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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

CULVERT AND BRIDGE
SUPPLEMENTAL INFORMATION REQUEST

Applicant: _____Licence No: _____
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: Michael Zurowski Tel: 416 364 8820 Fax: 416 364 0193 E-mail: michael.zurowski@baffinland.com

2. Project Manager: Patrick Chance Tel: 416 364 8820 Fax: 416 364 0193 E-mail: patrick.chance@baffinland.com

3. Does the applicant hold the necessary property rights? Yes, subject to approval from Qikiqtani Inuit Association

4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)?
   [ ] Yes [X] No
   If so, please provide letter of authorization.

5. Duration of the Project
   [ ] Annual
   [X] Multi Year:
   If Multi-Year indicate proposed schedule of on site activities
   Start: August 2005 Completion: October 2005 (It is expected that minor continuation of rehabilitation will occur in 2006 to continue repair any existing culvert material

Supplemental Technical Information
Required for Water Crossings (linear/bridge/culverts)

1. Waterbody name (English and Inuktitut) and location (Lat & Long) see topographical maps 47H and 37G attached

Existing Milne Inlet Road was established in 1964 and follows topography as detailed on topographical maps previously submitted. The culvert material that needs to be replaced is along the northern bank of Phillips Creek primarily within the first 30 kilometres from Milne Inlet. No major water course will be forded or crossed, except during use of the road in early 2006 to mobilize equipment and consumables to the Mary River Project site.

In 1964-65, old 45-gallon drums were used as culvert material along the road and on the airstrip to help drainage of melt water. No water course was forded. Narrow drainages along the north side-step of Philips Creek had culverts emplaced and leveled to allow access and ensure that the culvert was navigable in March and April. The road was and will be used during those periods to bring in equipment and supplies through use of a "cat train" (bulldozer pulled skid).

Culvert material at Milne Inlet

Use of Culvert Material to replace old 45-gallon drums and rehabilitate Mary River Airstrip. Material helped existing natural drainage and did not change any water-way.

2. Site photo, site map or air photo detailing location

Various Photos of existing Milne Inlet Access Road

Milne Inlet Road along Phillips Creek

Milne Inlet Road along Phillips Creek

Milne Inlet Road along Phillips Creek

Milne Inlet Road along Phillips Creek

Milne Inlet Road along Phillips Creek

Milne Inlet Road along Phillips Creek

Milne Inlet Road along Phillips Creek closer to Milne Inlet

Milne Inlet Road along Phillips Creek closer to Milne Inlet

Milne Inlet Road along Phillips Creek following contours along lake

3. Other Agencies contacted to date

Application was submitted to both Nunavut Planning Commission to keep them informed of future plans at the Mary River Project and the Qikiqtani Inuit Association for modification of the current IOL Land Use Plan. Copies of both applications were also forwarded to DIAND and the NIRB.

4. Need for the project and alternatives considered

At present, access to Mary River site is exclusively via air from Pond Inlet or southern communities such as Churchill, Manitoba. To mitigate cost of air support, which is almost 30% of 2004's exploration expenditure of almost $9 million, efforts will be made to rehabilitate the existing Milne Inlet access road. This will allow Baffinland the ability to mobilize equipment at Milne Inlet via ground. The savings would allow acceleration of the exploration plan and completion of a potential feasibility study.

5. General condition of the site (s)

i. Slope of banks

Generally the slope from the Mary River Project site to Milne Inlet averages a rather gentle 2 degree slope. The Milne Inlet road follows the gentle topography that was created by the Central Borden Discontinuity. It is expected that little re-grading of the road will be required as the initial construction took advantage of the natural glacial debris and river alluvium. The culverts will be restricted to relatively narrow, steep sided drainages flowing into Phillips and its associated tributaries. The new culverts will repair and replace existing culverts that have been eroded or washed out over the years.

ii. Description of substrate

Glacial debris and river alluvium, minor colluvium

iii. Vegetation (on banks, in-stream, to be removed)

It is not expected that existing vegetation will be removed or damaged. Road rehabilitation will be confined to existing works.

iv. Expected flow rates during time of construction

It is not known rates of flow from the drainages, however they generally be expected to be at the lowest level of drainage, as evidenced from 2004 experience. This is dependent upon weather as 2004 saw record levels of rainfall on north Baffin Island.

v. Channel meander pattern

None as there is no crossing of any channel expected of Phillips Creek. The only crossing of creek expected is that emanating from a small lake (NTS37G; 822000N, 542500E). The channel is shallow and no culvert is required to cross this channel. Access will be during the months of Marc and April, while the channel is frozen.

6. Existing Habitat

i. Fish Community (species/common names) at and near the site

None expected

ii. Use of impacted are as spawning, nursery, rearing, food supply or migration route

None expected

iii. Presence of sensitive habitat

None noted

iv. Assessment of impact to fish and fish habitat

None as drainages are seasonal

7. Construction Details

i. In water work timing restriction for fishery

None expected

ii. Proposed start date and completion date

Work will commence in early August, when the sealift access to Milne Inlet and mobilization of equipment via ship or barge.

iii. Type of crossing,

Galvanized iron culvert material as per the above referenced photographs. Culvert material will replace and repair existing culverts installed in 1964 with cut 45-gallon drums. The intent was to replace these with the galvanized material in 1966, but this task was never

completed. The existing culvert material is located at Milne Inlet in strapped bundles (see above photograph). There is more than sufficient material to replace all previously emplaced culverts.

iv. Method of installation

Where required, the existing culverts will be taken out and replaced with the new culverts. Impact on the existing environment will be minimal confined to the existing road and culverts.

v. Dimensions of pipe or structure

The galvanized steel sections are approximately 3-5 feet in length and vary in diameter from 2 to 3 feet. Attachment couplers and bolts will be used to attach and construct the culverts as required for each specific area. The culverts are primarily required for steep seasonal drainages that have washed out historically emplaced culverts.

vi. Machinery to be used

Equipment planned to be used will be:
Excavator – To take out and replace culverts. Use will mitigate impact on embankments.
Cat Bulldozer – For grading and minor leveling existing road.
Front-End Loader – For fill and level of culverts. Fill be taken from existing historic borrow pits, generally located close to existing culverts.

vii. Construction sequence (timing restriction may need to be taken into account)

Sequence of work will be from Milne Inlet to Mary River camp and return to coast to inspect and ensure that culverts are correctly emplaced.

viii. Sedimentation and erosion control measures

Replacement of existing culverts will repair and mitigate any erosion along drainages. Existing drainage areas to be repaired are generally steep and wherever possible existing contours will be maintained.

ix. Monitoring during construction

All efforts will be made to mitigate erosional effects. No long-term monitoring is envisioned.

x. Other mitigation measures

Construction will be limited to repair and rehabilitation of existing culverts and road.

xi. Assessment of impact to fish and fish habitat

None envisioned

xii. Bank stabilization (size range of material)

Existing river alluvium. Excepting drainage areas, slopes are gentle (2-3 degrees)

xiii. Cumulative impacts to area

None expected. Work is limited to rehabilitation and repair of existing seasonal road

xiv. Contingency plan

Contingency plan will be limited to temporary portable berms of fuel for heavy equipment. All precautions are in-place to mitigate possible fuel spills.

xv. Revegetation proposed

None proposed or expected

xvi. Proposed post-construction monitoring (photos taken of the site before construction, during construction and after construction; photographs should be taken form the same reference point for easy comparison)

Pictures will be taken as described above and distributed to NWB upon completion of work.

8. Bridge

i. Bridge dimensions and type

No bridges are envisioned

ii. Any structures (abutments, pilings, piers) that will be placed in the water, on a temporary or permanent basis

None planned or envisioned

iii. Anticipated changes to the existing channel/shoreline morphology as a result of the proposed works

None envisioned, culverts are limited to seasonal drainages

iv. Activities or structures that may cause a temporary or permanent barrier to movement of fish or flow of water

None envisioned

v. Coffer dams, dewatering, temporary watercourse diversions, excavation and temporary crossings

No dams of diversions of non-seasonal drainages will occur

vi. Total area of impact (m^2)

Area of impact is limited to rehabilitation and repair of the existing Milne Inlet seasonal road. Total area impacted by current road is approximately 50 hectares.

vii. Stabilization method and materials used at bridge abutments(include details of material size range)

Non-planned or envisioned

9. Culvert Installation

i. Culvert dimensions (height and width or diameter, length)

Variable length, generally 3-5 metres in length, 2-3 foot diameter

ii. Culvert type/material

Galvanized steel culvert material as per photographs and as discussed above, fill is existing gravel from river alluvium

iii. Impact to fisheries ability to migrate through the culvert

None, culverts are limited to existing drainages and rehabilitation of existing road and repair to existing culverts

iv. Need to realign the channel?

No

v. Open bottom or natural substrate inside?

Open

vi. Slope of culvert

Culverts are generally gently sloped, excepting one to two areas where erosion has steepened slope somewhat. Work confined to repair of existing culverts and rehabilitation of existing seasonal road.

vii. Installation of baffles, rock weirs or other structures

None envisioned