



**NOTICE OF RELEASE OF SCREENING DECISION REPORT
NIRB FILE NO.: 16UN059**

NPC File No.: 148353

January 6, 2017

To: Tracey McCaie
Manager Land Administration
Indigenous and Northern Affairs Canada
P.O Box 100
Iqaluit, NU X0A 0H0

Cc: Karén Kharatyan
A/Manager of Licencing
Nunavut Water Board
P.O Box 119
Gjoa Haven, NU X0B 1J0

Sent via email: tracey.mccaie@aandc.gc.ca ; landsmine@aandc.gc.ca ;
karen.kharatyan@nwb-oen.ca ; licencing@nwb-oen.ca

Re: Notice of Release of Screening Decision Report for Indigenous and Northern Affairs Canada's "CAM-C (Matheson Point) Remediation Project" Proposal, Kitikmeot Region, NIRB File No. 16UN059

Dear Tracey McCaie and Karén Kharatyan

Enclosed is the Nunavut Impact Review Board (NIRB or Board) Screening Decision Report to the Honourable Carolyn Bennett, Minister of Indigenous and Northern Affairs and Thomas Kabloona, Chairperson of the Nunavut Water Board for Indigenous and Northern Affairs Canada's "CAM-C (Matheson Point) Remediation Project" in the Kitikmeot Region, dated January 6, 2017.

The NIRB has assessed this project proposal for ecosystemic and socio-economic impacts taking into consideration the comments from relevant authorities and communities. Based on this assessment, the Board has indicated to the responsible Minister(s) that a review of the project is not required in accordance with paragraph 92(1)(a) of the *Nunavut Planning and Project Assessment Act* (NuPPAA). Accordingly, the NIRB awaits a response from the Minister.

In the absence of a response from the Minister, regulatory authorities should take note of paragraph 75(1)(e) of the *NuPPAA*, which provides: "A regulatory authority is not authorized to

issue a licence, permit or other authorization in respect of a project if the responsible Minister has decided either that the project could be modified and an amended project submitted to the Commission or that it is not to proceed.” Contravention of section 75(1) of *the NuPPAA* will render a licence, permit or other authorization issued of no force or effect.

Please contact Talia Maksagak NIRB Junior Technical Advisor at 867-983-5627 or info@nirb.ca if you have any questions or require additional clarification.

Sincerely,

A handwritten signature in blue ink, reading "Talia Maksagak".

Talia Maksagak
Junior Technical Advisor

cc: David Rochette, Indigenous and Northern Affairs Canada
Spencer Dewar, Indigenous and Northern Affairs Canada
Dele Morakinyo, Indigenous and Northern Affairs Canada
Geoff Clark, Kitikmeot Inuit Association
Charlotte Lamontagne, Indigenous and Northern Affairs Canada
Distribution List

Enclosure: NIRB Screening Decision Report (NIRB File No.: 16UN059)

Accordingly, the NIRB is issuing the attached Screening Decision Report dated January 6, 2017 to the responsible Minister(s). The Screening Decision Report provides, among other things, the regulatory framework, project overview and the NIRB assessment process, factors relevant for the determining significance of impacts and recommended project-specific terms and conditions.

Please note that the project proposal will not be enclosed due to the size of the electronic document and the limited bandwidth. However, an electronic copy of the project proposal is accessible online from the NIRB's online public registry at www.nirb.ca by using any of the following search criteria:

- Project Name: CAM-C (Matheson Point) Remediation Project
- NIRB File No.: 16UN059
- Application No.: 125014

We look forward to receiving a response from the responsible Minister. If you have any questions or require clarification, please do not hesitate to contact the NIRB's Director, Technical Services, Tara Arko at (867) 983-4611 or tarko@nirb.ca.

Sincerely,



Elizabeth Copland, Chairperson
Nunavut Impact Review Board

Enclosure: Screening Decision Report, NIRB File No.: 16UN059 (January 6, 2017)



SCREENING DECISION REPORT NIRB FILE No.: 16UN059

NPC File No.: 148353

January 6, 2017

Following the Nunavut Impact Review Board's (NIRB or Board) assessment of all materials provided, the NIRB is recommending that a review of Indigenous and Northern Affairs Canada, Contaminated Sites Program – Nunavut Division's "CAM-C (Matheson Point) Remediation Project" is not required pursuant to paragraph 92(1)(a) of the *Nunavut Planning and Project Assessment Act* (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(s) accepts this Screening Decision Report.

OUTLINE OF SCREENING DECISION REPORT

- 1) REGULATORY FRAMEWORK
- 2) PROJECT REFERRAL
- 3) PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS
- 4) FACTORS FOR DETERMINING SIGNIFICANCE OF IMPACTS
- 5) VIEWS OF THE BOARD
- 6) RECOMMENDED PROJECT-SPECIFIC TERMS AND CONDITIONS
- 7) MONITORING AND REPORTING REQUIREMENTS
- 8) OTHER NIRB CONCERNS AND RECOMMENDATIONS
- 9) REGULATORY REQUIREMENTS
- 10) CONCLUSION

REGULATORY FRAMEWORK

The primary objectives of the NIRB are set out in Section 12.2.5 of the Nunavut Land Claims Agreement (NLCA) as follows:

"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."

These objectives are confirmed under section 23 of the NuPPAA.

The purpose of screening is provided for under section 88 of the NuPPAA:

“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 subsection 89(1) of NuPPAA:

“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 subsection 89(2) provides that the considerations set out in paragraph 89(1)(a) prevail over those set out in paragraph 89(1)(b).

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. Specifically, paragraph 92(2)(a) of NuPPAA provides:

“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 October 6, 2016 the NIRB received a referral to screen the project proposal from the Nunavut Planning Commission (NPC or Commission).

Pursuant to Article 12, Section 12.4.4 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada* (Nunavut Agreement) and section 86 of the *Nunavut Planning and Project Assessment Act* (NuPPAA), the NIRB commenced screening this project proposal and assigned it file number 16UN059.

1. Project Description

The proposed “CAM-C (Matheson Point) Remediation Project” is located within the Kitikmeot region, approximately 30 kilometres northeast of Gjoa Haven. The Proponent intends to conduct remediation activities of the former CAM-C Intermediate Distant Early Warning Line site. The remediation activities are proposed to take place from April 2017 to March 2019.

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

- Remediation and clean-up of two (2) locations at Matheson Point: the Main Station and the Beach Area;
- Mobilization of personnel and equipment to Matheson Point:
 - Transportation of up to 30 personnel to site via helicopter and fixed-wing aircraft;
 - Sealifting of equipment and supplies to the site;
- Establishment and operation of a temporary 30-person camp;
- Temporary storage of fuels and hazardous materials at the camp site including:
 - 375,00 litres of diesel and 41,000 litres of gasoline;
 - 80 litres of hydraulic and motor oil;
 - Eight (8) kilograms of grease; and
 - 135 kilograms of propane;
- Use of equipment including backholes, tracked tractors, and all-terrain vehicles and snowmobiles, to support remediation activities;
- Improvements to existing site access routes and an airstrip;
- Withdrawal of up to 13 cubic metres of water daily from an inland waterbody for domestic and remediation activities;
- Quarrying of gravel and overburden materials to support remediation activities;
- Construction and operation of a landfarm cell for contaminated soil;
- Demolition of existing site infrastructure;
- Excavation, removal, handling, packaging, and onsite or offsite disposal of up to 4,932 cubic metres of hazardous and non-hazardous wastes, including:
 - Soils contaminated with petroleum hydrocarbons;
 - Soils contaminated with metals and polychlorinated biphenyls (PCBs); and
 - Scrap metal, drums, concrete, and other debris;
- Generation and disposal of grey water, sewage and other camp-related wastes onsite or offsite at an approved disposal facility;
- Incineration of combustible non-hazardous solid wastes on-site; and
- Demobilization and removal of equipment and materials on completion of remediation activities, including decommissioning of the landfarm cell after contaminated soils are remediated.

2. Scoping

The NIRB has identified no additional works or activities in relation to the project proposal.

3. Key Stages of the Screening Process

The following key stages were completed:

Date	Stage
October 6, 2016	Receipt of project proposal from the NPC
October 14, 2016	Information request(s)
November 9, 2016	Proponent responded to information request(s)
November 9, 2016	Scoping pursuant to subsection 86(1) of the NuPPAA
November 14, 2016	Public engagement and comment request
December 5, 2016	Receipt of public comments ¹
December 22, 2016	Ministerial extension requested from the Minister of Indigenous and Northern Affairs

4. Public Comments and Concerns

Notice regarding the NIRB's screening of this project proposal was distributed on November 14, 2016 to community organizations in Gjoa Haven, Taloyoak and Kugaaruk, 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 December 5, 2016¹ 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 and socio-economic effects; and if so, why;
- Whether the project is likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities; if so, why;
- Whether the project is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (please providing any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

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

Government of Nunavut (GN)

- Noted that the CAM-C site overlaps the natural range of Peary Caribou. Recommended that the Proponent inform on-site personnel when caribou are present at or near the project site and suspend project activities when caribou are observed on the project site.
- Indicated that hunting is prohibited for all on-site personnel.
- Noted that the use of fixed-wing aircraft can induce stress to wildlife. Recommended that aircraft maintain an altitude of 610 metres, except when approaching the airstrip, landing or taking off.

¹ On December 2, 2016 the NIRB issued correspondence to interested parties informing them of the Board's extension of the commenting deadline from December 5, 2016 to December 12, 2016 to accommodate for instances of limited public registry accessibility and related technical issues during the commenting period.

- Noted that the use of explosives may injure wildlife. Recommended that the Proponent survey blast sites and their surroundings to ensure that wildlife are at a safe distance before conducting blasting activities.
- Recommended that the Proponent conduct surveys to identify nests, dens and other wildlife refuges prior to conducting proposed remediation activities as wildlife may use abandoned structures as habitat.
- Indicated that the Proponent should comply with provisions under Section 73 of the *Nunavut Wildlife Act*.
- Noted that the range for muskox overlap the CAM-C site. Recommended that the Proponent avoid approaching muskox closer than 200 metres during calving season (April-June), and to be vigilant of potential disturbance to male muskox during the breeding season (August-September).

Environment and Climate Change Canada (ECCC)

- Recommended the use of an approved incinerator for the disposal of combustible wastes.
- Noted that the Proponent is required to carry out all phases of the project in a manner that avoids harming, killing or disturbing migratory birds. Recommended that the Proponent take into account ECCC's Avoidance Guidelines and comply with the *Migratory Birds Convention Act*.
- Noted that the Proponent should avoid harming, killing or harassing at-risk wildlife including those listed in the *Species at Risk Act*.

Fisheries and Oceans Canada (DFO)

- Recommended that the Proponent follow DFO's guidance tools in order to comply with the *Fisheries Act*.
- Noted that there is the potential for disturbance of marine mammals from marine-based activities associated with the project. Recommended that the Proponent survey the marine component of the project area for marine mammals and avoid accelerating within 400 metres or approaching closer than 100 metres of marine mammals.

Indigenous and Northern Affairs Canada (INAC)

- No comments or concerns regarding the project proposal at this time.

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

No concerns or comments were received with respect to Inuit Qaujimaningit or traditional and community knowledge in relation to the proposed project.

FACTORS FOR DETERMINING SIGNIFICANCE OF IMPACTS

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 section 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:

1. *The size of the geographic area, including the size of wildlife habitats, likely to be affected by the impacts.*

The proposed remediation activities will occur at the former CAM-C Intermediate Distant Early Warning Line site (DEW Line Site) at Matheson Point, approximately 30 kilometres northeast of Gjoa Haven. The footprint of the proposed remediation activities at the DEW Line Site will be approximately 22 square kilometres, which will include sites at the Main Station and Beach Area. The proposed activities may take place within habitat for muskox, wolves, migratory birds, inland and marine fish, marine mammals, and Species at Risk such as Peary Caribou, Red Knot, and Polar Bear, as identified by the Proponent and from mapping sources.

2. *The ecosystemic sensitivity of that area.*

The proposed remediation activities may occur in an area with ecosystemic sensitivity, including the potential for overlap of portions of the project footprint with Peary Caribou habitat. Specifically, the footprint of the proposed project may overlap areas identified as having value and priority to the local community (Gjoa Haven) for:

- i. Caribou migration routes,
- ii. Drinking water sources,
- iii. Polar bears, and
- iv. Arctic char.

3. *The historical, cultural and archaeological significance of that area.*

The Proponent has indicated that there are a number of known areas of historical, cultural and archaeological significance in the vicinity of the project area. Should the project be approved to proceed, the proponent has committed to avoiding identified archaeological resources in the vicinity of the project area and would be required to contact the Government of Nunavut-Department of Culture and Heritage if any additional sites of historical, cultural or archaeological significance are encountered.

4. *The size of the human and the animal populations likely to be affected by the impacts.*

The proposed project would occur at a location approximately 30 kilometres from Gjoa Haven, the nearest community; as such, no human populations are likely to be affected by project impacts. However, it was noted during the commenting period that there is potential for impact to Peary Caribou, which could result in adverse impacts to traditional pursuits such as caribou hunting. No other specific animal populations have been identified as likely to be affected by potential project impacts.

Although no significant public concerns were raised during the public commenting period, the NIRB notes that the proximity of the proposed activities to the community of Gjoa Haven and areas used by residents for recreational/traditional pursuits could potentially contribute to public concern developing. A term and condition has been recommended to direct engagement with the community, Hunters and Trappers Organization and posting of public notices to ensure residents are aware of the research being or to be conducted.

5. *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.*

The proposed project would involve the cleanup of a former DEW Line Site and remediation of contaminated soils; therefore, the proposed activities will be focused on reducing existing environmental impacts at the site. There is potential for additional impacts as a result of the proposed remediation activities to be conducted over a period of 144 days. However, based on past evidence of similar scope of activities, the potential adverse impacts will be short in duration and may be of low magnitude, reversible and mitigable with due care.

6. *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.*

The proposed project would occur in an area with some history of development, however the development is primarily associated with Hamlet infrastructure and include “Granular Production Operation” (08QN080); “Quarry Operation, Swan Lake” (05QN120). The proposed project would also occur within a 100 kilometres of one project that is currently active and located within the Hamlet of Gjoa Haven; the “Tank Farm Expansion and Upgrade” (16XN003). The potential for cumulative impacts to caribou, other terrestrial wildlife and habitat, fish and fish habitat, migratory birds, marine mammals, water quality, soil quality, cultural and archaeological resources, soil quality, terrain, permafrost, air quality, traditional wildlife harvesting pursuits and the local economy, as a result of the implementation of the proposed remediation activities and other projects occurring the region have been considered in the development of the NIRB’s recommendations.

7. *Any other factor that the Board considers relevant to the assessment of the significance of impacts.*

No other specific factors have been identified as relevant to the assessment of this project proposal.

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.

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: 1-4.

Ecosystem, wildlife habitat and Inuit harvesting activities:

Issue 1: Potential adverse impacts to caribou and caribou habitat (Peary caribou herd), other terrestrial wildlife, migratory birds, and marine mammals from site preparation, excavation, demolishing of existing structures, air traffic, marine shipping associated with the remediation project, and increased noise activities from the remediation project.

Board views: As discussed above in the assessment of factors relevant to this project proposal, the potential for impact(s) associated with proposed land-based activities, such as site preparation, excavation, demolition, and air traffic, is applicable to an area of approximately 22 square kilometres, which overlaps the natural ranges of several terrestrial wildlife species including Peary Caribou, muskox, wolves, Polar Bear, and migratory birds. In addition, there is potential for impacts to marine mammals from proposed marine-based activities such as marine shipping (sealifting) of equipment and waste to and/or from the project site. The potential impacts to terrestrial wildlife, migratory birds, and marine mammals are associated with disturbance and disruption of movement from project-related noise, and mortality from collisions with land-based vehicles, destruction of existing structures used as wildlife refuge, and vessel strikes in the marine environment. To mitigate potential impacts to wildlife, the Proponent has committed to inspecting facilities for wildlife presence prior to conducting any demolition exercise, avoiding areas of known wildlife or bird nests, and employing minimum distance requirements for transportation at the project site, including in the marine environment. The potential impacts to caribou, other terrestrial wildlife, migratory birds, and marine mammals are considered to be of low magnitude, short duration, infrequent, and reversible.

The Proponent would also be required to follow the *Migratory Birds Convention Act*, *Migratory Birds Regulations*, *Species at Risk Act*, the *Nunavut Wildlife Act*, the *Arctic Waters Pollution Prevention Act*, and the *Canada Shipping Act* (see Regulatory Requirements section).

Recommended Mitigation Measures: It is recommended that the potential adverse impacts may be mitigated by measures such as requiring the Proponent to maintain minimum flight altitudes and seasonal restrictions, and avoid disposal of wastes in the marine environment. The Board recommends the following terms and conditions to mitigate the potential adverse impacts to caribou, other terrestrial wildlife, migratory birds, and marine mammals: 7, 12, 22-35, and 49. In addition, the Board recommends term and

condition 38 to mitigate the potential adverse impacts from noise to migratory birds and terrestrial wildlife.

Issue 2: Potential adverse impacts to fresh and marine water quality, fish and fish habitat from potential spill events, site preparation, structure demolition, landfarming, and marine shipping activities associated with the remediation project.

Board views: The project may adversely impact fresh and marine water quality, fish and fish habitat from fuel and hazardous material spills, erosion and deposition of contaminated soil into or in proximity of the aquatic environment, including fish-bearing waterbodies, during site preparation, structure demolition, landfarming and marine shipping activities. However, the likelihood of such spill events or dispersion of hazardous material is considered to be low as the Proponent has committed to using berms and liners at storage sites for fuel and other hazardous materials and to implementing a Fuel and Hazardous Material Spill Contingency Plan for any spill incidents in different media (soil; snow; and water). The Proponent has also committed to implementing erosion protection measures such as silt curtains to reduce the spread of any eroded soils to water bodies. As a result, the potential adverse impacts to water quality, fish and fish habitat are considered to be of low magnitude, infrequent and reversible.

The Proponent would require a water licence from the Nunavut Water Board for the water usage activities and fuel storage. In addition, the Proponent would also be required to follow the *Fisheries Act*, the *Transportation of Dangerous Goods Regulations*, *Transportation of Dangerous Goods Act* and the *Canadian Environmental Protection Act* (see *Regulatory Requirements* section).

Recommended Mitigation Measures: It is recommended that the potential adverse impacts to fresh and marine water quality, fish and fish habitat may be mitigated by measures such as requiring the Proponent to ensure all project personnel are properly trained in fuel and hazardous waste handling procedures and ensure that silt fences or curtains are established down slope of quarry sites. The Board recommends the following terms and conditions to mitigate the potential adverse impacts to water quality, fish and fish habitat: 5, 6, 10, 11, 13-15, 17, 19, and 41-43.

Issue 3: Potential adverse impacts to ground stability, vegetation health, soil quality, terrain, and permafrost from site preparation, excavation and quarrying activities associated with the remediation project.

Board views: The potential for adverse impacts is applicable to a small geographic area that includes areas previously potentially contaminated with the development of the DEW Line site including the Main Station and the Beach Area. The activities proposed for the project, including site preparation, excavation, and quarrying, may result in adverse impacts to soil quality from erosion resulting in the redistribution of contaminated soil. Such project activities may also adversely impact terrain and permafrost as a result of grade changes to the land and exposure of the active zone in soils. However, the potential for impacts is limited to the project footprint and the probability of long term

impacts occurring is considered to be low. To mitigate potential impacts, the Proponent has committed to minimizing the land surface area to be exposed during the remediation project and to implementing erosion protection measures such as silt curtains. The Proponent has also committed to regrading and reshaping disturbed areas to match existing natural terrain and to restoring natural surface drainage patterns. The potential adverse impacts to soil quality, terrain, and permafrost are considered to be of low magnitude and reversible.

The Proponent would also be required to follow the *Transportation of Dangerous Goods Regulations*, *Transportation of Dangerous Goods Act*, and the *Canadian Environmental Protection Act*.

Recommended Mitigation Measures: It is recommended that the potential adverse impacts to the terrestrial environment, particularly ground stability, vegetation and surface soils would be mitigated by measures requiring the Proponent to follow appropriate refueling procedures, remove all garbage, undertake restoration of the site to a stable state upon completion of project activities, and implement erosion prevention measures prior to land disturbance. The Board recommends the following terms and conditions to mitigate the potential adverse impacts to soil quality, terrain and permafrost: 13-18, 21, 36, 37, 44, and 46-48.

Issue 4: Potential adverse impacts to air quality from remediation activities, including dust and emissions generated by site preparation, excavation, quarrying, and use of heavy equipment, incineration of combustible wastes, and landfarming operations associated with the remediation project.

Board views: There is potential for adverse impacts to air quality from site preparation, excavation, demolition, and quarrying activities associated with the project. The Proponent has committed to regularly using water as a dust suppressant on roads and land surfaces where dust may be an issue. The Proponent has also committed to implementing a no-idling policy for vehicles to reduce engine-related emissions and to using furnace filters for incineration facilities. The potential adverse impacts to air quality are considered to be of low magnitude, short-term, and reversible.

Recommended Mitigation Measures: It is recommended that the potential adverse impacts may be mitigated by measures such as ensuring that the incineration of combustible wastes comply with the *Canadian Wide Standards for Dioxins and Furans*, and the *Canadian Wide Standards for Mercury*. The Board recommends the following terms and conditions to mitigate the potential adverse impacts to air quality: 8, 9, 20, 21, and 45.

Issue 5: Potential adverse impacts to traditional land use activities in the area from noise and movement disruptions associated with the remediation activities and transportation operations.

Board Views: There is potential for the proposed project to disrupt traditional and recreational land use activities from, land and marine-based activities such as mobilization, site

preparation, and quarrying which may result in disruptions to movement of residents in Gjoa Haven to areas for traditional land use pursuits. In addition, noise generated from remediation activities may disperse wildlife resulting in a reduction in hunting success. Although the proposed project would include temporary and intermittent activities that would have limited potential for direct interaction with traditional land use activities, short-term impacts are possible. The project proposal would occur within the ranges of Peary Caribou herds and harvesting of these traditional resources may be limited within the direct project area; however, unmitigated project impacts could affect the migratory patterns of this herd and could result in indirect impacts to harvesting activities tied to these shared traditional resources in other areas. The Proponent has committed to coordinating proposed clean-up and remediation activities with the Gjoa Haven Hunters and Trappers Association and to providing regular updates on the project to community members. In addition to the Proponent's proposed mitigation measures, it is expected that standard operational considerations would mitigate any potential adverse impacts to wildlife, and in turn traditional land use activities, in the project area and areas adjacent to the proposed project. Terms and conditions have also been recommended to ensure safety to the public and to ensure that potential impacts to traditional land use activities are minimized should they be observed.

Recommended Mitigation Measures: Term and condition 39 has been recommended to ensure that all borrow areas are clearly marked to identify hazards on-site, while term and condition 40 have been recommended to avoid all recreational sites when developing borrow areas. Term and condition 50 is recommended to ensure that the affected communities and organizations are informed about the project proposal, and term and condition 52 has been recommended to ensure 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 were recommended within Issue 1 of this section.

Socio-economic effects on northerners:

Issue 6: Potential adverse impacts to historical, cultural and archaeological sites from land disturbance activities associated with the remediation project.

Board Views: The Proponent is proposing to work in an area of known historical significance, which may result in potential negative impacts. Specifically, a number of archaeological resources, including tent rings, have been identified by the Proponent in the vicinity of the project site. The Proponent has committed to isolating these archaeological sites to avoid disturbance during the remediation activities.

The Proponent is also required to follow the *Nunavut Act* (as recommended in the Regulatory Requirements section) and would be required to contact the Government of Nunavut-Department of Culture and Heritage if any additional sites of historical, cultural and archaeological importance are encountered.

Recommended Mitigation Measures: It is recommended that the potential adverse impacts may be mitigated by measures such as soliciting available Inuit Qaujimaningit from local

residents. The Board recommends the following term and condition to mitigate the potential adverse impacts to traditional land use activities: 50. In addition, the Proponent has been referred to Government of Nunavut – Department of Culture and Heritage’s “Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders” (found in Appendix B of this report) which details measures to be taken by Proponents for the identification, avoidance, and protection of archaeological and heritage resources in Nunavut pursuant to the *Nunavut Act*.

Issue 7: Potential positive impact to community perceptions of drinking water sources and to the local economy from employment associated with the remediation project.

Board Views: The proposed clean-up and remediation of the former DEW Line Site may reduce community perception of ongoing contamination of surrounding freshwater lakes and drinking water sources for Gjoa Haven by contaminants originating from the project site. The Proponent’s commitment to hire locally in executing the project is also considered to likely result in a positive impact to the local community.

Recommended Mitigation Measures: Although this recommendation notes positive impacts, the NIRB is recommending terms and conditions 50 and 51 to ensure the Proponent continues to inform the community of Gjoa Haven of ongoing site activities to ensure community members are aware of and best able to successfully connect with the local hiring opportunities committed to by the Proponent.

Significant public concern:

Issue 8: No significant public concern was expressed during the public commenting period for this file.

Board Views: It is noted that there is potential for public concern developing due to the proximity of the proposed project site to the Municipality of Gjoa Haven. Follow up consultation and involvement of local community members is expected to mitigate any potential for public concern resulting from project activities.

Recommended Mitigation Measures: Term and condition 50 is recommended by the NIRB to ensure that the affected communities and organizations are informed about the project proposal and to provide the Proponent with an opportunity to proactively address or mitigate any concerns that may arise from the project activities.

Technological innovations for which the effects are unknown:

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

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. Indigenous and Northern Affairs Canada, Contaminated Sites Program – Nunavut Division (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
2. The Proponent shall forward copies of all permits obtained and required for this project to the Nunavut Impact Review Board (NIRB) prior to the commencement of the project.
3. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (Application to Determine Conformity, October 6, 2016), and the NIRB (Online Application Form, November 9, 2016; and the Proponent's supplementary application information, October 6, 2016 and November 9, 2016).
4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

Water Use

5. 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 approved by the Nunavut Water Board.
6. The Proponent shall not use water, including constructing or disturbing any stream, lakebed or the banks of any definable water course unless approved by the Nunavut Water Board.

Waste Disposal/Incineration

7. 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.
8. The Proponent shall ensure that the incineration of combustible camp wastes comply with the *Canadian Wide Standards for Dioxins and Furans*, and the *Canadian Wide Standards for Mercury*.
9. The Proponent shall ensure that no waste oil/grease is incinerated on site.

Fuel and Chemical Storage

10. Unless otherwise authorized by the Nunavut Water Board, 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.

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 store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
13. 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.
14. The Proponent shall use drip pans or other equivalent device when refueling equipment. The Proponent shall also use secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks) at all refueling stations.
15. 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, and at vehicle maintenance areas.
16. The Proponent shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment.
17. 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

18. 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.
19. 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).
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.

Wildlife - General

22. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
23. The Proponent shall not harass wildlife. This includes persistently worrying or chasing animals, or disturbing large groups of animals. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.

24. 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

25. The Proponent shall not disturb or destroy the nests or eggs of any birds. If nests are encountered and/or identified, the Proponent shall take precaution to avoid further interaction and or disturbance (e.g., a 100 metres buffer around the nests). If active nests of any birds are discovered (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have left the nest.
26. The Proponent shall minimize activities during periods when birds are particularly sensitive to disturbance such as migration, nesting and moulting.
27. The Proponent shall avoid the seaward site of seabird colonies and areas used by flocks of migrating waterfowl by three (3) kilometres.
28. The Proponent shall ensure its aircraft avoid excessive hovering or circling over areas where bird presence is likely.

Aircraft Flight Restrictions

29. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum altitude of 610 metres above ground level unless there is a specific requirement for low-level flying, which does not disturb wildlife and migratory birds.
30. 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.
31. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
32. 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 Muskoxen Disturbance

33. 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.
34. The Proponent shall not block or cause any diversion to caribou migration, and shall cease activities likely to interfere with migration such as movement of equipment or personnel until such time as the caribou have passed.
35. During the period of May 15 to July 15, when caribou are observed within one (1) kilometre of project operations, the Proponent shall suspend all operations, including low-level over flights, blasting, and use of snow mobiles and all-terrain vehicles outside the immediate vicinity of the camps. Following July 15, if caribou cows or calves are observed within one (1) kilometre of project operations, the Proponent shall also suspend all operations in the vicinity, including low-level over flights, blasting, and use of snow mobiles and all-terrain vehicles, until caribou are no longer in the immediate area.

Ground Disturbance

- 36. 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.
- 37. 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.
- 38. All construction and road vehicles must be fitted with standard and well-maintained noise suppression devices and engine idling is to be minimized.

Establishment of New Quarries

- 39. The Proponent shall clearly stake and flag pit and quarry boundaries so they remain visible to other land users.
- 40. 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.
- 41. 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.
- 42. The Proponent shall ensure that silt fences/curtains are installed down gradient of any quarry activities.
- 43. The Proponent shall maintain an undisturbed buffer zone of at least 100 metres between quarry site and any high water mark of any water body. Alternately: The Proponent shall maintain an undisturbed buffer zone between the periphery of quarry sites and the high water mark of any water body that is of an adequate distance to ensure erosion control.
- 44. The Proponent shall locate screening and crushing equipment on stable ground, at a location with ready access to stockpiles.
- 45. 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.

Temporary Camps

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

Restoration of Disturbed Areas

- 48. The Proponent shall remove all garbage, fuel and equipment upon abandonment.

Ship-based Activities

- 49. The Proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes (including waste water) or sediment into any marine waters, and shall manage wastes on board the vessel prior to final disposal at approved port facilities.

Other

50. The Proponent should engage with local residents regarding planned activities in the area and should solicit available Inuit Qaujimaningit and information regarding current recreational and traditional usage of the project area which may inform project activities. Posting of translated public notices and direct engagement with potentially interested groups and individuals prior to undertaking project activities is strongly encouraged.
51. The Proponent should, to the extent possible, hire local people.
52. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.

MONITORING AND REPORTING REQUIREMENTS

In addition, the Board is recommending the following:

Annual Report

1. The Proponent shall submit a comprehensive annual report to the Nunavut Impact Review Board by March 31st of each year of permitted activities, beginning March 31, 2018. The annual report must contain, but not limited to, the following information:
 - a) A summary of activities undertaken for the year, including:
 - a map showing the location of fuel caches;
 - a description of local hires, contracting opportunities and initiatives;
 - flight altitudes, frequency of flights and anticipated flight routes;
 - site photos;
 - b) A work plan for the following year, including any progressive reclamation work 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 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;
 - e) An analysis of the effectiveness of mitigation measures for wildlife;
 - f) Summary of any heritage sites encountered during the remediation activities, any follow-up action or reporting required as a result and how project activities were modified to mitigate impacts on the heritage sites;
 - g) 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
 - h) 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

2. The Proponent shall update its Spill Contingency Plan to include the up to date emergency contact numbers for the Government of Nunavut-Department of Environment, Manager of Environmental Protection (867-975-7748).

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 (NPC) and the NIRB of any changes in operating plans or conditions, including phase advancement, associated with this project prior to any such change.

Bear and Carnivore Safety

2. 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.
3. 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.
4. 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 Gjoa Haven, phone: (867) 360-7605).

Species at Risk

5. 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

6. 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.

7. 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://www.ec.gc.ca/paom-itmb/>.

Incineration of Wastes

8. 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.

Transport of Waste/Dangerous Goods and Waste Management

9. Environment and Climate Change Canada recommends that all hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.
10. The Proponent shall ensure that a waste manifest or the appropriate transportation of dangerous goods (TDG) documentation accompany all potential hazardous samples and/or materials that are transported off site. Further, the Proponent shall ensure that the shipment of waste is registered with the Government of Nunavut Department of Environment (GN-DoE). Contact the Manager of Pollution Control and Air Quality at (867) 975-7748 to obtain a manifest if hazardous waste will be generated during project activities.
11. The Proponent shall provide an authorization or letter of conformation of disposal be obtained from the owner/operator of the landfill to be used for disposal of project-related wastes.

Indigenous and Northern Affairs Canada

12. Indigenous and Northern Affairs Canada (INAC) 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.
13. INAC 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.

Nunavut Water Board

14. The Nunavut Water Board impose mitigation measures, conditions and monitoring requirements pursuant to the Water Licence, which require the Proponent to respect the sensitivities and importance of water in the area. These mitigation measures, conditions and monitoring requirements should be in regard to use of water, snow and ice; waste disposal; access infrastructure and operation for camps; spill contingency planning; abandonment and restoration planning; and monitoring programs.

REGULATORY REQUIREMENTS

The Proponent is also advised that the following legislation may apply to the project:

1. The *Fisheries Act* (<http://laws-lois.justice.gc.ca/eng/acts/F-14/index.html>).
2. The *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (<http://www.canlii.org/ca/sta/n-28.8/whole.html>).
3. The *Migratory Birds Convention Act* and *Migratory Birds Regulations* (<http://laws-lois.justice.gc.ca/eng/acts/M-7.01/>).
4. The *Species at Risk Act* (<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.
5. The *Wildlife Act* (<http://www.canlii.org/en/nu/laws/stat/snu-2003-c-26/latest/snu-2003-c-26.html>) which contains provisions to protect and conserve wildlife and wildlife habitat, including specific protection measures for wildlife habitat and species at risk.
6. The *Nunavut Act* (<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**.
7. The *Transportation of Dangerous Goods Regulations*, *Transportation of Dangerous Goods Act* (<http://www.tc.gc.ca/eng/tdg/safety-menu.htm>), and the *Canadian Environmental Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/C-15.31/>). The Proponent must ensure that proper shipping documents accompany all movements of dangerous goods. The Proponent must register with the Government of Nunavut, Department of Environment Manager of Pollution Control and Air Quality at 867-975-7748.
8. The *Aeronautics Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-2/>).
9. The *Arctic Waters Pollution Prevention Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-12/>).
10. The *Canada Shipping Act, 2001* (<http://laws-lois.justice.gc.ca/eng/acts/C-10.15/>).
11. The *Marine Liability Act* (<http://laws-lois.justice.gc.ca/eng/acts/M-0.7/>).
12. The *Navigation Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/N-22/index.html>).
13. The Proponent shall undertake quarrying in accordance with the *Nunavut Mining Safety Ordinance* and the *Territorial Quarrying Regulations* (<http://www.canlii.org/en/ca/laws/regu/crc-c-1527/latest/crc-c-1527.html>) or equivalent.

Other Applicable Guidelines

14. The Proponent shall follow the Fisheries and Oceans Canada (DFO) *Guidelines for the use of Explosives in or near Canadian Fisheries Waters* (<http://publications.gc.ca/site/eng/82558/publication.html>) and shall not conduct blasting if wildlife is within sight or hearing distance of the project area.
15. The Proponent shall review and apply as applicable, design, operation, monitoring, sampling, analytical methods, decommissioning and closure, record keeping and reporting requirements for landfarming projects as found within the *Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils* (Science Applications International Corporation Canada, March 2006). It is recommended that the Proponent and any consultants hired for the project refer to this document as it relates to the future operations of the landfarming activities

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to Indigenous and Northern Affairs Canada, Contaminated Sites Program – Nunavut Division's "CAM-C (Matheson Point) Remediation Project". The NIRB remains available for consultation with the Minister regarding this report as necessary.

Dated January 6, 2017 at Arviat, NU.



Elizabeth Copland, 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: October 2016

Species at Risk ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Migratory Birds			
Eskimo Curlew	Endangered	Schedule 1	ECCC
Buff-breasted Sandpiper	Special concern	Pending	ECCC
Ivory Gull	Endangered	Schedule 1	ECCC
Ross's Gull	Threatened	Schedule 1	ECCC
Harlequin Duck (Eastern population)	Special Concern	Schedule 1	ECCC
Rusty Blackbird	Special Concern	Schedule 1	GN
Peregrine Falcon	Special Concern (<i>anatum-tundrius</i> complex ³)	Schedule 1 - Threatened (<i>anatum</i>) Schedule 3 – Special Concern (<i>tundrius</i>)	GN
Short-eared Owl	Special Concern	Schedule 3	GN
Red Knot (<i>rufa</i> subspecies)	Endangered	Schedule 1	ECCC
Red Knot (<i>islandica</i> subspecies)	Special Concern	Schedule 1	ECCC
Horned Grebe (Western population)	Special Concern	Pending	ECCC
Red-necked Phalarope	Special concern	Pending	ECCC
Vegetation			
Felt-leaf Willow	Special Concern	Schedule 1	GN
Blanket-leafed Willow	Special Concern	Schedule 1	GN
Porsild's Bryum	Threatened	Schedule 1	GN
Terrestrial Wildlife			
Peary Caribou	Endangered	Schedule 1	GN
Peary Caribou (High Arctic Population)	Endangered	Schedule 2	GN
Peary Caribou (Low Arctic Population)	Threatened	Schedule 2	GN
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
Marine Wildlife			
Polar Bear	Special Concern	Schedule 1	GN/DFO
Grizzly Bear	Special Concern	Pending	GN
Wolverine	Special Concern	Pending	GN
Atlantic Cod, Arctic Lakes	Special Concern	Pending	DFO
Atlantic Walrus	Special Concern	Pending	DFO
Beluga Whale (Cumberland Sound population)	Threatened	Pending	DFO
Beluga Whale (Eastern Hudson Bay population)	Endangered	Pending	DFO
Beluga Whale (Western Hudson Bay population)	Special Concern	Pending	DFO
Beluga Whale (Eastern High Arctic – Baffin Bay population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Canada – West Greenland population)	Special Concern	Pending	DFO
Bowhead Whale (Eastern Arctic population)	Special Concern	Schedule 2	DFO
Killer Whale (Northwest Atlantic / Eastern Arctic populations)	Special Concern	Pending	DFO
Grey Whale (Eastern North Pacific population)	Special Concern	Schedule 1	DFO

Species at Risk ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Humpback Whale (Western North Atlantic population)	Special Concern	Schedule 3	DFO
Narwhal	Special Concern	Pending	DFO
Fish			
Northern Wolffish	Threatened	Schedule 1	DFO
Atlantic Wolffish	Special Concern	Schedule 1	DFO
Bering Wolffish	Special Concern	Schedule 3	DFO
Fourhorn Sculpin	Special Concern	Schedule 3	DFO
Roundnose Grenadier	Endangered	Pending	DFO
Spotted Wolffish	Threatened	Schedule 1	DFO
Thorny Skate	Special Concern	Pending	DFO
Atlantic Cod, Arctic Lakes	Special Concern	Pending	DFO
Blackline Prickleback	Special Concern	Schedule 3	DFO

Notes: DFO: Fisheries and Oceans Canada; ECCC: Environment and Climate Change Canada; GN: Government of Nunavut

¹The Department of Fisheries and Oceans has responsibility for aquatic species.

²Environment and Climate Change Canada 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.

³The *anatum* subspecies of Peregrine Falcon is listed on Schedule 1 of SARA as threatened. The *anatum* and *tundrius* subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was assessed by COSEWIC as Special Concern.

Appendix B Archaeological and Palaeontological 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*² to issue such permits.

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

² P.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*³, the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under

³ s. 51(1)

the *Nunavut Archaeological and Palaeontological Sites Regulations*⁴, 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, Language, Elders and Youth (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 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

⁴ P.C. 2001-1111 14 June, 2001

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.