

“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 August 17, 2016 the Nunavut Impact Review Board (NIRB or Board) received a referral to screen North Country Gold Corp.’s (North Country Gold) “Committee Bay” project proposal from the Nunavut Planning Commission (NPC or Commission) due to significant modification to the original project proposal. The NPC noted that the previous conformity determination issued on March 3, 2007 with the Keewatin Regional Land Use Plan for the activities associated with the current proposal continues to apply.

Pursuant to section 86 of the *Nunavut Planning and Project Assessment Act* (NuPPAA), the NIRB commenced screening this project proposal. Due to the proposal containing activities that were sufficiently related to previously assessed activities under NIRB file number 07EN021, the NIRB viewed this project proposal as an amendment to the previously screened project and

assigned this proposal with this previous file number. A summary of the previously screened project activities can be found in **Appendix A**.

PROJECT OVERVIEW & THE NIRB ASSESSMENT PROCESS

1. Project Description

The proposed “Committee Bay” project is located within the Kivalliq region, in the community of Rankin Inlet. The Proponent proposes to increase the storage capacity of its existing temporary fuel storage facility at Lot 11 within the Itivia Industrial subdivision of the community. The proposed project is to support ongoing exploration activities at the Committee Bay exploration site located approximately 400 kilometres (km) north of Rankin Inlet. The proposed project is to take place from August 2016 to September 2018.

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

- Increase capacity of the existing temporary fuel storage facility (Arctic diesel, Jet A or Jet B aviation turbine fuel, and gasoline) from 73,800 litres (360 drums) to 820,000 litres (4000 drums);
- Establish secondary containment for the temporary fuel storage facility;
- Transport fuel via heavy lift aircraft from the temporary storage facility in Rankin Inlet to an existing 1.5 million litre (7,300 drums) capacity fuel storage facility at the Committee Bay exploration site.
- Continue to operate a temporary storage area in proximity to the fuel storage facility for the storage and staging of materials, including core boxes, timber, and up to five (5) shipping containers (sea cans), to support ongoing exploration activities;
- Store scrap metals, drained and crushed fuel drums, and other recyclable materials at the temporary area for sealift to appropriate recycling facilities in the South;
- Decommission and remove all structures associated with the temporary fuel facility and storage area in Rankin Inlet on conclusion of the exploration program; and
- Remediate any contaminated areas on site.

The scope of activities previously approved for this ongoing exploration program (NIRB File No. 07EN021) can be found in **Appendix A**.

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
August 17, 2016	Receipt of project proposal from the NPC
August 25, 2016	Information request(s)
September 8, 2016	Proponent responded to information request(s)
September 8, 2016	Scoping pursuant to subsection 86(1) of the NuPPAA

September 29, 2016	Public engagement and comment request
October 20, 2016	Receipt of public comments
October 21, 2016	Ministerial extension requested

4. Public Comments and Concerns

Notice regarding the NIRB's screening of this project proposal was distributed on September 29, 2016 to community organizations in Rankin Inlet, Naujaat, 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 October 20, 2016 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, (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)

- Recommended that the Proponent commit to removing contaminated waste and soil to an approved disposal facility on an annual basis.

Environment and Climate Change Canada (ECCC)

- No concerns at this time.

Indigenous and Northern Affairs Canada (INAC)

- Possible impacts from the proposed increase in fuel storage from 73,000 litres to 820,000 litres are mitigable with measures outlined in the Proponent's Spill Prevention Plan.
- Unsure the Proponent's originally proposed period of operation (August 2016 to September 2017) is feasible based on the date the project proposal was referred to the NIRB (August 17, 2016) and the ongoing screening of the project.
- Noted that reviewing a project well into the proposed project operation period would seem to defeat the purpose of the review process, and that it is the obligation of the Proponent to comply with the *Nunavut Planning and Project Assessment Act* (NuPPAA).
- Should the project be approved to proceed, it is the responsibility of the Proponent to ensure it complies with all permits and authorizations required to undertake the proposed project.

5. Comments and Concerns with respect to Inuit Qaujimaningit

No concerns or comments were received with respect to Inuit Qaujimaningit 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 a 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 NuPPAA. The Board took particular attention to take into account traditional knowledge and Inuit Qaujimaningit 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 project for storage of fuel and materials to support ongoing exploration would be located on a parcel of land (Lot 11), approximately 1,500 square metres, at the Itivia industrial subdivision in the Municipality of Rankin Inlet. The footprint of the proposed project would encompass a portion of Lot 11 to be used for storage of 4,000 drums (820,000 litres) of fuel and an adjacent area for storage of materials and supplies, including up to five (5) sea cans. The proposed activities are in support of ongoing exploration activities in the Committee Bay Greenstone Belt located approximately 400 km north of Rankin Inlet. The footprint for the proposed project also includes the routes for the transfer of fuel and materials from the storage facilities in Rankin Inlet to the exploration sites and the sealifting of project-related wastes to the South. Although the proposed fuel and materials storage facilities are to be located within an established subdivision within the Municipality of Rankin Inlet, the project footprint may overlap habitat for various species of migratory birds and other terrestrial wildlife including arctic fox and migrating caribou, as identified by the Proponent and from mapping sources.

2. *The ecosystemic sensitivity of that area.*

Although the proposed project is to be located at an established industrial subdivision within the Municipality of Rankin Inlet, the project activities may occur in an area with ecosystemic sensitivity, including caribou ranges. Specifically, the footprint of the proposed project may overlap and/or be in proximity to areas identified as having value and priority to local communities for:

- i. Caribou migration
- ii. Commercial and subsistence fishing
- iii. Drinking water resources

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

The Proponent has not identified any areas of historical, cultural and archaeological significance associated with the project area. Should the project be approved to proceed, the Proponent would be required to contact the Government of Nunavut-Department of Culture and Heritage if any 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 within the boundaries of the Municipality of Rankin Inlet; as such, there is potential for impacts to human populations in the community. Although the natural ranges of various species of wildlife overlap the proposed project area, no specific animal populations have been identified as likely to be affected by proposed project activities.

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.*

As the “Committee Bay” project is a proposed temporary fuel storage facility and materials storage area, the nature of potential impacts is considered to be well-known. Based on the type of fuel facility proposed (drum-based liquid fuel storage) and the volume of fuel to be stored on site (820,000 litres), there is potential for the project to result in measurable change in the environment. However, the potential impacts are likely to be localized, infrequent, short-term, and reversible 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 take place in proximity to other projects that have been or are being assessed by the Board. These projects include: “Quarry Project” (NIRB File No. 09QN046) located approximately six (6) km northwest of the town centre in Rankin Inlet; “Fuel Supply Pipeline Replacement Project” (NIRB File No. 15FN027) located within the municipal boundaries of Rankin Inlet; a bulk fuel storage facility in Rankin Inlet associated with the “Meliadine Gold Mine Project” (NIRB File No. 11MN034); and other industrial activities within the Itivia industrial subdivision in Rankin Inlet. The potential for cumulative impacts on valued ecosystemic and socioeconomic components, including terrestrial wildlife and migratory birds, fish and fish habitat, water and soil quality, ground stability, and traditional wildlife harvesting pursuits, have been considered in the development of the recommended mitigation measures set out in the following section.

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. However, the NIRB notes that the location of the proposed activities within the community of Rankin Inlet and in proximity to routes used by residents in pursuit of recreational/traditional activities could potentially contribute to public concern developing. A term and condition has been recommended to direct engagement with the community, Hunters and Trappers Organizations, and posting of public notices to ensure residents are aware of the activities being or to be conducted.

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 'Board views' regarding whether or not the proposed project has the potential to result in significant impacts, and 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 Board has previously recommended terms and conditions 1 through 4, 6, 44 and 70, which continue to apply to the current project proposal. The Board is also recommending term and condition 71 to ensure complete reference to applicable regulatory requirements and the Proponent's commitments regarding the project proposal.

Ecosystem, wildlife habitat and Inuit harvesting activities:

Issue 1: Potential adverse impacts to terrestrial wildlife (including caribou) and migratory birds during site preparation and operation of the proposed fuel storage facility and materials storage area.

Board Views: There is potential for adverse impacts to terrestrial wildlife, such as caribou, arctic fox, and migratory birds, with natural ranges overlapping or in proximity to the area proposed for project activities. Specifically, fuel spill events, air pollution (hydrocarbon vapour and dust emission), noise pollution, and onsite buildup of waste materials during the construction and operation phases of the project may result in adverse impacts to local wildlife populations. However, considering that the project is proposed on a land parcel that is part of an established industrial subdivision in the Municipality of Rankin Inlet, the probability of large local wildlife populations inhabiting the project footprint or surrounding areas is considered to be low. The magnitude of adverse impacts to terrestrial wildlife from a spill event is also considered to be low since any such event would likely be limited to the volume of fuel contained in the individual drum(s) that is breached. As part of its Spill Contingency Plan and Abandonment and Reclamation Plan, the Proponent has committed to conducting regular visual inspections of the fuel storage facility and the materials storage area to address any fuel leaks or waste build up. The Proponent has also committed to establishing secondary containment for the fuel storage facility and utilizing spill kits to limit the potential for fuel discharge from

any accidental spill to the external environment, and backhauling all waste materials generated on site to an approved disposal site.

The Proponent would also be required to follow the *Nunavut Wildlife Act*, *Migratory Birds Convention Act*, *Species at Risk Act*, *Transportation of Dangerous Goods Act*, and *Canadian Environmental Protection Act* (see Regulatory Requirements section).

Recommended Mitigation Measures: It is recommended that the potential adverse impacts to terrestrial wildlife, including migratory birds, may be mitigated by such measures as ensuring all wastes are kept inaccessible to wildlife at all times and avoiding disturbance or destruction of nests or eggs of any birds. The Board previously recommended the following terms and conditions to mitigate potential impacts to terrestrial wildlife, including migratory birds: 7, 9 through 12, 33, 47, and 53 through 58, which continue to apply to the current project proposal. In addition, the Board recommends term and condition 74 to mitigate the potential adverse impacts to terrestrial wildlife and migratory birds.

Issue 2: Potential adverse impacts to surface water quality and fish and fish habitat during site preparation and the operation of the fuel storage facility.

Board Views: As discussed in the assessment of factors relevant to this project proposal, there is potential for the project to cause a measurable change in the environment, including in any fish-bearing waterbodies in proximity to the site, from a fuel spill event or dispersal of wastes offsite. However, the potential for adverse impacts, including spills of fuel and wastes associated with the proposed project, is likely limited to the footprint of the proposed project as the Proponent has committed implementing a Spill Contingency Plan and Abandonment and Reclamation Plan to limit the spread of any fuel spills and minimizing waste buildup to mitigate potential adverse impacts to water quality and fish and fish habitat. The Proponent has also committed to establishing secondary containment for the fuel storage facility and treating any water and snow on site with a visible sheen prior to discharge to the external environment. The potential adverse impacts are considered to be of low probability and reversible.

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

Recommended Mitigation Measures: It is recommended that potential adverse impacts 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, as well as spill response and waste management. The Board previously recommended the following terms and conditions to mitigate potential impacts to surface water quality and fish and fish habitat: 18, 32, and 48 through 52, which continue to apply to the current project proposal. In addition, the Board recommends terms and conditions 73, 75 and 76 to mitigate the potential adverse impacts to surface water quality and fish and fish habitat.

Issue 3: Potential adverse impacts to soil quality and ground stability from the use of heavy equipment for site preparation and operation of the proposed fuel storage facility and materials storage area.

Board Views: There is potential for adverse impacts to ground stability and soil quality from site preparation activities and operation of the fuel storage facility and material storage area. Specifically, the use of heavy equipment for site preparation activities and operations may result in seasonal rutting and soil erosion. In addition, fuel spills may result in soil contamination. However, the potential adverse impacts to ground stability would likely be limited to the project footprint (1,500 square metres) and the potential for soil contamination may be mitigated if adequate secondary containment is established at the fuel storage facility and measures identified in the Proponent's Spill Contingency Plan are implemented.

The Proponent would also be required to follow the *Canadian Environmental Protection Act* (see Regulatory Requirements section).

Recommended Mitigation Measures: It is recommended that potential adverse impacts to soil quality and ground stability be mitigated by measures such as requiring the Proponent to establish the fuel storage facility on gravel, sand or other durable material. The Board previously recommended the following terms and conditions to mitigate potential impacts to soil quality and ground stability: 13, 15, 18, 32, 41, 42, 48 through 52, 60, and 61, which continue to apply to the current project proposal. In addition, the Board recommends terms and conditions 72 and 74 through 76 to mitigate the potential adverse impacts to soil quality and ground stability.

Issue 4: Potential adverse impacts to public and traditional land use activities from the construction and operation of the proposed fuel storage facility and materials storage area.

Board Views: There is potential for the proposed project to disrupt traditional and recreational land use activities. Specifically, activities associated with the construction and operation of the proposed project, including increase in traffic and use of heavy machinery near an existing public gravel road adjacent to the project footprint, may limit options for movement of community members to surrounding areas for traditional and recreational activities. The Proponent has committed to meeting requirements of the Municipality of Rankin Inlet in the execution of the project including adherence to applicable bylaws.

Recommended Mitigation Measures: The Board previously recommended the following terms and conditions to mitigate potential impacts to public and traditional land use activities: 18 and 42, which continue to apply to the current project proposal. In addition, the Board has previously recommended terms and conditions 17 and 69 to ensure that the affected communities and organizations are informed about the project proposal. Further, the Board recommends term and condition 77 to ensure that project activities do not interfere with Inuit wildlife harvesting activities and terms and conditions 78 and

79 to ensure that available Inuit Qaujimaningit can inform project activities to avoid interference with traditional land use activities.

Socio-economic effects on northerners:

Issue 5: Potential adverse impacts to historical, cultural and archaeological sites from ground disturbance associated with the construction of the proposed fuel storage facility and materials storage area.

Board Views: The Proponent has not identified sites of historical, cultural and archaeological importance in the proposed project area. The probability of impacts to historical, cultural and archaeological sites is considered to be low as the project is to be located in an established industrial subdivision within the Municipality. However, it is recommended that the Proponent consult with community members in Rankin Inlet prior to executing the project.

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 sites of historical, cultural and archaeological importance are encountered.

Recommended Mitigation Measures: The Board has previously recommended terms and conditions 17 and 69 to ensure that the affected communities and organizations are informed about the project proposal. In addition, term and condition 79 is recommended to ensure that available Inuit Qaujimaningit can inform project activities and reduce the potential for adverse impacts occurring to any additional historical, cultural, and archaeological sites.

Issue 6: Potential adverse impacts to human health and safety from the construction and operation of the fuel storage facility and materials storage area.

Board Views: There is potential for adverse impacts to human health and safety from exposure to atmospheric emissions of hydrocarbons and dust, increase in traffic and noise pollution from vehicles transporting fuel drums and other materials to and from the site, and fire or explosion hazards from the operation of the fuel storage facility. The Proponent has committed to implementing a Spill Contingency Plan to mitigate potential impacts of accidental fuel spills, conducting regular inspections of the site, avoiding waste buildup on site, eliminating potential ignition sources, and locating a fire extinguisher at the fuel storage facility to address fire incidents. The probability of adverse impacts to human health and safety is considered to be low.

Recommended Mitigation Measures: It is recommended that potential adverse impacts to human health and safety be mitigated by measures such as requiring the Proponent to inform community members of the timing for project activities including project-related traffic on public roads, and establishing a site-specific Emergency Response Plan to address potential accidents and malfunctions on site. The Board previously recommended the following terms and conditions to mitigate potential impacts to human health and safety:

13, 15, 17, 18, 50, and 52, which continue to apply to the current project proposal. In addition, the Board recommends terms and conditions 74 and 77 to mitigate the potential adverse impacts to human health and safety.

Issue 7: Potential positive impact to the local economy from employment associated with the construction and operation of the fuel storage facility and materials storage area.

Board Views: Proponent has committed to procuring the services of local contractors for the construction and operation of the storage facilities, including to load and unload fuel drums and to conduct regular inspections of fuel and materials storage facilities. The execution of the proposed project is likely to also increase revenues to the Municipality of Rankin Inlet. This is considered to likely result in a positive impact to the local economy.

Recommended Mitigation Measures: Term and condition 69, previously recommended by the Board to ensure the Proponent meets its commitment to procure local services for the project, continues to apply to the current project proposal.

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 location of the proposed activities within the Municipality of Rankin Inlet and near routes that may be used to access surrounding lands for recreational and traditional land use activities. Follow up consultation and involvement of the local community in Rankin Inlet is expected to mitigate any potential for public concern resulting from project activities.

Recommended Mitigation Measures: The Board has previously recommended terms and conditions 17 and 69 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 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 following terms and conditions were previously issued by the NIRB for File No. **07EN021** in Screening Decision Reports, and continue to apply to the Committee Bay Exploration project:

1. (*updated*) The Proponent shall operate the project in accordance with all commitments and mitigation measures stated in all correspondence and documents submitted to the Nunavut Impact Review Board (NIRB), Indigenous and Northern Affairs Canada (INAC, previously Indian and Northern Affairs Canada), and the Nunavut Water Board (NWB).
2. The Proponent shall maintain a copy of this Screening Decision at the site of operation at all times.
3. The Proponent shall forward copies of all authorizations obtained for this project to NIRB prior to the commencement of the project.
4. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.
5. (*updated*) The Proponent shall contact NIRB and Environment and Climate Change Canada (ECCC) if on-ice drilling will occur. The Proponent will submit the number and location all holes to be drilled prior to the activity.
6. (*updated*) The Proponent shall submit a comprehensive annual report with copies provided to the NIRB, Kitikmeot Inuit Association, INAC, ECCC and Government of Nunavut, Department of Environment (GN-DOE) by January 31st of each year following the calendar year reported. Annual reports must be provided until the project has been completed. The report must contain, but not be limited to, the following information:
 - a. A summary of activities undertaken for the year, including any progressive reclamation work undertaken, and a work plan for the following year –site photos should be provided where relevant;
 - b. A summary of how the Proponent has complied with NIRB conditions contained within the Screening Decision, and the conditions associated with all authorizations for the project proposal;
 - c. Wildlife monitoring observations, including:
 - i. description of any wildlife encounters and actions/mitigation taken
 - ii. maps of location of any sensitive wildlife sites
 - iii. timing of critical life history events
 - iv. potential impacts from the project
 - d. The results of environmental studies undertaken and plans for future studies;
 - e. A summary of local hires and initiatives;
 - f. A summary of community consultations undertaken and follow-up actions required to resolve any concerns expressed about the project proposal (if relevant);
 - g. A summary of site-visits by Land Use inspectors with results and follow-up actions;
 - h. A summary of site-visits with community members (if conducted); and
 - i. Efforts made to achieve compliance with the *Canada-Wide Standards for Dioxins and Furans*, and the *Canada-Wide Standards for Mercury*.
7. During the period of May 15th to July 15th, if caribou are observed calving in the project area, the Proponent must suspend all project activity (i.e. blasting, low-altitude flights, use of ATV's and snowmobiles, and the movement of equipment) until the caribou and calves have moved one (1) kilometre (km) away from project area. Furthermore, if caribou are observed

within 1 (one) km of the project area, prior to May 15th or after July 15th, then drilling activities will be suspended until the caribou leave the area.

8. The Proponent shall cease activities such as airborne geophysics surveys or movement of equipment that may interfere with caribou migration. Furthermore, the Proponent shall not conduct any exploration activities within ten (10) km of any important caribou crossings.
9. The Proponent shall take care not to disturb nesting raptors from April 15th to September 1st, and stay at least 1.5 (one and half) km away from them while in transit by aircraft and to avoid approaching them closely while on foot.
10. The Proponent must ensure that all aircraft maintain a flight altitude of at least 610 metres (m) during horizontal (point to point) flights at all times, particularly in bird nesting areas and when there are observed groups of caribou, and maintain a vertical distance of 1000 m and minimum horizontal of 1500 m from any observed concentrations of birds.
11. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation. Deliberate feeding of any wildlife is absolutely prohibited. The Proponent shall ensure that there is not hunting or fishing, unless proper Nunavut authorizations have been acquired.
12. In accordance with GN procedures and sections 5.6.52 and 5.6.55 of the Nunavut Land Claims Agreement, the Proponent shall contact the nearest Government of Nunavut Wildlife Office in the event of a defense kill of a Polar Bear, foxes, wolves or wolverine.
13. (*updated*) The Proponent shall comply with *Transportation of Dangerous Goods Regulations*, the *Environmental Protection Act*, and the Part 3.6 of the *Guideline for the General Management of Hazardous Waste in Nunavut* when handling, storing, and managing hazardous wastes, fuel and contaminated material. A waste manifest must accompany all movements of hazardous waste. The Proponent must register with GN-DOE by contacting Manager of Pollution Control and Air Quality at (867) 975-7748.
14. The Proponent shall be advised that calcium chloride (CaCl) is listed as a toxic substance under the *Canadian Environmental Protection Act* and the Proponent shall ensure that if CaCl is used as a drill additive; all sumps containing CaCl are properly constructed and located to ensure that the contents will not enter any water body.
15. The Proponent shall ensure that disposal of combustible wastes comply with the *Canada-wide Standards for Dioxins and Furans* and the *Canada-wide Standard for Mercury*. Efforts made to achieve compliance shall be reported to the NIRB as part of the annual report.
16. The Proponent shall incinerate all combustible wastes daily, and remove the ash from incineration activities and non-combustible wastes from the project site to an approved facility for disposal.
17. The Proponent shall consult with community residents of the Kitikmeot region, conduct regular information meetings to ensure that residents are kept aware of the activities and progress of the project and its phases.
18. (*updated*) The Proponent shall confirm to ECCC's, INAC's and GN-DOE's satisfaction that the entire site has been reclaimed, as much as possible, to its previous condition during the abandonment and restoration stage of the project. Depending on the results of confirmation sampling, the need for post closure monitoring will be re-evaluated.

Winter Road

19. The Proponent shall select a winter route that maximizes the amount of frozen water bodies used.

20. The Proponent shall not erect camps or store materials on the surface ice of lakes or streams, except that which is for immediate use.
21. The Proponent shall ensure that no disturbance of the stream bed or banks of any definable watercourse be permitted.
22. 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.
23. 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.
24. The Proponent shall suspend overland travel of equipment or vehicles if rutting occurs. Likewise, upon spring break up; or at such a time as the shorelines of frozen water bodies begin to thaw, the Proponent shall suspend all travel over water bodies if disturbance to the banks or shorelines of any definable water body occurs.
25. The Proponent shall ensure that winter lake/stream crossings are located to minimize approach grades and constructed entirely of ice and snow materials. Ice or snow free of sediment should be the only materials used to construct temporary crossings over any ice-covered watercourse. Cutting or filling of crossing approaches below the high water mark will require prior review and approval by Fisheries and Oceans Canada - Fish Habitat Management Branch (DFO-FHM).
26. The Proponent shall not allow mechanized clearing to be carried out immediately adjacent to any watercourse.
27. The Proponent shall avoid disturbance on slopes prone to natural erosion, and alternative locations shall be utilized.
28. The Proponent shall ensure that temporary crossings constructed from ice and snow, which may cause jams, flooding or impede fish passage and or water flow, are removed prior to spring break-up.
29. The Proponent shall implement sediment and erosion control measures prior to, and during operations to prevent sediment entry into the water during the spring thaw. 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.
30. The Proponent shall re-vegetate exposed soil to assist in road-bed stabilization and sediment control.
31. The Proponent shall ensure that the land use area is kept clean and tidy at all times.

Fuel and Chemical Storage

32. 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.
33. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.

Drilling on Land

34. 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.
35. The Proponent shall not allow any drilling wastes to spread to the surrounding lands or water bodies.

36. If an artesian flow is encountered, the Proponent shall ensure the drill hole is immediately plugged and permanently sealed.
37. 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.
38. 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.
39. The Proponent shall not locate any sump within thirty-one (31) metres of the normal high water mark of any water body. Sumps and areas designated for waste disposal shall be sufficiently bermed or otherwise contained to ensure that substances do not enter a waterway unless otherwise authorized.
40. The Proponent shall ensure all drill holes are backfilled or capped at the end of the project. The Proponent shall backfill and restore all sumps to match the natural environment prior to the end of project.

Restoration

41. The Proponent shall ensure that all disturbed areas are stabilized as required, upon completion of work, and restored to a pre-disturbed state.
42. The Proponent shall remove all garbage, fuel and equipment upon abandonment.
43. The Proponent shall complete all clean-up and restoration of the lands used prior to the end of each field season.

General

44. The Proponent shall operate in accordance with all commitments stated in its applications and correspondence provided to NIRB.

Water Use

45. The Proponent shall not extract water from any fish-bearing water body 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.
46. 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 and Incineration

47. The Proponent shall keep all garbage, food, domestic wastes, and petroleum-based chemicals (e.g. greases, gasoline, glycol-based antifreeze) and debris in bags placed in a covered metal container or equivalent until disposed of at an approved facility so that all such wastes remain inaccessible to wildlife at all times.

Fuel and Chemical Storage

48. 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.

49. The Proponent shall use adequate secondary containment or a surface liner (e.g. self-supporting insta-berms and fold-a-tanks) at all re-fuelling stations. Appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) must be readily available during any transfer of fuel or hazardous substances, as well as at vehicle-maintenance areas and at drill sites.
50. The Proponent shall inspect and document the condition of all 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. Caches shall be marked in such a manner to be easily identifiable in all seasons (long-pole flags, GPS coordinates recorded, maintain updated maps of cache locations, and caches placed in areas of minimal snow accumulation) to ensure year round access for inspection.
51. The Proponent shall remove and treat hydrocarbon contaminated soils on site or transport them to an approved disposal site for treatment.
52. 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.

Wildlife - General

53. The Proponent shall ensure that all project personnel and contractors 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

54. 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 metre 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.

Aircraft Flight Restrictions

55. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.
56. 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

57. 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.
58. The Proponent shall not block or cause any diversion to caribou 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 have passed.
59. The Proponent shall not construct or operate any camp, cache any fuel or conduct blasting within 10 km, or conduct any drilling operation within 5 km, of any paths or crossings known to be frequented by caribou (e.g. designated caribou crossings).

All-Weather Road and Ground Disturbance

60. 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.
61. The Proponent shall implement suitable erosion and sediment suppression measures on disturbed areas before, during and after construction in order to prevent sediment from entering any water body.
62. 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

63. The Proponent shall clearly stake and flag pit and quarry boundaries so they remain visible to other land users.
64. The Proponent shall locate quarry/pit facilities so as to protect unique geographical features and natural aesthetics.
65. 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. The Proponent shall ensure that silt fences/curtains are installed down gradient of any quarry activities.
66. 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.
67. The Proponent shall locate screening and crushing equipment on stable ground, at a location with ready access to stockpiles.

Restoration of Disturbed Area

68. 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. This restoration should include re-vegetation and/or stabilization of exposed soil and road bed.

Other

69. The Proponent should, to the extent possible, hire local people and to consult with local residents regarding their activities in the region.
70. Any activity related to this application, and outside the original scope of the project as described in the application, will be considered a new project and should be submitted to the NIRB for Screening.

In addition to the previously issued terms and conditions, the Board recommends the following project-specific terms and conditions:

General

71. The Proponent shall operate in accordance with all commitments stated in correspondence provided to the Nunavut Planning Commission (Application to Determine Conformity, August 17, 2016) and the NIRB (Online Application Form, August 7, 2016 and Proponent's supplementary application information, September 8, 2016).

Waste Disposal

72. The Proponent shall remove contaminated waste and soil on site to an approved disposal facility on an annual basis.

Fuel and Chemical Storage

73. 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.

74. The Proponent shall establish the fuel storage facility on gravel, sand or other durable material and construct fencing around the fuel storage facility to restrict human and wildlife access to the site.

75. The Proponent shall install an oil-water separator and/or other treatment technology on site to treat any hydrocarbon-contaminated water and snow prior to discharge to the external environment. All treated water to be discharged to the external environment shall meet applicable water quality guidelines.

76. The Proponent shall implement a “first in, first out” (FIFO) principle for drummed products on site and adhere to the storage life of drummed petroleum products established by the product manufacturers.

Other

77. The Proponent shall develop and implement a site-specific Emergency Response Plan to mitigate potential impacts of accidents and malfunctions, including fire outbreaks.

78. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.

79. 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.

MONITORING AND REPORTING REQUIREMENTS

The Board has previously recommended the following on May 11, 2007, February 26, 2010, and January 28, 2011:

1. The Proponent shall submit a comprehensive annual report with copies provided to the NIRB, KIA, INAC, EC and Government of Nunavut, Department of Environment (GN-DOE) by January 31st of each year following the calendar year reported. Annual reports must be provided until the project has been completed. The report must contain, but not be limited to, the following information:
 - a. A summary of activities undertaken for the year, including any progressive reclamation work undertaken, and a work plan for the following year –site photos should be provided where relevant;
 - b. A summary of how the Proponent has complied with NIRB conditions contained within the Screening Decision, and the conditions associated with all authorizations for the project proposal;

- c. Wildlife monitoring observations, including:
 - i. description of any wildlife encounters and actions/mitigation taken
 - ii. maps of location of any sensitive wildlife sites
 - iii. timing of critical life history events
 - iv. potential impacts from the project
 - d. The results of environmental studies undertaken and plans for future studies;
 - e. A summary of local hires and initiatives;
 - f. A summary of community consultations undertaken and follow-up actions required to resolve any concerns expressed about the project proposal (if relevant);
 - g. A summary of site-visits by Land Use inspectors with results and follow-up actions;
 - h. A summary of site-visits with community members (if conducted); and
 - i. Efforts made to achieve compliance with the *Canada-Wide Standards for Dioxins and Furans*, and the *Canada-Wide Standards for Mercury*.
2. Addition of Incineration Management Plan to the Corporate and Social Responsibility Action Plan and Abandonment & Restoration Plan
 (*updated*) The Proponent use an Environment and Climate Change Canada approved incinerator for the disposal of combustible camp wastes as outlined in the *Technical Document for Batch Waste Incineration* (<http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1>) which provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting. The Proponent shall produce an Incineration Management Plan for the camp to be submitted to the EC and the NIRB before the commencement of any camp expansion.
3. Updated Spill Contingency Plan and Abandonment & Restoration Plan
 (*updated*) The Proponent shall submit an updated Spill Contingency Plan and Abandonment & Restoration Plan to include its quarry activities. These updated plans shall be submitted to Environment and Climate Change Canada and the NIRB prior to the commencement of any quarrying activity.

The Proponent shall update its Spill Contingency Plan emergency contact numbers as required for the Government of Nunavut-Department of Environment (867-975-4644) and the Manager of Pollution Control and Air Quality (867-975-7748). The contact information for Environment and Climate Change Canada should be updated to Curtis Didham 867-975-4644 (Section 7.3) and attach a map indicating the fuel storage sites and locations of spill kits.

4. Fuel and Chemical Storage
 The Proponent should 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”.

5. Wildlife Log/Record of Observations

The Proponent shall maintain a record of wildlife observations while operating within the project area, including noting observations of Species at Risk identified in or near the project area (e.g. peregrine falcon, and wolverine). The reports should include 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. 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). 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.

A copy of this wildlife record or report should be submitted annually at the end of the operational season to the following Government of Nunavut contacts:

- a. **Manager, Wildlife:** Dustin Fredlund, (867) 982-7441, dfredlund@gov.nu.ca
- b. **Conservation Officer, Kitikmeot Region:** Allen Niptanatiak (867) 982-7451, ANiptanatiak1@gov.nu.ca
- c. **Regional Biologist:** Mathieu Dumond, (867) 982-7444, mdumond@gov.nu.ca.

In addition to the previously recommended monitoring and reporting requirements, the Board is recommending the following:

6. Emergency Response Plan

The Proponent shall develop and submit a site-specific Emergency Response Plan to the NIRB, the Government of Nunavut-Department of Community and Government Services, and the Municipality of Rankin Inlet prior to the commencement of project activities. The plan should include measures to mitigate potential impacts of accidents and malfunctions, including fire outbreaks.

OTHER NIRB CONCERNS AND RECOMMENDATIONS

In addition to the project-specific terms and conditions, the Board has previously recommended the following on May 11, 2007, February 26, 2010, and January 28, 2011:

1. Indigenous and Northern Affairs Canada

(updated) Indigenous and Northern Affairs Canada (INAC *previously* Indian and Northern Affairs Canada) 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.

INAC should also 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.

2. Wildlife

(updated) 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.

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.

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 Rankin Inlet, phone: (867) 645-8084).

3. Ice Bridges

If ice bridges are constructed, the Proponent follow the mitigation measures outlined in Fisheries and Oceans Canada's (DFO) Operational Statement for Ice Bridges, available at the following internet address: <http://www.dfo-mpo.gc.ca/regions/central/habitat/oseo/provinces-territoires-territoires/nu/index-eng.htm>.

4. General

All Authorizing Agencies shall notify the NIRB of any changes in operating plans or conditions associated with this project prior to any such change.

5. Nunavut Water Board

The Nunavut Water Board (NWB) 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; drilling operations; spill contingency planning; abandonment and restoration planning; and monitoring programs. In particular, mitigation measures, conditions and monitoring requirements should be considered for the use of water, snow and ice for the development and maintenance of the winter road for this project.

6. INAC Water Resources

INAC Water Resources should consider the importance of conducting regular inspections, pursuant to the authority of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, while the project is in operation. The inspectors should focus on ensuring the Proponent is in compliance with the conditions imposed through the Water Licence.

7. Quarry Activity

The Proponent shall undertake quarrying in accordance with the *Nunavut Mining Safety Ordinance* and the *Territorial Quarrying Regulations* or equivalent. The Proponent shall practice progressive reclamation in accordance with the restoration guidelines outlined in Indian and Northern Affairs Canada's *Northern Land Use Guidelines Pits and Quarries* (Draft, 2008).

8. Transport Canada

(updated) If the proposed all-weather road between the Hayes camp and the Three Bluffs Exploration Gold Deposit including the airstrip should include any work(s) to be built or placed in, on, over, under, through or across any navigable waterway it may create a potential interference to navigation. The Proponent is required to submit a *Navigation Protection Act* (NPA) application for each individual work to the *Navigable Waters Protection Program* (NWPP) for review to determine if the work is exempt or requires Formal Approval. Applications can be made to the *Navigable Waters Protection Program Prairie and Northern Region*, Transport Canada nwp-pen.pn@tc.gc.ca.

9. Fisheries and Oceans Canada

If the Proponent can meet the conditions outlined in the *Mineral Exploration Activities Operational Statement* (<http://www.dfo-mpo.gc.ca/regions/central/habitat/os-eo/provinces-territoires-territoires/nu/os-eo24-eng.htm>), then the DFO has no concerns regarding this project as it is unlikely to cause significant adverse effects to fish and fish habitat. If the Proponent cannot meet the conditions in the Operational Statement, they should submit an application to DFO for review.

10. Wildlife

(updated) The Proponent ensures that 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 at 867-982-7450 and Conservation Officer of Gjoa Haven at 867-360-7605) especially:

- a. If a situation occurs where wildlife becomes a nuisance (returning frequently, or unable to deter),
- b. If you have killed wildlife (either to resolve a conflict or unintentionally),
- c. If you have injured wildlife and have not been able to relocate or destroy,
- d. If a human has been attacked or bitten by wildlife. Note: Current policy is for any wildlife that attack humans to be destroyed; only in special circumstances would wildlife not be destroyed. If no further injury or human life is in danger contact the Conservation Officer to report and for further instructions.
- e. Contact the Wildlife Manager, Dustin Fredlund, 867-982-7441, dfredlund@gov.nu.ca for information and advice on measures which minimize wildlife-human conflict.
- f. (updated) 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.

The Board is currently also recommending the following:

11. Migratory Birds

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.

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/>.

12. Transport of Waste/Dangerous Goods and Waste Management

Environment and Climate Change Canada recommends that all hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.

REGULATORY REQUIREMENTS

The Board previously recommended, in the May 11, 2007, February 26, 2010, and January 28, 2011 Screening Decision Reports for the Committee Bay exploration project, the following legislation, which continues to apply to the current proposal:

Acts and Regulations

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://laws-lois.justice.gc.ca/eng/acts/n-28.8/>).
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 B** 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 C**.
7. The *Navigation Protection Act* (<http://laws-lois.justice.gc.ca/eng/acts/N-22/index.html>).

8. 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.
9. The *Transportation of Dangerous Goods Regulations* (<http://www.tc.gc.ca/eng/tdg/clear-tofc-211.htm>), *Transportation of Dangerous Goods Act* (<http://laws-lois.justice.gc.ca/eng/acts/t-19.01/>), 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.
10. The *Aeronautics Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-2/>).

In addition, the Proponent is also advised that the following legislation may apply to the project:

11. The *Arctic Waters Pollution Prevention Act* (<http://laws-lois.justice.gc.ca/eng/acts/A-12/>).
12. The *Canada Shipping Act, 2001* (<http://laws-lois.justice.gc.ca/eng/acts/C-10.15/>).
13. The *Marine Liability Act* (<http://laws-lois.justice.gc.ca/eng/acts/M-0.7/>).

CONCLUSION

The foregoing constitutes the Board's screening decision with respect to North Country Gold Corp.'s "Committee Bay".

Dated November 14, 2016 at Arviat, NU.



Elizabeth Copland, Chairperson

Attachments: Appendix A: Previously-Screened Project Proposals
Appendix B: Species at Risk in Nunavut
Appendix C: Archaeological and Palaeontological Resources Terms and Conditions for Land Use Permit Holders

APPENDIX A: PREVIOUSLY-SCREENED PROJECT PROPOSALS

As previously screened by the NIRB (File No. 07EN021), the original “Committee Bay” project proposed by Committee Bay Resources Ltd. (the Proponent) was located in the Kitikmeot region, approximately 260 kilometres (km) south of Kugaaruk and 270 km west of Naujaat. The Proponent indicated that it intended to conduct exploration activities within the Committee Bay Greenstone Belt.

The activities and/or components associated with the original proposal screened under the original File No. 07EN021 included:

- Delivery of equipment, fuel and supplies required for the exploration program;
- Ice strip construction for temporary airstrip on lake at Hayes Camp;
- Exploration and drilling on ice and on land;
- Repositioning of drill equipment;
- Use of existing airstrip at Crater Lake Camp;
- Landing of aircraft with tundra tires on an esker at Ingot Camp;
- Use of existing seasonal exploration camps at Ingot, Crater, Hayes and Bullion camps;
- Storage of drilling fluids;
- Fuel transportation and storage;
- Geochemical soil sampling;
- Gridding and ground geophysical surveys;
- Geological mapping and prospecting, sampling (rock, till and water) and staking;
- Consumption of water for drilling purposes;
- Generation of waste and water;
- Preparation of landing site for helicopter; and
- Baseline environmental work at Hayes camp.

The original proposal was received from Indian and Northern Affairs Canada (INAC, *now* Indigenous and Northern Affairs Canada) on February 27, 2007 and screened in accordance with Part 4, Article 12 of the Nunavut Land Claims Agreement (NLCA). On May 11, 2007 the NIRB issued a 12.4.4(a) screening decision to the Minister of INAC which indicated that the proposed project could proceed subject to the NIRB’s recommended project-specific terms and conditions.

Additional authorization and extension requests associated with the “Committee Bay” project have also been reviewed by the NIRB following screening of the original project proposal (07EN021). In each instance where the NIRB received applications up to and including January 26, 2009, the NIRB confirmed that the application was exempt from the requirement for further screening pursuant to Section 12.4.3 of the NLCA and that the activities therein remained subject to the terms and conditions recommended in the original May 11, 2007 Screening Decision Report. On February 2, 2010, after receiving an application for additional activities at site, the NIRB issued additional terms and conditions associated with the “Committee Bay” project. On January 28, 2011, after receiving an application for additional activities at site, the NIRB issued additional terms and conditions associated with the “Committee Bay” project. The following is a summary of subsequent previously screened project activities and requests for extensions and/or amendments to authorizations.

The activities and components associated with the previous February 29, 2008 application for an amendment to the Type B Nunavut Water Board licence (No. 2BE-CRA0710) for the proposal included:

- Increase the amount of water use for exploration from 16 gallons per minute (two active drills) to 32 gallons per minute (four active drills); and
- Additional domestic water use for camps.

The January 26, 2009 extension requests for INAC Land Use Permits N2007C0001 and N2007C0002 involved activities in support of continued exploration at the Committee Bay Greenstone Belt for an additional two years, between March 2009 and March 2011.

The activities and/or components associated with the February 2, 2010 amendment application to the INAC Land Use Permits N2009C0018 and N2009C0019 included:

- Continue exploration activities to October 30, 2011;
- Increase the number of drills to be used from 3 (three) to 6 (six) drills
 - 6 (six) drills to be used concurrently with 2 (two) of the 4 (four) camps open at any one time; and
- Build a temporary winter road approximately 10 kilometres long from Hayes Camp to the Three Bluffs deposit
 - Road to be used to haul water, drills and related equipment and personnel to the deposit to enable spring exploration drilling.

The activities and/or components associated with the December 2010 extension request for Land Use Permit N2009C0018 and the addition of a quarry permit and surface lease included:

- Increase in exploration activities, including additional drills, and revamping and addition of accommodation, camp buildings and services at the Hayes Camp:
 - Use of 7 (seven) diamond and 2 (two) RC drills positioned on the Three Bluffs Deposit for drilling up to 60,000 metres in 2011 and 2012;
 - Airborne and ground geophysical surveys;
 - Geological mapping and prospecting;
 - Infrastructure upgrade to accommodate up to 100 persons by adding:
 - 11 – 12x14 foot sleepers;
 - 1 – 200 cubic metres (m³) commercial kitchen;
 - 1 – 200 m³ commercial bathroom;
 - 1 – 200 m³ dining/rec room;
 - 2 – 600 m³ shops;
 - Vehicles, heavy equipment, waste water treatment plant, incinerator, and drilling equipment;
- Improving and increasing the length of the current Hayes Camp airstrip:
 - Upgrading the current esker airstrip to 3000 feet (approx. 915 metres) through levelling/grading and lengthening;
 - Quarrying of approximately 5000 m³ of ¾ crush to top coat the airstrip;
- Building an all-weather road from Hayes Camp to the Three Bluffs Gold deposit including a 5000 foot (approx. 1500 metres) airstrip:
 - Construction of an approximately 6-10 km road connecting the Hayes Camp to the Three Bluffs Exploration Gold Deposit;

- Temporary fuel storage for heavy equipment along the road corridor in 204 litre drums with a maximum of 19 drums per cache, secured with berms and spill kits;
- Installation of culverts may be required to facilitate site drainage. Location of culverts to be determined based on 2011 hydrology survey. No planned changes in water courses;
- Construction schedule:
 - April to June 2011, and September 2011: equipment mobilization;
 - June to September 2011: Study hydrology and geomorphology of the proposed road corridor to assess the best position for the all-weather road; and
 - September 2011 to August 2013: road construction.

The activities and components associated with the January 3 and January 25, 2012 requests included a proposal to extend the term of both of the Aboriginal Affairs and Northern Development Canada (AANDC, *now* INAC) Land Use Permits N2009C0019 and N2009C0018 for the proposal from March 2012 to March 2014, as well as to amend AANDC Land Use Permit N2009C0018 to include the following additional components:

- Use of explosives for blasting of gravel and/or work for the purposes of obtaining crushed material and aggregate to complete the upgrades to the all-weather 3000 foot (approx. 915 metres) airstrip to Hayes Camp including the addition of 2 (two) explosive magazines and a mini drill which will also require a new quarry permit;
- Addition of new equipment: 2 Huggland personnel carriers, 1 All Track, and 4 additional snow machines;
- Addition of 2 (two) new skid mounted 35,000 litre double walled fuel tanks to compliment the 2 already in place at the Hayes Camp to further reduce the need for drummed fuel; and
- Total amount of fuel required for the 2012 season will remain at approximately 1,500,000 litres.

The activities and/or components associated with the July 19, 2012 application for a Land Use Permit within the Municipality of Rankin Inlet included:

- Temporary storage of 51,250 litres of diesel fuel secured in an insta-berm;
- Storage of 15 pallets of core boxes and 1 (one) pallet of core box lids;
- Storage of 4 (four) lifts of timber; and
- One (1) sea can.

The activities and components associated with the February 27, 2013 requests for amendment and extension to the AANDC Land Use Permit N2009C0019 for North Country Gold Corp.'s "Committee Bay Project – Camp and Airstrip" project included:

- Additional exploration at 8 (eight) pending mineral leases; and
- Removal of 33 mineral claims from the exploration program.

The February 3, 2014 request was to renew and replace AANDC Land Use Permit N2009C0019 with Land Use Permit N2014C0002 associated with North Country Gold Corp.'s ongoing "Bullion Camp" project and to continue exploration activities as previously approved. The February 5, 2014 request was to renew and replace AANDC Land Use Permit N2009C0018 with

Land Use Permit N2014C0004 associated with North Country Gold Corp.'s "Hayes Camp" project and to continue exploration activities as previously approved.

The December 29, 2014 renewal request for the Nunavut Water Board's Type "B" water licence 2BE-CRA1015 was to support ongoing exploration at the "Committee Bay Project – Three Bluffs Deposit".

The activities and components associated with the May 5, 13 and 22, 2016 requests included a one (1) year extension of AANDC Land Use Permits N2014C0005 and N2014C0002 and a five (5) year extension of Nunavut Water Board's Type "B" Water Licence 2BE-CRA1520 in order to continue previously approved geochemical and soil sampling. In addition, the permits were for the operation of up to 12 additional temporary camps and undertake water withdrawals from additional nearby sources to support the camps.

Appendix B: 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: June 2015

Species at Risk ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Eskimo Curlew	Endangered	Schedule 1	EC
Ivory Gull	Endangered	Schedule 1	EC
Ross's Gull	Threatened	Schedule 1	EC
Harlequin Duck (Eastern population)	Special Concern	Schedule 1	EC
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	EC
Red Knot (<i>islandica</i> subspecies)	Special Concern	Schedule 1	EC
Horned Grebe (Western population)	Special Concern	Pending	EC
Red-necked Phalarope	Special concern	Pending	EC
Buff-breasted Sandpiper	Special concern	Pending	EC
Felt-leaf Willow	Special Concern	Schedule 1	GN
Porsild's Bryum	Threatened	Schedule 1	GN
Peary Caribou	Endangered	Schedule 1	GN
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	GN
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	Schedule 2	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)		Schedule 2	DFO
Killer Whale (Northwest Atlantic / Eastern Arctic populations)	Special Concern	Pending	DFO
Narwhal	Special Concern	Pending	DFO

Note: DFO: Fisheries and Oceans Canada; EC: Environment Canada; GN: Government of Nunavut

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

² Environment Canada (EC) 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.

³ The *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 C:
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*¹ to issue such permits.

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

¹P.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 *Nunavut Land Claims 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*², the federal government can make regulations for the protection, care and preservation of palaeontological and archaeological sites and specimens in Nunavut. Under

² s. 51(1)

the *Nunavut Archaeological and Palaeontological Sites Regulations*³, 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 Nunavut Land Claims 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.*

³ P.C. 2001-1111 14 June, 2001

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 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 Nunavut Land Claims 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*

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.