March 1, 2021

VACUERPOC Dacoc Ddovb

Serving the communities of

DPV 224P Arctic Bay

bapsoline Clyde River

45C2V2AD Grise Fiord

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

brLbc Kimmirut

POLLAC Kinngait

<°056)56 Pangnirtung

LcUTCC-P Pond Inlet

SPPSPC2495P Qikiqtarjuaq

46C7V2049 Resolute Bay

50P2956 Sanikiluag

50-556 Sanirajak Richard Dwyer

Manager of Licensing **Nunavut Water Board** P.O. Box 119, Gjoa Haven

Nunavut, XOB 1J0

Re: Baffinland Iron Mines Corporation's Type 'B' Water Licence 2BE-MRY1421 Renewal **Application for the Mary River Exploration Project**

Richard,

Baffinland Iron Mines Corporation's (Baffinland) renewal application for the Type 'B' Water Licence 2BE-MRY14211 (the Licence) was distributed for comments from interested parties by the Nunavut Water Board (NWB) on January 29, 2021. QIA has reviewed the application and presents 25 Technical Comments for the consideration of the NWB, Baffinland and interested intervenors (see Appendix).

QIA notes that Baffinland indicated in their application that they currently hold a Land Use Permit (QL2-2012) for access to Inuit Owned Land parcels PI-14 and PI-15. This Permit expired on December 31, 2020 and is no longer active. Baffinland is not currently permitted to access PI-14 and PI-15 until a new application for access to Inuit Owned Land is first reviewed and approved by the Mittimatalik Community Lands and Resources Committee and a new Land Use Permit is issued by QIA.

Sincerely,

Chris Spencer

cc:

Manager, Regulatory Affairs

Christopher Murray, Baffinland

🕗 (867) 975-8400 1-800-667-2742 🏮 (867) 979-3238 🔯 info@qia.ca 📵 www.qia.ca 🔞 @ Qikiqtani_Inuit 🔞 @ QikiqtaniInuit 🔞 @ QikiqtaniInuit

¹ NWB (2014). NWB Renewal Licence No. 2BE-MRY1421. April 17, 2014.

V5cU24P DOCOC DOOUP

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

4DY7CDdp Grise Fiord

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

L_cUFCC-P Pond Inlet

sppsbCs4dsp Qikiqtarjuaq

4PC7V204P Resolute Bay

50P2096 Sanikiluaq

50576 Sanirajak

Appendix – Technical Comments

ID:	QIA-01
Reference:	Covering Letter
Comment:	Baffinland states that "[s]cientific and engineering studies are also an
	integral part of Project development. These studies are intended to support
	engineering design, environmental studies, and support environmental
	management. The NWB will be informed of the extent of these studies as
	part of the Annual Work Plan, and/or the Annual Report." No further detail
	is provided as to the extent of scientific and/or engineering studies and if
	those studies would inform improvements to the Type B Water Licence.
Requests:	1. QIA requests that Baffinland commit to including any scientific and
	engineering studies performed on lands licenced within the Type B
	Licence in the Annual Report.

ID:	QIA-02
Reference:	Project Description
Comment:	In Section 3.4 of the Project Description, Baffinland proposes that NWB
	include a condition that would enable Baffinland to proceed with the
	development of satellite camps. It is not clear how this proposal relates to
	PART E Item 2 "The Licensee is required to provide thirty (30) days' notice
	to the Board and an Inspector prior to constructing and operation of any of
	the camp facilities mentioned in Part E Item 1."
Requests:	1. QIA requests that Baffinland confirm what changes, if any, are
	being proposed to enable the development of satellite camps.
	2. Per the Evrim Exploration Canada Corp. MVLWB Licence, additional
	details are included to inform locations of satellite camps: "The
	Permittee shall locate all camps on Durable Land or previously
	cleared areas and as approved by an Inspector." Durable Land is
	land that can withstand repeated use, such as gravel or sand with
	minimal vegetative cover. QIA recommends this be considered to
	add greater certainty to the placement of satellite camps.

ID:	QIA-03
Reference:	Project Description
Comment:	Baffinland states in Section 6 "[f]uture camps will be located such as to
	minimize impacts on surface drainage. Baffinland will not erect temporary
	camps or store material on the surface of frozen streams or lakes including
	the immediate banks except what is for immediate use." Multiple

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

L_cUFCC-P Pond Inlet

SPPSPC5495P Qikiqtarjuaq

4PC7V204P Resolute Bay

50P2096 Sanikiluaq

	provisions of the current Type B Water Licence restrict impacts to at least thirty-one (31) metres above the ordinary high-water mark, therefore, it is not clear if Baffinland is suggesting an alternative use for temporary camps.
Requests:	QIA requests that Baffinland confirm it will not construct future camps within thirty-one (31) metres of the ordinary high-water mark.

ID:	QIA-04
Reference:	Project Description
Comment:	Baffinland states in section 8: "Baffinland will dispose of all drill waste, including water, chips, muds and salts (Calcium Chloride CaCl ₂), from land-based drilling, in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty-one (31) metres from the ordinary high-water mark of any adjacent waterbody, where direct flow into a water body is not possible and no additional impacts are created." QIA has previously expressed concerns with drill waste not being appropriately contained in a sump and instead flowing onto the surrounding land.
Requests:	QIA requests that the NWB include in the Type B Water Licence the following term (Section 26(1)(g) Item 31) from the Evrim Exploration Canada Corp. Exploration Licence: "The Permittee shall not allow any Drilling Waste to spread to the surrounding lands and watercourses."

ID:	QIA-05
Reference:	Project Description
Comment:	Baffinland states in section 8: "Baffinland may, for the purpose of
	geotechnical or exploration investigations carry out drilling activities within
	thirty-one (31) metres of the high water mark of any water body or on ice,
	provided that such activities are consistent with the terms of this Licence
	and a request has been submitted and received by the NWB, ten (10) days
	in advance of drilling, that includes a thorough description of the proposed
	activities and the following: An appropriate scaled site map, complete with
	approximate GPS coordinates of planned drilling locations and the
	associated water bodies; Locations of waste deposition; and, Mitigation
	measures that are planned to be in place, prior to, during drilling and
	following if required to protect waters."
Requests:	The proposed project area includes activities on Inuit Owned Land parcels
	PI-14 and PI-15. Baffinland does not currently hold a valid Land Use Permit
	to conduct exploration activities on either parcel. QIA requests

VScUZePOC Dacac Dacap

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

4PC2QC26 Grise Fiord

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

LcUTCC-P Pond Inlet

SPPSPCS44SP Qikiqtarjuaq

4PC7V204P Resolute Bay

40P2956 Sanikiluaq

50556 Sanirajak acknowledgement from Baffinland that a permit is required prior to any project activities occurring on PI-14 and PI-15.

ID:	QIA-06
Reference:	Project Description
Comment:	Baffinland states in section 8: "If the bottom of the permanently frozen ground, or permafrost, is broken through by the drill, the depth of the bottom of permafrost and location should be reported in the annual report to the Board for data management purposes." The current Licence does not require Baffinland to report if an operator drills to the bottom of permafrost. It would also be beneficial to record the depth of the active layer to inform geotechnical recommendations.
Requests:	 QIA requests that Baffinland be required to report when permanently frozen ground, or permafrost, is broken through by the drill, the depth of the bottom of permafrost and location. QIA requests that Baffinland also be required to report the depth of the active layer.

ID:	QIA-07
Reference:	Project Description
Comment:	Baffinland indicates in section 17 of the renewal application that predicted
	environmental impacts of the undertaking and proposed mitigation
	measures are the same as those considered in the existing water licence.
	Baffinland makes no reference to adaptive management in its delivery
	letter, application, or project description. Given the focus of adaptive
	management to mitigate environmental impacts at the Mary River Project
	in the recent Phase 2 regulatory process, the inclusion of objectives,
	indicators, thresholds, and responses would have been a positive measure
	to ensure consistency.
Requests:	QIA requests that objectives, indicators, thresholds, and responses intended
	to mitigate environmental impacts be included in the Spills Contingency
	Plan and Exploration Closure and Reclamation Plan.

ID:	QIA-08
Reference:	Project Description
Comment:	Baffinland states in section 20 of the renewal application "Baffinland
	continues to consult with the North Baffin communities and organizations
	regarding, ongoing construction and operational activities at the Project,
	shipping season, progress regarding employment from the North Baffin

V5cU24P معحود ⊳طحول

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

L_cUFCC-P Pond Inlet

SPPSPC5495P Qikiqtarjuaq

4PC7V204P Resolute Bay

50P2096 Sanikiluaq

	communities, environmental monitoring activities and results, exploration activities and future phases of the Project. Baffinland's senior management team continued to participate in these meetings. The QIA and NWB Annual Report for Operations details a complete list of consultations and meetings held with regulators, stakeholders, and the public by Baffinland. The renewal application states that Baffinland reports on consultation in the QIA and NWB Annual Report for Operations."
	The 2019 Type B Water Licence Annual Report refers to the 2019 Type "A" Water Licence Annual Report. Neither Annual Report provides outcomes of consultations regarding exploration activities or the areas licenced under the current Type "B" Water Licence. Furthermore, there is no list of concerns expressed and measures to address concerns.
Requests:	QIA requests a detailed summary of consultation meetings that relate to the locations licenced under the current Type "B" Water Licence, including a list of concerns expressed and measures Baffinland proposes to address concerns.

ID:	QIA-09
Reference:	Spill Contingency Plan
Comment:	Response procedures described include the use of berms, ditches, trenches, and floating booms. A description of potential equipment that may be needed to complete these activities is not provided, except for Section 5.2 which notes a boat would be used to place booms. It is not clear if the necessary equipment for the most likely spill scenarios described in Section 8 will be available on site and located such that the identified response times can be met.
Requests:	QIA requests that a list of equipment necessary to respond to the likely spill scenarios should be provided and Baffinland should indicate if this equipment will be available on site and capable of responding within the defined response times.

ID:	QIA-10
Reference:	Spill Contingency Plan
Comment:	Section 5.4 describes wildlife protection procedures and management
	approach for impacted wildlife, however further details on the treatment
	approach for impacted wildlife are absent, as well as the reporting and
	adaptive management mechanisms that may be in place for wildlife
	incidents. It is not clear what treatment approaches could be taken, or who
	they would be carried out by. It is not known if certain Baffinland staff or

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

L_cUFCC-P Pond Inlet

SPPSPC5495P Qikiqtarjuaq

4PC7V204P Resolute Bay

50P2096 Sanikiluaq

	onsite contractors are qualified to handle and rehabilitate wildlife or euthanize, as necessary.
Requests:	QIA requests that the approach to impacted wildlife management be further defined and that the party conducting such action be identified. Reference to the project's available wildlife management and protection plan should also be provided to indicate how wildlife incidents are properly reported to relevant authorities and what mitigative responses may be implemented as a result.

ID:	QIA-11
Reference:	Spill Contingency Plan
Comment:	The plan identifies that other hazardous materials, chemicals or wastes besides fuel, lubricants and oils will be present but does not identify approximate quantities (although types are listed in Appendix E), nor does it identify the likely spill scenarios and responses to be implemented. The plan notes that small volumes will limit the magnitude of spills that can occur. Nevertheless, a spill risk is potentially still present and should be further identified with appropriate responses for the contingency plan to be considered complete with regards to all types of spills that may occur.
Requests:	QIA requests that the approximate quantities of hazardous materials on site
	be identified, as well as an analysis of the most likely spill scenario and
	responses.

ID:	QIA-12
Reference:	Spill Contingency Plan
Comment:	The plan identifies the potential for spills of untreated sewage but does not
	identify approximate quantities, nor does it identify a likely spill scenario
	and responses to be implemented. A spill analysis should be included for
	the contingency plan to be considered complete.
Requests:	QIA requests the approximate quantities of sewage generated onsite as
	well as an analysis of the most likely spill scenario and responses.

ID:	QIA-13
Reference:	Spill Contingency Plan
Comment:	Section 8.2 indicates sewage is to be disposed of in a latrine system, and greywater in a sump (if not directed to a sewage treatment facility) at a minimum distance of 31 m from water bodies. The 31 m distance was earlier identified as being consistent with the document "Design Rationale for Fuel Storage and Distribution Facilities" 3rd Edition 2006, published by

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

4PC2QC26 Grise Fiord

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

L_cUFCC-P Pond Inlet

SPPSPC5495P Qikiqtarjuaq

4PC7V204P Resolute Bay

50P2096 Sanikiluaq

	the Department of Public Works of the Northwest Territories. Design
	guidelines for fuel storage are not likely to also be applicable to permanent
	disposal structures for sewage and greywater.
Requests:	QIA requests that further details should be provided on the design of the
	latrine and sump to indicate if the design conforms to available guidelines
	or standards for sewage/greywater disposal structures.

ID:	QIA-14
Reference:	Spill Contingency Plan
Comment:	Likely spill scenarios for lubricants and oils include equipment rollover and
	spills during transfer. It stands to reason that if these scenarios are a risk for
	spills of oil/lubricants, they are also a risk for fuel spills, which could be even
	greater in volume; however, these scenarios are not identified among the
	likely scenarios for fuel spills.
Requests:	QIA requests that spill scenarios for vehicle rollover and fuel transfer be
	assessed and included with the fuel spill analysis.

ID:	QIA-15
Reference:	Spill Contingency plan
Comment:	Appendix C identifies locations of spill response kits and Appendix D
	identifies the typical contents of a spill response kit. However, it is not clear
	which type of response kit is to be sited at each location, nor is it identified
	if spill kits appropriate to the materials being transported or work
	conducted are also to be in equipment (e.g., trucks, rigs).
Requests:	QIA requests that the type of spill kit stored at each location should be
	identified, along with spill kits located within site equipment.

ID:	QIA-16
Reference:	Exploration Closure and Reclamation Plan
Comment:	A clear description of the exploration project sites is absent thus it is not
	clear where specific structures will be located and the associated activities
	that are to occur.
Requests:	QIA requests a detailed description of project sites including
	buildings and infrastructure that will be present, their locations and
	associated activities to be undertaken.
	2. QIA requests that maps be provided which indicate the layout and
	location of all project infrastructure.

ID:	QIA-17
Reference:	Exploration Closure and Reclamation Plan

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

L_cUFCC-P Pond Inlet

SPPSPC5495P Qikiqtarjuaq

4PC7V204P Resolute Bay

50P2096 Sanikiluaq

Comment:	No schedule/timeline is provided for when closure of each project
	component will occur, nor is it clear what the expected lifespan of the
	exploration project or component sites will be.
Requests:	QIA requests a schedule / timeline for the operation and closure of each
	specific component of the exploration project. It is understood that there
	may be uncertainty regarding timelines and that these may be subject to
	change. Development of a schedule/timeline for closure and reclamation
	would aid in satisfying Part I, Item 2 of the Water Licence, which requires all
	reclamation work to be completed prior to the expiry of the Licence.

ID:	QIA-18
Reference:	Exploration Closure and Reclamation Plan
Comment:	The Type B Water Licence Part I, Item 1 requires the Licensee to submit to
	the Board for approval within sixty (60) days following the issuance of this
	Licence, a revised, stand-alone, Closure and Restoration Plan prepared in
	accordance with applicable sections of the "Guidelines for Abandonment
	and Restoration Planning for Mines in the Northwest Territories (1990) and
	that must reflect the reduced scope of activities under this licence.
	However, sections of the Closure and Reclamation refer to the Interim
	Closure and Reclamation Plan for the Mary River Project for additional
	details, particularly for the closure and post-closure monitoring to be
	completed. Therefore, the water licence condition for a stand-alone
	document does not appear to be satisfied if the reader is required to refer
	to other documents for details on significant components of the closure
	plan for the exploration sites.
Requests:	QIA requests details on the closure and post-closure monitoring to be
	completed at the exploration sites. Proposed duration, frequency, locations,
	scope, sampling, and resource requirements should be provided to evaluate
	if closure criteria are being met and closure objectives achieved.

ID:	QIA-19
Reference:	Exploration Closure and Reclamation Plan
Comment:	For details regarding engagement, readers are referred to the Interim
	Closure and Reclamation Plan for the Mary River Project. This may not be
	consistent with the Water Licence conditions. In addition, the MVLWB
	Guidelines for Closure and Reclamation of Advanced Mineral Exploration
	and Mine Sites specify the inclusion of a record of engagement, as well as
	lessons learned from other projects and reclamation research plans that are
	to occur and which will support closure and reclamation of the site. These
	items are all absent from the Exploration Closure and Reclamation Plan.

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

L_cUFCC-P Pond Inlet

SPPSPC5495P Qikiqtarjuaq

4PC7V204P Resolute Bay

50P2096 Sanikiluaq

Requests:	 Provide a record of engagement specific to closure that has occurred that includes any issues identified by the engaged parties and how the company has addressed them or modified the project
	in response.
	Provide a summary of applicable lessons learned from other projects that can be applied to the exploration project.
	 Provide details of any reclamation research plans completed, in progress or proposed that will address uncertainties and support closure planning of the exploration sites.

ID:	QIA-20
Reference:	Exploration Closure and Reclamation Plan
Comment:	The location and number of proposed drill sites is not provided.
Requests:	QIA requests a summary of the anticipated drilling program, including
	anticipated number of sites and proposed locations on a map.

ID:	QIA-21
Reference:	Exploration Closure and Reclamation Plan
Comment:	The closure plan specifies disturbed areas are to be graded and scarified,
	but the total area of the disturbed areas is unclear.
Requests:	QIA requests additional detail regarding the areas of each drill site and
	campsite as well as detailed maps delineating each area.

ID:	QIA-22
Reference:	Exploration Closure and Reclamation Plan
Comment:	Details regarding the expected mobilization/demobilization requirements
	during reclamation are not provided. It is not clear how the exploration
	camps and drill sites will be accessed during construction, operation, and
	closure, either by winter road, helicopter, or boat. It is stated in Section 5 of
	the closure plan that transport of materials and equipment at closure will
	occur via helicopter or overland by cat train during the late winter period to
	Mary River Site, Milne Port or Steensby. However, should a cat train be
	used, it is not clear if this requires construction of a winter road.
Requests:	QIA requests a description of how the sites are accessed, and how
	materials and equipment are to be mobilized/demobilized during
	closure, including the requirement for any winter road.
	2. QIA further request additional detail regarding the requirements for
	personnel, equipment, fuel, accommodations, flights, etc.

Serving the communities of

DPV D24P Arctic Bay

6001C42069 Clyde River

4PC2QC26 Grise Fiord

 Δ^{L} Igloolik

 $\Delta^{\varsigma}b \Delta^{\varsigma}$ Igaluit

DrLbc Kimmirut

ParLAC Kinngait

<°056)56 Pangnirtung

L_cUFCC-P Pond Inlet

SPPSPC5495P Qikiqtarjuaq

4PC7V204P Resolute Bay

50P2096 Sanikiluaq

ID:	QIA-23
Reference:	Exploration Closure and Reclamation Plan
Comment:	Section 5.2.3 states contaminated soils will be removed from the
	exploration site, however the approximate quantity of impacted soil that
	may be generated from the exploration sites is unclear.
Requests:	QIA requests that an estimated volume of impacted soil be provided and
	itemized by site. This volume can be further refined following the
	completion of Phase I ESA's prior to closure.

ID:	QIA-24
Reference:	Exploration Closure and Reclamation Plan
Comment:	The closure plan indicates sumps will be used for disposal of greywater. It is
	not clear how sewage will be managed.
Requests:	 QIA requests additional detail regarding the number of sumps and estimated volume of sewage.
	 Provide the location and design of sumps, and any applicable standards/guidelines they are to conform to with regards to design, operation, and closure. Detail sewage management practices.

ID:	QIA-25
Reference:	Exploration Closure and Reclamation Plan
Comment:	The closure plan indicates structures, equipment, water lines, waste, etc.
	are all to be removed from site.
Requests:	QIA requests that the quantity of materials and waste to be removed from
	site be provided in a summary table.