



SCREENING DECISION REPORT
NIRB FILE No.: 20EN001

Related to NIRB File Nos.: 99WR055, 04EN014 and 05EN007

COMMISSION File No.: 149269

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April 6, 2020

Following the Nunavut Impact Review Board’s (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of Blue Star Gold Corp.’s “Ulu Gold Project” is not required pursuant to Article 12, Section 12.4.4(a) of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 92(1)(a) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (NuPPAA).

Subject to the Proponent’s compliance with the terms and conditions as set out in below, the NIRB is of the view that the project proposal is not likely to cause significant public concerns, and it is unlikely to result in significant adverse environmental and social impacts. The NIRB therefore recommends that the responsible Minister accepts this Screening Decision Report.

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The primary objectives of the NIRB are set out in Article 12, Section 12.2.5 of the *Nunavut Agreement* and are confirmed by s. 23 of the *NuPPAA*:

Nunavut Agreement, Article 12, Section 12.2.5: In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area.

The purpose of screening is provided for under Article 12, Section 12.4.1 of the *Nunavut Agreement* and s. 88 of the *NuPPAA* which states:

NuPPAA, s. 88: The purpose of screening a project is to determine whether the project has the potential to result in significant ecosystemic or socio-economic impacts and, accordingly, whether it requires a review by the Board...

To determine whether a review of a project is required, the NIRB is guided by the considerations as set out under Article 12, Section 12.4.2(a) and (b) of the *Nunavut Agreement* and s. 89(1) of *NuPPAA* which states:

NuPPAA, s. 89(1): The Board must be guided by the following considerations when it is called on to determine, on the completion of a screening, whether a review of the project is required:

- (a) a review is required if, in the Board's opinion,
 - i. the project may have significant adverse ecosystemic or socio-economic impacts or significant adverse impacts on wildlife habitat or Inuit harvest activities,
 - ii. the project will cause significant public concern, or
 - iii. the project involves technological innovations, the effects of which are unknown; and
- (b) a review is not required if, in the Board's opinion,
 - i. the project is unlikely to cause significant public concern, and
 - ii. its adverse ecosystemic and socioeconomic impacts are unlikely to be significant, or are highly predictable and can be adequately mitigated by known technologies.

It is noted that under Article 12, Section 12.4.2(c) and s. 89(2) of the *NuPPAA* provides that the considerations set out in s.89(1)(a) prevail over the considerations set out in s. 89(1)(b) of the *NuPPAA*.

As set out under Article 12, Section 12.4.4 of the *Nunavut Agreement* and s. 92(1) of the *NuPPAA*, upon conclusion of the screening process, the Board must provide its written report the Minister. The contents of the NIRB's report are specified under *NuPPAA*:

NuPPAA, s. 92(1): The Board must submit a written report to the responsible Minister containing a description of the project that specifies its scope and indicating that:

- (a) a review of the project is not required;
- (b) a review of the project is required; or
- (c) the project should be modified or abandoned.

Where the NIRB determines that a project may be carried out without a review, the NIRB has the discretion to recommend specific terms and conditions to be attached to any approval of the project proposal pursuant to paragraph 92(2)(a) of *NuPPAA* as follows:

NuPPAA, s. 92(2) In its report, the Board may also

- (a) recommend specific terms and conditions to apply in respect of a project that it determines may be carried out without a review.

PROJECT REFERRAL

On January 15, 2020 the NIRB received a referral to screen Blue Star Gold Corp.’s “Ulu Gold Project” project proposal from the Nunavut Planning Commission (Commission), which noted that the project proposal is outside the area of an applicable regional land use plan.

Pursuant to Article 12, Sections 12.4.1 and 12.4.4 of the *Nunavut Agreement* and s. 87 of the *NuPPAA*, the NIRB commenced screening this project proposal and assigned it file number **20EN001**.

PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

1. Screening Process Timelines

The following key stages were completed for the screening process:

Date	Stage
January 15, 2020	Receipt of project proposal and referral from the Commission.
January 15, 2020	Request to complete public registry online and provide information pursuant to s. 144(1) of the <i>NuPPAA</i>
January 28, 2020	Receipt and acceptance of online application from Proponent
January 28, 2020	Scoping pursuant to s. 86(1) of the <i>NuPPAA</i>
February 3, 2020	Public engagement and comment request
February 19, 2020	Receipt of Additional Information from Proponent (addition to scope)
February 20, 2020	Commission referral for amended activities and NIRB commenced screening of project proposal included amended activities as per s. 92(3)(c) of the <i>NuPPAA</i> .
February 20, 2020	Extension to public engagement and comment request
March 2, 2020	Receipt of public comments

Date	Stage
March 3, 2020	Proponent provided with an opportunity to address comments/concerns raised by public
March 12, 2020	Proponent responded to comments/concerns raised by public
April 6, 2020	Issuance of Screening Decision Report

2. Project Scope

All documents received and pertaining to this project proposal can be accessed from the NIRB's online public registry at www.nirb.ca/project/125502.

Project:	Ulu Gold Project
Region:	Kitikmeot
Location:	Ulu Mine Site and Hood River
Closest Community:	Approximately 200 kilometres (km) southeast from Kugluktuk.
Summary of Project Description:	The Proponent intends to conduct exploration and continue remediation of the site.
Project Proposed Timeline:	May 2020 to May 2025

As required under s. 86(1) of the *NuPPAA*, the Board accepts the scope of the project as set out by Blue Star Gold Corp. in the proposal. The scope of the project proposal includes the following undertakings, works, or activities:

According to the project proposal, the scope of the project includes the following undertakings, works or activities:

- establishment of a new temporary exploration camp and associated water supply;
- increase water withdrawal amount in current licence to 200 cubic metres per day (m³/day);
- conduct surface and underground exploration activities including mapping, prospecting, land and ice-based drilling;
- collect a 5,000 tonne bulk sample for offsite processing;
- conduct reclamation of legacy site infrastructure;
- undertake environmental baseline studies including but not limited to archeology, fish, water and wildlife to support an environmental assessment;
- maintenance, use and extension of existing airstrip;
- use of heavy equipment in conducting camp operations, airstrip maintenance and reclamation activities;
- storage of aviation fuel, gasoline, diesel or biodiesel, propane and hazardous materials such as lubricants, greases and coolants, drilling fluids, calcium chloride, oxygen, acetylene and explosives;
- potential establishment of remote fuel caches;
- potential use of biodiesel as a fuel source;
- transportation of crew and equipment via fixed wing aircraft, helicopter, all-terrain vehicles (ATV), trucks, bus, snowmobiles, snowcat and watercraft;
- potential use of an ice airstrip strip and/or historical winter trail route to support resupply;

- use of a portable camp for winter trail support, emergency shelter or exploration camp;
- use of existing quarries and borrow sites for construction materials;
- investigation for new quarries and borrow sites;
- establish a soil treatment facility (landfarm) for the treatment of hydrocarbon contaminated soils;
- establishment of a non-hazardous waste landfill;
- use of an incinerator for combustible waste;
- non-combustible waste to be either recycled, reuse/repurpose where possible, backhauled from site or disposed in onsite landfill;
- drill cuttings to be disposed of in a sump;
- human waste will be incinerated or disposed of in a sump;
- greywater to be disposed of in a sump; and
- hazardous waste to be backhauled and disposed of in a suitable facility.

3. Inclusion or Exclusion to Scoping List

Following consultation with the Proponent and a referral by the Commission on February 20, 2020, the NIRB resumed the assessment of the project proposal as per s. 92(3)(c) of the *NuPPAA* and included the following within the scope of the project:

- maintenance, use and extension of existing airstrip with materials sourced from new quarry materials; and
- storage of aviation fuel, diesel or biodiesel, within standalone vessels, either tanks or bladders up to 100,000 litre capacity each.

4. Public Comments and Concerns

Notice regarding the NIRB's screening of this project proposal was distributed on February 3, 2020 to community organizations in Kugluktuk, Cambridge Bay, Kingoak (Bathurst Inlet) and Umingmaktok (Bay Chimo), as well as to relevant federal and territorial government agencies, Inuit organizations and other parties. The NIRB requested that interested parties review the proposal and provide the Board with any comments or concerns by February 24, 2020 regarding:

- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic or socio-economic effects; and if so, why;
- Whether the project proposal is likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities; and if so, why;
- Whether the project proposal is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (and providing any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

On February 20, 2020 the NIRB extended the commenting period to include time for parties to review the inclusions to the scope. On or before March 2, 2020 the NIRB received comments from the following interested parties:

- **Government of Nunavut**
- **Crown-Indigenous Relations and Northern Affairs Canada**
- **Fisheries and Oceans Canada**
- **Government of the Northwest Territories**
- **Tłıchǫ Government**

a. Summary of Public Comments and Concerns Received during the Public comment period of this file

The following provides a summary of the comments and concerns received by the NIRB:

Government of Nunavut (GN)

- recommended that NIRB request additional information from the Proponent as the project proposal contains insufficient information pertaining to wildlife management and mitigation;
- project proposal does not reflect potential impacts on the Dolphin-Union and Bathurst caribou herds;
- project is in proximity (one (1) to 11 kilometres) of the calving area, post-calving areas and within the historic calving area of the Bathurst herd and the project activities may affect these areas and cause disturbance during calving, post-calving and migration;
- project schedule overlaps with the Bathurst caribou herd calving and post calving periods which occur June 2 to June 28;
- lack of information on cumulative impacts on caribou ranges from the proposed project combined with (e.g., Hood River Project, Tibbitt to Contwoyto Winer Road, Sabina Winter Ice Road, and Lupin Winter Access Road) which may cause effects on Dolphin-Union and Bathurst Caribou herd abundance and habitat quality;
- proposal is unclear if and how the Proponent used Inuit Qaujimagatuqangit to identify seasonal caribou areas;
- the exploration surveys and associated activities may disturb wildlife by converting/degrading terrestrial habitat;
- the project proposal lacks information related to environmental impacts and mitigation measures, including the necessary details related to the proposed geophysics surveys;
- the Environment and Heritage Resources Protection Plan (2020) does not discuss impacts on wildlife;
- the Wildlife Protection Plan (2020) mentions indirect habitat loss and disruption of movement as interaction pathways but, only the risk of direct and indirect mortality is discussed and assessed. No assessment of habitat loss and disruption of movement is provided;
- recommended altitude for flights where caribou may be present is 600 metres during calving and post calving, and 300 metres for other times of the year;
- recommended flights over areas where caribou have been observed and core calving areas should be avoided and mineral licks should be avoided by 1 kilometre during spring;
- no mechanism is proposed to assess the effectiveness of the mobile caribou conservation measures that are being adopted from the Kivalliq Region;
- recommended the proponent provide the project's Zone of Influence;

- recommended a revision to the Wildlife Protection Plan that includes the detailed description of proposed mitigation measures and a monitoring program;
- recommends that NIRB consider the location of the proposed new camp infrastructure, fuel storage facilities, and exploration activities be limited to areas well outside the seasonal ranges and migration corridors of the Bathurst Caribou herd;
- the project proposal contains insufficient information pertaining to the waste management and recommended the Proponent develop a fulsome Waste Management Plan that incorporates following plans: Land-farm Operation and Management Plan, Landfill Operation and Management Plan; Waste Incineration Plan, and Hazardous Waste Management Plan;
- recommended the Proponent provide additional details about the methods and containers used for fuel transport, storage and transfer and to update the Ulu Gold Project Spill Response Plan (January 2020) to provide additional detail in its proposed steps for responding to possible spills relating to larger storage containers (e.g. tanks, bladders) and include how spill response will be conducted during transport;
- additional detail is required how contaminated materials will be handled, stored and disposed of;
- recommended that the Proponent develop a Spill Contingency Plan for the land-farm operation or update the existing Ulu Gold Project Spill Response Plan (January 2020) to include a section on spill response for the land-farm. This should include specific reference to how water within the treatment cells (e.g. snowmelt, rainfall) will be tested and treated;
- Proponent has not included sufficient detail about planned quarry activities, such as estimated volume, lifespan, management, and reclamation and closure of the quarry and recommends the Proponent develop a Quarry Management Plan;
- Proponent has not included sufficient detail about how they intend to mitigate and manage impacts to wildlife and the environment from the effects of blasting and recommended the Proponent develop a Blasting Plan;
- recommended that the Proponent work with the Territorial Archaeology Office to identify and mark the locations of archaeological sites and to work with a qualified archaeologist(s) in order to conduct archaeological assessments of any areas where ground disturbance activities are planned to occur (exploration areas, campsite, airstrip extension, landfill(s), quarry/borrow sites, and winter trail);
- recommended that the Proponent adhere to the assessed winter trail route;
- recommended that no activities be conducted in the vicinity (50 metres buffer zone) of any archaeological sites

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

- Proposed Project can be mitigated with known practices or technology;
- Recommended common practices for winter roads, camps, fuel and hazardous material storage, spill containment and emergency procedures;
- Referred Proponent to reference documents.
 - Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils. Government of Canada. 2006 (Editorial Update 2013) (soil treatment facility design and operation);

- Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories. Mackenzie Valley Land and Water Board et al. November 2013;
- Exploration and Mining on Crown Lands in Nunavut Guidebook. Indian Affairs and Northern Development. Ottawa, 2005; and,
- Mine Reclamation Guidelines for the Northwest Territories and Nunavut. Department of Indian Affairs and Northern Development. 2009.
- Recommended the Proponent provide a written summary of its community engagement activities undertaken;
- Recommended the Proponent consider how it will involve communities in the Project including:
 - Incorporation of Inuit knowledge and Inuit Qaujimagatuqangit in the Project design;
 - Briefing community members on planned activities;
 - Briefing community members on monitoring results; and
 - Training and economic opportunities for community members.
- Recommended contact update (i.e., removing CIRNAC Inspector) in the Spill Response Plan; and
- Recommended updates to Manuals and Management Plans that have been referred to in the application be made available for parties to review during the screening process.

Fisheries and Oceans Canada (DFO)

- Specific information regarding the location and volume of the watercourse for camp water usage and mineral exploration are required to properly assess potential impacts to fish and fish habitat;
- Recommended Proponent refer to Fisheries and Oceans Canada's 'Interim code of practice: End-of-pipe protection screens for small water intakes in freshwater' for further mitigation measures for intake structures; and
- Noted that it is the Proponent's duty to notify DFO if they have caused or about to cause the death of fish by means other than fishing and /or the harmful alteration, disruption or destruction of fish habitat.

Government of the Northwest Territories (GNWT)

- Concerns with respect to caribou:
 - Proposed project overlaps with Bathurst caribou calving and post calving ranges;
 - Proposal likely to impact Bathurst caribou when they are most sensitive to disturbance;
 - Calving and post-calving ranges identified as necessary to the survival and displacement from these ranges linked to negative effects on calf survival and population trend;
 - Bathurst herd at a critical point with 2018 population estimates at 8,200 demonstrating a decline of more than 98% from peak numbers in 1986;
 - Human-caused factors that may impede recovery need to be kept to a minimum
- Wildlife Protection Plan submitted by Proponent does not provide adequate protection from sensory disturbance to caribou during calving and post-calving periods;
 - Restricting activities to when caribou are within 1 km is inadequate;

- No trigger distance and threshold numbers of caribou are provided for when the Proponent uses satellite collar information for making decisions;
- No discussion of lag time in location data being received and decisions being made.
- Provided supporting document links
 - Bathurst Caribou Range Plan
 - Recognizes the sensitivity and importance of calving and post-calving ranges and recommends protection of caribou;
 - Provides management tools such as mobile conservation measures that are protective of the Bathurst Caribou herd in other parts of its range
 - Recovery Strategy for Barren Ground Caribou in the NWT-draft
 - Research by Plante et al 2018 on the George and Leaf River herds in Northern Quebec and disturbance distances from exploration activities.

Thcho Government

- Concern regarding development in the area which is close to the Bathurst Caribou Herd calving grounds due to the recent dramatic decline of the herd;
- The Northwest Territories Conference of Management Authorities listed barren-ground caribou as ‘threatened’ in the Northwest Territories in February 2018;
- Extent of decline of the herd within the past 10 years is 74% which meets the population criterion of ‘endangered’;
- Noted the importance of protective measures and the need to mitigate impacts to caribou as much as possible so they can regenerate their populations;

b. Comments and Concerns with respect to Inuit Qaujimaningit, Traditional, and Community Knowledge

The following is a summary of the comments and concerns received with respect to Inuit Qaujimaningit, traditional and community knowledge:

Thcho Government

- “Caribou are in many ways the lifeline of the Tłıchǫ people; they are our way of life and culturally, our most important animal.”
- “We know that caribou are very sensitive, especially to human disturbance. In order to have caribou for future generations we have to be smart in the way we share the land with the caribou today.”
- Expressed concerns that the timing of project operation, during summer months, from May to August is the most sensitive for caribou. This is the time when caribou cows care for their newborn calves and will avoid areas of disturbance.
- During Tłıchǫ Government’s Ekwò Nàxoède K’è (formerly known as, Boots on the Ground) caribou monitoring program, the Tłıchǫ have observed low rates of calves during the last two years and this gives reason for concern that recovery of the herd is slow.
- Recommended that any disturbance to the cow and calves should be avoided to allow the few calves being born to have the ability to grow and repopulate.

5. Proponent's Response to Public Comments and Concerns

On March 4, 2020 due to the concerns and questions identified in the comments received from parties, the NIRB provided an opportunity for the Proponent to respond to the concerns raised during the commenting period. The following is a summary of the Proponent's response to concerns as received on March 12, 2020:

- Provided a summary of engagements undertaken to date and expects to have public meetings in March 2020 in Kugluktuk and Cambridge Bay;
- Agreed to provide copies of plans approved by the Nunavut Water Board (NWB) to the NIRB;
- Noted that the existing NWB water licence (2BM-ULU1520) requires that the Inspector be notified in the event of an unauthorized discharge of waste and it would be inappropriate to remove this requirement from the Spill Response Plan;
- Project has existing approved management plans including and *Interim Closure and Reclamation Plan*, and *Interim Water Management Plan* and a *Waste Management Plan* which are a condition of the water licence and are updated as part of the water licence annual reporting;
- The water licence process renewal and amendment process will allow parties to review to review and comment on these and future plans prior to the commencement of specific activities;
- Is in the process of finalizing its designs for the non-hazardous waste landfill and the soil treatment facility (also know as a landfarm) and specific sampling and handling procedures will be provide to the NWB and parties as part of the water licencing process;
- A standalone *Soil Treatment Facility Management Plan* and *Landfill management Plan* are being drafted and will be submitted to the NWB;
- A certified waste receiver will be utilized and a qualified professional actin as the Remediation Manager will be on site at all times during remediation to ensure compliant and safe waste segregation, handling, sampling and disposal;
- Provided a list of waste acceptable to be deposited into the landfill;
- Incinerator to be used for management of camp waste but controlled open burning planned for larger clean combustible waste;
- Committed to execute its work in a way that minimizes the negative effects to caribou and wildlife, and notes that the mitigation measures proposed in its *Wildlife Protection Plan* are the same as those for their adjacent Hood River Property and note that they feel these combined with NIRB's typical terms and conditions pertaining to flight heights, activity timing and overland travel are suitable to mitigate adverse environmental effects associated with the activities;
- Noted that the employment of mobile caribou mitigation measures is supported by Hunter and Trappers Organization and the Kitikmeot Inuit Association and that they do not believe a screening assessment for an existing project in the Kitikmeot Region is the appropriate venue for assessing the effectiveness of those measures developed for the Kivalliq Region;
- Noted that they do not see the need to revise the *Wildlife Protection Plan* to address camp siting in relation to sensitive habitats as it is already included in Section 5.1. but will revise Sections 5.5 and 6.5.2 to be more protective of caribou;

- Maintains that being responsive to changing wildlife use of the landscape through implementation of mobile protection measures, real time observation and current and historic collar data continue to be adequately protective;
- Expressed that a discussion of the zone of influence on caribou should not be required at the screening level;
- Described the potential effects of geophysical surveys;
- Noted that they have conducted a cumulative effects assessment that they consider adequate for the scope of the project and sufficient for screening and that they consider the potential effects to be mitigable and therefore there will be no residual effects to be carried forward into a cumulative effects assessment;
- Noted that the existing and planned projects in the area have no spatial or temporal overlap with the Ulu Project;
- Noted that fuel resupply and storage options for the upcoming season is ongoing and may include fuel delivery to site in barrels or in BATTs. Future resupply via an overland winter trail may occur, but is not planned for 2020;
- Committed to maintain and make immediately available appropriate and adequate spill response equipment materials and personnel during fuel transfer, and to maintain fuel storage and transfer within secondary containment which will be adequate to hold 110% of the largest container within the containment;
- Provided procedures for the treatment of spill response materials;
- Will develop a *Borrow Management Plan* and submit to the NWB;
- *Wildlife Protection Plan* and *Environment and Heritage Resources Protection Plan* address other drilling and blasting related potential effects;
- Have retained a Project Archeologist to conduct an archeological impact assessment in advance of any new ground disturbance; and
- Committed to engage with the Thçhø Government.

ASSESSMENT OF THE PROJECT PROPOSAL IN ACCORDANCE WITH PART 3 OF *NuPPAA*

In determining whether a review of the project is required, the Board considered whether the project proposal had potential to result in significant ecosystemic or socio-economic impacts.

Accordingly, the assessment of impact significance was based on the analysis of those factors that are set out under s. 90 of the *NuPPAA*. The Board took particular care to take into account Inuit Qaujimaningit, traditional and community knowledge in carrying out its assessment and determination of the significance of impacts.

The following is a summary of the Board’s assessment of the factors that are relevant to the determination of significant impacts with respect of this project proposal:

Factor	Comment
The size of the geographic area, including the size of wildlife habitats, likely to be affected by the impacts.	<ul style="list-style-type: none"> ▪ The physical footprint of the proposed project components is approximately 15,203 square kilometres (km²). ▪ The proposed activities may take place within habitat of far-ranging wildlife

Factor	Comment
	<p>species such as migratory and non-migratory birds, terrestrial wildlife such as caribou (Dolphin Union and Bathurst Herds), muskoxen, wolves, wolverine, arctic fox, arctic hare, and Species at Risk (Grizzly Bear, Wolverine, Peregrine Falcon, Short-eared Owl and Red-necked Phalarope). As such, project activities may potentially affect terrestrial habitat and migratory patterns.</p>
<p>The ecosystemic sensitivity of that area.</p>	<ul style="list-style-type: none"> ▪ The project footprint is located within key caribou calving and post-calving habitat areas and migration routes for the Bathurst Caribou Herd in summer and the Dolphin Union Caribou Herd during the winter/spring. ▪ As noted above the proposed project area may include several Species at Risk.
<p>The historical, cultural and archaeological significance of that area.</p>	<ul style="list-style-type: none"> ▪ The Ulu Gold Project is an existing project and exploration and camp use have occurred in the past; however, the site is undergoing remediation as proposed by the Proponent. ▪ No specific areas of historical, cultural and archaeological significance have been identified by the Proponent within the physical footprint of the proposed project. ▪ The Government of Nunavut indicates that there are numerous archaeological sites within the proposed project area, including many sites along the proposed winter trail route but this does not preclude the presence of unrecorded sites or cultural features in areas that have not had an archeological assessment.
<p>The size of the human and the animal populations likely to be affected by the impacts.</p>	<ul style="list-style-type: none"> ▪ Human populations are not likely to be affected due to distance from the proposed project activities to the nearest community. However, traditional land-use activities are likely to be affected by components of the proposed project as the area contains outpost camps, is used for traditional hunting and fishing and has also been used

Factor	Comment
	for commercial hunting of caribou, muskox, wolves and grizzly bears.
The nature, magnitude and complexity of the impacts; the probability of the impacts occurring; the frequency and duration of the impacts; and the reversibility or irreversibility of the impacts.	<ul style="list-style-type: none"> ▪ A zone of influence of up to 100 km from the most potentially disruptive project activities was selected for the NIRB's assessment. ▪ With adherence to the relevant regulatory requirements and application of the mitigation measures recommended by the NIRB, no significant residual effects are expected to occur.
The cumulative impacts that could result from the impacts of the project combined with those of any other project that has been carried out, is being carried out or is likely to be carried out.	<ul style="list-style-type: none"> ▪ The mitigation measures recommended by the NIRB have been designed with consideration for the potential for cumulative effects to result from the impacts of the project combined with other past, present and reasonably foreseeable projects.
Any other factor that the Board considers relevant to the assessment of the significance of impacts.	<ul style="list-style-type: none"> ▪ A component of the project would result in the clean-up and reclamation of legacy site infrastructure and the establishment of a soil treatment facility for treatment of hydrocarbon contaminated soils. As a result these activities would improve the ecological integrity and wildlife habitat.

Other past, present and reasonably foreseeable projects considered in this assessment:

NIRB Number	Project Title	Project Type
<i>Proposed Developments – undergoing assessment</i>		
17XN011	Grays Bay Road and Port	All Weather Road and Port
12MN043	Izok Corridor	Mine and All Weather Road
<i>Present Projects – approved or in operation</i>		
11EN047	Lupin Exploration Project	Advanced exploration
13EN013	Itchen Lake Property and Contwoyto Lake Property	Multi-year exploration
15EN024	Muskox Diamond Project	Multi-year exploration
19RN005	Lupin Mine Winter Access	Winter Road
19EA019	Hood River Project	Exploration
16UN058	Jericho Site Stabilization Project	Remediation
<i>Past Projects</i>		

NIRB Number	Project	Project Title	Project Type
08EA084/09RN066		Back River Exploration and Winter Road Project	Multi-year exploration
13UN038		Contwoyto Lake Remediation Project	Remediation
14EN033		Hood River Project	Multi-year exploration
18YN031		Tree River Geoscience Project	Research
17YN067		2017/18 Research Program for Grays Bay Road and Port	Research
17EN059		Arcadian Bay Project	Exploration
17YN060		Bathurst-Kiluhiquq Paleomagnetic Research Project	Research
00MN059		Jericho Diamond Mine	Mine [Closure and Reclamation]

VIEWS OF THE BOARD

In considering the factors as set out above in the screening of the project proposal, the NIRB has identified a number of issues below and respectfully provide the following views regarding whether or not the proposed project has the potential to result in significant impacts. In addition, the NIRB has proposed terms and conditions that would mitigate the potential adverse impacts identified.

The NIRB has listed specific Acts and Regulations below that may be applicable to the project proposal but this list should not be considered as a complete list and the Proponent is responsible to ensure that it follows all Acts and Regulations that may be applicable to the project proposal.

Ecosystem, wildlife habitat and Inuit harvesting activities:

Valued Component	Caribou, Caribou Calving and Post-Calving Habitat, and Caribou Migration Corridors
Potential effects:	Potential adverse effects to caribou and caribou habitat particularly calving, post-calving and migration areas of the Bathurst Caribou and Dolphin Union Caribou Herds from disturbance and disruption of movement from project-related noise, including the development and operations of the winter road, the camp site, quarrying, remediation activities, drilling, exploration and air transportation activities. Project activities would occur during May through October when the caribou are the most sensitive to noise disturbance. Further, there is potential for cumulative effects on disturbance to the caribou from other projects in the area.
Nature of Impacts:	Potential long-term adverse effects are possible from increased stress to caribou in key habitat areas on an already vulnerable population. If the mitigation measures proposed by the Proponent and the terms and conditions recommended by the NIRB are adhered to, the potential adverse effects to

	caribou and caribou habitat are considered to be of moderate magnitude, over the short-term and reversible upon cessation of activities.
Mitigating Factors:	The Proponent has committed to executing its work in a way that minimizes the adverse effects to caribou and has developed a <i>Wildlife Protection Plan</i> . The Proponent has committed to being responsive to changing wildlife use of the landscape through the implementation of mobile protection measures, real time observations and current and historic caribou collar data. In addition to the Proponent's proposed mitigation measures, it is expected that the terms and conditions including measures such as requiring the Proponent to cease activities that may interfere with the migration or calving of caribou until the caribou have left the area would mitigate any potential adverse impacts to caribou in the direct project area and areas adjacent to the proposed project.
Proposed Terms and Conditions:	Wildlife General – 26 through 32 Aircraft Flight Restrictions – 38 through 42 Caribou and Muskox – 43 through 48 Ground Disturbance – 50 and 58
Related Acts and/or Regulations:	1. The <i>Wildlife Act (Nunavut)</i> and its corresponding regulations (http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html).

Valued Component	Terrestrial wildlife including muskoxen, wolves, wolverine, arctic fox, arctic hare, migratory and non-migratory birds and Species at Risk (Grizzly Bear, Wolverine, Peregrine Falcon, Short-eared Owl and Red-necked Phalarope)
Potential effects:	Potential adverse effects to terrestrial wildlife, migratory and non migratory birds, and their associated habitats due to increased noise and dust generated from the project activities, including the development and operations of the winter road, the camp site, quarrying, remediation, exploration and air transportation activities.
Nature of Impacts:	The potential adverse effects of the proposed project activities to terrestrial wildlife and birds is considered to be of low magnitude, of short duration and reversible.
Mitigating Factors:	The Proponent has committed to executing its work in a way that minimizes the adverse effects to wildlife and has developed a <i>Wildlife Protection Plan</i> . The Board is also recommending terms and conditions that ensure that the potential adverse impacts can be mitigated by measures such as minimizing activities when wildlife and birds are particularly sensitive to disturbance especially during denning periods, migration, nesting and moulting, that minimum flight heights and restrictions are adhered to, and ensuring that all project personnel are made aware of the measures to protect wildlife.
Proposed Terms and Conditions:	Waste Disposal and Fuel Storage – 6 and 9 Wildlife General – 26 through 32 Migratory Birds and Raptors Disturbance – 33 through 37 Aircraft Flight Restrictions – 38 through 42

	Caribou and Muskox – 43 through 48 Ground Disturbance – 50 and 58
Related Acts and/or Regulations:	<ol style="list-style-type: none"> 1. The <i>Migratory Birds Convention Act</i> and <i>Migratory Birds Regulations</i> (http://laws-lois.justice.gc.ca/eng/acts/M-7.01/). 2. The <i>Species at Risk Act</i> (http://laws-lois.justice.gc.ca/eng/acts/S-15.3/index.html). Attached in Appendix A is a list of Species at Risk in Nunavut. 3. The <i>Wildlife Act (Nunavut)</i> and its corresponding regulations (http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html). 4. The <i>Aeronautics Act</i> (http://laws-lois.justice.gc.ca/eng/acts/A-2/).

Valued Component	Surface water quality, fish and fish habitat
Potential effects:	Potential adverse effects on surface water quality, and fish and fish habitat, from the establishment and operation of the camp, quarry activities, landfarm and landfill operations; the storage, transportation, and use of fuel, exploration drilling activities and the seasonal development and use of the winter road.
Nature of Impacts:	It is expected that standard operational considerations would mitigate any potential adverse impacts to water quality, fish, and fish habitat. As such, potential impacts would be considered to have a low magnitude, be mostly reversible and temporary in nature, and would have a low probability of extending beyond the immediate project area.
Mitigating Factors:	The Proponent has committed to implementing a <i>Spill Response Plan</i> for the project and to maintain and make immediately available appropriate and adequate spill response equipment materials and personnel during fuel transfer, and to maintain fuel storage and transfer within secondary containment. Additionally, the Proponent has a set of exiting approved management plans that provide mitigation measures that will be implemented as required. The Board is also recommending terms and conditions such as requiring the Proponent to employ mitigation measures related to fish habitat and passage protection; water protection during operations; fuel storage, use, and spill response; waste management; personnel training related to fuel and waste; use appropriate measures to prevent unplanned deposition of sediment and runoff during construction; and minimizing release of explosive residue into water. It is expected that these terms and conditions would mitigate any potential adverse impacts to water quality, fish and fish habitat in the direct project area and areas adjacent to the proposed project.
Proposed Terms and Conditions:	Water Use – 4 and 5 Fuel and Chemical Storage – 10 through 13, and 16 Landfarm Operations – 18 Landfill Operations – 23

	<p>Ground Disturbance – 49, 51 through 57, and 59 Aggregate Removal within Existing and New Quarries – 61 through 65 Stripping and Trenching – 69 through 72 Drilling on Land – 73 through 75, and 78 Drilling on Ice – 80 through 82 Land Use and Temporary Camps – 84</p>
Related Acts and/or Regulations:	<ol style="list-style-type: none"> 1. The Proponent is advised that the Canadian Environmental Protection Act (http://laws.justice.gc.ca/en/C-15.31/) lists calcium chloride (CaCl) as a toxic substance. The Proponent should assess alternatives to the use of CaCl as a drill additive, including biodegradable and non-toxic additives. 2. The <i>Fisheries Act</i> (http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html). 3. The <i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> (http://laws-lois.justice.gc.ca/eng/acts/n-28.8/). 4. The <i>Transportation of Dangerous Goods Regulations</i> (http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm), <i>Transportation of Dangerous Goods Act</i> (http://laws-lois.justice.gc.ca/eng/acts/t-19.01/), and the <i>Canadian Environmental Protection Act</i> (http://laws-lois.justice.gc.ca/eng/acts/C-15.31/). 5. The <i>Explosives Act</i> (http://laws-lois.justice.gc.ca/eng/acts/E-17/page-1.html#h-5). 6. The <i>Storage Tank System for Petroleum Products and Allied Petroleum Products Regulations</i> (http://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-197/FullText.html). The Proponent must identify their tank system to Environment and Climate Change Canada and installation of new systems must comply with the regulations' design requirements. 7. The <i>Guidelines for the use of Explosives in or near Canadian Fisheries Waters</i> (http://publications.gc.ca/site/eng/82558/publication.html). 8. Fisheries and Oceans Canada Protocol for Winter Water Withdrawal from Ice-covered Waterbodies in the Northwest Territories and Nunavut (http://registry.mvlwb.ca/Documents/W2010C0005/W2010C0005%20-%20Land%20Use%20Permit%20Application%20-%20DFO%20Water%20Withdrawal%20Protocol%20-%20Aug%2025_10.pdf).

Valued Component	Terrestrial vegetation, land, soil quality, terrain stability and permafrost
Potential effects:	Potential adverse effects to ground stability, vegetation health, soil quality, terrain, and permafrost from the establishment and operation of the camp; quarry activities; landfarm and landfill operations; the storage, transportation,

	and use of fuel; exploration drilling activities; and the seasonal development and use of the winter road.
Nature of Impacts:	The potential for adverse effects is applicable to a small geographic area that some of which includes areas previously impacted by the existing Ulu project. The potential for adverse effects is limited to the project footprint and the probability of long-term impacts occurring is considered to be low, and with proper remediation is reversible.
Mitigating Factors:	The Proponent has a suite of exiting approved management plans that provide mitigation measures that will be implemented as required. These plans include an <i>Environment and Heritage Resources Protection Plan</i> , a <i>Spill Response Plan</i> , an <i>Interim Closure and Reclamation Plan</i> , an <i>Interim Water Management Plan</i> , and a <i>Waste Management Plan</i> . The Proponent has also committed to drafting several new plans including a <i>Soil Treatment Facility Management Plan</i> describing existing contamination, soil sampling procedures and facility design; a <i>Landfill Management</i> for the landfill design and related operations and maintenance considerations; and a <i>Borrow Management Plan</i> to address use of esker materials and blast rock obtained through quarrying. The Board is also recommending terms and conditions to ensure that the potential adverse effects are minimized should they be observed.
Proposed Terms and Conditions:	Fuel and Chemical Storage – 10 through 16 Landfarm Operations – 17, 19 and 21 Landfill Operations – 22, 23 and 25 Ground Disturbance – 49, 51, 52, 55, 57, 59 and 60 Aggregate Removal within Existing and New Quarries –64 though 66 Stripping and Trenching – 70 and 71 Drilling on Land – 74 though 79 Land Use and Temporary Camps – 83 and 84 Restoration of Disturbed Areas – 87 through 89
Related Acts and/or Regulations:	<ol style="list-style-type: none"> 1. The <i>Transportation of Dangerous Goods Regulations</i> (http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm), <i>Transportation of Dangerous Goods Act</i> (http://laws-lois.justice.gc.ca/eng/acts/t-19.01/), and the <i>Canadian Environmental Protection Act</i> (http://laws-lois.justice.gc.ca/eng/acts/C-15.31/). 2. The <i>Nunavut Mining Safety Ordinance</i> and the <i>Territorial Quarrying Regulations</i> (http://www.canlii.org/en/ca/laws/regu/crc-c-1527/latest/crc-c-1527.html) or equivalent. 3. The <i>Explosives Act</i> (http://laws-lois.justice.gc.ca/eng/acts/E-17/page-1.html#h-5). 4. The <i>Storage Tank System for Petroleum Products and Allied Petroleum Products Regulations</i> (http://laws-lois.justice.gc.ca/eng/regulations/SOR-2008-197/FullText.html). The Proponent must identify their tank system

	<p>to Environment and Climate Change Canada and installation of new systems must comply with the regulations' design requirements.</p> <p>5. The <i>Northern Land Use Guidelines Pits and Quarries</i> (http://www.aadnc-aandc.gc.ca/eng/1100100023585) provide guidelines for progressive reclamation applicable to establishment of pits and quarries.</p> <p>6. The <i>Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils</i> (Science Applications International Corporation Canada, March 2006) provide information as it relates to the future operations of the landfarming activities.</p> <p>7. Environmental Guidelines for the Management of Contaminated Sites, Department of the Environment, Government of Nunavut, Revised December 2014 (http://www.gov.nu.ca/sites/default/files/contaminated_sites_remediation_2014.pdf).</p> <p>8. Environmental Guideline for Contaminated Site Remediation, Department of the Environment, Government of Nunavut; Revised March 2009 (https://www.gov.nu.ca/sites/default/files/Guideline%20Contaminated%20Site%20Site%20Remediation.pdf).</p> <p>9. Environmental Guidelines for the Management of Hazardous Waste, Government of Nunavut, Revised October 2010 (https://www.gov.nu.ca/sites/default/files/Guideline%20-%20General%20Management%20of%20Hazardous%20Waste%20%28rvised%20Oct%202010%29_0.pdf).</p>
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Valued Component	Air Quality
Potential effects:	Potential adverse impacts to air quality including dust and emissions generated by site activities including the use of heavy equipment for excavation and quarrying, the use of explosives to blast rock, vehicles traffic and the incineration of combustible wastes.
Nature of Impacts:	The potential adverse impacts to air quality would be limited to within the project footprint with a low probability of extending beyond the geographic area. The potential adverse impacts to air quality are considered to be of low magnitude, short-term, and reversible.
Mitigating Factors:	It is recommended that the potential adverse impacts may be mitigated by ensuring the Proponent undertakes appropriate dust suppression measures and that the incineration of combustible wastes comply with the <i>Canadian Wide Standards for Dioxins and Furans</i> , and the <i>Canadian Wide Standards for Mercury</i> .

Proposed Terms and Conditions:	Waste Disposal/Incineration – 7 through 9 Landfarm Operations – 21 Landfill Operations – 23 and 25 Ground Disturbance – 51 Aggregate Removal within Existing and New Quarries – 62
Related Acts and/or Regulations:	<i>Canada Wide Standards for Dioxin and Furans</i> <i>Canadian Wide Standards for Mercury</i>

Valued Component	Environment (land, water and air)
Potential effects:	Potential positive effects from the remediation activities including the identification and removal of hazardous wastes, uncontrolled wastes, and contaminated soil remediation.
Nature of Impacts:	Treating and removing contaminated soils, removing and disposing of structures and disposing of hazardous waste and site debris will reduce some of the environmental risks at the Ulu project site which could contribute to more serious contamination and environmental degradation without intervention.
Mitigating Factors:	Adhering to the NIRB's terms and conditions as well as the respective authorizations, it is expected that the project would provide an increase to the ecosystemic and environmental integrity of the area.
Proposed Terms and Conditions:	Landfarm Operations – 17 through 29 Landfill Operations – 22 and 23 Restoration of Disturbed Areas – 87 through 90.
Related Acts and/or Regulations:	<ol style="list-style-type: none"> 1. Environmental Guidelines for the Management of Contaminated Sites, Department of the Environment, Government of Nunavut, Revised December 2014 (http://www.gov.nu.ca/sites/default/files/contaminated_sites_remediation_2014.pdf). 2. Environmental Guideline for Contaminated Site Remediation, Department of the Environment, Government of Nunavut; Revised March 2009 (https://www.gov.nu.ca/sites/default/files/Guideline%20Contaminated%20Site%20Site%20Remediation.pdf). 3. Environmental Guidelines for the Management of Hazardous Waste, Government of Nunavut, Revised October 2010 (https://www.gov.nu.ca/sites/default/files/Guideline%20-%20General%20Management%20of%20Hazardous%20Waste%20-%20revised%20Oct%202010%29_0.pdf).

Valued Component	Wildlife harvesting and traditional land use activities.
Potential effects:	Potential adverse effects to traditional land use pursuits in the area from caribou migration disruptions and other wildlife disturbances from increased noise associated with the operational and remediation activities at the Ulu site, the transportation of personnel and equipment to and from the drill locations, the use of existing and new quarry sites, and the mineral exploration activities. The Proponent is proposing to work in an area in proximity to caribou calving, post-calving and caribou migration routes and the potential for disruption may cause stress and avoidance of critical caribou habitat. As a result, local caribou populations may be reduced and subsequently the availability of caribou as country food. This area also contains outpost camps and is known for of traditional land use activities and commercial sport hunts.
Nature of Impacts:	Although the proposed project would include temporary and intermittent activities that would have limited potential for direct interaction with traditional land use activities, potential long-term impacts are possible from increased stress to wildlife (particularly to caribou) in key habitat areas. Unmitigated project impacts could affect the migratory patterns of the caribou herds and could result in indirect impacts on an already vulnerable population and subsequently on harvesting activities tied to these shared traditional resources in other areas.
Mitigating Factors:	The Proponent has committed to executing its work in a way that minimizes the negative effects to wildlife and has developed a <i>Wildlife Protection Plan</i> and has committed to adopting mobile caribou protection measures. The Board is also recommending terms and conditions that ensure that the affected communities and organizations are informed about the project proposal, and that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities in the area. Terms and conditions associated with the protection of wildlife and wildlife habitat have also been recommended and are identified above.
Proposed Terms and Conditions:	Aggregate Removal within Existing and New Quarries – 67 and 68 Other – 90 and 91
Related Acts and/or Regulations:	n/a

Socio-economic effects on northerners:

Valued Component	Historical, Cultural and Archeological Sites
Potential effects:	Potential adverse impacts to historical, cultural and archaeological sites from land disturbance activities associated with the remediation project with the establishment of camps, exploration drilling, winter road and land travel.

Nature of Impacts:	The Proponent is proposing to work in an area where some historical, cultural or archaeological sites of significance have been identified and there is the potential to encounter other sites that have not yet been identified. The potential for impacts is considered to be minimal due to majority of the proposed project that would occur within the existing Ulu site and the winter road would be routed consistent with past winter roads.
Mitigating Factors:	The Proponent has retained a Project Archeologist to conduct an archeological impact assessment in advance of any new ground disturbance outside the existing Ulu pad area.
Proposed Terms and Conditions:	Heritage Resource – 85 and 86 Other – 90
Related Acts and/or Regulations:	The <i>Nunavut Act</i> (http://laws-lois.justice.gc.ca/eng/acts/N-28.6/). The Proponent must comply with the proposed terms and conditions listed in the attached Appendix B .

Valued Component	Local hiring, contracting and economic impact
Potential effects:	Potential positive impacts from the hiring of local community members for various projects and activities.
Nature of Impacts:	Potential for impacts is considered to be positive if the Proponent adheres to its commitment to hiring locally to the extent possible.
Mitigating Factors:	The Board is recommending terms and conditions to ensure that the Proponent continues to inform the communities of the ongoing site activities and to ensure community members are aware of and best able to successfully connect with hiring opportunities.
Proposed Terms and Conditions:	Other – 90 and 92
Related Acts and/or Regulations:	n/a

Significant public concern:

Valued Component	Public Concern
Potential effects:	Public concern was expressed over the potential impacts on Bathurst caribou herd calving and post-calving areas and on the extent of the decline of the Bathurst Caribou herd, the herd's vulnerability and the resultant adverse impacts on communities which rely on harvesting of this herd. Additional concerns were expressed over the timing of project operation, during summer months, from May to August which is the most sensitive time for caribou.

Nature of Impacts:	Proposed project activities are located in the calving, post-calving and migration areas of the Bathurst Caribou Herd; this is also an area that may be used for traditional activities, such as hunting and camping. There is also the potential for cumulative effects of the proposed with other projects in the area which may cause cumulative effects on both the Dolphin-Union and Bathurst Caribou herds' abundance and habitat quality.
Mitigating Factors:	Follow up consultation and involvement of local community members is expected to mitigate any potential for public concern resulting from project activities. The Proponent has committed to engage with the Th̄çḡ Government. The Board has recommended a term and condition to ensure that available Inuit Qaujimaningit, Traditional Knowledge and community knowledge of the area can inform project design. Additionally, the Board is recommending that the Proponent provide an annual report that includes wildlife observations and an evaluation of the success of the mitigative measures applied and that they submit a community engagement strategy plan and a public consultation report (see Monitoring and Reporting Requirements section below).
Proposed Terms and Conditions:	Other – 90 and 91
Related Acts and/or Regulations:	n/a

Technological innovations for which the effects are unknown:

- No specific issues have been identified associated with this project proposal.

Administrative Conditions:

To encourage compliance with applicable regulatory requirements and assist the Board and responsible authorities with compliance and effects monitoring for project activities, the following project-specific terms and conditions have been recommended: 1-3.

In considering the above factors and subject to the Proponent's compliance with the terms and conditions necessary to mitigate against the potential adverse environmental and social effects, the Board is of the view that the proposed project is unlikely to cause significant public concern and its adverse ecosystemic and socioeconomic impacts are unlikely to be significant, or are highly predictable and can be adequately mitigated by known technologies.

RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS

The Board is recommending the following specific terms and conditions to apply in respect of the project:

General

1. Blue Star Gold Corp. (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
2. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (COMMISSION File No.: 149269), and the NIRB (Online Application Form, January 28, 2020; Additional Information, February 19, 2020).
3. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

Water Use

4. The Proponent shall not extract water from any fish-bearing waterbody unless the water intake hose is equipped with a screen of appropriate mesh size to ensure that there is no entrapment of fish. Small lakes or streams should not be used for water withdrawal unless otherwise authorized by the Nunavut Water Board.
5. The Proponent shall not use water, including constructing or disturbing any stream, lakebed or the banks of any definable water course unless authorized by the Nunavut Water Board.

Waste Disposal/Incineration

6. The Proponent shall keep all garbage and debris in bags placed in a covered metal container or equivalent until disposed of at an approved facility. All such wastes shall be kept inaccessible to wildlife at all times.
7. The Proponent shall incinerate all combustible wastes daily and dispose of ash by burial beneath no less than one (1) metre of compacted soil. Non-combustible wastes shall be removed from the project site to an approved facility for disposal.
8. The Proponent shall ensure that no waste oil/grease is incinerated on site.

Fuel and Chemical Storage

9. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
10. The Proponent shall locate all fuel and other hazardous materials a minimum of thirty-one (31) metres away from the high water mark of any water body and in such a manner as to prevent their release into the environment unless otherwise authorized by the Nunavut Water Board.
11. The Proponent shall ensure that re-fueling of all equipment occurs a minimum of thirty-one (31) metres away from the high water mark of any water body, unless otherwise authorized by the Nunavut Water Board.
12. The Proponent shall use adequate secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks) when storing barreled fuel and chemicals at all locations.

13. The Proponent shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available during any transfer of fuel or hazardous substances, at all fuel storage sites, at all refuelling stations, at vehicle maintenance areas and at drill sites.
14. The Proponent shall inspect and document the condition of all large fuel tanks and fuel caches on a weekly basis. All fuel and chemical storage containers must be clearly marked with the Proponent's name and examined for leaks immediately upon delivery.
15. The Proponent shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment.
16. The Proponent shall ensure that all personnel are properly trained in fuel and hazardous waste handling procedures, as well as spill response procedures. All spills of fuel or other deleterious materials of any amount must be reported immediately to the 24 hour Spill Line at (867) 920-8130.

Landfarm Operations

17. The Proponent shall treat only petroleum and hydrocarbon contaminated soils at the landfarm facility. Materials contaminated with other substances such as glycol and heavy metals are not to be stored at the landfarm and must be disposed of at an authorized facility.
18. The Proponent shall ensure that it meets the required standards as set out in the Nunavut Water Board's Water Licence for this project prior to any discharge of water collected in the retention cell(s).
19. The Proponent shall ensure that the equipment used for aeration in the landfarm operation have been cleaned off within the landfarm facilities prior to exiting.
20. The Proponent shall take appropriate dust suppression measures when conducting soil turning and removal.
21. All operations personnel shall be adequately trained prior to commencement of landfarm operations and shall be made aware of all operational guidelines and Proponent commitments relating to the Project.

Landfill Operations

22. The Proponent shall dispose of non-hazardous materials only at the landfill and shall limit this disposal to those materials listed as acceptable for disposal. Hazardous materials, materials listed as unacceptable for disposal at the landfill, or materials that contain asbestos, fluorescent tubes or ozone depleting substances are not to be disposed of in the landfill and must be disposed of at an authorized facility.
23. The Proponent shall ensure that it meets the standards and/or limits as set out in the Nunavut Water Board Water Licence and any other permits as required for this project.
24. The Proponent shall take appropriate dust suppression measures when conducting soil topping of landfill materials, or landfill capping activities.

25. All operations personnel shall be adequately trained prior to commencement of landfill operations and shall be made aware of all operational guidelines and Proponent commitments relating to the Project.

Wildlife – General

26. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
27. The Proponent shall not harass wildlife. This includes persistently circling, chasing, hovering over pursuing or in any other way harass wildlife, or disturbing large groups of animals.
28. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
29. The Proponent shall ensure that all wildlife have the right-of-way on the winter road. Vehicles are required to slow down or stop and wait to permit the free and unrestricted movement of wildlife across the winter road at any location.
30. The Proponent shall enforce safe speed limits for vehicles travelling along the winter road to ensure drivers have sufficient time to react in a safe manner if wildlife are encountered on the winter road.
31. The Proponent shall ensure that drivers maintain at least 500 metres spacing when traveling in convoys to ensure drivers have time to react to any wildlife on the winter road.
32. The Proponent shall ensure that all project personnel are made aware of the measures to protect wildlife and are provided with training and/or advice on how to implement these measures.

Migratory Birds and Raptors Disturbance

33. The Proponent shall avoid conducting land clearing activities during the migratory bird season.
34. The Proponent shall not disturb or destroy the nests or eggs of any birds. If active nests of any birds are discovered or located (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have naturally left the vicinity of the nest by establishing a protection buffer zone¹ appropriate for the species and the surrounding habitat.
35. The Proponent shall minimize activities during periods when birds are particularly sensitive to disturbance such as migration, nesting and moulting.
36. The Proponent shall avoid the seaward site of seabird colonies and areas used by flocks of migrating waterfowl by three (3) kilometres.
37. The Proponent shall ensure its aircraft avoid excessive hovering or circling over areas where bird presence is likely.

¹ Recommended setback distances to define buffer zones have been established by Environment and Climate Change Canada for different bird groups nesting in tundra habitat and can be found at www.ec.gc.ca/paom-itmb.

Aircraft Flight Restrictions

38. The Proponent shall not alter flight paths to approach wildlife, and avoid flying directly over animals.
39. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum flight altitude of 610 metres above ground level except during landing, take-off or if there is a specific requirement for low-level flying, which does not disturb wildlife or migratory birds.
40. The Proponent shall ensure that aircraft maintain a vertical distance of 1000 metres and a horizontal distance of 1500 metres from any observed groups (colonies) of migratory birds. Aircraft should avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.
41. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
42. The Proponent shall advise all pilots of relevant flight restrictions and enforce their application over the project area, including flight paths to/from the project area.

Caribou and Muskox Disturbance

43. The Proponent shall avoid interfering with any paths or crossings known to be frequented by caribou during periods of migration.
44. The Proponent shall cease activities that may interfere with the migration or calving of caribou or muskox, until the caribou or muskox have passed or left the area.
45. The Proponent shall not block or cause any diversion to caribou or muskox migration, and shall cease activities likely to interfere with migration such as airborne geophysics surveys, drilling or movement of equipment or personnel until such time as the caribou or muskox have passed.
46. The Proponent shall not construct or operate any camp, cache any fuel or conduct blasting within ten (10) kilometres, or conduct any drilling operation within five (5) kilometres of any designated caribou water crossings.
47. During the period of May 15 to July 15, the Proponent shall suspend all project operations, including low-level over flights, drilling, blasting/trenching and use of snow mobiles and all-terrain vehicles outside the immediate vicinity of the camps. Should the results of localized monitoring satisfy the land use inspector the project operations may resume without disturbing pregnant caribou cows or cows with young calves the suspension may be lifted for the periods specified.
48. Should pregnant caribou cows, cows with young calves, or groups of 50 or more caribou be observed within one (1) kilometer of project operations at any time, the Proponent shall suspend all operations in the vicinity, including low level overflights, drilling, blasting/trenching, and use of snowmobiles and all terrain vehicles outside the immediate vicinity of the camp, until caribou are no longer in the immediate area.

Ground Disturbance

49. The Proponent shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles must be suspended if rutting occurs.
50. All construction and road vehicles must be fitted with standard and well-maintained noise suppression devices and engine idling is to be minimized.
51. The Proponent shall select a winter route that maximizes the use of frozen water bodies.
52. The Proponent shall not erect camps or store materials on the surface ice of lakes or streams, except that which is for immediate use.
53. The Proponent shall ensure that no disturbance of the stream bed or banks of any definable watercourse be permitted, except where deemed necessary for maintaining project-specific operational commitments or by a responsible authority in cases of spill management.
54. The Proponent shall not move any equipment or vehicles without prior testing the thickness of the ice to ensure the lake is in a state capable of fully supporting the equipment or vehicles.
55. The Proponent shall ensure that bank disturbances are avoided and no mechanized clearing carried out immediately adjacent to any watercourse.
56. The Proponent shall ensure that stream crossings and/or temporary crossings constructed from ice and snow, which may cause jams, flooding or impede fish passage and or water flow, are removed or notched prior to spring break-up.
57. The Proponent shall avoid disturbance on slopes prone to natural erosion, and alternative locations shall be utilized.
58. The Proponent shall ensure snow bank heights along the winter road/trail are managed to allow wildlife visibility and passage.
59. The Proponent shall implement suitable erosion and sediment suppression measures on all areas before, during and after conducting activities in order to prevent sediment from entering any waterbody. This includes ensuring that a sufficient thickness of snow and ice is present on the winter road to prevent unnecessary erosion of the underlying ground surface and impact on underneath vegetation.
60. The Proponent shall implement a clean-up and reclamation stabilization plan which should include, but is not limited to, re-vegetation and/or stabilization of exposed soil in road bed.

Aggregate Removal within Existing and New Quarries

61. The Proponent shall use water or other non-toxic and biodegradable additives for dust suppression as necessary to maintain ambient air quality without causing water to pool or runoff.
62. The Proponent shall not deposit or permit the deposit of sediment into any water body.
63. The Proponent shall ensure there is no obstruction of natural drainage, flooding or channel diversion from quarry/pit access, stockpiles, or other structures or facilities.

64. The Proponent shall ensure that silt fences/curtains are installed down gradient of any quarry activities.
65. The Proponent shall maintain an undisturbed buffer zone between the periphery of quarry sites and the highwater mark of any water body that is of an adequate distance to ensure erosion control.
66. The Proponent shall locate screening and crushing equipment on stable ground, at a location with ready access to stockpiles.
67. The Proponent shall clearly stake and flag pit and quarry boundaries so they remain visible to other land users.
68. The Proponent shall locate quarry/pit facilities so as to avoid all recreational sites and public use areas, and to protect unique geographical features and natural aesthetics.

Stripping and Trenching

69. The Proponent shall not conduct any trenching activities within thirty-one (31) metres of the high water mark of any water body unless authorized by the Nunavut Water Board.
70. The Proponent shall implement sediment and erosion control measures by employing erosion prevention measures (e.g., berms or silt fence) in the trenching area during the project operation.
71. The Proponent shall stockpile all overburden/topsoil generated during trenching using proper erosion prevention measures. Upon completion of operation, the Proponent shall back fill, reclaim/re-contour and re-vegetate all disturbed areas.
72. The Proponent shall pump accumulated water in blast trenches to a natural depression sump, with berms build if necessary. Water should be analyzed in accordance with the Nunavut Water Board water license discharge criteria before discharging into the environment.

Drilling on Land

73. The Proponent shall not conduct any land-based drilling or mechanized clearing within thirty-one (31) metres of the normal high water mark of a water body unless authorized by the Nunavut Water Board.
74. The Proponent shall not allow any drilling wastes to spread to the surrounding lands or water bodies.
75. If an artesian flow is encountered, the Proponent shall ensure the drill hole is immediately plugged and permanently sealed.
76. The Proponent shall ensure that all drill areas are constructed to facilitate minimizing the environmental footprint of the project area. Drill areas should be kept orderly with garbage removed daily to an approved disposal site.

77. The Proponent shall ensure that all sump/depression capacities are sufficient to accommodate the volume of waste water and any fines that are produced. The sumps shall only be used for inert drilling fluids, and not any other materials or substances.
78. The Proponent shall not locate any sump within thirty-one (31) metres of the normal high water mark of any water body sumps unless otherwise authorized by the Nunavut Water Board. Sumps and areas designated for waste disposal shall be sufficiently bermed or otherwise contained to ensure that substances do not enter a waterway.
79. The Proponent shall ensure all drill holes are backfilled or capped prior to the end of each field season. All sumps must be backfilled and restored to original or stable profile prior to the end of each field season.

Drilling on Ice

80. If drilling is conducted on lake ice, the Proponent shall ensure that any return water is non-toxic, and will not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers for the Environment (CCME) Guidelines for the Protection of Freshwater Aquatic Life.
81. The Proponent shall ensure that drill muds and additives are not used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water or are demonstrated to be non-toxic.
82. The Proponent shall ensure that all drill cuttings are removed from ice surfaces daily.

Land Use and Temporary Camps

83. The Proponent shall ensure that the land use area is kept clean and tidy at all times.
84. The Proponent shall ensure that all camps are located on gravel, sand or other durable land.

Heritage Sites

85. No activities shall be conducted in the vicinity (50 metres buffer zone) of any archaeological/historical sites. If archaeological sites or features are encountered, activities shall immediately be interrupted and moved away from this location. Each site encountered needs to be recorded and reported to the Government of Nunavut-Department of Culture and Heritage.
86. The Proponent shall ensure that all clients and staff are aware of the Proponent's responsibilities and requirements regarding archaeological or palaeontological sites that are encountered during land-based activities. This should include briefings explaining the prohibitions regarding removal of artifacts and defacing or writing on rocks and infrastructure.

Restoration of Disturbed Areas

87. The Proponent shall remove all garbage, fuel and equipment upon abandonment.
88. The Proponent shall complete all clean-up and restoration of the lands used prior to the end of each field season and/or upon abandonment of site.

89. The Proponent shall survey to the full extent its mineral leases to identify sources of pre-existing waste and/or contamination prior to establishing its camp and supporting infrastructure. Progressive reclamation should be practiced to the extent possible.

Other

90. The Proponent should consult with local residents regarding their activities in the area and solicit available Inuit Qaujimaningit, Traditional Knowledge and information that can inform project activities.

91. The Proponent shall ensure that project activities do not interfere with Inuit and non-Inuit wildlife harvesting or traditional land use activities.

92. The Proponent should, to the extent possible, hire local people and access local services where possible.

MONITORING AND REPORTING REQUIREMENTS

In addition, the Board is recommending the following:

Wildlife Mitigation and Monitoring Plan

1. Prior to the start of project activities, the Proponent shall submit an updated Wildlife Mitigation and Monitoring Plan (WMMP) to the Nunavut Impact Review Board, and the Government of Nunavut-Department of Environment. At a minimum, this plan should include proposed mitigation measures for caribou, migratory birds, grizzly bear and other sensitive species that may be encountered within the project area. The Proponent is encouraged to consult with the Government of Nunavut's Regional Biologists during the revision of the WMMP, regarding project schedule and timelines so as to ensure adequate mitigation of potential wildlife impacts.

Abandonment and Restoration Plan

2. The Proponent shall submit an Abandonment and Restoration Plan to the Nunavut Impact Review Board, Crown-Indigenous Relations and Northern Affairs Canada and the Government of Nunavut- Department of Environment prior to undertaking activities in the potential development area. The Plan should include procedures for using native plant species for re-vegetation in order to eliminate risk of introducing invasive species to the area pursuant to the Wildlife Act.

Community Consultation Report

3. The Proponent shall submit a community engagement strategy plan and a public consultation report to the Nunavut Impact Review Board as follows:

- a. Community Engagement Strategy Plan should be provided prior to the commencement of project activities and include:
 - i. information on how the Proponent plans to inform local residents of the project proposal; and
 - ii. how the community will be briefed on the monitoring results.

- b. Public Consultation Report should be provided following completion of project activities and include:
- i. copy of materials presented to community members;
 - ii. a description of issues and concerns raised; and
 - iii. advice offered to the Proponent as well as any follow-up actions that were required or taken to resolve any concerns expressed about the project.

Annual Report

4. The Proponent shall submit a comprehensive annual report with copies provided to the Nunavut Impact Review Board, by March 31st of each year of permitted activities beginning March 31, 2021. The annual report must contain at least the following information:
- a) A summary of activities undertaken for the year, including but not limited to:
 - a map showing the approximate location of drill sites;
 - a map showing the location of the fuel cache(s);
 - a description of local hires, contracting opportunities and initiatives;
 - flight altitudes, frequency of flights and flight routes;
 - site photos;
 - any reclamation work undertaken;
 - b) A work plan for the following year, including any progressive reclamation work to be undertaken;
 - c) A summary of community consultations undertaken throughout the year, providing copy of materials presented to community members, a description of issues and concerns raised, discussions with community members and advice offered to the company as well as any follow-up actions that were required or taken to resolve any concerns expressed about the project proposal;
 - d) A log of instances in which community residents occupy or transit through the project area for the purpose of traditional land use or harvesting. This log should include the location and number of people encountered, activity being undertaken (e.g., berry picking, fishing, hunting, camping, etc.), date and time; and any mitigation measures or adaptive management undertaken to prevent disturbance;
 - e) A discussion of issues related to wildlife and environmental monitoring, including the number of cease-work orders required as a result of proximity to caribou and any other wildlife;
 - f) A brief summary of WMMP results as well as any mitigation actions that were undertaken. In addition, the Proponent shall maintain a record of wildlife observations while operating within the project area and include it as part of the summary report. The summary report based on wildlife observations should include the following:
 1. Locations (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible.
 2. Prior to conducting project activities, the Proponent should map the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing

sites, and raptor nests in the project area, and identify the timing of critical life history events (i.e., calving, mating, denning and nesting).

3. Additionally, the Proponent should indicate potential impacts from the project, and ensure that operational activities are managed and modified to avoid impacts on wildlife and sensitive sites.
 - g) An analysis of the effectiveness of mitigation measures for wildlife;
 - h) Summary of any heritage sites encountered during the exploration activities, any follow-up action or reporting required as a result and how project activities were modified to mitigate impacts on the heritage sites;
 - i) Summary of its knowledge of Inuit land use in/near the project area and explain how project activities were modified to mitigate impacts on Inuit land use; and
 - j) A summary of how the Proponent has complied with conditions contained within this Screening Decision, and all conditions as required by other authorizations associated with the project proposal.

Spill Contingency Plan

5. The Proponent shall update its Spill Contingency Plan to:
 - a) include a section on spill response for the land-farm and include specific reference to how water within the treatment cells (e.g. snowmelt, rainfall) will be tested and treated; and
 - b) provide additional detail in its proposed steps for responding to possible spills relating to larger storage containers (e.g. tanks, bladders) and include how spill response will be conducted during transport.
6. The Proponent shall implement the recommendations found in the 2003 CCME Guidance Document PN 1326 entitled “*Environmental Code of Practice for Above Ground and Underground Storage Tank Systems containing Petroleum Product and Allied Petroleum Products*”.

OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board is recommending the following:

Change in Project Scope

1. Responsible authorities or Proponent shall notify the Nunavut Planning Commission as appropriate, and the NIRB of any changes in operating plans or conditions, including phase advancement, associated with this project prior to any such change.

Copy of licences, etc. to the Board and Commission

2. As per s. 137(4) of the *NuPPAA*, responsible authorities are required to submit a copy of each licence, permit or other authorization issued for the Project to the Nunavut Planning Commission and the NIRB. Please forward a copy of the licences, permits and/or other

authorizations to the NIRB directly at info@nirb.ca or upload a copy to the NIRB's online registry at www.nirb.ca.

Use of Inuit Qaujimaningit and Other Traditional Knowledge Holders

3. The Proponent is encouraged to work with local communities and knowledge holders to inform project design, to carry out the project, and to confirm or validate the perspectives represented in publications, film or other media produced as part of the project. Care should be taken to ensure that Inuit Qaujimaningit, Traditional Knowledge and local knowledge collected for the project is used with permission and is accurately represented.

Bear and Carnivore Safety

4. The Proponent should review the Government of Nunavut's booklet on Bear Safety, which can be downloaded from this link: http://gov.nu.ca/sites/default/files/bear_safety_-_reducing_bear-people_conflicts_in_nunavut.pdf. Further information on bear/carnivore detection and deterrent techniques can be found in the "*Safety in Grizzly and Black Bear Country*" pamphlet, which can be downloaded from this link: http://www.enr.gov.nt.ca/sites/default/files/web_pdf_wd_bear_safety_brochure_1_may_2015.pdf.
5. There are polar bear and grizzly bear safety resources available from the Bear Smart Society with videos on polar bear safety available in English, French and Inuktitut at <http://www.bearsmart.com/play/safety-in-polar-bear-country/>. Information can also be obtained from Parks Canada's website on bear safety at the following link: <http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/d.aspx> or in reviewing the "*Safety in Polar Bear Country*" pamphlet, which can be downloaded from the following link: http://www.pc.gc.ca/eng/pn-np/nu/quttinirpaaq/visit/visit6/~/_media/pn-np/nu/auyuittuq/pdf/shared/PolarBearSafety_English.ashx.
6. Any problem wildlife or any interaction with carnivores should be reported immediately to the local Government of Nunavut, Department of Environment Conservation Office (Conservation Officer of Kugluktuk, phone: (867) 982-7450).

Species at Risk

7. The Proponent review Environment and Climate Change Canada's "Environment Assessment Best Practice Guide for Wildlife at Risk in Canada", available at the following link: http://www.sararegistry.gc.ca/virtual_sara/files/policies/EA%20Best%20Practices%202004.pdf. The guide provides information to the Proponent on what is required when Wildlife at Risk, including *Species at Risk*, are encountered or affected by the project.

Migratory Birds

8. The Proponent review Canadian Wildlife Services' "Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut", available at the following link: <http://publications.gc.ca/site/eng/317630/publication.html> and "Key marine habitat sites for migratory birds in Nunavut and the Northwest Territories", available at the following link: <http://publications.gc.ca/site/eng/392824/publication.html>. The guide provides information

to the Proponent on key terrestrial and marine habitat areas that are essential to the welfare of various migratory bird species in Canada.

9. For further information on how to protect migratory birds, their nests and eggs when planning or carrying out project activities, consult Environment and Climate Change Canada's Incidental Take web page and the fact sheet "Planning Ahead to Reduce the Risk of Detrimental Effects to Migratory Birds, and their Nests and Eggs" available at: http://publications.gc.ca/collections/collection_2013/ec/CW66-324-2013-eng.pdf.

Incineration of Wastes

10. The Proponent review Environment and Climate Change Canada's "Technical Document for Batch Waste Incineration", available at the following link: <http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1>. The technical document provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting.
11. The Proponent review the Canadian Council of Ministers of the Environment's "Guidance Document for Canadian Jurisdictions on Open-Air Burning", available at the following link: http://www.ccme.ca/files/Resources/air/wood_burning/pn_1548_CCME%20Guidance%20Document%20on%20Open%20Air%20Burning%20FINAL.pdf as a guidance document for best practices associated with open-air burning.

Transport of Dangerous Goods and Waste Management

12. Environment and Climate Change Canada recommends that all hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.
13. The Proponent shall ensure that proper shipping documents (waste manifests, transportation of dangerous goods, etc.) accompany all movements of dangerous goods. Further, the Proponent shall ensure that the shipment of all dangerous goods is registered with the Government of Nunavut Department of Environment, Department of Environment Manager. Contact the Manager (867) 975-7748 to obtain a manifest if dangerous goods including hazardous wastes will be transported.

Winter Roads/Trails

14. If ice bridges are constructed, the Proponent follow the mitigation measures outlined in Fisheries and Oceans Canada's Operational Statement for Ice Bridges, available at the following internet address: <http://www.dfo-mpo.gc.ca/pnw-ppe/fpp-ppp/guide-eng.html>.
15. Cutting or filling of crossing approaches below the highwater mark will require prior review and approval by Fisheries and Oceans Canada - Fish Habitat Management Branch.

Caribou Management

16. Territorial and federal government agencies in Nunavut should work together with Regional Inuit Associations, co-management boards and industry to develop an action plan to identify and mitigate potential cumulative effects of human land use activities, including mineral

exploration, on barren-ground caribou. This assessment of cumulative effects should occur at a regional scale (i.e., larger than individual project areas).

17. As a result of expressed concerns regarding mineral exploration and the associated potential for cumulative effects on caribou and caribou habitat within the Kitikmeot region, the Commission, territorial and federal government agencies should work together with Regional Inuit Associations, co-management boards, the public, and industry to develop a plan that identifies appropriate land use in these areas prior to potential mineral exploration. The plan should identify and mitigate potential cumulative effects of human land use activities on barren-ground caribou on both localized and regional scales.
18. The Commission should be aware of the public concerns regarding a perceived lack of protection for caribou and caribou habitat within the Kitikmeot region of Nunavut. In developing a Nunavut-wide land use plan, the Commission may wish to consider formalized protection of important caribou habitat, and seasonal restrictions on potentially disruptive activities in these areas to minimize disturbance to caribou lifecycles and Inuit harvesting activities.

Crown Indigenous and Northern Affairs Canada

19. Crown Indigenous and Northern Affairs Canada (CIRNAC) impose mitigation measures, conditions and monitoring requirements pursuant to the Federal Land Use Permit, which require the Proponent to respect the sensitivities and importance of the area. These mitigation measures, conditions and monitoring requirements should be in regard to the location and area; type, location, capacity and operation of facilities; use, storage, handling and disposal of chemical or toxic material; wildlife and fisheries habitat; and petroleum fuel storage.
20. CIRNAC consider the importance of conducting regular Land Use Inspections, pursuant to the authority of the Federal Land Use Permit, while the project is in operation. The Land Use Inspections should be focused on ensuring the Proponent is in compliance with the conditions imposed through the Federal Land Use Permit.
21. CIRNAC forward to the NIRB copies of any decisions by Inspectors which allow project activities to continue in areas of caribou presence between dates indicating work stoppages are necessary (exemptions from Caribou Protection Measures).

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to the Blue Star Gold Corp's "Ulu Gold Project". The NIRB remains available for consultation with the Minister regarding this report as necessary.

Dated April 6, 2020 at Baker Lake, NU.

M. Kaviq Kaluraq

Kaviq Kaluraq, Chairperson

Attachments: Appendix A: Species at Risk in Nunavut
Appendix B: Archaeological and Palaeontological Resources Terms and Conditions for Land Use
Permit Holders

APPENDIX A: SPECIES AT RISK IN NUNAVUT

Due to the requirements of Section 79(2) of the Species at Risk Act (SARA), and the potential for project-specific adverse effects on listed wildlife species and its critical habitat, measures should be taken as appropriate to avoid or lessen those effects, and the effects need to be monitored. Project effects could include species disturbance, attraction to operations and destruction of habitat. This section applies to all species listed on Schedule 1 of SARA, as listed in the table below, or have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), which may be encountered in the project area. This list may not include all species identified as at risk by the Territorial Government. The following points provide clarification on the applicability of the species outlined in the table.

- Schedule 1 is the official legal list of Species at Risk for SARA. SARA applies to all species on Schedule 1. The term “listed” species refers to species on Schedule 1.
- Schedule 2 and 3 of SARA identify species that were designated at risk by the COSEWIC prior to October 1999 and must be reassessed using revised criteria before they can be considered for addition to Schedule 1.
- Some species identified at risk by COSEWIC are “pending” addition to Schedule 1 of SARA. These species are under consideration for addition to Schedule 1, subject to further consultation or assessment.

If species at risk are encountered or affected, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the species at risk Registry at <http://www.sararegistry.gc.ca> for information on specific species.

Monitoring should be undertaken by the Proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of species at risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested.

For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.

Mitigation and monitoring measures must be undertaken in a way that is consistent with applicable recovery strategies and action/management plans.

Schedules of SARA are amended on a regular basis so it is important to check the SARA registry (www.sararegistry.gc.ca) to get the current status of a species.

Updated: September 2019

Terrestrial Species at Risk ²	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ³
Migratory Birds			
Buff-breasted Sandpiper	Special Concern	Schedule 1	Environment and Climate Change Canada (ECCC)
Common Nighthawk	Threatened	Schedule 1	ECCC
Eskimo Curlew	Endangered	Schedule 1	ECCC
Harlequin Duck	Special Concern	Schedule 1	ECCC
Harris's Sparrow	Special Concern	Schedule 1	ECCC
Horned Grebe	Special Concern	Schedule 1	ECCC
Ivory Gull	Endangered	Schedule 1	ECCC
Olive-sided Flycatcher	Threatened	Schedule 1	ECCC
Peregrine Falcon	Special Concern	Schedule 1	ECCC
Red Knot Islandica Subspecies	Special Concern	Schedule 1	ECCC
Red-necked Phalarope	Special Concern	Schedule 1	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	ECCC
Short-eared Owl	Special Concern	Schedule 1	ECCC
Vegetation			
Porsild's Bryum	Threatened	Schedule 1	Government of Nunavut (GN)
Arthropods			
Transverse Lady Beetle	Special Concern	No Schedule	GN
Terrestrial Wildlife			
Caribou (Dolphin and Union Population)	Endangered	Schedule 1	GN
Caribou (Barren-ground Population)	Threatened	No Schedule	GN
Caribou (Torngat Mountains Population)	Endangered	No Schedule	GN
Grizzly Bear (Western Population)	Special Concern	Schedule 1	ECCC
Peary Caribou	Endangered	Schedule 1	GN
Polar Bear	Special Concern	Schedule 1	ECCC
Wolverine	Special Concern	Schedule 1	GN
Marine Wildlife			
Atlantic Walrus (High Arctic Population)	Special Concern	No Schedule	Fisheries and Oceans Canada (DFO)
Atlantic Walrus (Central/Low Arctic Population)	Special Concern	No Schedule	DFO
Beluga Whale (Cumberland Sound Population)	Threatened	Schedule 1	DFO
Beluga Whale (Eastern Hudson Bay Population)	Endangered	No Schedule	DFO

² The Department of Fisheries and Oceans has responsibility for aquatic species.

³ Environment and Climate Change Canada (ECCC) has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the Migratory Birds Convention Act (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency.

Terrestrial Species at Risk²	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility³
Beluga Whale (Eastern High Arctic-Baffin Bay Population)	Special Concern	No Schedule	DFO
Beluga Whale (Western Hudson Bay Population)	Special Concern	No Schedule	DFO
Fish			
Atlantic Cod (Arctic Lakes Population)	Special Concern	No Schedule	DFO
Fourhorn Sculpin (Freshwater Form)	Data Deficient	Schedule 3	DFO
Lumpfish	Threatened	No Schedule	DFO
Thorny Skate	Special Concern	No Schedule	DFO

**APPENDIX B: ARCHAEOLOGICAL AND PALAEOLOGICAL RESOURCES TERMS AND
CONDITIONS FOR LAND USE PERMIT HOLDERS**



INTRODUCTION

The Department of Culture and Heritage (CH) routinely reviews land use applications sent to the Nunavut Water Board, Nunavut Impact Review Board and the Indigenous and Northern Affairs Canada. These terms and conditions provide general direction to the permittee/proponent regarding the appropriate actions to be taken to ensure the permittee/proponent carries out its role in the protection of Nunavut’s archaeological and palaeontological resources.

TERMS AND CONDITIONS

- 1) The permittee/proponent shall have a professional archaeologist and/or palaeontologist perform the following **Functions** associated with the **Types of Development** listed below or similar development activities:

	Types of Development (See Guidelines below)	Function (See Guidelines below)
a)	Large scale prospecting	Archaeological/Palaeontological Overview Assessment
b)	Diamond drilling for exploration or geotechnical purpose or planning of linear disturbances	Archaeological/ Palaeontological Inventory
c)	Construction of linear disturbances, Extractive disturbances, Impounding disturbances and other land disturbance activities	Archaeological/ Palaeontological Inventory or Assessment or Mitigation

Note that the above-mentioned functions require either a Nunavut Archaeologist Permit or a Nunavut Palaeontologist Permit. CH is authorized by way of the *Nunavut and Archaeological and Palaeontological Site Regulations*⁴ to issue such permits.

- 2) The permittee/proponent shall not operate any vehicle over a known or suspected archaeological or palaeontological site.

⁴P.C. 2001-1111 14 June, 2001

- 3) The permittee/proponent shall not remove, disturb, or displace any archaeological artifact or site, or any fossil or palaeontological site.
- 4) The permittee/proponent shall immediately contact CH at (867) 934-2046 or (867) 975-5500 should an archaeological site or specimen, or a palaeontological site or fossil, be encountered or disturbed by any land use activity.
- 5) The permittee/proponent shall immediately cease any activity that disturbs an archaeological or palaeontological site encountered during the course of a land use operation until permitted to proceed with the authorization of CH.
- 6) The permittee/proponent shall follow the direction of CH in restoring disturbed archaeological or palaeontological sites to an acceptable condition. If these conditions are attached to either a Class A or B Permit under the Territorial Lands Act Indigenous and Northern Affairs Canada directions will also be followed.
- 7) The permittee/proponent shall provide all information requested by CH concerning all archaeological sites or artifacts and all palaeontological sites and fossils encountered in the course of any land use activity.
- 8) The permittee/proponent shall make best efforts to ensure that all persons working under its authority are aware of these conditions concerning archaeological sites and artifacts and palaeontological sites and fossils.
- 9) If a list of recorded archaeological and/or palaeontological sites is provided to the permittee/proponent by CH as part of the review of the land use application the permittee/proponent shall avoid the archaeological and/or palaeontological sites listed.
- 10) Should a list of recorded sites be provided to the permittee/proponent, the information is provided solely for the purpose of the proponent's land use activities as described in the land use application, and must otherwise be treated confidentially by the proponent.

Legal Framework

As stated in Article 33 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)*:

Where an application is made for a land use permit in the Nunavut Settlement Area, and there are reasonable grounds to believe that there could be sites of archaeological importance on the lands affected, no land use permit shall be issued without written consent of the Designated Agency. Such consent shall not be unreasonably withheld. [33.5.12]

Each land use permit referred to in Section 33.5.12 shall specify the plans and methods of archeological site protection and restoration to be followed by the permit holder, and any other conditions the Designated Agency may deem fit. [33.5.13]

Palaeontology and Archaeology

Under the *Nunavut Act*⁵, the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under the *Nunavut Archaeological and Palaeontological Sites Regulations*⁶, it is illegal to alter or disturb any palaeontological or archaeological site in Nunavut unless permission is first granted through the permitting process.

Definitions

As defined in the *Nunavut Archaeological and Palaeontological Sites Regulations*, the following definitions apply:

“archaeological site” means a place where an archaeological artifact is found.

“archaeological artifact” means any tangible evidence of human activity that is more than 50 years old and in respect of which an unbroken chain of possession or regular pattern of usage cannot be demonstrated, and includes a Denesuline archaeological specimen referred to in section 40.4.9 of the Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement).

“palaeontological site” means a site where a fossil is found.

“fossil” includes:

Fossil means the hardened or preserved remains or impression of previously living organisms or vegetation and includes:

- (a) natural casts;*
- (b) preserved tracks, coprolites and plant remains; and*
- (c) the preserved shells and exoskeletons of invertebrates and the preserved eggs, teeth and bones of vertebrates.*

Guidelines for Developers for the Protection of Archaeological Resources in the Nunavut Territory

(Note: Partial document only, complete document at: www.ch.gov.nu.ca/en/Archaeology.aspx)

Introduction

The following guidelines have been formulated to ensure that the impacts of proposed developments upon heritage resources are assessed and mitigated before ground surface altering activities occur. Heritage resources are defined as, but not limited to, archaeological and historical sites, burial grounds, palaeontological sites, historic buildings and cairns. Effective collaboration between the developer, the Department of Culture, and Heritage (CH), and the contract archaeologist(s) will ensure proper preservation of heritage resources in the Nunavut Territory. The roles of each are briefly described.

CH is the Nunavut Government agency which oversees the protection and management of

⁵ s. 51(1)

⁶ P.C. 2001-1111 14 June, 2001

heritage resources in Nunavut, in partnership with land claim authorities, regulatory agencies, and the federal government. Its role in mitigating impacts of developments on heritage resources is as follows: to identify the need for an impact assessment and make recommendations to the appropriate regulatory agency; set the terms of reference for the study depending upon the scope of the development; suggest the names of qualified individuals prepared to undertake the study to the developer; issue an archaeologist or palaeontologist permit authorizing field work; assess the completeness of the study and its recommendations; and ensure that the developer complies with the recommendations.

The primary regulatory agencies that CH provides information and assistance to are the Nunavut Impact Review Board, for development activities proposed for Inuit Owned Lands (as defined in Section 1.1.1 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)*), and the Indigenous and Northern Affairs Canada, for development activities proposed for federal Crown Lands.

A developer is the initiator of a land use activity. It is the obligation of the developer to ensure that a qualified archaeologist or palaeontologist is hired to perform the required study and that provisions of the contract with the archaeologist or palaeontologist allow permit requirements to be met; i.e. fieldwork, collections management, artifact and specimen conservation, and report preparation. On the recommendation of the contract archaeologist or palaeontologist in the field and the Government of Nunavut, the developer shall implement avoidance or mitigative measures to protect heritage resources or to salvage the information they contain through excavation, analysis, and report writing. The developer assumes all costs associated with the study in its entirety.

Through his or her active participation and supervision of the study, the contract archaeologist or palaeontologist is accountable for the quality of work undertaken and the quality of the report produced. Facilities to conduct fieldwork, analysis, and report preparation should be available to this individual through institutional, agency, or company affiliations. Responsibility for the curation of objects recovered during field work while under study and for documents generated in the course of the study as well as remittance of artifacts, specimens and documents to the repository specified on the permit accrue to the contract archaeologist or palaeontologist. This individual is also bound by the legal requirements of the *Nunavut Archaeological and Palaeontological Sites Regulations*.

Types of Development

In general, those developments that cause concern for the safety of heritage resources will include one or more of the following kinds of surface disturbances. These categories, in combination, are comprehensive of the major kinds of developments commonly proposed in Nunavut. For any single development proposal, several kinds of these disturbances may be involved

- *Linear disturbances: including the construction of highways, roads, winter roads, transmission lines, and pipelines;*
- *Extractive disturbances: including mining, gravel removal, quarrying, and land filling;*

- *Impoundment disturbances: including dams, reservoirs, and tailings ponds;*
- *Intensive land use disturbances: including industrial, residential, commercial, recreational, and land reclamation work, and use of heritage resources as tourist developments.*
- *Mineral, oil and gas exploration: establishment of camps, temporary airstrips, access routes, well sites, or quarries all have potential for impacting heritage resources.*

Types of Studies Undertaken to Preserve Heritage Resources

Overview: An overview study of heritage resources should be conducted at the same time as the development project is being designed or its feasibility addressed. They usually lack specificity with regard to the exact location(s) and form(s) of impact and involve limited, if any, field surveys. Their main aim is to accumulate, evaluate, and synthesize the existing knowledge of the heritage of the known area of impact. The overview study provides managers with baseline data from which recommendations for future research and forecasts of potential impacts can be made. A Class I Permit is required for this type of study if field surveys are undertaken.

Reconnaissance: This is done to provide a judgmental appraisal of a region sufficient to provide the developer, the consultant, and government managers with recommendations for further development planning. This study may be implemented as a preliminary step to inventory and assessment investigations except in cases where a reconnaissance may indicate a very low or negligible heritage resource potential. Alternately, in the case of small-scale or linear developments, an inventory study may be recommended and obviate the need for a reconnaissance.

The main goal of a reconnaissance study is to provide baseline data for the verification of the presence of potential heritage resources, the determination of impacts to these resources, the generation of terms of reference for further studies and, if required, the advancement of preliminary mitigative and compensatory plans. The results of reconnaissance studies are primarily useful for the selection of alternatives and secondarily as a means of identifying impacts that must be mitigated after the final siting and design of the development project. Depending on the scope of the study, a Class 1 or Class 2 Permit is required for this type of investigation.

Inventory: A resource inventory is generally conducted at that stage in a project's development at which the geographical area(s) likely to sustain direct, indirect, and perceived impacts can be well defined. This requires systematic and intensive fieldwork to ascertain the effects of all possible and alternate construction components on heritage resources. All heritage sites must be recorded on Government of Nunavut Site Survey forms. Sufficient information must be amassed from field, library and archival components of the study to generate a predictive model of the heritage resource base that will:

- allow the identification of research and conservation opportunities;
- enable the developer to make planning decisions and recognize their likely effects on the known or predicted resources; and

- make the developer aware of the expenditures, which may be required for subsequent studies and mitigation. A Class 1 or 2 permit is required.

Assessment: At this stage, sufficient information concerning the numbers and locations of heritage resources will be available, as well as data to predict the forms and magnitude of impacts. Assessments provide information on the size, volume, complexity and content of a heritage resource, which is used to rank the values of different sites or site types given current archaeological knowledge. As this information will shape subsequent mitigation program(s), great care is necessary during this phase.

Mitigation: This refers to the amelioration of adverse impacts to heritage resources and involves the avoidance of impact through the redesign or relocation of a development or its components; the protection of the resource by constructing physical facilities; or, the scientific investigation and recovery of information from the resource by excavation or other method. The type(s) of appropriate mitigative measures are dictated by their viability in the context of the development project. Mitigation strategies must be developed in consultation with, and approved by, the Department of Culture and Heritage. It is important to note that mitigation activities should be initiated as far in advance of the construction of the development as possible.

Surveillance and monitoring: These may be required as part of the mitigation program.

Surveillance may be conducted during the construction phase of a project to ensure that the developer has complied with the recommendations.

Monitoring involves identification and inspection of residual and long-term impacts of a development (i.e. shoreline stability of a reservoir); or the use of impacts to disclose the presence of heritage resources, for example, the uncovering of buried sites during the construction of a pipeline.