads (including the Northern Section of the ORAR); and
- e) The following component plans:

Migratory Birds and Bats Mitigation and Monitoring

The plan must include at least the following.

- a) Mitigations consistent with the recommended mitigation, management and monitoring practices identified in the Bat Best Management Practices for Bats in BC (ENV 2016, or as replaced or updated from time to time);
- b) The means by which pre-clearing surveys will be conducted of;
 - i) raptors, and migratory birds by a Qualified Professional; and
 - ii) bats by a Qualified Professional to determine the distribution of suitable bat roosting habitat relative to Project infrastructure and activities;
- c) offsets for the potential loss of observed bat roosting habitat by installation of bat boxes or artificial roost trees as per Best Management Practices for Bats in BC (ENV 2016, or as replaced or updated from time to time), in suitable locations as determined by a Qualified Professional;
- d) Installation of alternate lighting to reduce attractants to bats from Project infrastructure if a Qualified Professional determines lighting is an attractant to bats based on bat observations near infrastructure:
- e) A scientifically sound approach for monitoring of migratory birds and avian species at risk in wetland areas associated with the discharge pipeline corridor south of the ORAR and the Kemess Lake Valley Infrastructure area, where point count surveys have not previously been conducted that includes:
 - i) A list of existing standards to be followed during monitoring, including RISC standards for inventory and survey methods of Forest and Grassland Birds (including recommendations for survey frequency and timing), as well as other species-specific survey and inventory methods accepted by ECCC where applicable for species that are often not detected using RISC standards; and
 - ii) descriptions of how surveys will be carried out by a Qualified Professional in a manner that protects and avoids harming, killing or disturbing migratory birds or destroying or taking their nests or eggs. All surveys must be conducted in accordance with ECCC's Avoidance Guidelines (http://www.ec.gc.ca/paom-itmb/) and in consultation with regional ECCC.
- f) Protection of active nest sites by species specific buffers in accordance with General Nesting Periods of Migratory Birds in Canada (ECCC 2016, or as

- replaced or updated from time to time), with a minimum 30 m buffer if evidence of nesting behaviour is observed and avoiding clearing outside of the reduced risk window as identified in the Region 7 Omineca Reduced Risk Windows for Fish and Wildlife (Ministry of Water, Land and Air Protection 2004; or as replaced or updated from time to time) is not possible as determined by the Holder:
- g) Bi-weekly nest surveys of infrastructure potentially used by barn swallows for nesting, during the breeding season. A species-specific buffer must be employed around all probable or actual nest sites that are detected during preclearing point count surveys or on infrastructure. These nests must be monitored until the young have fledged or the nest is abandoned. The minimum buffer distance of 30 meters must be utilized wherever practicable as determined by a Qualified Professional; and
- h) Requirement to record the exact buffer distance employed for any nest sites and report the outcome of the nesting attempt in annual reporting.

Alpine and Sub-Alpine Species Mitigation and Monitoring Plan

The plan must include at a minimum:

- a) The means by which field surveys to identify important habitat areas for Hoary Marmot, Ptarmigan species and Short-eared Owl by a Qualified Professional must be conducted prior to commencement of Construction in areas that a Qualified Professional determines may impact these species;
- b) The means by which pre-clearing surveys for Short-eared Owl must be conducted in advance of any clearing conducted in areas identified as suitable nesting habitat between March 1 to September 15. If Short-eared Owl nests or evidence of nesting is observed then appropriate buffers as determined by a Qualified Professional will be used in order to minimize disturbance and avoid loss of the nest; and
- c) Mitigation measures to reduce effects of habitat loss, habitat alteration and sensory disturbance from Project infrastructure and activities in alpine and subalpine habitat where Hoary Marmot, Ptarmigan species and Short-eared Owl may reside as determined by a Qualified Professional.

Omineca Resource Access Road (ORAR) Environmental Monitoring and Management Plan

The plan must include at a minimum:

- a) The means by which the mitigations specific to the use of the ORAR listed in section 4.2 of Appendix 15-C of the Application will be implemented;
- b) Mitigation measures to reduce roadside vegetation attractants to moose along the Northern Section of the ORAR, including but not limited to removal of early seral stage vegetation that provides moose forage;
- c) Mitigation to manage snowbanks on the Northern Section of the ORAR, to provide escape pathways (i.e., gaps) to allow wildlife to exit the plowed roads and mitigation measures to reduce predator access points into important caribou habitat areas as determined by a Qualified Professional;
- d) Monitoring of road dust on wildlife habitat on the Northern Section of the ORAR

- and adaptive management of road dust; and
- e) During all phases of the Project, the Holder must, at the request of and within a reasonable timeframe specified by EAO or FLNRO attend meetings and participate in initiatives to inform environmental management and monitoring along the ORAR, including but not limited to in relation to transportation related wildlife effects along the ORAR. The Holder must also implement measures identified by such initiatives where a Qualified Professional determines that the initiatives or measures will reduce the effects on wildlife from the Holder's use of the ORAR.

Caribou Management and Monitoring Plan

The plan must be, and demonstrate how it is, informed by:

- a) the data in Herd Boundary Refinement for the Chase, Spatsizi, and Frog Caribou Herds in North-central British Columbia, Sittler, K.S., et al., 2015; and
- b) A review of mitigation measures used by other industries and in other geographic areas, for caribou, their effectiveness, and how they might be applicable to potential Project impacts on caribou as determined by a Qualified Professional.

The plan must include at a minimum:

- a) Mitigation to restrictions on caribou movement caused by the Project in the area of subsidence delineated in the Certified Project Description and other potential areas of movement, identified by a Qualified Professional in the wildlife local study area (Figure 15.3-1 of the Application);
- b) Measures to monitor caribou movement in the areas that a Qualified Professional determines could be impacted by the Project:
- c) Identify opportunities to enhance caribou habitat through reclamation;
- d) The means by which the Holder will, through road decommissioning and restoration, close off access to, and reduce opportunities for movement of, caribou predators in the area covered by mineral tenures held by the Holder;
- e) During all phases of the Project, the Holder must, at the request of and within a timeframe specified by EAO or FLNRO, participate in mitigation and monitoring initiatives that may be developed by provincial or federal agencies to understand and mitigate risks to caribou and its habitat in the caribou regional study area as shown in Figure 15.3-2 of the Application. These initiatives may include but are not limited to surveying and habitat modelling, collaring of caribou, predator studies, restoration or improvement of habitat and access control: and
- f) Monitoring of the effectiveness of mitigation measures that must include monitoring of wildlife ramps over the water discharge line and other movement corridors with cameras.

Throughout all phases of the Project the Holder must:

- a) Record wildlife observations and mortalities; and
- b) Reporting information must be tabulated and submitted to Omineca FLNRO and Aboriginal Groups on an annual basis.

The Holder must provide a draft plan to MEM, FLNRO, ECCC, Aboriginal Groups, and EAO for review a minimum of 45 days prior to the planned commencement of

Construction.

The Holder must not commence Construction until the plan has been approved by EAO, unless otherwise authorized by EAO.

The plan, and any amendments thereto, must be implemented to the satisfaction of a Qualified Professional throughout Construction, Operations and Closure and to the satisfaction of EAO.

26. **Caribou Program**

Prior to the commencement of Construction (or such later date authorized by EAO), the Holder must enter into an agreement with FLNRO and any other parties that FLNRO directs (Caribou Agreement), setting out the terms of the Holder's participation in and financial contributions to a program of activities (Caribou Program) to mitigate, offset or compensate for the adverse effects of the Project and cumulative effects of the Project, by supporting the conservation and management of those caribou with habitat which includes some or all of the caribou regional study area as shown in Figure 15.3-2 of the Application. The Holder must abide by the terms of the Caribou Agreement.

The Caribou Program may include any of the following, as determined by EAO, in discussion with FLNRO and Aboriginal Groups:

- Monitoring of caribou movement and habitat use;
- Monitoring of caribou predator movement and habitat use;
- The development and implementation of population, habitat and access management measures that support the conservation and management of caribou and are additional to the measures to be implemented by the Holder under condition 25; and
- Administration of such activities.

The Caribou Agreement must not, without the consent of the Holder, require the Holder to contribute amounts in excess of an amount equal to \$30,000, plus an adjustment for inflation representing the diminishment in value of that amount from the date this Certificate is issued.

The Caribou Agreement may require the Holder to provide monitoring data, review, comment on, or otherwise participate in the preparation and presentation of draft plans, final plans, and reports regarding the Caribou Program.

27. Air Quality Management Plan

The Holder must retain a Qualified Professional to update the Air Quality Management Plan in section 24.3 of the Application. The updated plan must be developed in consultation with ENV, MEM, Northern Health Authority and Aboriginal Groups.

The updated plan must include at a minimum:

- a) The means by which the mitigation measures listed in sections 7.1.7 and 24.3.4 of the Application will be implemented:
- b) Mitigations to reduce potential PM2.5 concentrations;
- c) Mitigations and monitoring to minimize dust emissions to the satisfaction of a

Qualified Professional:

- d) Monitoring of metal contaminants contained in fugitive dust at human health receptor locations (including but not limited to the worker camp) and mitigation to address effects identified by a Qualified Professional; and
- e) Comparison of monitoring results to relevant health guidelines including but not limited to other jurisdicitons if BC does not have a health guideline for a particular contaminant and implementation of additional montioring or mitigation if exceedances are observed.

The Holder must provide a draft plan to ENV, MEM, Northern Health Authority, Aboriginal Groups and EAO for review a minimum of 45 days prior to the planned commencement of Construction. The Holder must provide the updated plan to ENV, MEM, Northern Health Authority, Aboriginal Groups and EAO no less than 90 days after commencing Construction.

The plan, and any amendments thereto, must be implemented to the satisfaction of a Qualified Professional throughout Construction, Operations and Closure and to the satisfaction of EAO.

28. **Groundwater Quality Information**

The Holder must provide to Northern Health Authority's Office of Health and Resource Development 45 days prior to Construction the results of baseline groundwater quality monitoring and information about the Project anticipated groundwater contaminant concentations, timing of potential groundwater contamination, health effects resulting from potential groundwater contamination and expected treatment options (including but not limited to triggers for treatment).

29. **Health and Medical Services Plan**

The Holder must retain a person with expertise in delivering health services in camp environments to develop a plan for the provision and coordination of health services to employees of the Project on and off-site. The plan must be developed in consultation with Northern Health Authority and Aboriginal Groups.

The plan must:

- a) Be consistent with the Health and Medical Services Plan Best Management Guide for Industrial Camps (HMSP BMG; Northern Health Authority, March 2015, or as amended or replaced from time to time);
- b) Describe the following:
 - i) On-site health and medical services to be implemented to meet the workforce's urgent and non-urgent health care needs;
 - ii) Disease and infection prevention and outbreak protocols; and
 - iii) Health promotion, disease prevention and worker wellness program information (including but not limited to physical infrastructure, amenities and activities that are supportive of physical and mental health) as described in HMSP BMG (Northern Health Authority, March 2015, or as amended or replaced from time to time).
- Describe a process for communication, coordination, and collaboration with the Northern Health Authority and local health service providers, including patient care/transfer, data collection and reporting;

- d) Describe how the Holder will adaptively manage health service concerns, if they arise; and
- e) Describe how this plan relates to the Socio-Community and Economic Effects Management Plan.

The Holder must provide this draft plan to Northern Health Authority, Aboriginal Groups and EAO for review a minimum of 180 days prior to the planned commencement of Construction. The Holder must provide the updated plan to Northern Health Authority, Aboriginal Groups and EAO 30 days prior to construction.

The plan, and any amendments thereto, must be implemented throughout Construction and Operations under the supervision of a person with expertise in delivering health services in camp environments and to the satisfaction of EAO.

30. Socio-Community and Economic Effects Management Plan

The Holder must develop a Socio-Community and Economic Effects Management Plan in consultation with Northern Health Authority and Aboriginal Groups and to the satisfaction of EAO.

The Socio-Community and Economic Effects Management Plan must include at a minimum:

- a) The means by which the mitigation measures identified in section 17.5.3 of the Application will be implemented:
- b) Description of communication and engagement with Aboriginal Groups, community representatives, service providers and stakeholders related to social and economic effects of the Project and mitigation measures, throughout all phases of the Project including identification of key contacts, types of engagement, frequency of engagement, roles and responsibilities, and key outcomes:
- c) Description of issues identification and management approach including:
 - The process by which members of the public may submit feedback regarding the Project and the resolution process for any complaints received about the Project including the timeframe within which the Holder will respond to the compliant and the means by which they will respond;
 - ii) How issues will be identified, tracked and responses documented;
 - iii) Mechanisms for collaboration and resolution; and
- d) Description of an adaptive management approach, including the development and implementation of alternative mitigation, to address unpredicted effects that are directly attributable to the Project and related to the valued components in Section 16 (Economic Effects); and Section 17 (Social Effects) of the Application.

The Holder must provide this draft plan to EAO, Northern Health Authority and Aboriginal Groups for review 90 days prior to the start of Construction.

The plan and any amendments thereto, must be implemented throughout Construction and Operations to the satisfaction of EAO.

31. Aboriginal Cultural Awareness and Recognition

At least three months prior to commencing Construction in an Aboriginal Group's asserted or established traditional territory, the Holder must commence consultation with the Aboriginal Group to identify opportunities for cultural awareness and recognition. The Holder must offer opportunities to Aboriginal Groups that include holding ceremonies, installing signage, executing cultural protocols, recognizing cultural heritage, and providing cultural awareness training to Project personnel. If specific opportunities for cultural awareness and recognition are requested by an Aboriginal Group, the Holder must determine the scope and content of the cultural awareness and recognition opportunity and associated activities, in consultation with the Aboriginal Group and must support or conduct such activities, or must provide a rationale to the Aboriginal Group explaining why a specific request or activity is not practicable.

32. Transfer of Certificate

- a) Except as provided below, neither this Certificate nor any interest in it may be transferred to any person. This Certificate will be effectively transferred if the proposed Holder acknowledges that, upon transfer, it will be responsible for complying with the conditions of the Certificate, and both the proposed Holder and the Holder:
 - i) obtain consent for the transfer from the Executive Director.
 - ii) apply under Section 19 of the Act for such amendments to this Certificate, if any, as the Executive Director deems necessary to ensure compliance with and enforceability of this Certificate and to otherwise reflect the proposed transfer, and
 - iii) confirm by written notice to the Executive Director, within 14 days of the completion of all aspects of the transfer transaction other than this notice, that the transfer has been completed.
- b) An interest in this Certificate may be transferred by way of a grant of security to lenders or financers without consent.
- c) A transfer of this Certificate to a trustee in bankruptcy, by a receiver or a trustee in bankruptcy pursuant to a court approved sale, or as part of a court approved arrangement under the Company Creditors Arrangement Act may occur without consent.
- d) If this Certificate is transferred without consent, the new and former Holder must notify the Executive Director within 30 days of the transfer and apply within the time specified by the Executive Director for any amendments to this Certificate that the Executive Director deems necessary to ensure compliance with and enforceability of this Certificate and to otherwise reflect the proposed transfer.

33. Transfer of Interest in Project

- a) Except in connection with the granting of security to Project lenders or financers, prior to the Holder transferring a significant interest in the Project, the Holder and proposed transferee must:
- b)
- i) obtain consent for the transfer from the Executive Director, and
- ii) apply under Section 19 of the Act for such amendments to this Certificate, if any, as the Executive Director deems necessary to ensure

- compliance with and enforceability of this Certificate and to otherwise reflect the proposed transfer.
- c) A transfer to a trustee in bankruptcy, by a receiver or a trustee in bankruptcy pursuant to a court approved sale or as part of a court approved arrangement under the Company Creditors Arrangement Act may occur without consent.

If a significant interest in the Project is transferred without consent, the Holder must notify the Executive Director within 30 days of the transfer and apply within the time specified by the Executive Director for any amendments to this Certificate that the Executive Director deems necessary to ensure compliance with and enforceability of this Certificate and to otherwise reflect the proposed transfer.