



NIRB Uuktuutinga Ihivriughikhamut #125458

Iqaluit Quarry Area 1 and Area 2

Uuktuutinga Qanurittuq: New

Havaap Qanurittunia: Pits and Quarries

Uuktuutinga Ublua: 3/26/2019 12:12:02 PM

Period of operation: from 0001-01-01 to 0001-01-01

Piumayaat Angirutinga: from 0001-01-01 to 0001-01-01

Havauhikhaq Ikayuqtinga: Danny Zita
Government of Nunavut
PO Box 272
Kugluktuk Nunavut X0B 0E0
Canada
Hivayautit Nampanga:: (867) 982-7661, Kayumiktukkut Nampanga::

Operations Phase: from 2019-03-16 to 2029-03-15

Hulilukaarutit

| Inigiya | Hulilukaarut Qanurittuq | Nunannga Qanurittaakhaanik | Initurlinga qanuritpa | Initurlinga utuqqarnitat unaluuniit Ingilraaqnitat Uyarannguqtut akhuurninnga | Qanitqiyauyuq qanitqiamut nunallaat kitulluuniit ahiruqtaliyainnit nuna |
|---------------|----------------------------|-------------------------------|--------------------------|--|--|
| Quarry Site 1 | Quarry/Borrow pit | Commissioners | unknown | unknown | within 2 km |
| Quarry Site 2 | Quarry/Borrow pit | Commissioners | unknown | unknown | within 2km |

Nunaliin Ilauyun, Aviktuqhimayuniitunullu Ikayuuhiarunguyun

| Nunauyuq | Atia | Timiuyuq | Upluani Uqaqatigiyaungmata |
|----------|--|-----------------|-------------------------------|
| Iqaluit | Jennifer Jarvis - City Planner and Development Officer | City of Iqaluit | 2019-03-24 |

Angiuttauvaktunik

Naunaiqlugu nunanga talvani havauhikhaq ittuq:

South Baffin

Angiuttauvaktunik

| Munariniqmut Ayuittiaqtuq | Angirutinga Qanurittuq | Tadja Qanurittaakhaanik | Ublua Tuniyauyuq/Uuktuqtuq | Umikvikhaa Ublua |
|---|-------------------------------|----------------------------|-------------------------------|------------------|
| Government of Nunavut, Community Government & Services | Approval letter to proceed | Active | 2019-03-27 | |

Project transportation types

| Transportation Type | Qanuq Atuqtauniarmangaa | Length of Use |
|------------------------|---|---------------|
| Land | Quarry material to be transported by dump truck | |

Project accomodation types

Nunauyuq

Ihuaqutivaluin Atuqtauyukhan

Hanalrutit atuqtaunahuat (ukuallu ikuutat, pampiutainnik, tingmitinik, akhaluutinik, hunaluuniit)

| Hanalrutit Qanurittuq | Qaffiuyut | Aktikkulaanga – Qanurittullu | Qanuq Atuqtauniarmangaa |
|--------------------------------|-----------|------------------------------|--|
| Loader | 2 | 5.7m x 2.7m x 1.5m | excavate quarry material |
| Dump Trucks | 3 | 8m x 2.5m x 3.4m | Haul quarry material |
| Water Truck | 1 | 10 tons | Dust control |
| Passenger vehicles | 2 | NA | transport personnel |
| Screening & Crushing equipment | 2 | Unknown | Screen and crushing of sand and gravel |

Qanurittuq Urhuqyuaq unalu Qayangnaqtut Hunavaluit Aturninnga

| Qanurittuq urhuqyuaq hunavaluit aturninnga: | Urhuqyuaq Qanurittuq | Qaffiuyut qattaryut | Qattaryuk Aktikkulaanga | Atauttimut Qaffiuyut | Ilanga | Qanuq Atuqtauniarmangaa |
|---|----------------------|---------------------|-------------------------|----------------------|--------|---|
| Gasoline | fuel | 0 | 0 | 0 | Liters | none stored on site |
| Diesel | fuel | 0 | 0 | 0 | Liters | none stored on site - used for Crusher/Screeener/Loader |
| Hydraulic Fluids & Oils | hazardous | 0 | 0 | 0 | Liters | none stored on site - for heavy equipment maintenance |
| Anti-freeze | hazardous | 0 | 0 | 0 | Liters | none stored on site - for vehicles |

Imaqmik Aturninnga

| Ubluq qanuraaluk (m3) | Aturumayain imavaluin utiqittagaani qanuq | Atulirumayain imavaluin utiqittagani humi |
|-----------------------|---|---|
| 0 | n/a | n/a |

Iqqakuq

Ikkakunik Munakgiyauyunik

| Havauhikhaq Hulilukaarut | Qanurittuq Iqqakut | Ihumagiyauyuq Qanuraaluktut Atuqtait | Qanuq Iqqakuurniarmangaa | Halummaqtirarnirutikhan piyutin |
|-----------------------------|---|--|-----------------------------|------------------------------------|
| Quarry/Borrow pit | Atakuin (halumaiqtun nunan, iqqakuuvaluillu uyaqqiqivingmin) | 100000 | dump truck | none |

Avatiliriniqmut Ayurhautingit:

Accidental leaks and spillages of substances such as fuel or petroleum-based lubricants - if this occurs the City will call the NU 24-hour spill report line at (867) 920- 8130 and immediately extract and remove the aggregate at the point of the spill. The contaminated soil will be relocated to the community land farm. Noise and vibration effects from rock crushing/breaking and machinery.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

No known carving stone deposits are located in this area. If a carving stone deposit is located then extraction of aggregate will cease until the City decides what they wish to do. The extraction of the aggregate will go down 1-3 meters. Should flooding become an issue, drainage ditches will be constructed to promote drainage away from the pit. We will continually monitor erosion or potential for erosion and implement control measures to minimize erosion. Minor slumping may occur to the landscape due to the extraction of aggregate but will be levelled off once the quarry is depleted. No evidence of ice lenses in the area. We currently do not blast and do not foresee having to blast. We will inform the public about the sight, and post signs around the site about the safety. Staff will also follow WSCC safety regulations around the site and area. Once this site is depleted of essential aggregate, the quarry will be leveled off to avoid any steep ditches using sand, silt and any other undesirable aggregate

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

Qanurittuq Ittunik Avatinga: Avatingalluanga

Tidal processes and bathymetry in the project area – This section does not apply. Air quality – Appears excellent. There is no reason to believe that air quality should not be excellent. Climate conditions and predicted future climate trends – The arctic is undergoing apparent raise in average temperature in the long term. This will have no incidence of this quarry. Noise levels – Noise level is of low concern but will be typical of such heavy equipment

Qanurittuq Ittunik Avatinga: Inuuhimayunut Avatinga

Wildlife, including habitat and migration patterns – No wildlife observed, although any wildlife observed will be respected at all times during the work. Birds, including habitat and migration patterns – No birds observed, although any wildlife observed will be respected at all times during the work.

Qanurittuq Ittunik Avatinga: Inungit-maniliurutingit Avatinga

Archaeological and culturally significant sites (e.g. pingos, soap stone quarries) in the project and adjacent areas – None observed Land (should archaeological sites be encountered, all work will stop, permits will be applied for and archaeological investigation will proceed) and resource use in the area, including subsistence harvesting, tourism, trapping and guiding operations – The area surrounding the quarry areas is used as a gravel extraction activity. There are no subsistence harvesting or tourism activity within or surrounding the new quarry areas.

Miscellaneous Project Information

The areas are of low value habitat for terrestrial mammals and birds. However, the following measures are planned to mitigate potential negative effects on wildlife during operational phases:• A zero-tolerance policy regarding the harassment, disturbance and feeding of wildlife will be implemented.• All workers will be educated on the wildlife (particularly species at risk) expected to occur in the area, including IQ/traditional knowledge.•Food, food waste, and other attractants will be handled, stored and disposed of safely to avoid attracting and habituating animals.• Polar bear sightings will be immediately reported to the Site Supervisor recording the time, date, location, activity, and proximity to

workers. This will be followed site protocols to keep workers and the public at large safe during the wildlife encounter. • Movement of vehicles and machinery will be restricted as required for any wildlife occurrences in the area. • Species at risk, or other features such as bird nests will trigger documentation and wildlife management protocols to minimize wildlife disturbance. • Work site boundaries will be flagged to prevent inadvertent loss or alteration of wildlife habitat. As well, the project will comply with the Migratory Bird Regulations pursuant to the Migratory Bird Convention Act. • If active nests are encountered, the nesting areas will be avoided until nesting is complete. • The nest will be protected with a buffer zone appropriate for the species. • Best practices will be applied as appropriate as per the Regulations. Water requirements for dust management during excavation and loading activities will be from the existing water supply infrastructure in the Hamlet. It is anticipated that water will be delivered by the Hamlet's trucked water service or a locally contracted water truck. There will be no extraction or discharge of water from or into fresh water bodies. Fuel will be provided by the Hamlet's facilities and supplies. There will be no storage of fuel on site. There will be no storage of hazardous material on site. There will be no use of explosives

Naunaiyainiq ukuninnga Ayurhautingit unalu Piumayaat Ikkiliyuumiutinahuarutit

Excavation of material at the identified sites will expose underlying permafrost to warming and may cause permafrost thaw and slumping. Mitigation measures will be in place to limit or prevent excessive thaw such as: ensuring positive drainage away from the pit face and restricting excavation to the active layer in shallow sources.

Tamatkiumayunik Ihuikgutivaktunik

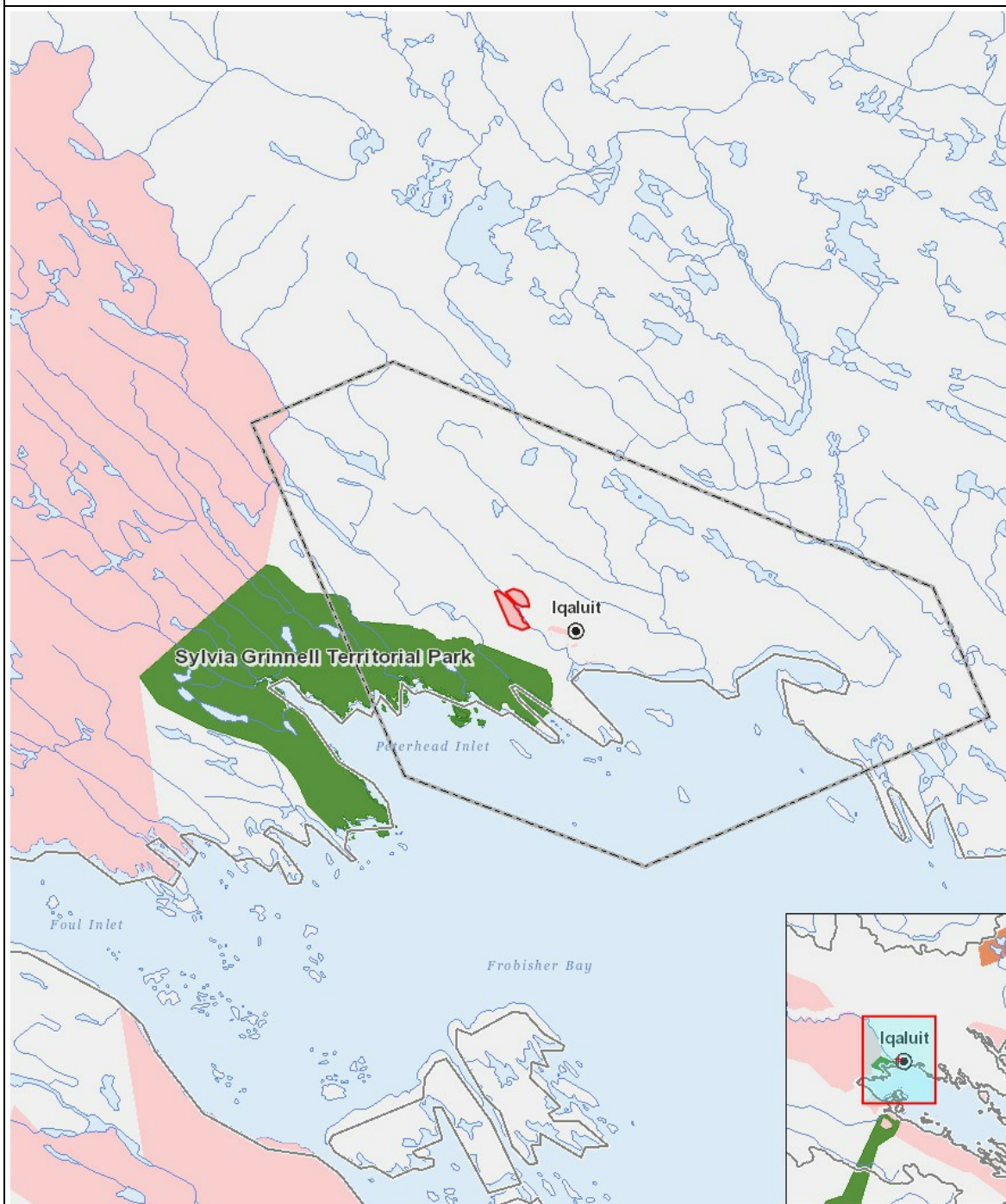
The overall cumulative effects are good: a good source of granular material was found, its development will provide a good source of gravel for the City and its development will provide employment in Iqaluit. No negative regional or cumulative economic effects associated with the quarries were identified.

Impacts

Ilitariyauniq Avatiliriniqmut Ayurhautingit

| | PHYSICAL | Designated environmental areas | Ground stability | Permafrost | Hydrology / Limnology | Water quality | Climate conditions | Eskers and other unique or fragile landscapes | Surface and bedrock geology | Sediment and soil quality | Tidal processes and bathymetry | Air quality | Noise levels | BIOLOGICAL | Vegetation | Wildlife, including habitat and migration patterns | Birds, including habitat and migration patterns | Aquatic species, incl. habitat and migration/spawning | Wildlife protected areas | SOCIO-ECONOMIC | Archaeological and cultural historic sites | Employment | Community wellness | Community infrastructure | Human health |
|-------------------|----------|--------------------------------|------------------|------------|-----------------------|---------------|--------------------|---|-----------------------------|---------------------------|--------------------------------|-------------|--------------|------------|------------|--|---|---|--------------------------|----------------|--|------------|--------------------|--------------------------|--------------|
| Havakvinga | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - |
| Aulapkaininnga | | | | | | | | | | | | | | | | | | | | | | | | | |
| Quarry/Borrow pit | | - | - | N | - | - | - | - | N | - | - | - | N | | N | - | - | - | - | | P | - | - | - | - |
| Piiqtauniq | | | | | | | | | | | | | | | | | | | | | | | | | |
| - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | | - | - | - | - | - |

(P = Nakuuyuq, N = Nakuungittut unalu mikhilimaittuq, M = Nakuungittut unalu mikhittaaqtuq, U = Naluyauyuq)



List of Project Geometries

| | | |
|---|---------|---------------|
| 1 | polygon | Quarry Site 1 |
| 2 | polygon | Quarry Site 2 |