Baffinland Iron Mines Corporation

EQE BAY

ENVIRONMENTAL PROTECTION PLAN

BAF-PH1-400-P16-0001

Issued For Permitting

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DOCUMENT REVISION RECORD

Issue Date MM/DD/YY	Revision	Prepared By	Approved By	Description of Change and Purpose of Issue
12/07/18	DRAFT	AV	TI	DRAFT – Issued for Permitting
02/21/19	0	RAC	MLH	FINAL – Issued for Permitting
03/20/26	1	JH	LK	DRAFT – Issued for Review
06/05/2026	2	JH	LK	FINAL – Issued for Permitting Updates made based on comments during regulatory review of Type 'B' Water Licence Renewal Application

0 CONTENTS AND REVISION CONTROL

The Environmental Protection Plan (EPP) is a living document and routinely reviewed and revised as required. The Contents and Revision Control Operational Standard presented, herein, outlines the contents of the EPP and provides a Contents List with the most recent revision date for each Operational Environment Standard (OES). The Contents List will be updated and re-issued when any OES is revised or added.

This EPP has been developed for the Eqe Bay Exploration Program, using a similar document developed for the Mary River Project (BAF-PH1-830-P16-0008, Rev 1, August 30, 2016). All OESs will be considered Rev. 0 in this Plan.

SECTION 2	OPERATIONAL ENVIRONMENT STANDARDS	REV #	REVISION DATE
2.1	Cultural Heritage and Archaeological Resources	0	
2.2	Avoiding Disturbance to Local Land Users	0	
2.3	Land Disturbance	0	
2.4	Water Use	0	
2.5	Water Intake and Winter Withdrawal Management	0	
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2.7	Equipment Operations & Mobilization	0	
2.8	Fuel Storage and Handling	0	
2.9	Aircraft Flights	0	
2.10	Sediment and Erosion Control	0	
2.11	Polar Bear Encounters	0	
2.12	Fox and Wolf Encounters	0	
2.13	Caribou Protection Measures	0	
2.14	Bird Protection Measures	0	
2.15	Solid Waste Management	0	
2.16	Wastewater Treatment	0	
2.17	Hazardous Material and Hazardous Waste Management	0	
2.18	Road Construction	0	
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2.20	Wildlife Log Instructions	0	
2.21	Quarry and Borrow Development	0	
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SECTION 3	**DOCUMENTATION LOGS AND FORMS**		
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3.2	Human Use Log	0	
3.3	Water Collection Log	0	
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3.5	NT-NU Spill Report Form	0	
3.6	Polar Bear Readiness Audit Form	0	
3.7	Wildlife Log	0	
3.8	Active Migratory Bird Nest Field Sheet	0	
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1 INTRODUCTION

The purpose of the Environment Protection Plan is to ensure that a high level of importance is placed on the protection of the environment by personnel throughout the lifecycle of Baffinland Iron Mines Corporation's (Baffinland's) Eqe Bay Exploration Program (Exploration Program). This document provides Operational Environment Standards (OESs) to identify and address environmental issues and concerns and to provide guidance and control measures, to avoid potential negative impacts to the environment and/or mitigate these impacts to the greatest extent practicable. The OESs are not comprehensive and are intended to be used in conjunction with relevant documents such as Environmental Management Plans (EMPs), Standard Operating Procedures, Environmental Permits, Licences, and Regulations, etc. The EPP will be updated as required to reflect current management reviews, incident investigations, regulatory changes, or other Exploration Program modifications. The EPP is an integral part of the Environmental Management System implemented for the Exploration Program and allows for the integration of environmental issues and regulations into the Exploration Program's design and operation.

The EPP provides a practical way to facilitate field implementation of environmental regulations, practices, and measures required to eliminate or reduce potential adverse environmental effects. It is a working document for use by personnel, as well as at the Baffinland corporate level for ensuring commitments made in policy statements are implemented and monitored. The EPP provides a quick reference for personnel to monitor for compliance and to make suggestions for improvements. This EPP provides the general protection measures for routine and unplanned activities associated with the Exploration Program. The EPP is developed in recognition of applicable permits, authorizations, approvals and Inuit Knowledge. As well, this Plan provides operational measures that comply with aforementioned permits, approvals, etc., and provides reference to other associated and relevant documents such as Environmental Management Plans and Standard Operating Procedures.

The specific purposes of the EPP are as follows:

- Provide a reference document to ensure that commitments to minimize adverse environmental effects will be met.
- Document and identify environmental concerns and ensure appropriate protection measures are implemented.
- Provide concise guidance to personnel regarding the implementation of appropriate standards for protecting the environment and minimizing adverse environmental effects.
- Provide a reference and training document for personnel when planning and/or conducting specific activities and working in specific areas.
- Communicate changes in the Program through the revision process.
- Provide a reference to related applicable documents such as legislative requirements, guidelines, permits, Environmental Management Plans, Standard Operating Procedures, etc.

The EPP provides documentation of environmental protection measures against which the environmental performance of the Exploration Program can be readily measured and corrective actions developed and implemented where required. Personnel are expected to understand and implement the environmental protection measures provided within the EPP. If, at any time, personnel do not understand how or when to implement an environmental protection measure, personnel should contact the Environmental Representative onsite to obtain further clarification.

1.1 HEALTH, SAFETY AND ENVIRONMENT POLICY

This Baffinland Iron Mines Corporation Policy on Health, Safety and Environment is a statement of our commitment to achieving a safe, healthy and environmentally responsible workplace. We will not compromise this policy for the achievement of any other organizational goals.

We implement this Policy through the following commitments:

- Continual improvement of safety, occupational health and environmental performance.
- Meeting or exceeding the requirements of regulations and company policies.
- Integrating sustainable development principles into our decision-making processes.
- Maintaining an effective Health, Safety and Environmental Management System.
- Sharing and adopting improved technologies and best practices to prevent injuries, occupational illnesses and environmental impacts.
- Engaging stakeholders through open and transparent communication.
- Efficiently using resources, and practicing responsible minimization, reuse, recycling and disposal of waste.
- Reclamation of lands to a condition acceptable to stakeholders.

Our commitment to provide the leadership and action necessary to accomplish this policy is exemplified by the following principles:

- As evidenced by our motto “Safety First, Always” and our actions, Health and Safety of personnel and protection of the environment are values, not priorities.
- All injuries, occupational illnesses and environmental impacts can be prevented.
- Employee involvement and active contribution through courageous leadership is essential for preventing injuries, occupational illnesses and environmental impacts.
- Working in a manner that is healthy, safe and environmentally sound is a condition of employment.
- All operating exposures can be safeguarded.
- Training employees to work in a manner that is healthy, safe and environmentally sound is essential.
- Prevention of personal injuries, occupational illnesses and environmental impacts is good business.

- Respect for the communities in which we operate is the basis for productive relationships.

We have a responsibility to provide a safe workplace and utilize systems of work to meet this goal. All employees must be clear in understanding the personal responsibilities and accountabilities in relation to the tasks we undertake.

The health and safety of all people working at our operation and responsible management of the environment are core values to Baffinland. In ensuring our overall profitability and business success every Baffinland and business partner employee working at our work sites is required to adhere to this Policy.

1.2 ENVIRONMENTAL APPROVALS

TABLE 1-1 will list Baffinland's issued Environmental Approvals for the Eqe Bay Exploration Program, once received. This list will be continually updated as the Exploration Program progresses through the regulatory process and evolves.

TABLE 1-1: ENVIRONMENTAL APPROVALS ISSUED FOR THE EQE BAY EXPLORATION PROGRAM

Permit ID	Licence Name	Applicability	Expiry
Nunavut Impact Review Board			
18EN026	Screening Decision Report (Aug. 17, 2018)	Exploration Program activities.	N/A
Nunavut Water Board			
2BE-EQE1926	Type 'B' Water Licence	Waste and water management related to the Exploration Program.	April 3, 2026
Authorizations under the *Fisheries Act*			
TBD	Letter of Advice for Barge Landing and Culvert Crossings	Watercourses, aquatic and marine environments.	TBD
Inuit Land Use Lease			
TBD	Inuit Land Use Lease III	Exploration Program activities.	TBD

The terms and conditions included in approvals that have been received to date (i.e. NIRB Screening Decision Report) have been incorporated into the OESs provided in this document. As the Exploration Program progresses through the regulatory process and additional approvals are received, this Plan will be revised to reflect the new terms and conditions (i.e. Type 'B' Water Licence Renewal).

1.3 ROLES AND RESPONSIBILITIES

1.3.1 VICE-PRESIDENT OF SUSTAINABLE DEVELOPMENT

- Provide corporate resources and overall direction to the implementation of the EPP.

1.3.2 DIRECTOR OF SUSTAINABLE DEVELOPMENT

- Provide technical guidance and final review and approval of revised versions of EPP.
- Ensure EPP is properly communicated to the Eqe Bay Camp Manager and Exploration Program Personnel.
- Review revisions to the EPP.

1.3.3 EQE BAY CAMP MANAGER

- Implement the EPP in daily operations.
- Maintain a current copy of the EPP at site.
- Provide training and support to ensure successful implementation of the EPP.
- Initiate changes to improve and update the Plan as required.

1.3.4 EQE BAY EXPLORATION PROGRAM PERSONNEL

- Read and understand the relevant sections of the EPP.
- Adhere to this Plan's protocols and procedures.

1.3.5 ENVIRONMENTAL REPRESENTATIVE

- Conduct routine inspections of Exploration Program activities to ensure compliance with this Plan and relevant approvals.
- Provide environmental monitoring and reporting (i.e. spills) support to Exploration Program operations.
- Conduct a review and revision of the EPP on an as needed basis to determine if updates are required, or at the request of the Camp Manager or Director of Sustainable Development.
- Ensure revisions are distributed to managers and supervisors.
- Perform document controls.
- Ensure that managers, supervisors and their staff are familiar with the EPP and its protection measures.
- Obtain approvals from management.

2 OPERATIONAL ENVIRONMENT STANDARDS

2.1 CULTURAL HERITAGE AND ARCHAEOLOGICAL RESOURCES

A number of cultural heritage and archaeological sites have been identified across the Project Area. The Environmental Representative will provide information regarding the location of these sites relative to potential work areas. The potential exists to encounter undiscovered cultural heritage or archaeological resources (Chance Finds) when conducting construction activities such as excavating and site clearing.

2.1.1 ENVIRONMENTAL CONCERN

The Eqe Bay Exploration area has been occupied by humans for over 4,000 years. Archaeological sites are common throughout the region, mostly consisting of stone structures that usually represent tent rings and shelters, caches, traps, hunting blinds, cairns and *inukshuks*. Stone tool making sites are also present. These types of archaeological sites and features are often difficult to recognize. All archaeological sites are valuable, non-renewable sources of information about local people's history and provide crucial data for scientists studying Northern ways of life throughout the past. It is against territorial law to disturb known or suspected archaeological sites, punishable by fine or imprisonment. Many areas of the Project have not been surveyed by a qualified archaeologist; therefore Personnel must obtain approval from the Environmental Representative before traveling off of existing roads or disturbing ground surfaces.

The Eqe Bay Exploration Area is expected to have a high overall archaeological potential. Surveys were completed in 2018 and 2021, and areas assessed to be of moderate or high archaeological value have been mapped, photographed, documented and staked or roped off to prevent potential for human interaction.

2.1.2 ENVIRONMENTAL PROTECTION MEASURES

The following measures will be implemented to minimize the potential for impacting an archaeological site:

- Personnel shall not deviate from already disturbed areas or established routes (existing roads and camp areas).
- Cultural resources discovered during Program activities (Chance Finds) shall be reported to the onsite Environmental Representative who will develop a course of action in consultation with the Program Archaeologist.
- Upon a discovery, a Cultural Heritage Chance Find Discovery Report (Section 3.1) must be completed and submitted to the Environmental Representative.
- Human remains and funerary objects shall be treated with dignity and respect at all times, regardless of ethnic origins, cultural backgrounds or religious affiliations.
- Artifacts shall be left where they are found. If artifacts are disturbed or removed, their location shall be reported to the Environmental Representative.

- Archaeological site locations shall be kept confidential to prevent unauthorized collection or disturbance of artifacts.
- Known sites near Program activities will be marked by stakes, flagging and/or yellow rope at approximately 30 metres away from each site.
- All personnel shall avoid and remain more than 30 m away from all known or suspected archaeological sites, staying well away from any temporary protection measures such as flagging, stakes and/or yellow rope fencing.
- Existing inukshuks shall not be modified or disturbed. New inukshuks or rock piles shall not be constructed since building new rock piles may clutter the archaeological record and/or result in unknowingly using rocks from existing archaeology sites.
- Known archaeological sites shall be avoided by re-routing roads and establishing borrow excavations at locations approved for use by the Program Archaeologist. Sites that can't be avoided will be mitigated by the archaeology team prior to construction activities.
- If suspected archaeological or human remains (structures, artifacts or bones) are unearthed during work operations, stop work immediately and notify the Environmental Representative. The Environmental Representative will in turn contact the Program Archaeologist and the appropriate lands inspector and the Government of Nunavut, as required by law. The Program Archaeologist shall complete an archaeological review of all proposed Program Areas as they are finalized to identify areas with possible conflicts and areas where Program activities may proceed.

2.1.3 FORMS

- Cultural Heritage Chance Find Discovery Form (Section 3.1)

2.2 AVOIDING DISTURBANCE TO LOCAL LAND USERS

2.2.1 ENVIRONMENTAL CONCERN

Land and resource use in the Program Areas includes hunting, fishing and trapping. While Eqe Bay is not currently a high use area, it should be expected that other land users could enter the area at any time. Baffinland is committed to minimize disturbance to land users to the extent practical.

2.2.2 ENVIRONMENTAL PROTECTION PROCEDURE

Measures will be implemented to minimize disturbance to existing land use patterns for the duration of the Exploration Program. These measures include:

- Aircraft will fly in accordance with guidelines outlined in the Aircraft Flights Operational Environment Standard (Section 2.9).
- Road traffic will operate in accordance with guidelines outlined in the Road Construction and Borrow Development OES (Section 2.18).
- Pilots and others will record the presence of other land users in the Human Use Log (Section 3.2) posted at camp, and will notify the Environmental Representative of any sightings.
- Land users are encouraged to record their presence using the Human Use Log (Section 3.2) posted at camp.
- Any disruptions to land use will be documented so that this information can be considered in subsequent phases of exploration activities.

2.2.3 FORMS

- Human Use Log (Section 3.2)

2.2.4 RELATED DOCUMENTS

- Aircraft Flights (Section 2.9)

2.3 LAND DISTURBANCE

Development of the Eqe Bay Exploration Program will require ground disturbances, including camp and road construction, quarrying and mobile vehicle operation.

2.3.1 ENVIRONMENTAL CONCERN

The Arctic is a fragile environment where the recovery of vegetation within this region is slow. Ground disturbance shall be minimized to protect archaeological resources, wildlife habitats, sensitive landforms, such as ice-rich permafrost features, and prevent erosion and the movement of sediment into watercourses and water bodies. Conditions provided in received and pending approvals address ground disturbances and outline the necessary protection measures that are required to minimize impact to the environment.

2.3.2 ENVIRONMENTAL PROTECTION PROCEDURE

The following measures shall be implemented to minimize potential ground disturbances:

- Personnel and equipment shall remain on only existing roads and trails.
- Modifications to any design/engineering drawings must be approved by the Environmental Representative before any work on the modification may be started.
- Rutting (furrow creation) shall be minimized on ground surfaces when possible.
- All camps and equipment storage areas shall be located on gravel, sand and/or other durable land.
- No materials shall be stored on the surface ice of streams.
- No material shall be removed from below the ordinary High Water Mark of any stream or water body.
- Greywater sumps must be located at distance of at least 31 metres above the ordinary High Water Mark of any water body.
- Equipment and supplies brought to Eqe Bay shall be clean and free of soils that could contain plant seeds not naturally occurring in the area or other invasive species. Vehicle tires and treads in particular must be inspected prior to initial use.
- Prior to construction activities, a site drainage drawing must be submitted to the Environmental Representative for approval.
- The limits for all clearing, grubbing and topsoil overburden removal shall be staked in the field prior to the commencement of any work.
- Areas to be cleared shall have sediment and erosion control measures implemented prior to the initiation of any clearing activities. The sediment and erosion control measures shall be adapted to suit the field conditions associated with the specific construction activities as construction proceeds.
- No debris or any other construction material shall be allowed to enter any water body.
- The Baffinland Incident Investigation and Reporting Procedure (BIM-5100-SOP-0021) will be completed for all non-approved land disturbances.

2.3.3 FORMS

- None

2.3.4 RELATED DOCUMENTS

- Cultural Heritage and Archaeological Resources (Section 2.1)
- Sediment and Erosion Control (Section 2.10)
- Road Construction and Borrow Development (Section 2.18)
- Incident Investigation and Reporting Procedure (Appendix D; BIM-5100-SOP-0021)

2.4 WATER USE

2.4.1 ENVIRONMENTAL CONCERN

The use of water by Baffinland for the Exploration Program will be governed by a Type 'B' Water Licence issued by the Nunavut Water Board (NWB). In addition to regulating water usage, the Type 'B' Water Licence regulates many aspects of the Program's waste management practices, construction and operation activities, construction and operation activities, aquatic effects monitoring, emergency response planning and the abandonment, reclamation and closure of the areas associated with the Exploration Program.

This Operational Environment Standard provides guidance for water use activities associated with the Exploration Program.

2.4.2 ENVIRONMENTAL PROTECTION MEASURES

CAMP WATER SUPPLY

- Only approved water sources shall be used for Program activities.
- The Eqe Bay Exploration Camp will obtain water from unnamed lake EB-2.
- Water supply facilities will be maintained to the satisfaction of the Water Licence Inspector (Crown-Indigenous Relations and Northern Affairs Canada; CIRNAC).
- Total volumes of water withdrawn from any water body by Baffinland will be recorded and provided to the Environmental Representatives a daily withdrawal rate in cubic metres per day using the Water Collection Log (Section 3.3).
- Daily water usages volumes for the Exploration Program shall not exceed volumes outlined in Baffinland's Type 'B' Water Licence, as shown below in TABLE 2.4-1.

TABLE 2.4-1: WATER USE FOR DOMESTIC AND INDUSTRIAL PURPOSES

Program Activity	Maximum Daily Water Usage (m^3 per day)
Domestic (Camp)	29
Drilling	270

- Streams and lakes cannot be disturbed or used as a water source unless authorized and approved by the Nunavut Water Board.
- If water is required from a source that may be drawn down (small lake or stream), Baffinland shall submit a request for approval to the Board 30 days prior to withdrawing the water. Work shall be performed in such a way as to ensure that materials such as sediment, fuel or any other hazardous material do not enter watercourses and waterbodies through the implementation of sediment

control measures and proper hazardous materials management practices. In the event of a release to the environment, the Spill Contingency Plan shall be implemented.

- All water intake hoses shall be equipped with a screen of an appropriate mesh size (as approved by the DFO) to ensure that fish are not entrained. Additionally, operators will ensure the water intake hoses withdraw water at such a rate that fish do not become impinged on the screen.
- Measures shall be provided to prevent and control erosion on banks of any body of water.
- Equipment shall not be washed in any watercourse or waterbody.
- No fuelling and/or servicing of equipment shall occur within 31 metres of any water body.

For water use activities associated with drilling programs, see Exploration Drilling Operations (Section 2.6).

2.4.3 FORMS

- Baffinland – Eqe Bay EPP – Water Collection Log (Section 3.3)

2.4.4 RELATED DOCUMENTS

- Sediment and Erosion Control (Section 2.10)
- NWB - Type 'B' Water Licence

2.5 WATER INTAKE AND WINTER WITHDRAWAL MANAGEMENT

2.5.1 ENVIRONMENTAL CONCERN

The primary environmental concern regarding water withdrawal is the potential for harmful impacts to fish populations through entrainment (fish being drawn into the intake) or impingement (fish being trapped against the intake screen). Improper placement of intake structures can disrupt sensitive habitats such as spawning, rearing, or migration corridors. During winter months, excessive water withdrawal from ice covered waterbodies can deplete oxygenated surface water or reduce the total water volume below levels necessary for fish survival. Additionally, improper intake height can lead to the entrainment of benthic organisms or the suspension of bottom sediments, negatively affecting water quality.

2.5.2 ENVIRONMENTAL PROTECTION MEASURES

The following measures will be implemented to ensure water intake activities comply with DFO standards and protect aquatic life:

Placement and Installation

- Intake pipes must be placed away from natural or man-made structures that may attract fish and must avoid known migration, spawning, or rearing habitats.
- Lake bathymetry data shall be used to identify areas with sufficient depth to ensure the intake screen remains fully submerged throughout the operation.

- Intake screens must be suspended off the lake bottom to prevent the entrainment of benthic organisms and the intake of sediment.
- All water intake hoses must be equipped with DFO approved screens with an appropriate mesh size to prevent entrainment.
- Operators must maintain withdrawal rates low enough to prevent fish from becoming impinged on the screen face.

Winter Withdrawal Protocols

- Before initiating winter withdrawals, personnel must measure ice thickness and total water depth at the intake location to calculate available under ice water volume.
- Total withdrawals must not exceed 10% of the available under-ice water volume to protect overwintering fish.
- Intake screens must be positioned at a depth that avoids removing the highly oxygenated water layer located directly beneath the ice.

Inspection and Maintenance

- Personnel must conduct daily visual inspections of active water intakes to ensure screens are submerged.
- Screens must be kept free of debris, biofouling, or ice accumulation. If any damage or gaps exceeding 2.54 mm are identified, pumping must stop immediately for repairs.
- All water volumes withdrawn must be recorded daily, and inspection results must be documented in the appropriate log.

2.5.3 FORMS

- Water Collection Log (Section 3.3)
- Daily Drilling Inspection Report (Section 3.4)
- Environmental Inspection Forms (Section 3.13)

2.5.4 RELATED DOCUMENTS

- Type ‘B’ Water Licence
- Eqe Bay Spill Contingency Plan DFO (2020) Interim Code of Practice: End-of-Pipe Fish Protection Screens for Small Water Intakes in Freshwater
- DFO (2010) Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut

2.6 EXPLORATION DRILLING OPERATIONS

Exploration drilling will be required to confirm, characterize and quantify new and already known deposits during the Eqe Bay Exploration Program.

2.6.1 ENVIRONMENTAL CONCERN

Environmental concerns with drilling include surface disturbances, drilling fluid and cutting disposal, impacts on dust, noise and water quality, and habitat encroachment.

All drilling muds and other additives will be approved by the Environmental Representative prior to being transported and used on site for any exploration drilling program. MSDS on drilling muds and other additives will be appended to the Eqe Bay Spill Contingency Management Plan.

Use of water for drilling will be subject to the conditions outlined in the Type 'B' Water Licence.

2.6.2 ENVIRONMENTAL PROTECTION MEASURES

- Acceptable Drill Locations:
  - Drill locations should be greater than 31 m from the ordinary High Water Mark of nearby waterbodies. Greater setbacks are preferred, if possible. Drilling activities and disturbance may be carried out within 31 m of the ordinary High Water Mark of nearby waterbodies, only if specific approval has been obtained from the Nunavut Water Board.
  - Drilling crews must confirm all drill locations with the Environmental Representative before drill mobilization.
  - Archaeology clearance for drilling locations shall be confirmed with the Environmental Representative prior to drill mobilization (see Section 2.1).
- Pre-Drilling Preparation:
  - A Pre-Drilling Inspection Report (see Section 3.4) shall be completed by the acting supervisor before drilling activities commence.
  - Conduct a visual wildlife inspection immediately prior to movement of the drill. For details on drilling restrictions associated with wildlife interactions, see Operational Environment Standards: Polar Bear Encounters (Section 2.11), Fox and Wolf Encounters (Section 2.12), Caribou Protection Measures (Section 2.13) and Bird Protection Measures (Section 2.14).
  - Prior to the commencement of drilling for each hole, establish a dedicated sump location where collected drill water and cuttings will be deposited. The location shall be a minimum of 31 m from the ordinary High Water Mark of nearby water bodies and located such that any flow towards a water body is minimized (sump shall be in a bowl, depression or be on a flat surface). Crews will ensure sumps are of sufficient capacity based on a combination of proposed drillhole length, water usage and the potential residence time of the sumps.
  - Implement sediment and erosion control measures prior to drilling operations and maintain these during the operation to minimize transport of sediment into adjacent water bodies. Silt fences shall be placed immediately down-gradient of drill set-ups/sumps and up-gradient of

any water body or stream. The selection of silt fence locations will be based on minimizing the transport distance of drill cuttings/mud and placing silt fences in optimal locations that will be functionally effective.

- Behaviors
  - All waste, such as food and packaging, shall be collected for disposal at the camp on a daily basis. To avoid wildlife encounters and reduce attractants at work sites, food should not be allowed to be removed from the kitchen area, except in prepared bag lunches.
  - Feeding and/or harassing wildlife is strictly prohibited.
- Drill Mobilization, and Equipment Storage:
  - Do not use surface vehicles to move drill rigs or other equipment, without prior authorization by the Environment Department. The use of any vehicles off approved routes is prohibited.
  - Equipment or vehicles shall not be moved unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging.
  - All activities, including the overland transport of workers, shall be conducted in such a way to minimize ground disturbance.
  - Equipment shall not obstruct any stream.
  - Equipment storage holding areas will be located on gravel, sand or other durable land 31 m above the ordinary High Water Mark of any water body in order to minimize impacts on surface drainage and water quality.
  - Material shall not be stored on the surface of frozen streams or lakes, including immediate banks, except materials that are for immediate use.
  - All drill waste, including water, chips, muds and salts ($CaCl_2$) from land based drilling shall be disposed in a properly constructed sump or natural depression located at least 31 m from the ordinary High Water Mark of nearby water bodies.
- Drill Operation:
  - Work shall be performed in such a way as to ensure that materials such as sediment, fuel and/or any other hazardous material does not enter watercourses and water bodies through the implementation of sediment control measures and proper hazardous materials management practices. In the event of a release to the environment, the Spill Contingency Plan shall be implemented.
  - If the bottom of the permafrost is broken through by the drill, the depth of the bottom of the permafrost and location shall be reported immediately to the Environment Department who followed by providing notification to the Nunavut Water Board.
  - Contain and re-circulate drill water to the fullest extent possible in order to reduce water usage. Utilize silt fences and natural depressions to prevent water from running into nearby watercourses and water bodies.
  - Drilling waste must not be allowed to spread to the surrounding land or water bodies; the footprint of any spillage must be minimized to the greatest degree practicable.

- Dispose of drill water into a properly constructed sump, or a naturally occurring contained depression. The drill water and cuttings spillage footprint shall be minimized through the use of berms, sumps, silt fences and/or other means of containment.
- Use portable containment sumps (bins), for drill water and cuttings where containment in the ground is impractical. The bins shall not overflow and shall be dumped by means of helicopter or pump, to the location identified for disposal of dirty drill water and cuttings.
- In case of an artesian flow occurrence, drill holes shall be immediately plugged and permanently sealed to prevent induced contamination of groundwater or salinization of surface waters. Report the artesian flow occurrence as soon as possible to the Environmental Representative who in turn will report the occurrence to the Nunavut Water Board.
- All drill rigs shall be equipped with spill kits in the event of leaks and spills. All operators should be trained in spill response and be familiar the use of spill kits.
- Dust management protocols will be applied during all drilling activities. This includes the use of water or approved dust suppressants on drill pads and access trails as required to minimize the generation of airborne particulates during drilling operations.

- Water Use, Brine and Drill Water Runoff:
  - Drill water shall be obtained from water sources(s) proximal to the drilling targets and shall not exceed a total of 250 m^3 per day for all drilling activities on the Project.
  - No material shall be removed from below the ordinary High Water Mark of any water body unless authorized.
  - Streams cannot be used as a water source unless authorized and approved by the Nunavut Water Board.
  - If water is required from a source that may be drawn down (small lake or stream), Baffinland shall submit a request for approval to the Board at least 15 days prior to withdrawing the water.
  - The drill water supply temperature should be monitored during drilling and kept to a temperature as low as possible (but not so low as to cause an imminent risk of frozen water lines).
  - To maximize drill return water recirculation, casing is to be frozen into the ground to a depth of 3 to 6 m below grade. The specific depth of casing to be frozen into each hole and length of time to allow for freezing will be specified by the acting Supervisor.
  - Drill water shall not be released directly to a nearby water course or to the ground.
  - Salt and water use for each drill is to be controlled by the use of brine mixing stations. The brine station operator will inspect his/her station daily and will be in continuous communication with each exploration drill. Brine conservation measures will be adopted which will include: shutting off the flow of brine to drills when brine is not required (i.e., when drills are temporarily shut down); eliminating all spillage in the vicinity of the brine stations; and minimizing to the greatest extent practicable the brine's salt concentrations.

- Brine (calcium chloride salt mixed with water) used in exploration drilling is to be controlled to the maximum extent practicable. Drilling muds contained in drilling fluids must be settled out in sumps or by silt fences prior to entering any downstream water bodies or streams.
- All water intake hoses shall be equipped with a screen of an appropriate mesh size (as approved by the DFO) to ensure that fish are not entrained. Additionally, operators will ensure the water intake hoses withdraw water at such a rate that fish do not become impinged on the screen.
- Measures shall be provided to prevent and control erosion on banks of any body of water.
- Separate clean water from "dirty" water streams whenever possible, (by means of hose extensions and snow berms or other means that direct and keep discharge away from the immediate area of the drillhole) to prevent migration and expansion of a "dirty" water plume.
- Use portable containment sumps (bins), for drill water and cuttings where containment in the ground is impractical. The bins shall not overflow and shall be dumped by means of helicopter or pump, to the location identified for disposal of dirty drill water and cuttings.
- In case of an artesian flow occurrence, drill holes shall be immediately plugged and permanently sealed to prevent induced contamination of groundwater or salinization of surface waters. Report the artesian flow occurrence within 48 hrs to the Environment Department who in turn will report the occurrence to the Nunavut Water Board.
- For on-ice drilling, returned water released must be nontoxic, and not result in an increase in Total Suspended Solids (TSS) in the immediate receiving water above the CCME guidelines for the protection of Fresh Water Aquatic Life (i.e. .10 mg/L for lakes with background levels under 100 mg/L or 10% for those above 100 mg/L).

- Daily Inspections
  - For each drilling location, a Daily Drilling Inspection Report shall be completed for each day of drilling activities.
  - Daily inspections for fuel/hydraulic leaks, equipment condition, sediment and erosion control, and water intakes shall be conducted prior to commencing work activities at the start of each work shift/day. All leaks shall be immediately repaired.
  - Daily checks of active sumps will be conducted to ensure that any sump water spill-over occurs in a controlled manner. Sumps are to be constructed so that there is an overflow notch cut into the sump embankment to allow the sump water to decant from the sump in a controlled fashion.
  - A Daily Drill Inspection Report (Section 3.4) will be filled out by the acting Supervisor for every day of drill operation.
  - Water use will be tracked using inline water metres on intake lines and recorded as a total daily volume (m^3/day) on the Daily Drilling Inspection Reports (Section 3.5).
  - Silt fences will be checked daily.

- The brine station operator will inspect his/her station daily and will be in continuous communication with each exploration drill.

- Drill Hole Abandonment:
  - Upon completion of a hole in rock, the casing will be removed. If the casing cannot be removed it will be cut off to be flush with surface and backfilled.
  - Plug all drill holes upon completion, and where possible return drills cuttings at the surface to the drill hole at all land-based drilling locations.
  - Return all combustible waste and petroleum products to camp for proper management and disposal.
  - Remove all non-combustible garbage and debris from the land use area to an approved disposal site.
  - Materials such as debris and/or drill cuttings shall not be left on the ice when there is potential for that material to enter a waterbody.
  - Restore, contour and stabilize constructed drill sumps, and other disturbed areas, to the pre-disturbed state upon completion of drilling.
  - Contour and stabilize all other disturbed areas upon completion of work and restore these areas to a pre-disturbed state.
- Drilling Completion Reporting
  - A Post-Drilling Inspection Report (see Section 3.4 – Drill Inspection Forms - Pre-Drilling, Daily and Post Drilling) will be filled out at the completion of each drill hole.
  - Ensure a copy of all Pre-Drilling, Post-Drilling and Daily Drill Inspection Reports for all drill holes are submitted to the Environmental Representative at the completion of each drilling program.

2.6.3 FORMS

- Drill Inspection Forms (Section 3.4)

2.6.4 RELATED DOCUMENTS

- Sediment and Erosion Control (Section 2.10)
- Polar Bear Encounters (Section 2.11)
- Fox and Wolf Encounters (Section 2.12)
- Caribou Protection Measures (Section 2.13)
- Bird Protection Measures (Section 2.14)
- Exploration Drilling Operations (Section 2.6)
- Type ‘B’ Water Licence
- Eqe Bay Spill Contingency Plan

2.7 EQUIPMENT OPERATION AND MOBILIZATION

2.7.1 ENVIRONMENTAL CONCERNS

Mobile equipment emits noise and air emissions, are potential sources of leaks and spills and can cause rutting and land disturbances, as well as disturbance of archaeological sites if necessary clearances have not been obtained.

Noise associated with equipment use and mobilization may negatively affect neighbours. Air emissions may have air quality implications. Accidental leaks or spills of fuel or other hazardous materials may affect soils, water quality, fish and fish habitat, and wildlife.

2.7.2 ENVIRONMENTAL PROTECTION MEASURES

- Damage to archaeology sites will be avoided by following the protection measures outlined in the Operational Environment Standard: Cultural Heritage and Archaeology Resources (Section 2.1).
- Rutting and land disturbance will be minimized by following the protection measures outlined in the Operational Environment Standard: Land Disturbance (Section 2.3).
- All equipment will be equipped with properly functioning mufflers.
- All spills involving equipment shall be reported to the Environmental Representative immediately and documented by submitting the necessary documentation within 12 hours of the spill using the Incident Investigation and Reporting Procedure (BIM-5100-SOP-0021) and NT-NU Spill Report Form (Section 3.5). See Operational Environment Standard: Spill Control Measures and Reporting (Section 2.23) for more details on spill reporting.
- Daily pre-operation inspections will be made on all equipment using the Pre-Op Inspection Form. If problems are identified the equipment will be taken out of service and repaired.
- Repair all leaks immediately. All leaks will be immediately reported to the environmental representative.
- Equipment operators will be trained and licenced to operate their particular equipment; training will be provided for operators before operating any new equipment.
- Equipment and vehicles that will remain parked for extended periods of time or that are prone to leaks will have spill trays placed underneath them to contain any fluid leaks.
- Dust generation resulting from vehicle traffic and the hauling of equipment or materials will be mitigated through the enforcement of site specific speed limits. In periods of dry or high wind conditions, water or other approved dust suppression products will be applied to high traffic areas and mobilization routes to manage air quality and minimize impacts to surrounding vegetation.

2.7.3 FORMS

- NT-NU Spill Report Form (Section 3.5)

2.7.4 RELATED DOCUMENTS

- Cultural Heritage and Archaeological Resources (Section 2.1)
- Land Disturbance (Section 2.3)
- Spill Control Measures and Reporting (Section 2.23)
- Incident Investigation and Reporting Procedure (Appendix D; BIM-5100-SOP-0021)

2.8 FUEL STORAGE AND HANDLING

Fuel will be stored in drums and double walled ISO tanks within constructed containment to support Eqe Bay exploration activities.

2.8.1 ENVIRONMENTAL CONCERNS

Accidental and uncontrolled leaks, releases and spills of fuel may occur due to improper storage, poor handling procedures or equipment malfunction. Fuel releases to the environment have the potential to negatively affect worker health and safety as well as soil quality, aquatic life and wildlife. The potential for fuel spills is addressed through the Spill Contingency Plan developed for the Eqe Bay Exploration Program.

2.8.2 ENVIRONMENTAL PROTECTION MEASURES

The following environmental protection measures shall be used for all storage and handling of fuels during the Eqe Bay Exploration Program:

- Personnel refuelling equipment or vehicles will supervise re-fuelling at all times and will not leave fuel transfer operations unattended.
- Avoiding ship-to-shore transfer of fuel during freeze-up or break-up periods.
- Undertake fuel transfer from vessels to shore under good weather conditions.
- Transfer of fuel to storage tanks or to vehicles shall be conducted by a fully-trained and qualified person.
- Exposed pipelines shall be protected from damage by vehicular collision through the installation of guard rails or barriers.
- Adequate spill response equipment and supplies will be available at fuel storages sites, refuelling stations, maintenance areas and drill sites.
- Hoses and pipes used for fuel transfer shall be equipped with properly functioning and approved check valves that are spaced to prevent backflow of fuel in the case of failures.
- All spills shall be reported to the Environmental Representative immediately and documented by submitting the necessary documentation within 12 hours of the spill using the Baffinland Incident Investigation and Reporting Procedure (BIM-5100-SOP-0021) and NT-NU Spill Report Form (Section 3.6). See Operational Environment Standard: Spill Control Measures and Reporting (Section 2.23) for more details on spill reporting.

- All fuel storage tanks will be inspected on a regular basis and will be in accordance with the requirements outlined in the Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products, issued by the Canadian Council of Ministers of the Environment.
- Fuel storage containers will be stored in secondary containment and shall not be placed within 31 m of ordinary High Water Mark of nearby water bodies.
- All mobile equipment will be serviced and fuelled on land at least 31 m above the ordinary High Water Mark of any water body. No petroleum or chemical product will be allowed to spread to surrounding lands or into water bodies.
- All fuel containers shall be sealed, labelled with the name Baffinland Iron Mines Corporation and stored in a way to prevent wildlife access.
- Waste oils, lubricants, and other used oil shall be placed in drums, labeled as waste materials, and stored in a contained area until removed from site for disposal at an approved, licenced waste management facility (Section 2.17 - Hazardous Material & Hazardous Waste Management).
- All fuel storage areas shall be inspected on a regular basis. See Operational Environment Standard: Compliance Inspections (Section 2.23). Examine all fuel storage containers in your work area for leaks at least once per day.
- Repair all leaks immediately. All leaks will be immediately reported to the environmental representative.
- An operator will be stationed at both ends of hoses during refueling operations, unless both ends of the hose are visible and readily accessible by one operator.
- Adequate lighting will be provided at refueling areas (enabling fuel levels to be adequately judged, and any overflow to be observed).
- Use fuel nozzles equipped with automatic shutoffs and a drip tray sill be used underneath the filling point when fueling mobile equipment and vehicles.

2.8.3 FORMS

- Incident Investigation and Reporting Procedure (Appendix D; BIM-5100-SOP-0021)
- NT-NU Spill Report (Section 3.6)

2.8.4 RELATED DOCUMENTS

- Hazardous Material & Hazardous Waste Management (Section 2.17)
- Spill Control Measures and Reporting (Section 2.23)
- Eqe Bay Spill Contingency Plan
- Type B Water Licence

2.9 AIRCRAFT FLIGHTS

The Eqe Bay Exploration Program will involve air traffic consisting of flights made by helicopters and smaller twin-engine fixed wing aircraft. The high level of aircraft use requires pilots, and personnel directing pilots, to be aware of the potential disturbances to wildlife and the requirements of the various approvals issued to Baffinland. Additionally, Inuit hunters may be moving through the Eqe Bay area at any time of the year, and Baffinland has committed to minimizing disturbance of local users to the extent practical. All personnel are responsible for operating in accordance with the legal requirements and commitments outlined in this Operational Environment Standard. However, safety will be considered the most critical aspect of aircraft operations and safety considerations will supersede other concerns.

2.9.1 CONCERNS REGARDING WILDLIFE

Aircraft can cause disturbance to wildlife by interrupting their activities (i.e. feeding, calving, migration, etc.) and possibly causing the animals to leave an area and habitats. Caribou, important to Inuit culture and diet, can be sensitive to aircraft noise. Disturbance of caribou has the greatest effect prior to, during and following calving (approximately mid-May to mid-July). Migratory birds are also disturbed by low-level overflights.

2.9.2 CONCERNS REGARDING INUIT LAND USE

Aircraft can disturb hunters or other land users (i.e. tourists) during low level flights that disturb the people and/or the wildlife they may be pursuing. Land users travel over land and ice from roughly late November through late June/early July. August is particularly important for boats due to the short duration of open water. Land users may travel by boat and camp in the area, and may travel inland hunting caribou by walking or using all-terrain vehicles.

2.9.3 ENVIRONMENTAL PROTECTION MEASURES

- Minimize the number of flights to the extent possible.
- Subject to safety requirements, aircraft will maintain a cruising altitude of at least:
  - 650 m above ground level minimum, and;
  - 1,100 m vertical and 1,500 m horizontal from observed concentrations of migratory birds. If altitude is not possible, maintain a lateral distance of at least 1,500 m.
- Ensure that certification of noise compliance is current, where compliance is applicable.
- Personnel should report to the Camp Manager any improper flight practices.
- Avoid caribou calving sites between May 15 and July 15, as identified by Program biologists or observed by aircraft pilots.
- Pilots shall report to the Environmental Representative caribou movements and locations during calving and post-calving periods, so that these areas can be avoided.
- Avoid large concentrations of wildlife and take alternate routes.

- Plan routes that are likely to have least occurrences of wildlife.
- Hovering or circling may greatly increase disturbances and must be avoided when practical.
- The Environmental Representative will inform pilots of wildlife sensitive area.
- For details on reporting wildlife sightings, refer to Operational Standard: Wildlife Log Instructions (Section 2.20)

2.9.4 EXCEPTIONS

- Low-level flights will be required during slinging operations in the vicinity of the Eqe Bay and on occasion at other locations, or where short distances are involved.

2.9.5 FORMS

None

2.9.6 RELATED DOCUMENTS

- Polar Bear Encounters (Section 2.11)
- Fox and Wolf Encounters (Section 2.12)
- Caribou Protection Measures (Section 2.13)
- Bird Protection Measures (Section 2.14)

2.10 SEDIMENT AND EROSION CONTROL

Land disturbances during road construction and operation, culvert installation and excavation of borrow locations and quarries have the potential to cause erosion and release sediment-laden runoff into nearby watercourses and/or water bodies. Sediment and erosion control measures may include, but are not limited to, silt fencing, erosion control mats (fascines), erosion blankets/geotextile lining, sand bags, terraces, benching, use of flocculants, check dams and riprap structures. Personnel are responsible for the implementation of erosion and sedimentation control measures prior to the initiation of construction, borrowing or quarrying activities in each specific work area.

2.10.1 ENVIRONMENTAL CONCERN

The potential exists for the movement of soil (wind erosion), the unplanned release of sediment to watercourses/water bodies and the slumping or change in landscape form associated with changes in the permafrost profile. Stormwater, which may include any surface runoff and flows resulting from precipitation, drainage or other sources, may contain suspended sediments, metals, petroleum hydrocarbons, and other substances. These materials may affect water clarity and, subsequently, aquatic life by reducing feeding success, fish egg and larval survival and fish habitat. Rapid runoff can degrade the quality of the receiving water by eroding stream beds and banks. Rapid runoff can degrade the quality of the receiving water by eroding stream beds and banks. Due to the region's arid climate, high winds can erode soil with minimal vegetation cover. Sedimentation of local watercourses is a concern during land

disturbance during construction, but can occur at any time, including during reclamation and closure activities.

2.10.2 ENVIRONMENTAL PROTECTION MEASURES

As required, personnel may be instructed to implement additional sediment and erosion control measures by the Environmental Representative to ensure protection of the receiving environment.

The following environmental protection procedures/measures will be implemented to prevent or mitigate erosion and sediment-laden runoff impacts:

- The size of the disturbed area and duration of soil exposure shall be limited as specified in the construction schedule and "Issued for Construction" drawings.
- Road embankments, watercourse crossing installations and borrow/quarry areas shall be constructed in accordance with approved plans and procedures.
- Temporary and permanent drainage installations shall be designed, constructed, and maintained to an appropriate standard.
- The topsoil/overburden stockpiles shall be contoured, where possible, with established drainage routes around the stockpiles, as specified by the Environmental Representative.
- Stream bank sections and slopes that contain loose or erodible materials shall be stabilized through the application of filter fabrics or geotextile in conjunction with riprap. Sediment control measures will be installed prior to watercourse crossing installations (Section 2.18 - Tote Road Watercourse Crossing Installation).
- Appropriate sediment and erosion control measures will include a combination of silt fences, silt (turbidity) curtains, sediment traps, check dams and gravel berms.
- Roads shall be constructed with gradients or surface treatment and drainage systems to limit the potential for run-off and erosion.
- Quarry and borrow activities will be concentrated to the maximum extent possible to limit the area of disturbance.
- At borrow areas, drainage patterns will be re-established to near natural conditions.
- Turbidity monitoring will be conducted at watercourses by the Environmental Representative during and after construction (or reclamation) activities when necessary.
- Project Personnel shall maintain, as required, all sediment and erosion control measures following rain or storm events to minimize further environmental damage. All repairs shall be undertaken under the direction and to the satisfaction of the Environmental Representative or Camp Manager.

2.10.3 FORMS

None

2.10.4 RELATED DOCUMENTS

- Road Construction (Section 2.18)

2.11 POLAR BEAR ENCOUNTERS

2.11.1 ENVIRONMENTAL CONCERN

Polar Bear encounters are possible in the Eqe Bay area and can pose an immediate threat to life, health, safety, and property.

2.11.2 ENVIRONMENTAL PROTECTION MEASURES

The following measures will be implemented to minimize the potential for bear-human encounters:

- Site and working areas will be kept clean of food scraps and garbage at all times. Effective waste management is paramount to reducing the likelihood of encounters.
- Do not attempt to chase, catch or follow polar bears under any circumstance.
- Polar bears that attempt to approach work sites or personnel must be actively deterred by shouting or use of noise makers such as bear bangers whenever possible.
- All polar bear sightings must be reported immediately to the Environmental Representative and Camp Manager, regardless of the time of day.
- Bear monitors will be posted at the Eqe Bay camp and will accompany remote field crews that do not have full-time air support.
- The Environmental Representative will authorize and coordinate the use of deterrent measures. A defence kill is to be used as an absolute last resort only when there is an imminent risk to human safety.
- Under the direction from the Environmental Representative, helicopters may be used to haze/deter polar bears away camps and work sites.
- Any defensive kills must be reported immediately to the Environmental Representative, who will notify the Qikiqtani Inuit Association (QIA), Hunters and Trappers Organization (HTO), wildlife officer and other stakeholders as required. The meat from the carcass must not be allowed to spoil and the animal will need to be dressed immediately and the meat and pelt appropriately stored until transportation is available to the designated affected community.
- Polar bear safety will be part of the Eqe Bay site orientation program.
- A copy of the Polar Bear Safety Plan developed for the Mary River Project will be kept at the Eqe Bay camp for reference.

- Routine completion of a Polar Bear Readiness Audit to ensure that all polar bear incidents are documented and promptly reported to regulators and that all preparation and requirements regarding polar bear mortalities are in place.

2.11.3 FORMS

- Polar Bear Readiness Audit Form (Section 3.6)

2.11.4 RELATED DOCUMENTS

- Polar Bear Readiness Procedure and Audit (Appendix A)

2.12 FOX AND WOLF ENCOUNTERS

2.12.1 ENVIRONMENTAL CONCERN

Foxes and wolves can become habituated to sites where they can access food and food waste. This situation can arise from intentional feeding by personnel or improper waste management practices. Once such food conditioning has occurred, these animals lose their fear of humans and may approach personnel in an aggressive fashion. Rabies is usually endemic in fox populations. Habituated foxes that act aggressively will be addressed immediately.

2.12.2 ENVIRONMENTAL PROTECTION MEASURES

The following measures will be implemented to minimize potential impacts to foxes and wolves and the associated risk to the health and safety of personnel:

- Site and working areas will be kept clean of food scraps and garbage. All waste will be disposed of at the Eqe Bay exploration camp incinerator, or securely stored for off-site disposal.
- Wildlife will not be intentionally fed under any circumstances. The consequences of such actions will be major disciplinary action.
- Fox and wolf sightings should be recorded in the Wildlife Log (see Section 3.2) at camp. Wolf sightings should be reported to the Environmental Representative immediately.
- Wildlife attempting to approach personnel will be deterred by shouting, chasing and using noise makers, such as bear bangers. Should those deterrents not work, the site Environmental Representative and Camp Manager will be notified immediately for their assessment. Typically, wolves can be readily deterred by the above methods. Based on site experience, foxes are less responsive to deterrence. Due to the high incidence of rabies in foxes on Baffin Island, foxes that exhibit aggressive behaviour to humans, regardless of deterrence measures, are presumed to be rabid. The Environmental Representative and Camp Manager will assess the situation and make the recommendation for or against dispatching a likely rabid fox by lethal shot.
- In the rare situation where a lethal shot is necessary, approval to proceed will be provided by the Environmental Representative. Only personnel authorized and trained in the use of firearms will be used. This task will be executed so that personnel, equipment and infrastructure are not endangered. If rabies is suspected, a body shot will be taken, and the carcass will be handled to avoid direct physical contact. The carcass will be incinerated immediately, and the appropriate wildlife officer will be notified.
- Fox and wolf interactions will be documented and included in the Wildlife Logs (see Section 3.7)
- No drilling activity should take place within 2 km of an active wolf den between mid-May and mid-August if direct line of sight and disturbance is noted. Contact on-site Environment staff to determine if a den is in the vicinity of operations.

2.12.3 FORMS

- Wildlife Log (Section 3.7)

2.12.4 RELATED DOCUMENTS

- Wildlife Log Instructions (Section 2.20)

2.13 CARIBOU PROTECTION MEASURES

2.13.1 ENVIRONMENTAL CONCERN

Caribou are currently present in relatively low numbers in the Eqe Bay region. Caribou harvesting is important to local communities, so there is added importance to ensuring that the Exploration Program operates with minimal potential effects on caribou. The potential effects on caribou include those from disturbance, primarily due to noise and other sensory disturbances from exploration activities. The primary mitigation for caribou is avoidance followed by monitoring. Caribou are most sensitive during the pre to post calving time period of May 15 to July 15.

2.13.2 ENVIRONMENTAL PROTECTION MEASURES

The following measures will be implemented to minimize disturbance to caribou:

- Personnel that are not Nunavut Land Claim beneficiaries will not be permitted to hunt or fish on any land accessed from the Eqe Bay camp. All personnel shall return home between shift rotations and shall not be permitted to stay in the area to hunt or fish as part of their shift rotations.
- Mobile equipment and vehicles shall yield the right-of-way to wildlife.
- Traffic is to slow down and keep distance from the animals as much as possible. If necessary, traffic will stop to enable crossings of groups or to allow groups of caribou paralleling the road to move into adjacent habitat. Caribou occurrence in the vicinity of the road and their responses to traffic will be monitored by on the ground behavioral observations, to determine if it is apparent that caribou are being disturbed or displaced by traffic or exploration activities. Specific guidance is provided in the Caribou Encounter Decision Tree provided in Appendix B.
- All caribou sightings will be reported to the Environmental Representative who will keep geo-referenced records of caribou sightings. This will enable biologists to monitor caribou activity in relation to the Exploration Program's activities.
- Active caribou calving sites (as identified by biologists or observed by aircraft pilots) will be avoided between May 15 and July 15, and where possible, there will be no increase in mine construction or operational activity within one (1) km of the calving sites during this time period.
- Should pregnant caribou cows, cow with young calves be observed within one (1) kilometer of Eqe Bay exploration activities, operations in the vicinity of sighted caribou activities will be assessed by the Environmental Representative and modified as required. If the caribou are determined to be disturbed by operational activities, the activity will be modified or cease until

the caribou are no longer in the immediate area. The QIA and HTOs of nearby communities will be consulted if it is determined that modifications to operational activities may be required.

- If any caribou (including non-pregnant individuals and those without young) are observed within the vicinity of exploration activities, such as drilling, and exhibit signs of disturbance or displacement (e.g., alert posture, fleeing, or interrupted feeding), operations will be modified or suspended until the animals have moved out of the immediate area of influence.
- Monitoring and mitigation measures will be implemented at points where the roads, trails and flight paths pass through caribou calving areas, particularly during caribou calving times.
- Protocols will be implemented for documentation and reporting of all caribou interactions as well as mechanisms for adaptive management responses designed to prevent further interactions.

2.13.3 FORMS

- Wildlife Log (Section 3.7)

2.13.4 RELATED DOCUMENTS

- Baffinland - Caribou Encounter Decision Tree (Appendix B)

2.14 BIRD PROTECTION MEASURES

2.14.1 ENVIRONMENTAL CONCERN

Birds are generally widespread and often encountered in the Baffin region. The majority of these birds are migratory. The main concern with birds is that the potential exists that some aspects of the exploration activities may disrupt nesting and migratory patterns. Birds are an important part of the food chain in the Arctic ecosystem and changes in their numbers and distribution will directly affect predators like raptors and foxes that rely on them as a readily available source of food. It is against the law to disturb or destroy an active migratory bird's nest (*Migratory Bird Convention Act* and regulations).

2.14.2 ENVIRONMENTAL PROTECTION MEASURES

The following measures will be implemented to minimize disturbance to birds and bird nests:

- Personnel are not permitted to hunt birds.
- During the Active migratory bird nesting season, on-ground inspections and pre-disturbance surveys of each work area for nests will be conducted prior to the commencement of project activity in undisturbed areas. The migratory bird-nesting season in the Project area occurs from late-May to mid-August. The nesting calendar published by ECCC will be referred to when determining nesting season dates for a given calendar year (Environment and Climate Change Canada, 2025). Baffin Island falls entirely within the "N10" zone.
- On-ground inspections will be conducted for bird nests and eggs for each area prior to equipment placement or Program activities. Active nest sites will be identified through observation of high densities of birds, nests, or birds exhibiting territorial behaviour indicating a nearby nest. Active nests must not be destroyed or disturbed.
- The inspections will be conducted based on method described in Appendix C of the EPP - Mary River Active Migratory Bird Survey Procedure.
- Personnel will avoid disrupting identified nest sites.
- All equipment placement, drills, pumps and waterlines must be placed outside of the designated protective buffer zone set back distance.
- Shoreline and waterline routes will be inspected for breeding birds, nests, and post-hatch young, before waterlines for drills are placed. Personnel should remain more than 100 m from these nest sites at all times and time spent on the hose alignment should be minimized to reduce disturbances in areas between water source and Program activities.
- Active raptor (falcons, hawks and owls) nests will be avoided by relocation of Program activities, if possible. Where possible or practical, Program activities will be relocated at least 500 m from known active raptor nests during the breeding season, rescheduled to outside the breeding season (mid-April to mid-August) or delayed until the young have fledged and left the nest.

- Bird sightings, particularly raptors or large concentrations of birds, should be recorded in the Wildlife Log (Section 3.7) at camp.
- If nests and eggs are encountered during exploration activities, the primary mitigation will be avoidance. Personnel shall establish clear zones of avoidance on the basis of the species-specific nest setback distances outlined in Appendix C. To prevent increasing the risk of predation, individual nests shall not be marked using flagging tape or similar materials. Instead, markers may be placed at the outer limits of the established buffer zone.
- The seaward site of seabird colonies and areas used by flocks of migrating waterfowl shall be avoided by a minimum distance of three (3) kilometres.
- Guy-wire deterrents will be used on communication towers established for the Project. Consideration will be given to reducing lighting when possible in areas where it may serve as an attractant to birds or other wildlife.
- Drills, pumps and waterlines should be placed at least 500 m from active bird nests and every precaution should be taken to avoid disrupting the nests. All Project Personnel must avoid active nest sites. Time spent on the hose alignment should be minimized to reduce disturbances in areas between the water source and Project activities. Active nests must not be destroyed.
- No drilling activity should take place within 500 m of an active raptor nest site during the breeding season (approximately mid-May to August); unless an individual nest protection plan has been prepared by an avian biologist in conjunction with the Baffinland Environment Department. Report all active nest sites to the Environmental Department.
- Whenever practical and not causing a human safety issue, a stop work policy shall be implemented when wildlife in the area may be endangered (at risk of immediate injury or death) by work being conducted.
- Environment and Climate Change Canada's Canadian Wildlife Service (ECCC-CWS) may be contacted at cwsnorth-scfnord@ec.gc.ca regarding migratory-bird related concerns.

2.14.3 FORMS

- Wildlife Log (Section 3.7)
- Active Migratory Bird Nest Field Sheet (Section 3.8)

2.14.4 RELATED DOCUMENTS

- Appendix C - Mary River AMBNS Procedure (BIM-5200-SOP-0012)

2.15 SOLID WASTE MANAGEMENT

2.15.1 ENVIRONMENTAL CONCERN

Solid wastes are non-liquid, non-soluble materials including domestic garbage, food wastes, construction debris, commercial refuse, non-combustible and non-hazardous materials. Solid waste materials generated by Eqe Bay activities will be re-used and recycled wherever possible and feasible. Where it is not possible or feasible, the three (3) main methods of solid waste management will be incineration, open burning and off-site disposal. Solid waste, if not properly disposed of, may cause health and safety concerns to personnel, attract wildlife, and could impair the aesthetics of the Eqe Bay area.

2.15.2 INCINERATION

Domestic wastes, that cannot feasibly be re-used or recycled, will be incinerated at the Eqe Bay exploration camp. Combustible non-hazardous wastes (i.e., food scraps, oily rags, paper and small plastics, etc.) will be incinerated to minimize the negative impacts of attraction vectors to wildlife. Efforts will be made to incinerate food waste on a daily basis or semi-daily basis as much as possible. Residual ash generated by incinerator operations will be stored in drums for off-site disposal. Refer to the Eqe Bay Waste Management Plan for additional details.

2.15.3 OPEN BURNING

Untreated, clean wood waste products including lumber, timber, and pallets as well as paper and cardboard packaging that cannot feasibly be re-used or recycled will be burned onsite at approved open-burn location at Eqe Bay. Any treated and/or painted waste wood products, including plywood or particle board, will not be permitted for opening burning. Open burning shall strictly be operated in an open top sea container at an approved open-burning location. Refer to the Eqe Bay Waste Management Plan for additional details.

2.15.4 ENVIRONMENTAL PROTECTION MEASURES

- Waste streams generated by the Eqe Bay Exploration Program will be sorted according to the Eqe Bay Waste Sorting Guidelines (Appendix A of the Eqe Bay Waste Management Plan) and disposed by means of incineration, open-burning, or shipment offsite for proper disposal at licenced waste facilities.
- Food wastes, packaging and paper will be incinerated on site. Kitchen grease will be shipped south for disposal.
- Untreated, clean wood waste products including lumber, timber, and pallets as well as paper and cardboard packaging that cannot feasibly be re-used or recycled will be burned onsite at an approved open-burn location.
- All wildlife attracting waste (i.e., food scraps) will be stored in sealed animal proof containers.
- All waste backhauled offsite to licenced waste facilities will be manifested using the Off-Site Waste Disposal Log (Section 3.9) or a similar tracking mechanism.

- Sewage sludge generated at the sewage treatment plants will be dewatered and incinerated onsite.
- Waste accumulated and stored on site prior to disposal will be contained in shipping containers or lined secondary containment structures to mitigate health, safety and environmental hazards.
- Time lapse between waste collection and disposal shall be minimized to the extent practical.
- Additional training will be provided to the kitchen and accommodations staff on sorting camp domestic wastes.
- All combustible waste and debris will be stored and covered until disposal.
- All personnel are responsible for daily housekeeping and clean-up of their work areas.
- All personnel will be trained in the Eqe Bay Waste Sorting Guidelines (Appendix A of the Eqe Bay Waste Management Plan) and will be responsible for sorting their own waste.

2.15.5 FORMS

- Offsite Waste Disposal Log (Section 3.9)

2.15.6 RELATED DOCUMENTS

- Hazardous Material and Hazardous Waste Management (Section 2.17)
- Eqe Bay Waste Management Plan

2.16 WASTEWATER TREATMENT

2.16.1 ENVIRONMENTAL CONCERN

Wastewater, such as sewage, grey water, and oily (contaminated) water will be generated by the Eqe Bay Exploration Program. Sewage generated by the Eqe Bay exploration camp will be directed to a dedicated sewage treatment plant for treatment and effluent discharge. Greywater will be directed to the sewage treatment plant for treatment or directly discharged to an approved sump location. Oily water will be collected, stored in drums or totes, and shipped offsite for treatment and/or disposal. Refer to the Eqe Bay Waste Management Plan for additional details.

Uncontrolled or untreated releases of wastewater has the potential to impact downstream receiving environments.

2.16.2 ENVIRONMENTAL PROTECTION MEASURES

The following measures will be implemented to minimize the potential for accidental releases of wastewater on site:

- The quantity of treated effluent discharged from the sewage treatment plant will be monitored and recorded using inline flow monitors. Water quality of treated effluent will be routinely monitored to ensure compliance with the water quality discharge criteria stipulated in the Type 'B' Water Licence.
- Issues and/or concerns identified at the sewage treatment plant (i.e., improper operation, pipeline rupture, system breakdown, etc.), will be reported immediately to the Environmental Representative and Camp Manager and will be addressed promptly.
- In the event of an accidental release of wastewater into the environment (i.e., pipeline rupture, etc.), immediate action will be required to ensure that the release is contained and mitigated. Refer to the Eqe Bay Spill Contingency Plan for additional guidance. All spills will be reported to the Environmental Representative immediately and documented by submitting the necessary documentation within 12 hours of the spill. For more information on spill reporting, see Operational Environment Standard: Spill Control Measures and Reporting (Section 2.23).
- Water quality and operational data will be reported to applicable regulators and stakeholders as required by the Type 'B' Water Licence and other relevant approvals.
- The sludge generated by the sewage treatment plant will be dewatered using a filter press and incinerated on site. Sludge will be stored in an animal proof secure area until disposal.
- Water conservation initiatives will be implemented where feasible to reduce water use and volumes of wastewater generated by exploration activities.

- Treated wastewater will only be released into the receiving environment at approved locations. All wastewater discharges will be monitored to ensure all discharged effluent meets the regulatory requirements outlined in the Type 'B' Water Licence.

2.16.3 FORMS

- Wastewater Log (Section 3.10)

2.16.4 RELATED DOCUMENTS

- Spill Control Measures and Reporting (Section 2.23)
- Type 'B' Water Licence
- Eqe Bay Spill Contingency Plan

2.17 HAZARDOUS MATERIAL AND HAZARDOUS WASTE MANAGEMENT

2.17.1 ENVIRONMENTAL CONCERN

Hazardous materials (other than fuels) will be used during the Eqe Bay Exploration Program, including oils, greases, antifreeze, ammonium nitrate, batteries, cleaners and other chemicals. Where the generation of the hazardous waste cannot be prevented, its management onsite will aim to prevent waste from resulting in potential negative impacts to the health and safety of personnel and the environment. Refer to the Eqe Bay Waste Management Plan for additional details.

2.17.2 ENVIRONMENTAL PROTECTION MEASURES

Effective implementation of the following controls is required to ensure that hazardous materials and hazardous wastes are properly managed in order to minimize the potential for accidental releases to the environment:

- Hazardous materials and hazardous waste will be stored within designated lined and contained areas or within shipping containers at the laydown area.
- Storage containers will be leak-proof and have content names and labels clearly visible.
- All drums shall be marked with the name Baffinland Iron Mines Corporation.
- Hazardous materials arriving by sealift will be temporarily stored in their original sea containers at laydown locations at the Eqe Bay Exploration Area camp until transported to their final destination.
- Lubricating oils and antifreeze will be dispensed from drums or cubes using either fitted taps or pumps and will employ drip trays.
- Regular visual inspection for leaks, drips or indications of loss will be conducted at all storage areas for evidence of accidental releases and verification that hazardous wastes and materials are properly labelled and stored.
- Waste storage sites will be monitored and sampled in accordance with Baffinland's Water Licences.
- Hazardous wastes and materials will be stored in a manner that prevents access by wildlife.
- Cleaning materials (i.e., rags, gloves, etc.) will be properly wrapped in sealed plastic bags and will be directed to disposal by incineration.
- All hazardous waste shall be clearly labelled and will not be combined with other solid non-hazardous waste.
- Smoking within 10 m of any hazardous waste storage location will be prohibited.

- Hazardous wastes and materials will be stored at least 31 m away from the ordinary High Water Mark of nearby water bodies.
- Baffinland shall itemize and maintain a tracking manifest for all hazardous materials to be used on-site. The Camp Manager shall conduct periodic inspections and audits to confirm the tracking manifest is up to date and accurate. Personnel will be responsible for maintaining the current Material Safety Data Sheets (MSDS) on-site for all hazardous materials pertaining to their activities.
- All hazardous material spills shall be reported to the Environment Department immediately and documented by submitting the necessary documentation within 12 hours of the spill using the Baffinland Incident Investigation and Reporting Procedure (BIM-5100-SOP-0021) and the NT-NU Spill Report Form (Section 3.5). The Eqe Bay Spill Contingency Plan will be implemented, as required. Refer to Section 2.23 Spill Control Measures and Reporting for additional details.
- All biological hazardous wastes generated at the medical clinic and first aid stations will be packaged, labeled and transported offsite for disposal at an appropriate licenced facility.
- Transportation and packaging of hazardous waste offsite shall be coordinated and supervised by fully-trained and qualified personnel.
- Repair all leaks immediately. All leaks will be immediately reported to the environmental representative.

2.17.3 FORMS

- NT-NU Spill Report Form (Section 3.5)
- Baffinland Incident Investigation and Reporting Procedure (Appendix D; BIM-5100-SOP-0021)

2.17.4 RELATED DOCUMENTS

- Spill Control Measures and Reporting (Section 2.23)
- Eqe Bay Spill Contingency Plan
- Eqe Bay Waste Management Plan

2.18 ROAD CONSTRUCTION

2.18.1 ENVIRONMENTAL CONCERN

The movement of material during road construction can expose soils and make them vulnerable to erosion. These activities can result in changes to the thermal regime of the ground (active layer and permafrost), as a new active layer is created. Modification to the thermal regime may induce melting of any ground ice present, resulting in thaw settlement and depressions caused by these settlements leading to erosion and possibly ponding of water.

2.18.2 ENVIRONMENTAL PROTECTION MEASURES

The ground surface will re-establish thermal equilibrium and will be suitable for re-colonization by natural vegetation over time. The following measures will be implemented to enhance this re-establishment of thermal equilibrium and minimize the effects of erosion, sedimentation and water ponding:

- The appropriate sedimentation and erosion mitigation measures will be installed prior to construction to mitigate impacts to surface water flows during construction.
- Roads will constructed of competent material.
- At low lying areas where roadbed fill is in the order of 1 m and the permafrost can be expected to rise to a meaningful degree, swales or culverts will be installed as part of road maintenance to prevent the ponding of water.
- Culverts will be designed and installed using industry best practices in order to properly manage surface water flows (refer to Section 2.19)
- At closure, swales will be left in place, or alternatively, the road bed will be breached to allow drainage.
- Borrow activities will occur only at approved locations and will be concentrated to limit the area of disturbance. Borrow pits will be located 31 metres away from the High Water Mark of the nearest water body or stream.
- Thawed layer removal will be done sequentially.
- Areas of unexpected settlement will be filled to re-establish the natural contours and eliminate ponding of water.
- Regular inspection of borrow locations will be completed and unstable slopes re-graded to eliminate depressions and re-establish natural drainage patterns.
- Dust control measures will be integrated into both the construction and ongoing maintenance phases of all roads and trails. This includes the regular application of water or calcium chloride on road surfaces to stabilize fine materials and prevent dust plumes caused by road maintenance equipment or general road use.

2.18.3 FORMS

None

2.18.4 RELATED DOCUMENTS

- Sediment and Erosion Control (Section 2.10)
- Watercourse Crossing Installation (Section 2.19)

2.19 WATERCOURSE CROSSINGS INSTALLATION

The Eqe Bay Exploration Program is expected to develop an access road or trail to connect the exploration camp to the exploration area. Two (2) crossing types are proposed:

- Conventional single or multiple culverts crossings designed to pass select design flows within fish-bearing streams, and
- Conventional single or multiple culverts installed to preserve drainage across the access road/trail.

2.19.1 ENVIRONMENTAL CONCERNS

Watercourse crossing installation has the potential to impact aquatic environments through the:

- Alteration of fish habitat or blockage of fish passage.
- Accidental releases of deleterious substances (i.e., fuel spills, sediment).

The construction of watercourse crossings has the potential to negatively affect fish and fish habitat from the construction of the crossing structures or the post-construction influence of the completed structures on fish habitat. Elevated levels of suspended sediment are the primary change in water quality that could result from work on or around water. Construction activities typically result in short-term effects, while long term effects can arise through erosion of ditches and slopes if not mitigated.

There are two groups of water crossings with respect to fish habitat and the environmental protection measures required:

- **Large Culvert Crossings in Fish Habitat** - Crossings in fish habitat, subject to the conditions of a DFO Letter of Advice or an authorization (to be determined by the DFO), will be installed according to an engineering design that specifies the sizing of the crossing (i.e., the number and diameter of culverts required to pass design flows) and the manner of installation (i.e., according to a typical or site-specific drawing).
- **Minor Drainage Crossings** – Sections of the proposed access road/trail alignment cross perpendicular to a slope. Small diameter culverts will need to be installed across the road/trail at these and other locations to manage sheet flows. Culvert sizes will be judged onsite during installation.

There are basic environmental protection measures that apply to all groups of crossings, and additional measures that apply to the fish-bearing crossings.

2.19.2 ENVIRONMENTAL PROTECTION MEASURES

The following measures will be implemented to minimize the potential impacts of water crossings and installations:

- Culverts will be installed in accordance with approved plans.
- Work should be scheduled during low flow conditions whenever possible – avoid conducting work during large precipitation/runoff events.
- Sediment and erosion control measures shall be implemented prior to work and shall be left in place and maintained until all disturbed areas have been stabilized. For more information on sediment and erosion control measures see Operational Environment Standard: Sediment and Erosion Control (Section 2.10).
- Any stockpiled materials shall be stored and stabilized 31 m away from the High Water Mark of nearby water bodies, unless for immediate use.
- All materials and equipment shall be operated and stored in a manner that prevents deleterious substance (e.g. petroleum products, silt, debris, etc.) from entering water bodies. This includes checking that equipment is free of fluid leaks, and that grease and other debris is wiped or washed clean from the equipment, before entering the water.
- Re-fuelling and equipment maintenance is to be conducted 31 metres away from the High Water Mark of nearby water bodies.
- Install crossings at right angles to the watercourse so that the original direction of stream flow is not significantly altered.
- Minimize in-water work (get-in and get-out quickly).
- Water crossings will be backfilled with substrate (fill) material that is clean, competent, and consistent with the existing substrate size and texture found within the watercourse.
- All disturbed areas shall be stabilized immediately upon completion of work and restored to a pre-disturbed state or better.
- To minimize the impacts of hydraulic oil spills to the environment, use biodegradable hydraulic oils (when appropriate) for equipment that is working near or in water.

2.19.3 ADDITIONAL ENVIRONMENTAL PROTECTION MEASURES – FISH-BEARING CROSSINGS

- The Environmental Representative shall be on on-site to assess the crossings prior to the onset of construction to confirm the absence or presence of spawning sites at least 20 metres upstream or downstream of the crossing location, and whether spawning Arctic char are present in the vicinity.
- For all crossings where fish may be present, the Environmental Representative shall be present to monitor construction activities and document turbidity levels upstream and downstream of the

crossing under construction using the Watercourse Crossing Data Monitoring Form (Section 3.11) and the Turbidity Monitoring Data Form (Section 3.12). The Environmental Representative shall be on-site during all in-water construction, compensation and restoration works to ensure the approved design and conditions of approval (i.e. DFO Letter of Advice) are being adhered to.

- If machinery is required to bring material or equipment to the opposite side of the watercourse, then it shall be restricted to a onetime event (over and back) and only if no other existing crossing can be used. If the stream bed and banks are highly erodible (e.g., dominated by organic materials and silts) and erosion and degradation is likely to occur as a result of equipment crossing, then a temporary crossing structure or other practices shall be used to protect these areas.
- Machinery fording shall occur at least 20 metres upstream or downstream of location where fish and/or spawning sites are noted.

2.19.4 FORMS

- Watercourse Crossing Data Monitoring Form (Section 3.11)
- Turbidity Monitoring Data Form (Section 3.12)

2.19.5 RELATED DOCUMENTS

- DFO Letter of Advice or Authorization (to be confirmed)
- Sediment and Erosion Control (Section 2.10)

2.20 WILDLIFE LOG INSTRUCTIONS

A log of wildlife sightings in the Eqe Bay area will be posted at the exploration camp maintained and managed by the Environmental Representative.

Wildlife species potentially in the Eqe Bay area include caribou, wolf, fox, arctic hare, lemmings, polar bear, walrus, seals, whales, raptors, loons, ducks, geese, songbirds and shorebirds. Personnel will be required to record wildlife sightings on the posted Wildlife Log (Section 3.7) with the exception of caribou sightings, which should be reported to the Environmental Representative directly due to the sensitive nature of these sightings.

All polar bear and wolf sightings are required to be reported to the Environmental Representative immediately. Refer to OESs: Polar Bear Encounters (Section 2.11) and Fox and Wolf Encounters (Section 2.12) for additional information on polar bear and wolf sightings. Refer to Caribou Protection Measures (Section 2.13) for additional information on caribou sightings.

2.20.1 WILDLIFE LOG INSTRUCTIONS

- Record your name and the date of the observation.
- Record the GPS coordinates if possible. Ensure coordinates are recorded in latitude/longitude or UTM NAD83.
- Briefly describe the location, noting any significant landmarks, infrastructure nearby, water bodies or other features. This is particularly important if GPS coordinates for the sighting are not available.
- Record the type of animal. Identify the species, if possible, or the general type or group.
- Record the number of animals observed and the life stage (juvenile or adult), if known.
- Record observations on the behaviour of the animal. What was it doing at the time you observed it? Was it making any sounds? How did it react to your presence? How far away was it? Were you walking/driving/flying?

2.20.2 FORMS

- Wildlife Log (Section 3.7)

2.20.3 RELATED DOCUMENTS

- Polar Bear Encounters (Section 2.11)
- Fox and Wolf Encounters (Section 2.12)
- Caribou Protection Measures (Section 2.13)
- Bird Protection Measures (Section 2.14)

2.21 QUARRY AND BORROW MANAGEMENT

The development of several rock quarries and/or borrow sources may be required to support the Eqe Bay Exploration Program.

2.21.1 ENVIRONMENTAL CONCERN

Environmental concerns associated with quarrying and borrowing activities include: soil erosion, habitat loss, dust generation, permafrost degradation and water ponding. The water quality of waterbodies adjacent to these activities may also be impacted by means of sedimentation, fuel contamination and ammonia contamination from explosives residue.

2.21.2 ENVIRONMENTAL PROTECTION MEASURES

The following environmental protections measures for the management of quarries and borrow sources shall be implemented to mitigate potential impacts:

- Only approved quarry and borrow sources will be developed.
- Site specific management plans for each quarry and borrow source will be developed. Management plans will be approved by the QIA and NWB.
- Personnel involved in the development of quarries and borrow sources will be familiar with the conditions and environmental protection measures outlined in the site specific quarry and borrow source management plans.
- The limits of the quarry and/or borrow source shall be clearly flagged/staked in the field prior to conducting any work in the field.
- Surface water flows near quarries and borrow sources will be managed and monitored as proposed in the most current site specific quarry and/or borrow source management plans.
- In the event water licence criteria or other criteria established in the quarry management plans are exceeded or close to being exceeded, personnel will work with Environment to develop and implement effective preventative and/or mitigation measures, including treatment, if necessary, to ensure that the effects associated with the manufacturing, storage, transportation and use of explosives do not negatively impact the Project and surrounding areas.
- Materials such as debris and/or drill cuttings shall not be left on the ice when there is potential for that material to enter a waterbody.
- Maintain natural drainage patterns to the extent practicable.
- Maintain vegetation buffer zones to protect water bodies.
- Sources of in-pit water will be diverted away from the development area by constructing ditches and berms using rip-rap, geotextile and other sedimentation control measures. Ditching will be

minimized to reduce land disturbance and will be approved by the Environment Department prior to construction.

- Organics and topsoil will be salvaged and stored for use in reclamation. Overburden material may be stored for reclamation or if the material is of acceptable quality, be used for construction.
- Use rip-rap to reinforce drainage channel corners and water discharge points.
- Promote natural revegetation where required to stabilize slopes.
- Quarry and borrows sources will be developed as proposed in the most current site specific quarry and/or borrow source management plans, including the maintenance of the approved vegetated buffer zones between development and nearby water bodies.
- Rock removed from quarries will be sampled and confirmed to be non-acid generating and non-metal leaching, as per the site specific quarry management plan.
- Stockpiling and crushing infrastructure will be located on stable ground, at least 31 m from the ordinary High Water Mark of nearby water bodies.
- Disturbance to vegetation will be minimized, as practical.
- The side slopes of the borrow sources will be 1H:1V to 2H:1V, slightly gentler than natural slopes to reduce risks associated with water pooling and erosion.
- Organics and topsoil will be salvaged and stored for use in reclamation. Overburden material may be stored for reclamation or if the material is of acceptable quality, be used for construction.
- Adequate sediment and erosion control measures, including silt fences, turbidity curtains, settling ponds and check dams, will be installed around the development area to protect adjacent watercourses and waterbodies from adverse impacts such as sedimentation and elevated turbidity levels. Refer to Operational Environment Standard - Section 2.10 – Sediment and Erosion Control for additional details.
- Proper fuel containment and handling techniques will be used. Refer to Operational Environment Standard – Fuel Storage and Handling (Section 2.8) for additional details.
- Adequately stocked spill kits will be available at quarries and borrows sources in the event of a spill.
- Personnel experienced and authorized to work with explosives will use proper explosives handling techniques to minimize waste and releases to the environment.
- When explosives are utilized Environmental personnel shall monitor the effects of explosives residue and related by-products from project-related blasting activities. In the event water licence criteria or other criteria established in the quarry or waste rock management plans are exceeded or close to being exceeded, exploration personnel will work with the Environment Representative to develop and implement effective preventative and/or mitigation measures,

including treatment, if necessary, to ensure that the effects associated with the manufacturing, storage, transportation and use of explosives do not negatively impact the Project and surrounding areas.

- Ice-rich material will be stockpiled 31 m above the ordinary High Water Mark of any water body and in a location where melt water will not re-enter the pit or have adverse impacts on adjacent aquatic resources.
- Dust mitigation measures, including the use of water, calcium chloride and other dust suppression products, will be used as required to manage dust emissions at quarry locations.

2.21.3 FORMS

None

2.21.4 RELATED DOCUMENTS

- QIA Land Use Licence/Lease
- Land Disturbance (Section 2.3)
- Sediment and Erosion Control (Section 2.10)
- Fuel Storage and Handling (Section 2.8)

2.22 COMPLIANCE INSPECTIONS

Personnel are responsible for maintaining a clean, safe and environmentally acceptable work area. Personnel are expected to conduct regular operational inspections of their work areas and facilities to ensure Baffinland's commitments and expectations regarding health, safety and environment are being met or exceeded. Deficiencies identified during the inspections will be promptly addressed.

In addition to operational inspections conduct by operational personnel, the Environmental Representative will conduct routine inspections to confirm Eqe Bay operations are in compliance with the Type 'B' Water Licence, Inuit Land Use Lease III and other applicable approvals, using the Environmental Inspection Forms (Section 3.13) provided in this Plan. A finalized set of Environmental Inspection Forms (Section 3.13) for Eqe Bay activities will be included in the Rev. 0 of the Eqe Bay EPP.

Personnel who are unsure about certain environmental impacts and/or necessary protection measures will consult the Environmental Protection Plan first followed by the Environmental Representative before proceeding with any the activity under question.

Inspections will focus around the following:

- Hazardous materials and hazardous waste will be stored in a spill tray, a lined containment berm or shipping container.
- Waste should be segregated in accordance with the Waste Sorting Guidelines. Operational personnel in concert with the Camp Manager will ensure that disposal bins for each type of waste (hazardous, landfill, incinerator) are accessible and clearly labelled.
- Food waste and wildlife attractants will be disposed indoors to prevent the attraction and food conditioning of wildlife.
- Refuelling and equipment maintenance activities will employ the use of spill trays to prevent hazardous materials such as fuel, oils and greases from spilling onto the ground.
- All spills should be documented and reported to the Environment Department as soon as possible. Spills should be cleaned up as soon as possible after being reported, unless told otherwise by the Environment Department. For more details on spill reporting see Operational Environment Standard: Spill Control Measures and Reporting (Section 2.23).
- All spills should be documented and reported to the Environment Department as soon as possible. Spills should be cleaned up as soon as possible after being reported, unless told otherwise by the Environment Department. For more details on spill reporting see Operational Environment Standard: Spill Control Measures and Reporting (Section 2.23).
- The schedule for conducting environmental inspections will vary from month to month and will be established by the Environmental Superintendents and Coordinators and approved by the

Environmental Manager. The schedule will be developed based on the Inspection and Monitoring Plan.

2.22.1 FORMS

- Environmental Inspection Forms (Section 3.13)

2.22.2 RELATED DOCUMENTS

- Eqe Bay Spill Contingency Plan
- Eqe Bay Waste Management Plan

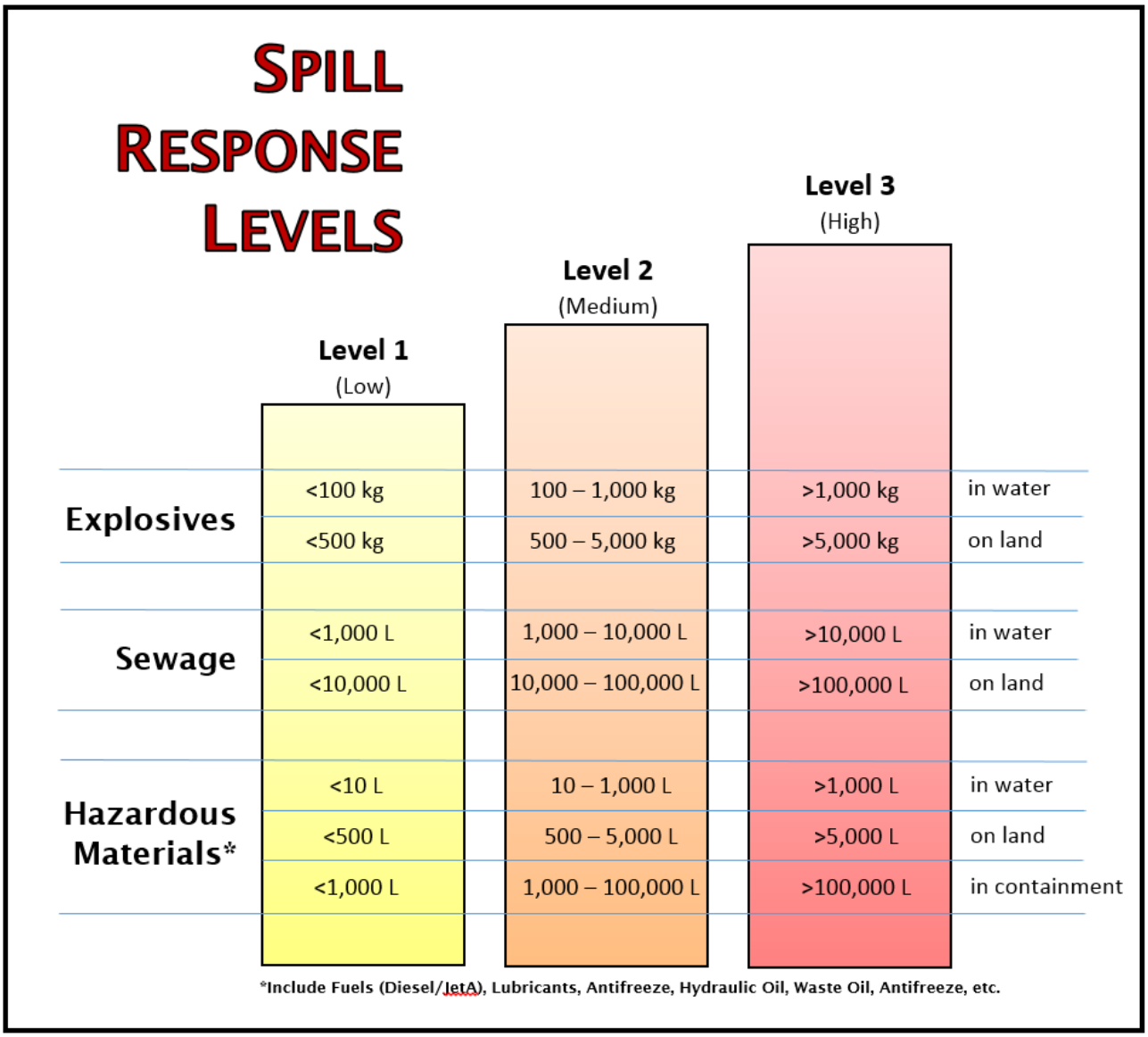
2.23 SPILL CONTROL MEASURES AND REPORTING

Several hazardous materials will be used during Eqe Bay Exploration Program including Jet-A1, diesel, oils, greases, antifreeze, calcium chloride, ammonium nitrate, batteries, cleaners and a variety of other materials. The management of hazardous materials onsite will focus on preventing the materials from causing harm to the health and safety of personnel and the surrounding environment. All spills, leaks and releases of hazardous materials will be reported immediately to the Environmental Representative and documented using the Baffinland Incident Investigation and Reporting Procedure (BIM-5100-SOP-0021) and NT-NU Spill Report Form (Section 3.5).

Baffinland has adopted a classification system that includes three levels of emergency response. Each level of emergency, based on the significance of the event, requires varying degrees of response, effort and support. With emphasis on spills and releases the three response levels are as follows:

- Level 1 (Low) – Minor accidental release of a deleterious substance with:
  - No threat to public safety; and/or
  - Negligible environmental impact to receiving environment.
- Level 2 (Medium) – Major accidental release of a deleterious substance with:
  - Some threat to public safety; and/or
  - Moderate environmental impact to receiving environment
- Level 3 (High) – Uncontrolled hazard which:
  - Jeopardizes personnel safety: and/or
  - Significant environmental impacts to receiving environment

For spills, the level of emergency response to a spill incident will be based on the substance released, quantity spilled, the receiving environment that is potentially impacted, and the human health risk. The level of response will also take into account whether the location of the spill is within or outside of containment. Refer to the Eqe Bay Spill Contingency Plan for additional details on spill response scenarios, spill response equipment and the specific spill response roles and responsibilities of site personnel. The matrix on the next page will be used as a working guideline for personnel when responding to spills.



The general spill reporting and cleanup requirements that will be employed during the Eqe Bay Exploration Program are outlined in Table 2.22-1. The Environmental Representative will be responsible for external reporting requirements (i.e. NT-NU Spill Line).

TABLE 2.22-1: GENERAL SPILL REPORTING AND CLEAN UP REQUIREMENTS

Spill on Land		
Volume (L)	**Required Documentation**	**Spill Clean up**
Less than 1 litre	- Verbal or email report	Environmental Representative will advise if needed.
Greater than 1 litre and less than 100 litres	- Photos of spill and clean-up - Baffinland Incident Investigation Report	Spills greater than 30 litres will have an Environmental Representative present to advise clean-up efforts.
Greater than 100 litres	- Photos of spill and clean-up - Baffinland Incident Investigation Report - NT-NU Spill Report - Notification to regulators and the Spill Line	The Environmental Representative will lead and advise clean-up efforts.
Spill on Water Body or Watercourse		
Volume (L)	**Required Documentation**	**Spill Clean up**
Any volume	- Photos of spill and clean-up - Baffinland Incident Investigation Report - NT-NU Spill Report - Notification to regulators and the Spill Line	The Environmental Representative will lead and advise clean-up efforts.

2.23.1 FORMS

- NT-NU Spill Report Form (Section 3.5)

2.23.2 RELATED DOCUMENTS

- Hazardous Material & Hazardous Waste Management (Section 2.17)
- Eqe Bay Spill Contingency Plan
- Baffinland Incident Investigation and Reporting Procedure (Appendix D; BIM-5100-SOP-0021)

3 DOCUMENTATION LOGS AND FORMS

A key aspect of the EPP is effective record-keeping. The following logs and forms will be used to record key information:

- Cultural Heritage Chance Find Discovery Form (Section 3.1)
- Human Use Log (Section 3.2)
- Water Collection Log (Section 3.3)
- Drill Inspection Forms (Section 3.4)
- NT-NU Spill Report Form (Section 3.5)
- Polar Bear Readiness Audit Form (Section 3.6)
- Wildlife Log (Section 3.7)
- Active Migratory Bird Nest Field Sheet (Section 3.8)
- Off-site Waste Disposal Log (Section 3.9)
- Wastewater Log (Section 3.10)
- Watercourse Installation Form (Section 3.11)
- Turbidity Monitoring Data Form (Section 3.12)
- Environmental Inspection Forms (Section 3.13)
- Incident Investigation and Reporting Procedure (BIM-5100-SOP-0021)

The record keeping forms are described further in their respective sections of the EPP. All completed logs and forms are to be submitted to the Environmental Representative.

3.1 CULTURAL HERITAGE AND CHANCE FIND DISCOVERY FORM

Cultural Heritage Chance Find Discovery Form	Reference No. (Environmental Representative to assign)

Please complete this form in the event of a chance find of a suspected burial, archaeological finds scatter, or an isolated find of a single artifact (e.g. stone tools/arrowheads, eggshell, pottery, concave milling/grinding stones, spherical hammerstones).		
Date and Time of Discovery :		
Name(s) and Contact Information of Discoverer(s) : Telephone #: Email:		
Location of the Discovery :	Area : GPS coordinates :	
Description of Archaeological Discovery :		
Estimated weight (kg):		
Dimensions (cm) :		
Sketch of Discovery Area :	**Drawing of Chance Find(s) :**	
Temporary Protection Implemented :		
Name	**Signature**	**Date (MM/DD/YY)**
Received by Environmental Representative	**Signature**	**Date (MM/DD/YY)**

Notes :

If you need more room to draw or describe the discovery area/finds, please use back of the page.

****Please return this form to the Environmental Representative as soon as possible (within 24 hours of the discovery at the latest)****

3.2 HUMAN USE LOG

Land and resource uses in the Eqe Bay include; hunting, fishing, trapping, and tourism. Potential impacts to existing land use will include the interruption of camping, hunting, tourism and marine activities. Baffinland has made a commitment to minimize disturbance to other land users to the extent possible.

Approvals issued to Baffinland require that the Company monitor the potential effects of its activities on Inuit harvesting activities. To do so, Baffinland wants to be aware of when people come into the area. The objective is to understand the activities of other land users.

TABLE 3.2.1: HUMAN USE OF OBSERVATION LOG

Date (MM/DD/YY)	Where (GPS)	Number of People In Party	Inuit or Non-Inuit	Activities Observed (Camp, Hunting, Travel, Etc.)

3.3 WATER COLLECTION LOG

Water Collection Log

Date	Time	Truck ID	No. Loads	Source	Discharge Location	Operator name	Initials

3.4 DRILL INSPECTION FORMS

PRE-DRILLING INSPECTION REPORT

Baffinland	PRE-DRILLING INSPECTION REPORT **Baffinland personnel:** **Date:** **Time:** **Proposed hole ID:** **Final hole ID:**

PROPOSED HOLE INFORMATION:

Deposit #:		**Collar location:**	E
Project:		(NAD 83)	N
Area:		**Dip:**	
NTS:		**Azimuth:**	
Elevation:		**Target depth:**	
Description of drill hole location:			
Purpose of drill hole:			

DRILLING INFORMATION:

Has site been approved by drill foreman?		
Drill contractor: Drill personnel: Drill #:		
Expected start of drilling:		
Is moving of drill hole required?		
If yes, provide reason:		
New collar location:	E	N

WATER MANAGEMENT:

Water source:		
Pump Station #:		
Sump location identified and constructed?:	Yes/No (Photo required)	
Corner 1:	E	N
Corner 2:	E	N
Silt fence(s) constructed?:	Yes/No (Photo required)	
Corner 1:	E	N
Corner 2:	E	N

SITE ASSESSMENTS:

Are wildlife present?: (If yes, record in log)
Is site safe for drilling?

Stable platform	Yes /No	Fire Extinguisher	Yes /No
First Aid kit	Yes /No	Eye Wash	Yes /No
PPE	Yes /No	Spill Kits	Yes /No

Safety concerns/issues:
Environmental concerns?

PHOTOGRAPHIC RECORD:

Photo of drill hole location prior to setup?		Yes /No
Name:		Folder:
Uploaded to hard drive?		

COMMENTS:

DAILY DRILLING INSPECTION REPORT

Baffinland	DAILY DRILL INSPECTION REPORT Baffinland personnel: Date: Time: Hole ID:

HOLE INFORMATION:

Deposit #:	1	**Collar location:**	E
Location:		(NAD 83)	N

DRILLING INFORMATION

Drill contractor:
Drill personnel:
Drill #:

DRILLING PROGRESS:

Day Shift	Night Shift
Start depth:	**Start depth:**
End depth:	**End depth:**
Total depth drilled:	**Total depth drilled:**
Casing installed:	**Casing installed:**

Any rods/casing/tools lost in the drillhole? If yes, what was lost?

Delays/Problems: (breakdowns, stuck rods, bit change, weather, wait time, drill move, etc) Provide time estimate

WATER USE ASSESSMENT:

Sediment control measures in place:
Assessment of effectiveness:
Approximate water level in sump:
Color of water in sump:
Color of runoff?
Conductivity readings?: Station # Reading / Station # Reading / Station # Reading
Turbidity sample(s) taken?: Sample # Reading / Sample # Reading

DAILY WATER USE MONITORING:

Water meter reading (start of day):

Water meter reading (end of day):

SITE ASSESSMENT:

Are wildlife present?: (check log for previous wildlife activity)

Is site safe for drilling?

Stable platform	Yes /No	Fire Extinguisher	Yes / No
First Aid kit	Yes /No	Eye Wash	Yes / No
PPE	Yes /No	Spill Kits	Yes / No
Lined Berms	Yes /No		

Safety concerns/issues:
Environmental concerns?
Corrective action required?: Action plan (if required):
Responsible party:
Date to be completed: Photograph (only required to document problems and corrective actions)

PHOTOGRAPHIC RECORD:

Photo of drill hole during drilling? Photo of water management measures? Yes /No
Name: Folder:
Uploaded to hard drive?

COMMENTS:

POST-DRILLING INSPECTION REPORT

Baffinland	POST-DRILLING INSPECTION REPORT Baffinland personnel: Date: Time: Final hole ID:

HOLE INFORMATION:

Deposit #:
Project: MARY RIVER
Area: BAFFIN ISLAND
NTS: 37G/5
Elevation:
Description of drill hole location:
Purpose of drill hole:

Collar location: E
(NAD 83) N
Dip:
Azimuth:
EOH:

DRILLING INFORMATION:

Drill contractor:
Drill personnel:
Drill #:
End of drilling:
Casing:
Any rods/casing/tools lost in the drill hole? If yes, what was lost?

Are rods/casing left in the ground cut at ground level and is the hole properly plugged and capped? Yes / No
Next set-up collar location: E N

WATER USE ASSESSMENT:

Water source: Mary River
Pump station #:
Total amount of hours water was pumped from pump station:

SITE ASSESSMENT:

All materials and debris removed from site? Yes /No
Any environmental concerns? Yes /No If yes, please describe below:

Any additional work required? Yes /No If yes, please describe below:

Corrective action:
Responsible party:
Date to be completed by:

PHOTOGRAPHIC RECORD:

Photo of drill hole location following demobilization and clean up? Yes /No
Name: Folder:
Uploaded to hard drive?

COMMENTS:

INSPECTION COMPLETED BY:

Baffinland signature: Drill contractor signature:

3.5 NT-NU SPILL REPORT FORM

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
Tel: (867) 920-8130
Email: spills@gov.nt.ca

A	Report Date: MM DD YY	Report Time:	☐ Original Spill Report OR ☐ Update #_____ to the Original Spill Report	Report Number:
B	Occurrence Date: MM DD YY	Occurrence Time:		
C	Land Use Permit Number (if applicable):		Water Licence Number (if applicable):	
D	Geographic Place Name or Distance and Direction from the Named Location:		Region: ☐ NT ☐ Nunavut ☐ Trans-boundary or Ocean	
E	Latitude: _____ Degrees _____ Minutes _____ Seconds		Longitude: _____ Degrees _____ Minutes _____ Seconds	
F	Responsible Party or Vessel Name:	Responsible Party Address or Office Location:		
G	Any Contractor Involved:	Contractor Address or Office Location:		
H	Product Spilled: ☐ Potential Spill	Quantity in Litres, Kilograms or Cubic Metres:	U.N. Number:	
I	Spill Source:	Spill Cause:	Area of Contamination in Square Metres:	
J	Factors Affecting Spill or Recovery:	Describe Any Assistance Required:	Hazards to Persons, Property or Environment:	
K	Summary of the spill incident and efforts / description of the incident:			

L	Reported to Spill Line by:	Position:	Employer:	Location Calling From:	Telephone:
M	Any Alternate Contact:	Position:	Employer:	Alternate Contact Location:	Alternate Telephone:

REPORT LINE USE ONLY

N	Received at Spill Line by:	Position:	Employer:	Location Called:	Report Line Number:

Lead Agency: ☐ ECCC ☐ CCG/TCMSS ☐ GNWT ☐ GN ☐ ILA ☐ CIRNAC ☐ CER ☐ Other: _____

File Status: ☐ Open ☐ Closed

Agency:	Contact Name:	Contact Time:	Remarks:
Lead Agency:			
First Support Agency:			
Second Support Agency:			
Third Support Agency:			

3.6 POLAR BEAR READINESS AUDIT FORM

Baffinland

Polar Bear Readiness Audit

Auditors: _____ **Date:** _____

Dressing Hardware

☐ Two 6 inch Buck Knives

☐ Two 4 inch Buck Knives

☐ One Sawblade

Fire Arm Approved Personnel Onsite

Name	Shift	Room

Pre-approved Polar Bear Dressers

Name	Shift	Room

Carcass Storage Location

Storage location	Temperature

Carcass Delivery Capabilities

Delivery Method	Delivery Timeline

Comments:

3.7 WILDLIFE LOG

DID YOU SEE ANY WILDLIFE?

LET US KNOW ᐅᒪᔪᓐᓂᒃ

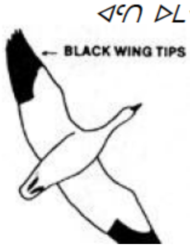
ᑕᑯᓚᐅᕐᐱᑦ ? ᐊᑦᑎ ᖃᐅᔾᖃᕐᑎᒍᑦ

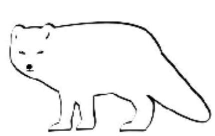
Wildlife observations by site personnel make very important contributions to environmental baseline studies. It is important enough that Baffinland asks you to record any observations of wildlife by listing them on this form.
ᐅᒪᔪᓐᓂᒃ ᖃᐅᔾᓴᖃᕐᑕᕐᓂᖅ ᓴᕕᒃᓴᕐᓂᐊᕐᕕᖕᒥ ᓴᓇᔪᓐᓂᑦ ᐊᑐᕈᑎᖃᑎᐊᕐᒪᑦ ᐊᕙᑎᒥᒃ ᖃᐅᔾᓴᕐᓂᕐᒥᒃ.
ᐊᑐᕈᑎᖃᕐᓂᖓ ᐱᔪᑎᒋᔪᒍ ᐸᕙᓐᓚᑯᑦ ᐃᓕᓯᓐᓂᒃ ᐊᐱᕆᕗᑦ ᐅᒪᔪᓐᓂᒃ ᑕᑯᖕᒪᕕᑦ ᑎᑎᖃᕐᑕᕐᓗᒋᑦ

DATE ᐅᓪᓗᖓ	ANIMAL & HOW MANY? ᐅᒪᔪᖅ ᑭᓯᓚᐅᕐᐸ ᐊᒻᒪ ᖃᓯᐅᓚᐅᕐᐸᑦ ?	WHERE? ᓇᖕᓂ ?	COMMENTS ᐅᖃᐅᓯᑦ

Please leave wildlife alone. Do not feed them and never leave waste behind.

ᐊᑦᑎ ᐅᒪᔪᑦ ᐅᓚᕕᓴᖃᑖᕆᓗᒋᑦ. ᑭᒥᓇᕙᖏᓗᒋᑦ ᐊᒻᒪ ᑕᒪᐅᖓᑐᐃᓇᖅ ᐃᒋᑎᖃᑖᕆᓗᑎᑦ





3.8 ACTIVE MIGRATORY BIRD NEST FIELD SHEET

Active Migratory Bird Nest Field Sheet

Survey Date: MM/DD/YYYY	Start Time: 24 hour	End Time: 24 hour		
Names of Surveyors:		GPS # used	Camera # used	Total # of Surveyors:
Weather Conditions (Precipitation, Cloud cover, Wind[1], Temperature) – Note: Surveys should not be conducted in rain, snow or other inclement weather				
Description of Search Area (Location – Geographic Place Name or Distance & Direction from Named Location, Size etc.):				Photos of Site:

Survey Map (Include any existing disturbance, water bodies or other geographic features and the location of any nests found)	Waypoint Corners of Search Area (Waypoint #, Latitude, Longitude)
	Waypoint Corner 1:
	Waypoint Corner 2:
	Waypoint Corner 3:
	Waypoint Corner 4:

Birds Observed during Surveys (That are not on a Nest):

Species detected (if species is unknown, default to species group – e.g. songbird, shorebird, duck, raptor)	Number of individuals	Method of detection (song, call, visual – foraging, flying, etc.)

Number of Nests Found (Details on Other Side):

Nest Observations:			
* Record any nests that appear new, but do not have any eggs or young in them, fill out form below including photos.			
Nest ID #	Waypoint (Waypoint #, Latitude, Longitude)	Species/Species Group	# Eggs/Young
	Description of Nest (Type of Nest, How it was Found, Habitat Surrounding Nest, etc.)		Photo Numbers
	Nest Buffer Applied (Size, How it was Determined, How it was Marked)		
Nest ID #	Waypoint (Waypoint #, Latitude, Longitude)	Species/Species Group	# Eggs/Young
	Description of Nest (Type of Nest, How it was Found, Habitat Surrounding Nest, etc.)		Photo Numbers
	Nest Buffer Applied (Size, How it was Determined, How it was Marked)		
Nest ID #	Waypoint (Waypoint #, Latitude, Longitude)	Species/Species Group	# Eggs/Young
	Description of Nest (Type of Nest, How it was Found, Habitat Surrounding Nest, etc.)		Photo Numbers
	Nest Buffer Applied (Size, How it was Determined, How it was Marked)		
Nest ID #	Waypoint (Waypoint #, Latitude, Longitude)	Species/Species Group	# Eggs/Young
	Description of Nest (Type of Nest, How it was Found, Habitat Surrounding Nest, etc.)		Photo Numbers

The information contained herein is proprietary Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied.
It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

	Nest Buffer Applied (Size, How it was Determined, How it was Marked)	

[1] Beaufort wind scale: 0 = no wind (smoke rise vertically, >1km/h), 1= light air (Smoke drifts slightly, 1-5 km/h), 2= light breeze (wind felt on face, 6-11 km/h), 3= gentle breeze (wind extends light flag, 12-19 km/h), 4= moderate breeze (Raises dust and loose paper, 20-28 km/h), 5= Fresh breeze (Crested wavelets form on inland waters, 29-38 km/h), 6= strong breeze (Large branches in motion. Whistling heard in wires, 39-49 km/h), 7= near gale (Inconvenience felt in walking against wind, 50-61 km/h), 8= gale (Walking into wind almost impossible, 62-74 km/h).

3.9 OFF-SITE WASTE DISPOSAL LOG

Line	Prov. Code	Shipping Name of Waste (i.e. Kitchen Grease, Contaminated Oily Solid, etc.)	Class	UN	P.G	Quant. Shipped (kg)	Packaging				Phys. State (S, L, G)
							Mine Site	Milne Port	Total	Packaging Type	

Note : PACKAGING TYPE : 01 drum; 02 tank; 03 bulk; 04 carton; 05 bag; 06 roll-off or lugger; 07 other

3.10 WASTEWATER LOG

Date	Time	Flow Meter Value	Operator Initials	Comment

3.11 WATERCOURSE CROSSING DATA MONITORING FORM

SECTION	OPERATIONAL ENVIRONMENT STANDARD	REVISION #	REVISION DATE
3.11	Watercourse Crossing Data Monitoring Form	A	June 4, 2008

CROSSING ID:										
Construction Duration:		**Start:**				**Finish:**				
	Environmental Inspector:				**Start (Date and Time):**			**Finish (Date and Time):**		
Env. Inspector on site during in-water work:										
LOCATION	**Datum:**				**Zone:**					
Easting (m):		**Northing (m):**			**Elevation (from mapping):**			**Other notes:**		
FISH ASSESSMENT PRIOR TO CONSTRUCTION				**Date of Inspection:**						
Fish Present?	**Y / N**		**If Yes, distance from crossing:**				**US / DS**			
Spawning Arctic Char present at crossing?	**Y / N**	**(If yes, contact biologist)**								
Spawning site present 20 m upstream or downstream of crossing?	**Y / N**									
CHANNEL CHARACTERISTICS	**Date Measured:**									
		Pre-Construction					**Post Construction**			
Location	**Distance**	**Width (m)**		**Water Depth (m)**			**Width (m)**		**Water Depth (m)**	
		Wetted	**High W**	**Max**	**Avg.**		**Wetted**	**High W**	**Max**	**Avg.**
Crossing										
Upstream										
Downstream										
SEDIMENT AND EROSION CONTROL MEASURES										
Measure installed:							**Date installed:**			
							Dated removed:			
							Turbidity monitored	Y / N		
Measures taken to stabilize disturbed areas:										
CROSSING INSTALLATION DETAILS										
1.2 m		**culverts**		**lengths of culvert**			**Notes:**			
1.0 m		**culverts**		**lengths of culvert**						
0.5 m		**culverts**		**lengths of culvert**						
PHOTOS	***View across crossing, view from upstream, view from downstream and any other to illustrate conditions.***									
	Photo #	**Date**	**Direction**	**Vantage point**		**Photo #**	**Date**	**Direction**	**Vantage point**	
Before					**After**					
across					across					
from US					from US					
from DS					from DS					
During					**Sed Con**					
across					across					
from US					from US					
from DS					from DS					
NOTES										

3.12 TURBIDITY MONITORING DATA FORM

CROSSING ID:

Field Crew:		**Date:**	**Time:**
LOCATION **Datum:**		**Zone:**	
Easting (m):	**Northing (m):**	**Elevation (from mapping):**	**Other notes:**
CURRENT WEATHER: Wind:	**Air Temp:**	**Precipitation:**	**Cloud Cover (%):**
Recent Weather Events:			
CONSTRUCTION **Construction Phase (circle one):** Pre-Construction During Construction Post-Construction			
Type of Activity:	**Equipment in Use:**		
Date Construction Began:			

Is the crossing location changing? (i.e. Is the crossing moving upstream or downstream of its original location? How far? Which direction?)

SITE SKETCH, NOTES, REMARKS: (i.e. high water table, high turbidity, natural bank erosion, water color, char observed in stream, algae in water, etc.)

Is there anything unique about this crossing compared to other watercourses? (i.e. steep banks, clay in water, etc.)

Substrate Particles **% Areal Coverage (est.)** **% sand/silt/clay (<2mm)** **% gravel (2 - 64 mm)** **% cobble (64 - 256 mm)** **% boulder (> 256 mm)** **% bedrock**	**Riparian Vegetation and Shading (describe):**

***IN SITU* TURBIDITY READINGS** (complete at least one measurement upstream and downstream of crossing)
Meter Make and Model:

Location	Distance from crossing (m)	Turbidity (NTU)	Time	Location	Distance from crossing (m)	Turbidity (NTU)	Time
Upstrea				Upstream			
Crossing				Crossing			
Dwnstrm				Downstrea			

FLOW ESTIMATES **Location :**	
High Water Width (m):	**Distance between points (m):**
Wetted Channel Width:	**Time (min): /**
Approx. Average Depth:	**Surface velocity estimate:**
	Average Velocity (0.8 (1) x Surface Velocity) (V) =

Note (1) - depends on substrate composition: 0.8 for rough, loose rocks or coarse gravel / 0.9 for smooth mud, sand, or hard pan rock

PHOTOS: (upstream, crossing, downstream)

NOTES:

3.13 ENVIRONMENTAL INSPECTION FORMS

Aircraft Fuel Dispensing Areas Inspection Checklist

Date:	
Inspecting Personnel:	
Camp:	

Baffinland

	Condition	Y/N or NA	Recommended Corrective Action (if necessary)	Responsible Party	Corrective Action Taken or Plan	Completion Date
1	Is a spill kit present and fully stocked?					
2	Is a drum or disposal bin present for used absorbent pads?					
3	Is there a spill tray present for re-fuelling activities?					
4	Are spill trays damaged or overflowing?					
6	Are fuel lines damaged or leaking?					
7	Does the Jet A fuel tank have visible signs of overflow (ex. stains on the side of the tank)?					
8	Are there visible leaks or free product within the fuel berm?					
9	Is there evidence of leaking or visible staining outside of lined area?					
10	Is there water present in the bermed area? If so, specify maximum water depth.					
11	Is there free phase product visible on any water surface within the bermed area?					
12	Are there signs of instability or tears in bermed areas? (i.e. collapsing berm or exposed liner).					
13	Is there any other refuse present? (i.e. garbage, loose materials, etc.)					

Additional Notes:

Containment Berms and Accommodations Complex Fuel Storage Inspection Checklist

Date:	
Inspecting Personnel:	
Camp:	

Area		Condition	Y/N or NA	Recommended Corrective Action (if necessary)	Responsible Party	Corrective Action Taken or Plan	Completion Date
Accomodations Complex - Fuel Tanks (Day)	1	Are spill kits present, labelled and fully stocked?					
	2	Is there any visible damage to the fuel tanks?					
	3	Are any lines, fittings, or pipes damaged and/or leaking?					
	4	Are there any fuel stains or visible spills near the fuel storage tanks?					
	5	Are storage tanks protected by cement barriers?					
Containment Berms (Bladder Farm, New Product Berms, Steel Tank Farm)	1	Is a spill kit present, labelled and stocked at each berm?					
	2	Are there visible leaks or stains within or outside the berms?					
	3	Is there water present in the bermed areas? If so, specify maximum water depth.					
	4	Is there free phase product visible on any water surface within the bermed areas?					
	6	Are there signs of instability or tears in bermed areas? (i.e. collapsing berm or exposed liner)					
	7	Are all containers within the berms labelled, stored upright, and in good condition (i.e. free of structural defects)?					
	8	Is there any refuse present? (i.e. garbage, loose materials, etc.)					

Additional Notes:

Hazardous Waste Containment Berm Inspection Checklist

Date:
Inspecting Personnel:
Camp:

Baffinland

	Condition	Y/N or NA	Recommended Corrective Action (if necessary)	Responsible Party	Corrective Action Taken or Plan	Completion Date
1	Are spill kits present, labelled, and fully stocked?					
2	Are all containers within the berm correctly labelled, stored upright and in good condition (i.e. free of structural defects)?					
3	Is there evidence of leaking or visible staining outside of lined area?					
4	Is there water present in the bermed area? If so, specify maximum water depth.					
5	Is there free phase product visible on any water surface within the bermed area?					
6	Is there free phase product visible on the ground within the bermed area?					
7	Are there signs of instability or tears in bermed areas? (i.e. collapsing berm or exposed liner)					
8	Is there any other refuse present? (i.e. garbage, loose materials, etc.)					

Additional Notes:

Crusher and Quarry Inspection Checklist

Date:
Inspecting Personnel:
Camp:

Baffinland

	Condition	Y/N or NA	Recommended Corrective Action (if necessary)	Responsible Party	Corrective Action Taken or Plan	Completion Date
1	Are hazardous materials and waste being stored in secondary containment?					
2	Are spill kits present, labelled, and fully stocked?					
3	Is explosives packaging (boxes, plastic bags) being burnt in an approved open burn location?					
4	Is ash generated from open burns being transferred and stored in the appropriate drums?					
5	Are waste items being properly sorted and diposed of?					
6	Are the natural drainage patterns of the quarried area still intact?					
7	Are silt fences or settling ponds in place to limit sediment transport into surrounding water bodies?					
8	Is there any signs of pooling water or thawing permafrost?					
9	Are there any fuel stains or visible spills?					
10	Is topsoil or overburden being stockpiled in area away from drainage routes?					
11	Are operators conducting pre-operation checks on their equipment?					
12	Do equipment operators have an adequate amount of spill reponse supplies on board?					

Genset Area Inspection Checklist

Date:	
Inspecting Personnel:	
Camp:	

Baffinland

Area		Condition	Y/N or NA	Recommended Corrective Action (if necessary)	Responsible Party	Corrective Action Taken or Plan	Completion Date
Genset Area	1	Is a spill kit present, labelled and fully stocked?					
	2	Are spill berms present under the oil drains, hose connections, and any other points of potential leakage?					
	3	Are spill berms in danger of overflowing?					
	4	Is there visible staining under the oil drains or other areas of potential leakage?					
	5	Are any hoses or nozzles cracked, damaged or leaking?					
	6	Are all hazardous waste/materials in secondary containment?					
	7	Is there any other refuse present? (i.e. garbage, loose materials, etc.)					

Additional Notes:

Incinerator and Burnable Waste Storage Inspection Checklist

Date:

Inspecting Personnel:

Camp:

Baffinland

	Condition	Y/N or NA	Recommended Corrective Action (if necessary)	Responsible Party	Corrective Action Taken or Plan	Completion Date
1	Is a spill kit present, labelled and fully stocked?					
2	Are fuel lines damaged or leaking?					
3	Are spill trays present at any points of potential leakage in fuel lines? (e.g. hose connections)					
4	Is any burnable waste securely contained within the sea can?					
5	Are any inappropriate waste types present (ex. styrofoam, aerosols, waste batteries)?					
6	Is the surrounding area free of loose debris?					
8	Are there any animal attractants (ex. food waste being left outdoors)?					
9	Is the door to the incinerator securely shut to prevent animal access?					
11	Do all ash drums have lids on them?					
12	Are operators filling out the incinerator log?					
13	Is there signage describing acceptable wastes?					

Additional Notes:

Tent City (Exploration Camp) Inspection Checklist

Date:	
Inspecting Personnel:	
Camp:	

Baffinland

	Condition	Y/N or NA	Recommended Corrective Action (if necessary)	Responsible Party	Corrective Action Taken or Plan	Completion Date
1	Are fuel berms present behind each tent?					
2	Are fuel berms structurally sound? (i.e. no rips, tears or leaks)					
3	Are fuel berms in danger of overflowing?					
4	Are fuel drum and fuel drum stands structurally sound? (i.e. punctures, tilting, etc.)					
5	Is there any staining around fuel berms or tents indicating a spill?					
6	Are the fuel lines damaged or leaking?					
7	Is there any refuse present? (i.e. Loose garbage)					
8	Is environmental lab waste stored in a labelled quatrex bag?					

Additional Notes:

Baffinland

Waste Sorting Area Inspection Checklist

Date: _____
Time: _____
Inspector name: _____
Inspector's position: _____

Please review and complete the form as applicable. Any non-conformances with the waste sorting area should be reported to the Environment Department.

General Site			
	Yes	No	Corrective Action
Is the route to the waste sorting area in suitable condition to provide truck access?			
Are the waste sorting signs in good condition?			
Are the waste containers upright and in their appropriate locations?			
Does the waste appear to be sorted?			
Is the site clean and free of litter?			
Are there any unacceptable wastes present? (ie. food scraps, cardboard, paper, scrap wood, small plastics or other burnables)			

Waste Sorting Containers						
	Container type* (drum or quatrex)	Quantity	Capacity (Full, half, empty)	Condition (OK, damaged, leaky)	Signage (OK, damaged, missing)	Comments
Aerosol cans						
Used absorbents						
Propane Containers						
Used oil filters						
Waste batteries						
Contaminated hoses						
Mixed waste containers						
Oily plastics						

Additional Comments

_____

_____

Baffinland

General Environmental Inspection Form

NAME:_____ DATE:_____

AREA(S) INSPECTED:_____

_____

_____

_____

ENVIRONMENTAL CONCERNS: _____

_____

_____

CORRECTIVE ACTIONS REQUIRED:_____

_____

_____

_____

COMMENTS:_____

_____

_____

4 REQUEST FOR REVISION TO AN OPERATIONAL ENVIRONMENT STANDARD

The EPP is a living document, and its users are encouraged to suggest changes to the content or wording of Operational Environment Standards to make the document more useful.

Please submit a copy of this Request for Revision to an Operational Environment Standard to the Environmental Representative.

Section To Be Revised (or Title of New Operational Environment Standard): (E.g. Section 2.1 Archaeology)
Nature of Proposed Change: (E.g. update, addition, new, etc.)
Rationale For Request (E.g. Environmental Protection, worker safety, etc.)
The Revision (or New Operational Environment Standard):

5 REFERENCES

Environment and Climate Change Canada. (2025, 01 20). *Nesting periods*. Retrieved from Government of Canada: https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html

Appendix A -
Polar Bear Readiness Procedure and Audit

POLAR BEAR READINESS PROCEDURE AND AUDIT

Introduction

The purpose of this document is to ensure that all polar bear incidents are documented and promptly reported to regulators and that all preparation and requirements regarding polar bear mortalities are in place. The Polar Bear Safety Plan developed for the Mary River Project should be referenced for additional information pertaining to polar bear mortalities.

Reporting Requirements

In the event of a polar bear mortality QIA, HTOs of the nearest communities and the appropriate Government of Nunavut (GN) Wildlife Officer must be notified within 2 hours of the kill.

1. QIA
   To be updated with contact information provided by QIA.
2. HTO
   To be updated with contact information provided by Igloolik and Hall Beach HTOs.
3. GN Wildlife Officer
   To be updated with contact information provided by the GN.

Preparations and Procedure

1. Firearm Use
   Only pre-approved designated individuals that have documented their Possession and Acquisition licence with the Camp Manager will be authorised to shoot a polar bear.
2. Dressing
   Only pre-approved Inuit workers with the experience and expertise will attend to field dressing, gutting, skinning, cutting the carcass. A Wildlife Carcass Dressing Kit consisting of two 6 inch blades, two 4 inch blades and one sawblade will be provided by the Environmental Representative.

   In the event of polar bear mortality, the following parts must be preserved and delivered to the GN Wildlife Officer:

   i. The lower jaw or an undamaged post-canine tooth,
   ii. Any lip tattoos present,
   iii. Any radio collars or ear tags present, and
   iv. Evidence of sex (i.e. penis/baculum).

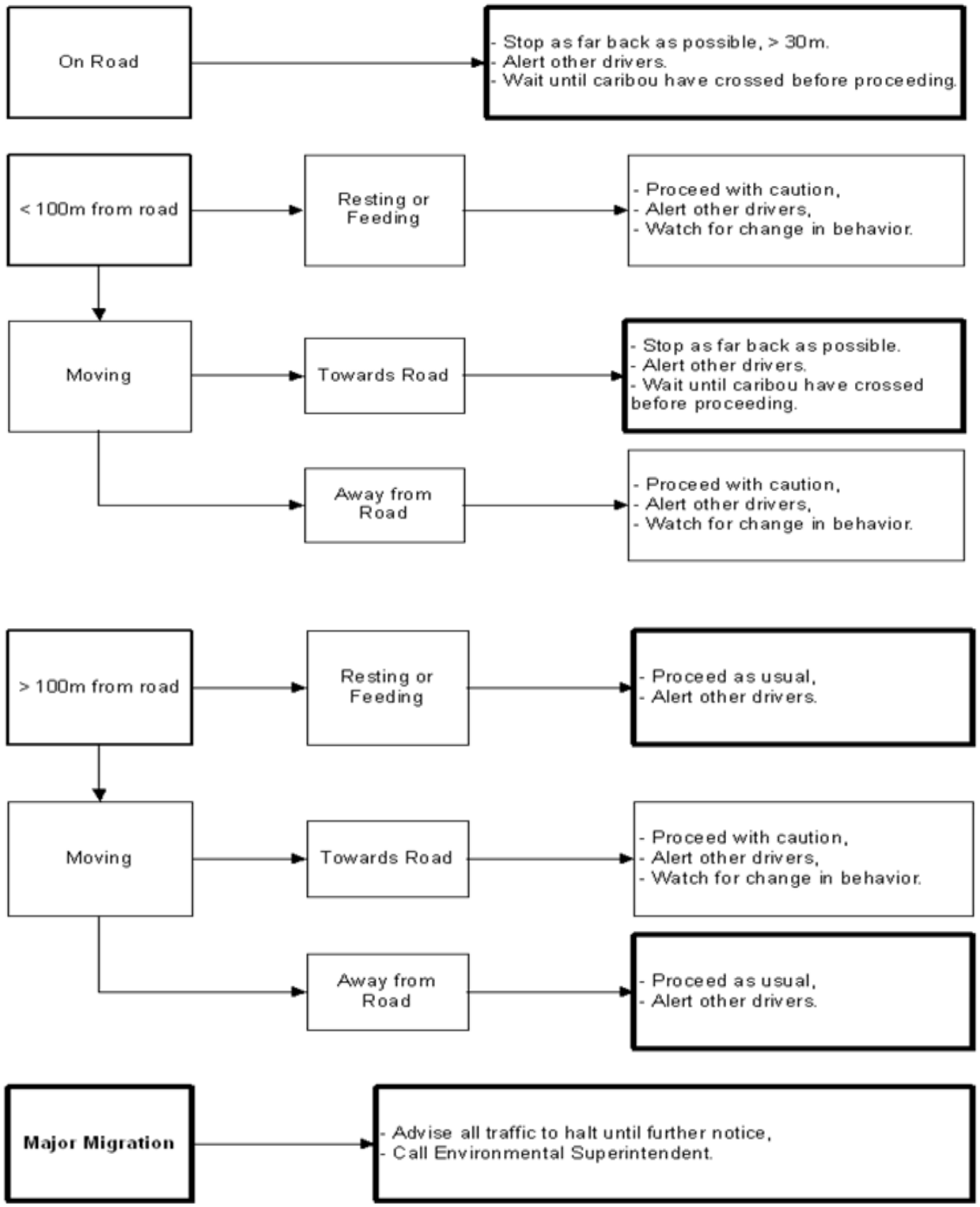
3. Carcass Storage

   All salvageable parts of the carcass must be delivered to the designated community within 24 hours of the kill, if possible. Prior to being delivered and to avoid spoilage, all salvageable wildlife parts must be promptly and safely stored in a refrigerated place. The meat and salvageable parts should not be stored in a shipping container.

Polar Bear Readiness Audit

Polar bear readiness and preparation requirements will be audited once per month by the Environmental Representative using the form provided in Section 3.6 of the Eqe Bay EPP.

Appendix B-
Caribou Encounters Decision Tree



Appendix C -
Active Migratory Bird Nest Survey Procedure

Baffinland Iron Mines Corporation

BIM-5200-SOP-0012 AMBNS PROCEDURE

DOCUMENT REVISION RECORD

Issue Date MM/DD/YY	Rev #	Prepared By	Reviewed By	Approved By	Description of change and purpose of issue
03/09/21	0	KB	AM	FG	Use
02/26/25	1	HG	BR	KB	Annual review

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1. PURPOSE

The purpose of this Standard Operating Procedure is to provide guidance on how to complete an AMBNS during the migratory bird nest window and establish no-disturbance buffers. The Migratory Birds Regulations, under the Migratory Birds Convention Act (MBCA), 1994, prohibit the harming of migratory birds and the disturbance or destruction of their nests and eggs. The inadvertent destruction of nests and eggs from industrial activity is an “incidental take”, and is illegal. Under the MBCA, Baffinland must exercise due diligence to avoid harm to migratory birds, their nests, eggs, and young. Baffinland practices due diligence by completing active migratory bird nest surveys (AMBNS). Completing AMBNS’ is also a condition of the Mary River Project Certificate No. 005, as issued by the Nunavut Impact Review Board (NIRB).

2. APPLICATION

The Standard Operating Procedure applies to all departments and to all Baffinland employees, contractors and visitors when involved in an AMBNS. If possible, Baffinland endeavours to complete land clearing and disturbance outside the bird nesting window, if not, an AMBNS must be completed. An AMBNS is required when disturbing or clearing land or any industrial activities in previously undisturbed areas during the Migratory Bird Nest Window. A no-disturbance buffer is required around any active nests.

3. DEFINITIONS AND ABBREVIATIONS

3.1 ABBREVIATIONS

Statement	Definition
AMBNS	Active Migratory Bird Nest Survey
CDMS	Controlled Document Management System (on BIM Live Sharepoint)
EPP	Environmental Protection Plan
FLRA	Field Level Risk Assessment
GPS	Global Position System
MBCA	Migratory Birds Convention Act
NWB	Nunavut Water Board
NIRB	Nunavut Impact Review Board
PPE	Personal Protective Equipment
SOP	Standard Operating Procedure
SWI	Safe Work Instruction

3.2 DEFINITIONS

Statement	Definition
GPX File	GPS Exchange Format, is an XML schema designed as a common GPS data format for software applications. It can be used to describe waypoints, tracks, and routes. It is an open format and can be used without the need to pay license fees.
Migratory Bird Nest Window/ Season	The migratory bird-nesting season in the Project area occurs from mid-May to Mid-August, please refer to the Government of Canada Website for exact dates for each calendar year. Baffin Island falls entirely within the "N10" zone. https://www.canada.ca/en/environment-climate-change/services/avoiding-harm-migratory-birds/general-nesting-periods/nesting-periods.html

3.3 HAZARDS

There are numerous hazards associated with completing AMBNS surveys, as technicians will be exposed to a range of environments such as close proximity to roads, heavy equipment etc. These hazards may include, but are not limited to:

- Heavy equipment and light vehicle traffic
- Slippery and uneven ground
- Working in remote areas out of radio range;
- Wildlife interactions
- Changing weather conditions
- Sun or glare

4. AMBNS PROCEDURE

4.1 AMBNS PLANNING

1. An AMBNS must be conducted a maximum of 5 days before clearing. If clearing or disturbance activities does not occur in the entire area within 5 days of the AMBNS, the survey must be re-done.
2. A minimum of three (3) people are required for an AMBNS. When possible, conduct AMBNS surveys with an expert in migratory bird identification. Biologists visit the Project area to conduct specific monitoring programs for Baffinland's Terrestrial Environment Monitoring Programs, and can accompany AMBNS surveys when they are on site and timing permits.
    - Survey effort required on the tundra is about one hectare/hour/person.
3. Ensure the weather is adequate for an AMBNS. Do not conduct a survey during poor weather. Eggs and young birds are vulnerable to cold and rain. Adult birds are also less likely to leave their nest or be observed during poor weather.
4. **The survey area is to be clearly marked by the project manager requesting the survey, and the stakes match the GPS coordinates provided for the planned works.**
    - If the area requiring an AMBNS survey is not clearly marked, contact the Environmental Coordinator prior to proceeding.

4.2 AMBNS EXECUTION

1. Once at the AMBNS site, turn the GPS on and verify it has acquired satellites to display your current location prior to starting. Clear the current track, which automatically starts a new track, to record the survey transects.
    - Use the “Map” display on the GPS unit to view your current track and ensure transects are completed parallel to one another.
2. Surveyors will walk the entire proposed disturbance site in transects, looking for active nests on the ground, in shrubs, between rocks, and under grass tufts.
    - Transects should be no more than 25 m apart, but distance between transects will depend on visibility. Open tundra areas, with greater lines of sight, can be surveyed using wider-spaced transects. Nests can be hard to find, so surveys must be thorough (Examples in Appendix A).

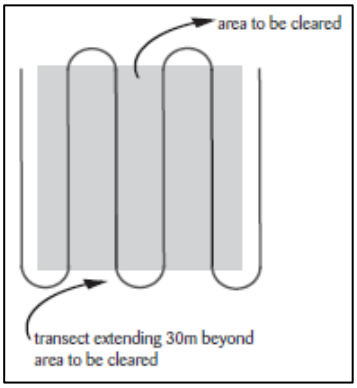


FIGURE 1 EXAMPLE SURVEY TRANSECTS

3. Rope-drags involves two people holding either end of the rope-drag while a third person (the primary observer) walks behind and in the middle, watching for birds that may flush off a nest after the rope has been dragged over/ beside it.

FIGURE 2 ROPE DRAG DEMONSTRATION

4. Look for signs of nesting bird behaviour, such as agitated adult birds, birds flushing from the ground, a “broken wing” display, or birds carrying food or nest materials. Use the binoculars to observe.
    - If you see a bird showing signs of nesting behaviours, stop and watch to locate the nest area.
5. Record the types of birds seen during the survey, and their behaviour. Use the AMBNS Field Sheet. Try to identify all birds to the species level, or at least the species group, listed below and in Appendix B.
    - Songbirds
    - Gulls & terns
    - Geese & cranes
    - Shorebirds
    - Ducks & loons
    - Raptors
6. Survey an additional **50 m** area outside of the area to account for disturbance impacts to nesting birds adjacent to cleared areas.
    - To account for species with larger no-disturbance buffers (e.g., loons, cranes), if there is suitable adjacent habitat (e.g., pond edges) an additional 750 m past the disturbance edge will be surveyed at the discretion of the Coordinator.

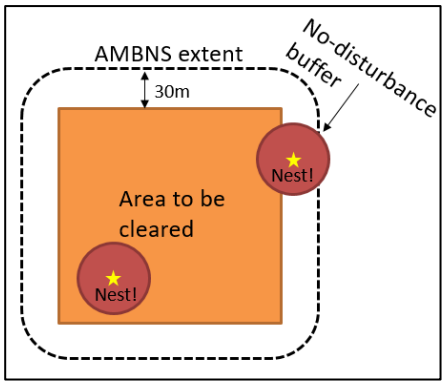


FIGURE 3 AMBNS EXTENT AND BUFFERS

7. Ensure that your GPX file (including survey track and all waypoints), a scanned copy of the AMBNS field sheet, and all photos are saved in the appropriate folder on the server.

4.3 IF A NEST IS FOUND

Nests are active while adults, young, or eggs are in the nest or nest area. When a nest is located:

- Minimize the amount of time you spend at the nest to limit the disturbance to the birds
- Record the geographic location of the nest using a GPS, and take pictures of the nest and buffer for your records.
- Record the number of eggs and/or young observed in the nest.
- Mark the location. To avoid an increased risk of predation, do not use artificial markers or flags, and instead place a small rock pile to identify the nest for follow-up status monitoring.
- When naming bird nests' they must each have a unique identifier beginning with the year (ex. 2022-001).
- The no-disturbance buffer must be clearly marked and staked with posts to make it obvious to equipment operators. These no-disturbances are to remain in effect until it is confirmed that young have left the nest or nesting area.
- In areas where several species are nesting in proximity, setbacks for the most sensitive species should be used if they are present.
- Take a GPS track of the no-disturbance buffer and record the track name on the field sheet.
- In cases where it is not feasible to use the recommended buffer distances to protect a nest, the Coordinator will develop nest-specific guidelines and procedures to protect the nest.
- Communicate your findings and location of no-disturbance buffers to the construction supervisor and equipment operators.

TABLE 1 NO DISTURBANCE BUFFERS FOR MAJOR BIRD GROUPS OF NORTHERN BAFFIN ISLAND

Species Group	Recommended Setback Distances (m)	
	Pedestrians/ATVs	Road/Construction/Industrial Activity
Songbirds	30	100
Shorebirds	50[a]	100[a]
Terns & Gulls	200b	300b
Ducks	100	150
Geese	300	500
Loons & Cranes	500	750

a: For nests of American Golden Plover or Ruddy Turnstone, these setbacks should be increased to 150 m for pedestrians/ATVs and 300 m for Roads/Construction/Industrial Activities respectively. For nests of Black-bellied Plover, Whimbrel, or Red Knot, these setbacks should be increased to 300 m for pedestrians/ATVs and 500 m for Roads/Construction/Industrial Activities. In areas where several species are nesting in proximity, setbacks for the most sensitive species should be used if they are present.
b: For project activities in proximity to nests of Ross's Gull these setbacks should be increased to 500 m for pedestrians/ATVs and 750 m for Roads/Construction/Industrial Activities. A 2 km setback should also be applied to any Ivory Gull nest

4.4 FOLLOW-UP AFTER A NEST IS FOUND

The Coordinator will assign a crew to re-visit nests on an as-needed basis to determine the status. When chicks have fledged the nest and are not observed near the nest site, and no other nests are found within the buffer, disturbance of the area may proceed. For most migratory bird species, removing the nest after the nesting season will have no effect on the bird's ability to nest again as the great majority build or occupy new nests each year. However, the nests of migratory bird species listed in Schedule 1 of the Species at Risk Act as either endangered, threatened or extirpated, are protected whether or not those nests are active, as the species may occupy the nest again. If these species are observed, the Environmental Coordinator determine the path forward.

5. RESPONSIBILITIES

Role	Responsibility
Environmental Superintendent	• Relaying any new, planned construction to the Environmental Coordinators; • Ensure that personnel understand the contents of the Procedure and follow its requirements.
Environmental Coordinator	• Making necessary revisions to this procedure • Ensuring that all Technicians have reviewed the referenced procedures and have signed off on them • Saving the relevant construction plans and land disturbance forms on the server • Coordinating with Project construction managers to execute AMBNS surveys when required, and ensure it aligns within 5 days of the start of construction in the area requiring an AMBNS survey
Environmental Technician	• Read, understand and adhere to the procedures outlined in this document • Utilize appropriate PPE and equipment when conducting monitoring • Contact the Environmental Coordinator if uncertain about any of the tasks • Ensure that this procedure is followed and contact the Environmental Coordinator for approval prior to proceeding with any deviation from the Procedure • Record and complete all necessary field notes in a legible manner on the field sheets • Transfer all documentation (photos, notes, GPX file) to the server in a timely manner • Report any incidents to the Environmental Coordinator; • Report any wildlife observations and/or potential archaeology sites with GPS locations, field notes, and photos to the Environmental Coordinator • Handle all equipment with care and understand how to properly use, store, and charge all equipment • Ensure monitoring equipment (e.g. GPS, camera) is charged and in good working condition

6. PRE-REQUISITE COMPETENCY SKILLS

6.1 FLRA

FLRAs must be completed by technicians prior to every task and reviewed and updated if:

- Conditions change
- Additional hazards are identified
- The activity of others in the area pose a hazard

Technicians will complete an FLRA card prior to completing an AMBNS survey to determine potential hazards and whether appropriate controls are in place. This hazard and risk assessment includes checking in with the site area supervisors and/or workers to identify any additional hazards. Throughout the survey, additional hazards observed are to be noted, assessed and recorded in the technician's FLRA book.

6.2 EQUIPMENT REQUIREMENTS

6.2.1 PPE

The minimum PPE as per Baffinland's PPE Standard (BIM-5100-STA-0004) is required to be worn during the AMBNS survey. Additional PPE may be required as a result of the hazard assessment process, such as but not limited to:

- Clothing suitable for the weather and working conditions

6.2.2 Additional Equipment

- Two handheld radios (one on D13, one on the corresponding channel for the survey area)
- Camera
- Pen/pencil
- AMBNS field sheet
- GPS
- Rope drag (a tool used to flush birds - consists of long rubber drags attached to a rope)
- Flagging tape and stakes (to indicate area has been surveyed)
- Binoculars
- Bird identification book (Common Birds of Nunavut, Sibley Field Guide to Birds)

6.3 TRAINING AND QUALIFICATIONS

All personnel performing AMBNS surveys at Baffinland will have read and fully understood this document, as well as the EPP.

All of these documents can be found on CDMS. Following the review of the above documentation, consult the Environmental Coordinator for any questions regarding environmental commitments.

All personnel operating light vehicles on site will be familiar with the Light Vehicle Operation Procedure, the Tote Road Travel Procedure and Mine Haul Road Driving Authorization when applicable. The Environmental Coordinator will grant authorization for light vehicle operation in conjunction with the Training, Mine Operations and Ore Handling departments.

Prior to completing AMBNS surveys, technicians will have received training from the Environmental Coordinator or acting supervisor on AMBNS surveys. Technicians will also participate in PowerPoint training pertaining to the EPP, record documentation, and data management. An Environmental Coordinator or their designate must accompany technicians during their first AMBNS to complete in-field training.

7. RELATED DOCUMENTS

BIM-5100-PLA-0003-Polar Bear Safety Plan

BIM-5100-SOP-0034-Light Vehicle Procedure

BAF-PH1-330-PRO-0043-Tote Road Travel Procedure

BIM-5100-STA-0004-Personal Protective Equipment Standard

BIM-5200-FRM-0008- AMBNS Field Sheet

BIM-5200-PLA-0002-Cultural Heritage Resource Protection Plan

BIM-5200-PLA-0003-Environmental Protection Plan

Migratory Birds Convention Act (MBCA), 1994

Nunavut Impact Review Board (NIRB), 2020. In the matter of the Nunavut Land Claims Agreement, Nunavut Land Claims Agreement Act, S.C., 1993, c. 29 Article 12, Part 5 and In the matter of an application by Baffinland Iron Mines Corporation for development of the Mary River Project Proposal in the Qikiqtani Region of Nunavut, NIRB Project Certificate No. 005. Amendment No. 3 dated June 18, 2020.

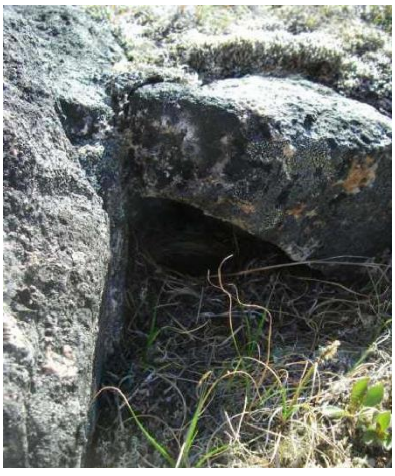
Nunavut Water Board (NWB), 2015. Nunavut Water Board Licence No. 2AM-MRY1325 – Amendment No. 1. Issued by the Nunavut Water Board, July 2015.

Government of Canada Migratory Bird Nesting Mapwww.canada.ca/en/environment-climate-change/avoiding-harm-migratory-birds/general-nesting-periods.html#toc0

APPENDIX A EXAMPLES OF BIRD NESTS





APPENDIX B BIRD SPECIES AT MARY RIVER PROJECT

Songbird Species at Mary River

- Songbirds are:
  - Typically small in size (same size or smaller than a robin)
  - Often heard singing or calling
  - Usually nest on the ground or in shrubs
- To date, we've documented 7 songbird species (not including raven) at Mary River
  - Most common: Lapland Longspur, Horned Lark, American Pipit, and Snow Bunting
  - Other species: Northern Wheatear, Common Redpoll and Hoary Redpoll

Songbirds — Lapland Longspur


- Most common songbird at Mary River
- Male has black head and breast outlined in white with a reddish-brown nape and streaky brownish back
- Female has similar markings but colors are much duller; note the buffy ear patch outlined by a bold dark triangle

Songbirds — Horned Lark


- Male and female have similar plumage

- Note he the facial pattern: white or yellowish face and throat with black bib, black under the eyes and black “horns”
- White belly and brown back

Songbirds — American Pipit

- Male and female share similar coloring
- Grayish above, light streaking on breast and sides of belly

Songbirds — Snow Bunting

http://bagsy-thecaptainslog.blogspot.ca/2011_01_28_archive.html

- Black and white songbird
- Male and female similar although males generally show more white
- Often nests in rock crevices

Shorebird Species at Mary River

- Shorebirds are:
  - Small to medium in size (smaller than ducks)
  - Often found near water but a few species may be found in upland areas away from water
- To date, we've documented 8 shorebird species at Mary River
  - Most common: Baird's Sandpiper, American Golden Plover, Semipalmated Plover, Common Plover, Ringed Plover, and Red Phalarope
  - Other species: Dunlin, White-rumped Sandpiper, and Pectoral Sandpiper

Shorebirds – Baird's Sandpiper

- Most common shorebird at Mary River, but looks very similar to several other shorebird species
- Found in a wide variety of habitats
- Note the lack of streaking on the belly and under the wings, black bill and black legs

Shorebirds – American Golden-Plover

- Found mostly at higher elevations
- One of the larger shorebirds at Mary River; note the black belly and face, dark crown and white markings, and the golden spots on the back

- Black bellied Plover (below) looks similar but lacks the dark crown. Both have a species-specific buffer

Shorebirds – Semipalmated & Common Ringed Plovers

- Smaller shorebirds with dark facial mask and breast band, light brown back, yellow legs
- Typically nest in gravelly substrates
- Frequently do broken wing displays when you are near the nest
- Very hard to distinguish between these two species (best distinguished by call): “common Ringed” left, “semipalmated” right

Shorebirds – Red Phalarope

- Almost always found in or adjacent to water
- In the water, may look like a small duck (but note the narrower bill and different body shape)
- Also note the reddish neck and belly, and white eye patch

Other Shorebirds to Watch For

- These have not been found yet, but have species-specific buffers if they are nesting: Red Knot (a species at risk), Ruddy Turnstone, & Whimbrel

Gregory Breese, U.S. Fish and Wildlife Service

http://flickr.com/photos/72825507@N00/326908333

Tim Bowman, U.S. Fish and Wildlife Service

Red Knot	Whimbrel	Ruddy Turnstone
• Chunky & short-legged • Red face, throat & belly • Mottled back with grey, brown & red colors	• Larger shorebird • Long down curved bill • Bold dark striped crown & dark eyeline • Streaked chest and belly	• Black and white head pattern • Rusty brown back • Pale belly • Orange legs

Gulls and Terns Species at Mary River

- Unlikely to be nesting in areas where development will be occurring – often nest on cliffs or rocky islands. Some exceptions.
- To date, Glaucous Gull, Thayer's Gull, Herring Gull, Arctic Tern, and Longtailed Jaeger have been documented at Mary River – but several other species are found in the surrounding marine areas

Thayer's Gull

Gulls and Terns – Species at Risk

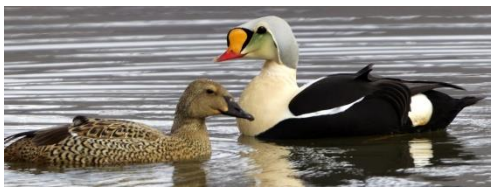
- 2 possible species at risk (neither has been observed to date): Ivory Gull and Ross's Gull

 http://www.flickr.com/photos/84878506@N00/514437906/	 www.flickr.com/photos/9765210@N03/5206246591
Ivory Gull: • Pure, white gull • Small, orange-tipped bill • Dark eye and short dark legs	**Ross's Gull:** • White head with black ring around neck • Dark eye and black bill • Pale grey back

Ducks and Loons Species at Mary River

- Nests may be found if development occurs near water
- Numerous species present including Long-tailed Duck, King Eider, Common Eider, Red-breasted Merganser and 4 species of Loons (Redthroated, Pacific, Yellow-billed and Common)

Long-tailed Duck



King Eider Duck

Common Eider

Red-breasted Merganser

Yellow-billed Loon

Geese and Cranes Species at Mary River

- Often found near water bodies
- Our largest birds
- Species including Snow Goose, Canada/Cackling Goose, and Sandhill Crane among others

Canada/Cackling Goose

Snow Goose

Sandhill Crane

Raptors Species at Mary River

- Have both cliff-nesting raptors (Peregrine Falcon, Gyrfalcon, Rough-legged Hawk) and ground-nesting raptors (Snowy Owl, Short-eared Owl)
- Note: Short-eared owl is a species at risk; rare in the Mary River area but can be found

Peregrine Falcon

Rough Legged Hawk

Snowy Owl

Short eared owl

Appendix D -
Incident Investigation and Reporting Procedure

Baffinland Iron Mines Corporation

BIM-5100-SOP-0021 INCIDENT INVESTIGATION AND REPORTING PROCEDURE

DOCUMENT REVISION RECORD

Issue Date MM/DD/YY	Rev #	Prepared By	Reviewed By	Approved By	Description of change and purpose of issue
02 / 10 / 14	0	HF		MA	USE
01 / 21 / 19	1	TS		SP	USE
09 / 20 / 21	2	SS		TRS	USE
09 / 22 / 21	3	SS		TRS	USE
11 / 15 / 21	4	SS		TRS	USE, new report form update
07 / 03 / 22	5	JH		TRS	USE
08 / 08 / 22	6	JN	JN	TRS	USE
08 / 11 / 23	7	SDP	BT	TRS	Updates to regulations, new pocket guide, new PEEPO

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1. PURPOSE

Baffinland Iron Mines (BIM) is committed to "***SAFETY first, ALWAYS***" in all work areas to ensure the continued Health and Safety of all employees and contractors connected with the Mary River operation.

This Incident Investigation and Reporting Procedure is intended to standardize the processes and activities related to Preparedness, Detection, Containment, Documentation, Communication and Investigation / Learning activities required for the control of undesirable events within the BIM Mary River operation.

This procedure shall be used in all Baffinland operations including field and corporate offices, exploration, construction and site operations.

2. APPLICATION

The activities in this document apply to all Baffinland employees, contractors and subcontractors who perform formal incident reporting and investigation activities while working on or at a Baffinland controlled worksite.

3. DEFINITIONS AND ABBREVIATIONS

3.1 ABBREVIATIONS

Statement	Definition
PEEPO	People, Environment, Equipment, Procedures, Organization
MOC	Management of Change

3.2 DEFINITIONS

Statement	Definition
Business Interruption	The unplanned temporary loss of use of any BIM equipment or processes.
Bump and Scrape	Minor swelling or abrasion not requiring cleansing or non-prescription medications.
Corrective Action	A set of actions taken to rectify, or change a process, system, or equipment where those processes, systems or equipment have previously caused errors, nonconforming issues or undesirable events.
Community Reputation	A local community complaint that may impact BIM's reputation.
Equipment Failure – Fatigue	Associated with components experiencing cyclic stresses or strains resulting in permanent damage.

Equipment Failure – Erosion	Occurs when high-velocity liquid or solid matter impacts a solid surface, causing intense points of compression and resulting in deformation and shear
Equipment Failure – Corrosion	This refers to rusting steel, chemicasl attack, electrical; equipment loose, wet or dirty.
Equipment Failure – Overload	Equipment operating outside of its design capabilities.
Incident	Any undesirable event or occurrence that could of or did result in a loss or worker harm condition.
First Aid Injury	Worker injury treatment as per BIM-5100-SOP-0007 Injury/Illness Classification
Key Learnings	The documented pieces of information that reflect both negative and positive takeaways from an investigation.
Land Disturbance	Any unapproved disturbance, land clearing, vegetation removal or damage to undisturbed land.
Lost Time Injury	Worker not able to return for their next scheduled shift.
Medical Diagnostic Procedure	Procedure or tool used to confirm or rule out a condition.
Medical Aid Injury (Medical Treatment)	Worker requires treatment by a registered medical practitioner beyond first aid as per BIM-5100-SOP-0007 Injury/Illness Classification
Near Miss	An event or form of incident, which under slightly different conditions could have resulted in a significant loss or harm to workers.
Non-Conformance	Error in a process, service or product that does not match specifications.
Non-Compliance	Failure to act in accordance with policy, procedure or directions.
Non-Reportable Spill	A spill or release requiring only BIM internal reporting and recording.
No Treatment – Report Only	A potential injury where a worker was exposed to harmful energy release, but when examined by a PA, the assessment showed that no injury or mechanism for injury was noted.
No Property Damage – Report Only	An event where equipment contact with another energy source occurred, but there is no observable damage or damage is only cosmetic and does not impact the equipment operation. The equipment was examined for damage and no damage that could impact its safe operation was identified.
Reportable Spill	A spill or release requiring BIM internal and external agency reporting and recording.

Restricted Work	Worker unable to perform one or more of their routine functions.
Security	An event that includes a violation of BIM's security policies.
Thermal Event	An extreme heat event that does not produce a flame.
Vehicle Incident	A single or multiple vehicle involved collision with stationary objects, land feature, other vehicles, wildlife, and road debris.
Wildlife Interaction	Any human or equipment interaction with wildlife resulting in animal mortality, animal rescue scenario or animal aggression.

4. INCIDENT AND NEAR MISS MANAGEMENT PROCESS

The incident and near miss management process is a structured approach to be used by all workers and particularly those in leadership roles to prepare for, detect, respond, classify, determine causes of, act to prevent reoccurrence, and communicate learnings from incidents and near misses. The following steps shall be followed.

4.1 PREPAREDNESS AND DETECTION

An incident can be manifested as a near miss, non-conformance or as a loss event. Preparation for response and the timely detection of an undesirable event at its early stage is important to minimalize harm and prevent the escalation of the event.

4.1.1 Preparedness

Before a task begins, workers shall ensure they have adequate communication methods and know which leaders and support resources they will contact to manage an undesirable event. For BIM leadership this includes the functional capabilities of the designated Incident Command Centers (ICC) and backup ICCs.

4.1.2 Detection

Timeliness is important in the response, assessment, evaluation, investigation and actions related to any specific incident. Near Misses, Equipment Damage, Environmental Releases or workers exhibiting injury shall be identified and reported up as soon as they are observed. The quality of information from statements and other forms of evidence quickly degrades over time.

4.2 INCIDENT RESPONSE

4.2.1 Secure the Event Scene

Workers in leadership roles on a worksite shall communicate an incident to their supervisor and secure the event scene to eliminate or minimize risk of further injuries, environmental affects, property damage, or disruption of evidence.

To secure the scene, the following (included but not limited to) actions may be required depending on the severity or consequences of the incident:

- Stop work / activities.
- Safe-out equipment/processes.
- Freeze the worksite.
- Assess existing and probable/possible/potential dangers to workers.
- Call a CODE 1 emergency (BAF-PH1-810-PRO-0005 Reporting Code 1 Emergencies)

Securing a scene is important for incidents where an external agency has authority. This includes Dangerous Occurrence incidents or Serious Injury incidents as per the NU Mine Health and Safety Act and Regulations (Section 16.01). Where there is a BIM significant incident (ranked as C3-C6), the scene must remain frozen until a release is authorized by the site Health and Safety Leadership. For less serious C1 and C2 ranked incidents, the scene must remain frozen until release is authorized by the department's leadership.

4.2.2 Exception to Securing the Scene

An incident scene may be disturbed in order to attend to an injured employee or to prevent further or escalating injuries, stop an environmental release or to protect property that is endangered as a result of the incident. Worker safety shall be assessed before disturbing any incident scene.

4.2.3 Emergency Response

Workers shall activate the BIM Emergency Response Plan by reporting a "CODE 1" in the case of incidents that involve:

- A complete loss of a life support system such as fuel or electrical power, or accommodations.
- Significant property damage impacting life, health, safety or environment.
- An incident or event involving potentially life threatening injury or severe medical condition.
- A serious life threatening or non-life threatening injury.
- A fire or thermal event involved with any equipment or structure.
- A polar bear or wolf within 1.5 Kilometers of the camp, mine and or field work activity.
- A large scale sustained and uncontrolled release of hazardous materials into the environment.

4.2.4 Preserve the Scene

Where an incident requires the preservation of the scene, the supervisor shall ensure:

- All personnel are accounted for.

- All non-essential personnel are removed.
- Access to the area is limited.
- Incident scene boundaries are established and delineated with tape or barriers.
- Reportability to an external agency is determined.
- Security or area personnel monitor the scene and maintain an access log.
- Visual evidence is recorded by photos or videos.

4.2.5 Gather Information / Evidence

Immediately following a significant incident, the supervisor, senior person present and emergency response incident commander shall:

- Begin a log to document the emergency response actions.
- Perform a preliminary assessment of the incident level using the BIM Incident Investigation and Reporting Procedure Reference Guide Book (Part 1.7) and communicate that assessment to the ICC.
- Identify preventative actions necessary to prevent a re-occurrence on the site or similar work sites.
- Photograph/video the scene before any movement of items or other changes are made.
- Ensure that any perishable evidence is preserved.
- Identify all personnel who might have information about the incident and plan to conduct interviews.
- Complete initial notifications in accordance with the BIM Incident Investigations Report Guide.

4.2.6 Substance Abuse Testing

Substance abuse testing may be required within 8 hours of a work-related incident in order to practice due diligence and eliminate that potential causal factor. The decision to refer an employee for a test post-incident will be made by the Supervisor investigating the incident by following the Substance Abuse Prevention Policy BAF-PH1-700-POL-0012 . A decision to conduct a post event substance abuse test shall be based on a positive response to any of the following factors:

1. Unusually poor judgement by an individual involved.
2. The individual shows signs of impairment or are acting out of character.
3. If the event resulted in or had the potential to result in any of the following outcomes:
    - A worker, member of the public or any other individual suffers a medical treatment, lost time, disabling injury or fatality as a result of the incident.
    - A regulatory reportable environmental incident occurs.
    - Property or equipment damage occurs from the incident.
    - The incident or near miss is classified as significant (C3 – C6)

For less serious incidents a department Manager or Superintendent, at their discretion, may require a post-incident test where it is reasonably believed that Drug or Alcohol use may have been a factor in the incident:

- The individual shows signs that "sufficiently arouse the employer's suspicion of impairment" through unusual actions, behaviour, or physical characteristics that give rise to impairment.

5.2.7 Incident Classification

To ensure a consistent assessment, incidents are classified as C1 through to C6 based on an evaluation of their actual consequence. Supervisors shall classify the event by using the Actual / Potential Consequence Table (available through the Part 1 help link) in the BIM Incident Investigation Report form or by viewing page 23 (Table 1-1) in the BIM Incident Investigation and Reporting Procedure Reference Guide.

4.2.8 Injury and Illness Classification

To ensure a consistent evaluation, injury and illness classifications in Health and Safety type events are performed using the BIM-5100-SOP-0007 Injury/Illness Classification procedure.

4.2.9 Event Notification (BIM Internal)

Once the initial event classification is determined, an event notification must be communicated to required personnel within a specific timeframe based on the event type. There are two types of notification methods - Email and Phone. All event notifications must include the following initial information:

- Actual date of the event and the time that event occurred
- Date the event was reported and the time it was reported
- The Main Person Involved
- Who reported the event
- The Main Person's employer
- What BIM department the Main Person is working at
- A detailed location of the event
- The Main Person's supervisor
- The incident type and classification (C1-C6) and/or Dangerous Occurrence or Serious Injury
- A brief description of the event
- The Immediate Actions Taken, i.e. secure scene to protect people, environment and equipment

4.2.9.1 C1-C2 Notification

Events classified as a C1 or C2 consequence require an email notification by the responsible supervisor within 4 hours after becoming aware of the event. The Supervisor shall complete Part 1 of the BIM Incident Investigation Report form, save the report as an "initial" report to their department specified directory and submit the initial report by populating the generated email send to with their current department's Superintendent and Manager. If the incident has any environmental component (non-reportable spill, reportable spill / release, wildlife interaction or land disturbance) the BIM Environmental Superintendents must be included in the email notification.

4.2.9.2 C3-C6 NOTIFICATION

Events classified as a C3 through to C6 require an immediate phone and email notification by the responsible supervisor as soon as they become aware of the event. The Supervisor shall verbally provide the information as outlined in 5.2.8 to their department Manager or designate. The Supervisor shall next complete Part 1 and Part 2 of the BIM Incident Investigation Report form, save the form as a "Preliminary" report and use the default group email list generated by the form to email to all applicable or impacted department Managers and Superintendents.

All departmental leadership shall follow the event notification hierarchy of reporting as specified in Figure 1-2 on page 25 of the BIM Incident Investigation and Reporting Procedure Reference Guide. (See following Table 5-2)

TABLE 4-1: Initial Event Notification Requirements

Initial Event Notification Requirements					
Reporting notification and timeline per Incident Classification	**C1 or C2**	**C3 or C4**	**C5 or C6**	**Dangerous Occurrence or Serious Injury**	**Reportable Spill**
		SIGNIFICANT INCIDENT OR NEAR MISS			
	Within 4 Hours	**Immediately**			
BIM Manager/ Superintendent Notification	**Supervisor notifies Dept. Manager / Superintendent by email.**	**Supervisor notifies Dept. Manager/ Superintendent by phone and email.**			**Supervisor notifies Dept. Manager/ Superintendent by phone and email.**
BIM Site H&S Leadership and General Manager Notification		**Dept. Manager/ Superintendent notifies site H&S Leadership and GM by phone and email.**			**Dept. Manager/ Superintendent notifies site Environment Leadership and GM by phone and email.**
BIM Director of H&S Notification		**Site H&S Leadership and GM notifies Director of HSEST by phone and email.**			**Site Environment Leadership and GM notifies Director of HSEST by phone and email.**
BIM Executive Committee Notification		**Director of HSEST notifies Executive Committee by phone and email.**			
External Initial Notification (WSCC, NWT/NU)				**Site H&S Leadership notifies External Regulators by phone and email**	**Site Environment Leadership notifies External Regulators by phone and email**
External Initial Notification (QIA)				**Site H&S Leadership notifies External Regulators by email within 24 hours**	**Site Environment Leadership notifies External Regulators by email within 24 hours**

4.2.10 External Agency Event Notification

Some incidents (Dangerous Occurrences, Serious Injuries, and significant Fires, Spills or Releases) will require external notification by a designated BIM authority. The events that trigger external

notifications are dictated by regulating bodies, which have established timelines for initial and final incident reports and investigations.

- Health and Safety related incidents can involve the NU WSCC regulator
- Environmental incidents can involve Federal, Territorial and regional regulators.
- Financial incidents can involve Federal or Territorial regulators.
- Community related incidents can involve Territorial or regional regulators.

Large and small wildlife mortality incidents shall follow the BIM Reporting Procedure for Wildlife Incidents.

4.3 INVESTIGATION AND LEARNING

The BIM manager responsible for the work area and the supervisor of the person(s) involved shall ensure that an investigation is completed within the specified time frame. The investigation type is based on consequence level of the incident, non-conformance or near miss event. (See Table 5-4)

Workers performing or leading the investigation shall be trained in the investigation processes applicable to the investigation type specified. This can be the BIM Investigation Report process, the BIM 5 Why process, or the BIM ICAM process.

Table 4-2: INCIDENT INVESTIGATION TYPES AND COMPLETION TIMELINES

The timelines noted above are the required time frame to complete the report and begin the approval process.

Investigation Type	C1 – C2 Event	C3 – C4 Event	C5 – C6 Event	Dangerous Occurrence / Serious Injury	Reportable Spill
Prelim. Report Part 1 of Inv. Report	12hrs	12hrs	12hrs	12hrs	12hrs
Investigation Report Part 1 - 4	72hrs	5 days	7 days	72hrs	72hrs
5-WHYs Presentation		5 days			5 days
ICAM Report			7 days		
External DO/SI Report				72hrs	
External Spill Report					30 days
QIA Report			7 days	72hrs	30 days

4.3.1 Investigation Objectives

The objectives of all incident and near miss investigations is to:

- Establish the facts
- Identify contributing factors and latent hazards
- Review the adequacy of existing controls and procedures
- Report the findings
- Recommend corrective actions which can improve efficiency, reduce risk and prevent recurrence
- Detect developing trends that can be analysed to identify specific or recurring problems
- Identify any key learnings for distribution within the organization and externally as required.

4.3.2 Incident Investigation Team

The manager or superintendent of the involved person or area is the incident owner and must assign an investigation lead.

The investigation lead may request the health and safety representatives, environmental advisor(s), subject matter expert(s) or other professionals to assist with the investigation. HSRs must be given the opportunity to participate in any phase of the investigation.

It is important the core investigation team be assembled promptly to enable team members to view the site of the incident as early as practicable. Investigation team sizes will depend on the type of incident to ensure a thorough investigation is completed.

Skills that can benefit an investigation team include:

- Administrative skills - to control and log data.
- Legal skills - to provide advice and review reports. Selection of legal counsel should be made in consultation with the company corporate legal department.
- Consultants and specialist skills – detailed and specialised knowledge or skills that may be useful during an incident investigation should be included as appropriate. Involvement may not be required for the full duration of the investigation.

Investigation Lead Role

The role of the assigned Investigation Lead is to:

- Lead the team through the steps of the investigation
- Ensure investigation team safety
- Communicate and liaise with stakeholders and external parties in line with site policy
- Assign duties to the team
- Obtain the services of specialist advisors as required
- Schedule and co-ordinate investigation activities and resources
- Supervise preparation of the investigation report

- Brief management on the team's findings

4.3.3 Investigation Tools

The investigation team should be prepared for the task, and have investigation tools readily at hand such as;

- Digital Camera, tablet - mobile phones may be used if permitted by the General Manager
- Extra personal protective equipment (PPE) – gloves, earplugs, safety glasses both clear and dark
- High visibility barrier tapes (caution and danger)
- Tape measure – 8m and 30m
- Identification tags or labels
- Specimen containers and zip-lock bags
- “Out-of-Use” and “Information” tags
- Isolation lockout padlock and personal danger tags
- Non-Permanent markers and whiteboard
- Fluorescent spray paint (cannot be kept in a vehicle)
- Flashlight and batteries
- Note book/ Post-It notes
- Pen, pencils and erasers
- Clipboard and grid paper for mapping/sketching
- Radio (hand-held mobile – Icom, Sonim)

4.3.4 Data Collection

During the data collection phase, the investigation team should aim to collect as many facts as possible. This will help in understanding the incident and the events leading up to it.

During the data collection phase of the investigation the team shall gather relevant facts to understand the incident and the events, which led to the incident. The collection of the data is divided into five areas:

- People
- Environment
- Equipment
- Procedures and Documents
- Organization

For each of these five data categories the team should identify all conditions, actions, or deficiencies, which may have been contributing factors to the incident.

To ensure that all the facts are uncovered, ask the following questions for each category:
Who? What? When? Where? Why? and **How?**
For most of these questions, an important follow-up question is - If not, why not?

The PEEPO Chart (Baffinland Intranet Page – Incident Reporting) shall be used as a template to organize findings.

Guidance for data collection activities based on the People, Environment, Equipment, Procedures and Documents and Organization categories is available in the BIM Incident Investigation and Reporting Procedure Reference Guide on pages 41 through to 54.

4.4 INVESTIGATION REPORT AND LEARNINGS

All Events require the completion and submission of a Preliminary Incident Report Form. Supervisor is to ensure preliminary information listed in Part 1 & 2 of the Incident Investigation Report is forwarded in a timely manner to the manager/superintendent. The Preliminary Incident Report (Part 1 & 2 of the Incident Investigation Report) is to be completed by the Department Manager or Superintendent and submitted within 12 hours, The Manager or Superintendent must use the "Submit Preliminary" button on the Incident Investigation Report form to submit the report by email.

The Preliminary Incident report consists of Part 1 & 2 of the BIM Incident Investigation Report, (Baffinland Intranet Page – Incident Reporting).

4.4.1 BIM Incident Investigation Report

All Events C1-C6, including Dangerous Occurrence, Serious Injury, and Reportable Spills (as per BIM Incident Investigation and Reporting Procedure Reference Guide Book), must be reported using the BIM Incident Investigation Report, (Baffinland Intranet Page – Incident Reporting).

The Incident Investigation Report Form contains Four (4) Parts:

Part 1: Event Notification
Part 2: Preliminary Report - Supporting Information
Part 3: Causal Analysis (Investigator), Corrective Actions
Part 4: Final Report – Management Signoff

The Department Manager or Superintendent is responsible to ensure the completion of all three parts, including the review, sign-off, and submission requirements as per Section 4.6.2.

4.4.2 5-WHY Report

The C3-C4 Investigation will include completion of all four parts of the BIM Investigation Report Form (Baffinland Intranet Page – Incident Reporting)

In addition to the BIM Investigation Report Form, a 5-WHY Investigation Report (Baffinland Intranet Page – Incident Reporting) must be completed for a C3-C4 Investigation. The 5-WHY presentation includes:

- Event Description
- Associated Photos and Diagrams
- Timeline Chart
- 5-WHYs Causal Analysis
- Short Term and Long Term Corrective Actions
- Key Learnings
- Presentation Sign Off

The Final Incident Report Form and 5-WHYs Presentation is to be completed by the Department Manager or Superintendent and submitted within 5 days, and ensures review, sign-off, and submission requirements are completed as per BIM Incident Investigation and Reporting Procedure Reference Guide Book.

4.4.3 ICAM Report

The C5-C6 Investigation will include completion of all four parts of the BIM Investigation Report Form, (Baffinland Intranet Page – Incident Reporting).

The Final Incident Report Form and ICAM Report is to be completed by the Department Manager or Superintendent and submitted within 7 days both the final incident investigation report and ensure review, sign-off, and submission requirements are completed as per BIM Incident Investigation and Reporting Procedure Reference Guide Book

Note: The General Manager, Health and Safety Leadership can request the final report be submitted as a 5-WHYs Presentation or ICAM report in some cases outside of perimeters set out in this document. This determination is based on but not limited to the following:

- The nature of the occurrence
- The recognition of learning opportunities for the overall business
- The frequency of occurrence

4.4.4 Corrective Actions

Corrective actions are the controls recommended to reduce future risk exposure or repeating of an undesirable event. Corrective actions identified in Investigation Reports shall be assigned with an expected completion date. The completion of corrective actions will be tracked by the H&S group to ensure they are addressed by their responsible party within their planned due date.

4.4.5 Management of Change (MOC)

Actions taken to address incident causal factors may be subject to the BIM Management of Change review process to ensure new risks or threats to equipment or workers are not created. Workers shall perform the assessment using the MOC form.

Corrective Actions that should trigger a MOC include:

- Addition of new process equipment or critical business system (including software).
- "Not in Kind" replacement of process equipment or equipment parts.
- Modifications or minor additions to process equipment.
- Modifications or minor additions to infrastructure / non-process equipment. (buildings, roads, power supplies).
- Changes to process control and/or instrumentation (PLC, HMI).
- Changes in critical process parameter operating limits.
- Alterations to safety systems (interlocks, shutdowns, fire or explosion suppression, etc.).
- Revisions to standard operating procedures (including emergency procedures).
- Changes in site-level organizational structure.
- Changes to equipment maintenance schedules.

4.4.6 Effectiveness of Corrective Actions (Controls)

Effective controls eliminate or remove the causal factors of an incident and prevent a recurrence. The effectiveness ranking follows the hierarchy of controls:

- PPE: *Least Effective*
- Administrative:
- Engineering: to
- Substitution:
- Elimination: *Most Effective*

Note that layered controls will achieve a higher level of risk reduction and repeat events.

The impacted department Manager shall review implemented corrective actions or controls to evaluate whether the expected effectiveness is achieved. Where a corrective action is not progressed or implemented for various reasons, the Manager shall provide a rationale for that decision.

Corrective Actions shall be:
Specific
Measureable
Accountable
Reasonable
Timely
Effective

Reviewed

4.4.7 Communication of Investigation Results

The BIM HSEST is responsible for ensuring Lessons Learned or Key Learnings from significant incidents are presented and disseminated to all relevant stakeholders.

4.4.8 Document Retention

Incident investigation documents shall be retained for 10 years as per BAF-PH1-500-PRO-0020.

5. RESPONSIBILITES

Role	Responsibility
SR. DIRECTOR OF HSEST	• Immediately report to the Executive Team all incidents or near misses with an actual or potential consequence of C3 – C6, Dangerous Occurrence, Serious Injuries as per MHSR 16.01, outbreak of fire as per MHSR 16.07 and Reportable Spills. • Activate and manage the Crisis Management Plan, BIM-5000-PLA-0004, for all incidents with an actual consequence of C5 – C6. • Report to regulatory agencies or police services on behalf of Baffinland. • Monitor site compliance to Incident Investigation Requirements. • Present a monthly Incident Summary to the BIM Executive Committee (EXCO). • Ensure review, sign-off, and submission requirements are completed as per Section 4.6.2
GENERAL MANAGER	• Immediately report with the site Health and Safety leadership to the Sr. Director of HSEST all incidents or near misses with an actual or potential consequence of C3 – C6, Dangerous Occurrence, Serious Injuries as per MHSR 16.01, and outbreak of fire as per MHSR 16.07 and Reportable spills. • Ensure the Incident Management System is compliant with Corporate Requirements. • Initiate and lead an Investigative Team in the event of a disaster incident. • Participate in C3-C6 Incident Review Meetings conducted during Site Sunday Management Safety Meeting. • Ensure review, sign-off, and submission requirements are completed as per Section 4.6.2

DEPARTMENT MANAGEMENT AND SUPERINTENDENT	• Ensure all department employees and contractors promptly report all incidents to their supervisor. • Review all incident reports prior to submission for accuracy, compliance to the requirements of this procedure and quality. • Immediately notify site Health and Safety Leadership and the General Manager by phone for incidents with an Actual or Potential Consequence of C3-C6, Dangerous Occurrence, Serious Injuries as per MHSR 16.01, outbreak of fire as per MHSR 16.07 and Reportable spills. • Send an initial incident notification as per Table 5 2: Initial Event Notification Requirements for all incidents with an Actual or Potential Consequence of C1-C2 within 4 hours of occurrence. • Ensure a preliminary report is completed using Part 1 & 2 of the BIM Investigation Report Form, (Baffinland Intranet Page – Incident Reporting). The Manager/Superintendent must submit the preliminary report within 12 hours of the incident occurring, use the “Submit Preliminary” button on the Incident Investigation Report form to submit the report by email. • Initiate and lead investigations of major incidents within their respective areas of responsibility • Completing a final investigation in the required format (Investigation Form, 5 –WHYS or ICAM) within the timelines described in Section 4.2.1 Investigation Types and Completion Time Lines. • Develop and Implement Corrective Actions based on the underlying causes and contributing factors of the incident and lessons learned from the incident. • Review all Preliminary and Incident Reports prior to submission. • Ensure review, sign-off, and submission requirements are completed as per Section 4.6.2 • Prepare and present C3-C6 incident investigation during Site Sunday Management Safety Meeting. • Ensure all identified corrective actions are documented and implemented • Proof of corrective action(s) completion must be submitted to BIM

	CorrectiveActions@baffinland.com by the listed corrective action due date. • Conduct Corrective Action Audits on a weekly basis and submit report to BIM-CorrectiveActions@baffinland.com. • Distribute and share learnings from incidents as per the requirements of this document. • Participate in Incident Review Meetings as required. • Pictures and supporting documentation must be submitted by selecting the “Add Pictures” or “Add Documents” button on the top task bar of the BIM Incident Investigation Report.
CONTRACTOR MANAGEMENT	• Ensure all department employees and contractors promptly report all incidents to their supervisor. • Immediately notify their site BIM Representative/Contract Holder by phone for incidents with an Actual or Potential Consequence of C3-C6, Dangerous Occurrence, Serious Injuries as per MHSR 16.01, outbreak of fire as per MHSR 16.07 and Reportable spills. • Send an initial incident notification by email for all incidents with an Actual or Potential Consequence of C1-C2 within 4 hours of occurrence to their site BIM Representative/Contract Holder. • Ensure a preliminary report using Part 1 & 2 of the BIM Investigation Report Form (Baffinland Intranet Page – Incident Reporting). The preliminary report must be submitted within 12 hours of the incident occurring, use the “Submit Preliminary” button on the Incident Investigation Report form to submit the report by email. • Complete a final investigation in the required format within the timelines described in Section 4.2.1 Investigation Types and Completion Time Lines and submit to their site BIM Representative/Contract Holder. • Develop and Implement Corrective Actions based on the underlying causes and contributing factors of the incident and lessons learned from the incident. • Ensure Subcontractor compliance to Baffinland Incident Management Requirements.

	• Promptly report all occupational injuries and illnesses, property loss, environmental exposures, near misses, and safety opportunities that occur within their area of responsibility to their site BIM Representative/Contract Holder. • Lead and/or participate in the investigation of incidents that occur within their area of responsibility. • Ensure review, sign-off, and submission requirements are completed as per Section 4.6.2 • Ensure effective implementation of Investigation Corrective Actions.
SUPERVISION	• Immediately notify Department Manager and Superintendent by phone and email for incidents with an Actual or Potential Consequence of C3-C6, Dangerous Occurrence, Serious Injuries as per MHSR 16.01, outbreak of fire as per MHSR 16.07 and Reportable spills. • Send an initial incident notification by email for all incidents with an Actual or Potential Consequence of C1-C2 within 4 hours of occurrence to their Department Manager and Superintendent. • Complete a preliminary report using Part 1 & 2 of the BIM Investigation Report Form (Baffinland Intranet Page – Incident Reporting), and submit to the Department Manager and Superintendent for their review within the 12 hrs timeline requirement. • Complete a final investigation in the required format (Investigation Form, 5-WHYs or ICAM) within the timelines described in Section 4.2.1 Investigation Types and Completion Time Lines and submit to their Department Manager and Superintendent. • Ensure injured workers receive proper medical attention. • Participate in the investigation of incidents that occur within their area of responsibility. • Ensure review, sign-off, and submission requirements are supported as per Section 4.6.2 • Ensure effective implementation of investigation corrective action items. • Review incident learnings and recommendations with subordinates.

	• Emphasize the importance of near miss and safety opportunity reporting with all employees. • Investigate and initiate corrective actions on reported safety opportunities and near miss incidents. • Participate in incident review meetings as required. • In most cases, the immediate area supervisor will conduct the initial data collection of an incident investigation. This initial activity is primarily a recording of facts, environment at the scene, vehicles and equipment involved, relevant documentation including procedures, JHA and FLRA's, training certification, list of affected employees and witnesses and photographs of the scene. Direct supervisors are familiar with employee's work environment & assigned tasks. Supervisors must take the incident situation under control and immediately eliminate or control hazards to others.
HEALTH AND SAFETY SUPERINTENDENT	• Provide guidance to Department Management and Superintendents when determining Incident and Near Miss Actual and Potential Consequence. • Assist Department Management and Superintendents with notification requirements to the Chief Mines Inspector and any other reporting to the government associated with the incident. • Coordinate with the BIM Human Resources Department with injury reporting requirements to the Nunavut Workers' Safety and Compensation Commission (WSCC). • Evaluate Investigative Reports and coach Department Managers and Superintendents on investigation methods and compliance. • Ensure review, sign-off, and submission requirements are completed as per Section 4.6.2 • Establish and maintain a log of open investigation reports and corrective actions. • Facilitate incident investigation training for required personnel.
BIM AND CONTRACTOR EMPLOYEES	• Activate the Emergency Response Plan by reporting a "CODE 1" in the case of incidents that are Immediately Dangerous to Life and Health.

	• Secure the scene, safe out equipment and assess if there is any immediate danger to yourself or other workers upon occurrence of all incidents. • Immediately report all incidents and near misses to their supervisor as per the requirements of this document. • Coordinate first aid treatment to any injured person(s) or provide it, if trained to do so. • Follow all instructions given by supervision or ERT at the incident scene. • Actively try to minimize any scene disturbance beyond helping any injured person or making the area safe to occupy. • Participating in the investigation process as required. I.e. statement writing, interviews and reenactments, etc.

6. PRE-REQUISITE COMPETENCY SKILLS

- 5 Whys Investigation Process Training
- Hazard Recognition and Control Training

7. RELATED DOCUMENTS

- Crisis Management Plan BIM-5000-PLA-0004
- Injury Illness Classification Procedure BIM-5100-SOP-0007
- Management Of Change Procedure BAF-PH1-300-PRO-0014
- NWT And NU Mine Health And Safety Act And Regulations (MHSR)
- Spill Contingency Plan BIM-5200-PLA-0012
- Substance Abuse Prevention Policy BAF-PH1-700-POL-0012
- Stakeholder Engagement Plan BIM-5200-PLA-0008
- Reporting Code 1 Emergencies Procedure BIM-5100-SOP-0006