ᓄᓇᕗᒻ ᐊᐸᑎᓕᓵᓴᕐᔪᑦ ᑲᑎᒪᔨᖏᑦᑎᒍᑦ ᑐᓴᕐᓂᑐᑦ ᖃᒥᖅᑕᕐᕕᖏᖅ #125989

Arviat new quarry sites

ᑐᓴᕐᓂᑐᐸᓂᖅ ᖃᓄᐃᓕᓴᐅᑎᑦ:	New
ᐱᓕᓵᐊᓚᕆᐅᔪᒪᔨᒃ ᖃᓄᐃᓕᓴᐅᑎᑦ:	Pits and Quarries
ᐅᓪᓗᖏᑦ ᑐᓴᕐᓂᑎᓕᐊᔾᔨᐅᑎᒃ:	8/14/2024 4:35:46 PM
Period of operation:	from 2024-06-26 to 2054-09-25
ᐱᓕᓵᐊᖑᑉᐳᒪᔪᖅ:	Randy Mercer Government of Nunavut P.O. Box 272 Kugluktuk Nunavut X0B 0E0 Canada ᐅᖑᓚᐅᑎᑦ: 867-982-7657, ᓯᑲᓴᓂᑦ: NIL

ᑐᓴᐅᒪᔪᓕᑦ

ᖃᓄᐃᑦᑐᑎᓂᔪ ᐱᓕᕆᐊᖃᖅᓂᐊᕆᐊᖃᖅᑐᓵᓂᔪ

ᖃᓕᓗᓈᑎᑐᑦ: This project proposes new Hamlet quarry sites within the Arviat municipal boundary. The proposed new quarry/aggregate sites will serve current and future aggregate needs of the Hamlet such as road construction and maintenance, land grading/scaping, and other similar hamlet needs. The quarry/aggregate sites will also be used by various private persons and entities to serve their aggregate needs once they apply to the Hamlet for a quarry permit.

ᐅᐃᓱᑎᑐᑦ: NIL

ᐃᓄᖅᑎᑐᑦ: NIL

Inuinnaqtun: NIL

Personnel

Personnel on site: 1

Days on site: 10950

Total Person days: 10950

Operations Phase: from 2024-06-26 to 2054-09-25

Closure Phase: from 2054-09-25 to 2054-10-25

ᐱᓕᓐᐊᓐᔨᐅᓂᐊᖅᑐᑦ

ᓇᒥ	ᖃᓄᐃᓕᑦᑐᒥᑦ ᐱᓕᓐᐊᖃᖅᓂᐊᖅᓯ	ᑭᓄᑯᑦ ᓄᓇᕐᑯᑦᓂᓂ	ᑐᓴᐅᒪᔨᓴᑦ ᓄᓇᐅᓯ ᖃᓄᐅᑦ ᐊᑐᓴᐅᓪᓕᐅᖅᑯᑦᓯᒪᔨᓐᓇᓂᓂᓄᓐᓄᓄ	ᐃᑦᓴᕐᓂᑕᖃᖅᓴᐃᐅᓪᓕᐅᖅᓯ ᐃᓄᖅᓄᑦ ᓇᔨᖅᑕᐅᖅᑦᑕᕐᓂᑯᓐᓄᑦ ᑕᐃᑦᑭᒪᓂᑐᖃᐅᓕᖅᑐᖅ	ᖃᓄᖅᓂᖅᓯᖅ ᓄᓇᓕᒋᐅᔨᐅᔨᖅ ᐊᒻᒪᓗ ᓴᐳᒻᒋᐃᐅᓪᓕᐊᓗ ᑭᓇᐅᑦ
Quarry sites A & B (AKA. Prospects #1 & 2)	Quarry/Borrow pit	Commissioners	No previous history	A archeological assessment will be completed this summer.	Approx. 6.5 Kilometres North-west of the community of Arviat.
Quarry sites C,D,& E (AKA. Prospects #3)	Quarry/Borrow pit	Commissioners	Some areas within the site are being used recreationally by local residents (cabins, beach etc..)	A archeological assessment will be completed this summer.	Approx. 5.5 Kilometres North-west of the community of Arviat.

ᓄᓇᕗᐅᓯ ᐃᓕᐅᖃᕐᕕᐅᓂᖓ ᓄᓇᕗᑦᓓᓗ ᐊᐃᑲᑐᓕᐅᖅᓂᖓᓄᓐᓄᑦ ᐃᑲᔪᕕᐅᔨᓂᖅᑐᑦ

ᓄᓇᕗᒋᔭᖅ	ᐊᑎᑦ	ᑲᑐᔾᔨᐊᖃᖅᑎᑎᒋᔭᖅ	ᖃᓄᖅᑎᑦ ᑐᓴᐅᒪᔨᓴᑦ ᐅᑭᐅᓂᖅᓴᐅᓪᓕᐊᑦᑎᓂᓂᑦ
ᐊᖅᐃᐊᑦ	John Hussey, Senior Administrative officer & Hamlet Council.	Hamlet of Arviat	2024-01-23

ᓀᐃᓴᓱᒋᑦ ᐱᒍᖏᓐᓄᐅᑎ ᐊᖏᕐᕋᑕᐅᓯᒪᔪᑦ

ᓇᒋᑎᐊᖏᓱᓂᒃ ᐱᓕᓇᐊᓇᖏᐊᐅᓂᐊᖅᑐᑦ ᑎᑎᕐᓗᓂᑦ:

ᓀᐃᓴᓱᒋᑦ ᐱᒍᖏᓐᓄᐅᑎ ᐊᖏᕐᕋᑕᐅᓯᒪᔪᑦ

ᑲᕿᒪᑎᐅᔨᓵᑦ ᐊᐃᒃᑐᑐᕐᓂᒪᓱᓂ ᒪᓕᑲᖏᓐᓄᒪᔪᓂᒃ ᐱᖏᐊᖏᓐᓄᒪᔪᓂᓗ ᖃᒪᓕᑦ ᐱᔪᓐᓇᖏᑐᑦ ᐊᖏᕐᕋᑕᐅᓯᖏᓐᓄᑦ ᖃᐅᔨᓴᓐᓄᑦ	ᖃᓄᐃᓕᑐᑐᓕᓇᐅᕿᓪᓚᕆᓂᕿ ᓀᐃᓴᓱᒋᑕᕐᑕᐅᔨᖅᖃᖅ ᐱᔪᓐᓇᐅᑎᑕᐅᔨᖅᖃᖅ ᐊᖏᕐᕋᑕᐅᓯᖏᓐᓄᑦᓯᓂᓕᑦ	ᐃᓐᓇ ᖃᓄᐃᓕᑕᓐᓇᕿᓂᕿ	ᐅᑉᓗᒋᑦ ᑐᓂᔾᔪᑎᑦ/ ᑐᓴᓱᖅᑐᑕᐅᓪᓗᐅᒪᔪᖅᖃᖅ	ᑭᒡᓕᖃᖅᓴᓐᓇ
Government of Nunavut, Community Government & Services	CGS is the applicant on behalf of the Hamlet of Arviat	Active	2024-01-23	
Hamlets and Municipalities	Hamlet council approved CGS applying for NPC/NIRB approval through council motion # 10/24	Active	2024-01-23	

Project transportation types

Transportation Type	ᓄᓇᒧᑦ ᐊᑐᓚᐅᓂᐊᖅᐸ	Length of Use
Land	Local and private dump trucks, loaders, excavators, screeners, and crushing machines	

Project accomodation types

ᓄᓇᓕᒃᖅ

ᐊᑐᓚᐅᓂᐊᖅᑐᖅ

ᐱᖏᑦ ᐊᖅᑎᔪᖅ ᐊᑐᖅᑕᐅᓂᐅᓴᔪᖅ ᐃᓕᖅᓯᐅᑎᓗᑎᑦ ᐃᑯᑕᐃᑦ, ᒥᓪᓗᐊᕐᑏᓱᑦ, ᖃᖅᓴᑕᓯᖅ, ᓄᓇᓯᐅᑦ ᐊᓯᖏᓪᓗ

ᐊᖅᑎᔪᖅ ᐱᖏᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᖅ ᖃᓄᐃᓪᓕᖅᑐᑦ	ᖃᑦᓯᐅᐊᓕᑦ	ᐊᖅᑎᓂᖅᑎᑦ - ᐳᖅᑐᓂᖅᑎᑦ	ᓯᓚᒧᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᐸ
CAT Loader	1	5.7m x 2.7m x1.5m	Excavate quarry material
Dump Truck	1	8m x 2.5m x 3.4m	haul quarry material
Track Excavator	1	10m(L) x 3.2m (H) x 3.2m (W)	excavate quarry material
Screener	1	14.2m(L) x 4m(H) x 4.9m (W)	Screen undesirable aggregate and large boulders

ᑎᑎᕋᐅᓯᖏᓐᓄᑐ ᐅᖅᓯᖅᓴᐃᑦ ᐊᑦᑕᓇᖅᑐᖅᑕᓂᓪᓗ ᐊᑐᖅᑕᐅᓂᐊᕐᓂᖅᑎᑦ

ᓯᓚᒧᑦ ᐅᖅᓯᖅᓴᕐᕕᐊᖅᐸᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᐸᑦ	ᖃᖅᓄᐃᓪᓕᖅᑐᑦᑐᓂᓪᓕᐊᓂᖅ ᐅᖅᓯᖅᓴᕐᕕᐊᖅᐸᑦ	ᖃᖅᑎᐅᐊᕐᑐᑦ ᐅᖅᓯᖅᓴᖅᑎᐅᔪᑦ	ᐳᖅᓴᐃᐅᑦ ᐃᒪᖅᖃᖅᑎᑦᓯᓂᖅᓴᖅ	ᑲᑎᓪᓗᒍ	ᐳᖅᓴᐃᑦ ᐊᒥᓱᓂᖅᑎᑦ	ᓯᓚᒧᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᐸᑦ
Diesel	fuel	1	535	535	Liters	fuel tank that attached to the CAT loader. Diesel will be taken from the community fuel station.
Diesel	fuel	1	567	567	Liters	fuel tank that attached to the Dump Truck. Diesel will be taken from the community fuel station.
Diesel	fuel	1	600	600	Liters	fuel tank that attached to the Track Excavator. Diesel will be taken from the community fuel station.
Diesel	fuel	1	276	276	Liters	fuel tank that attached to the Screener. Diesel will be taken from the community fuel station.

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ᐅᓪᓗ ᑕᒪᖅ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᖅ	ᖃᓄᖅ ᐃᒥᖅᑕᖅᑕᕐᓂᐊᖅᐸᑦ	ᓇᑭᑦ ᐃᒥᖅᑕᖅᑕᕐᓂᐊᖅᐸᑦ
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ᐊᖏᑕᑯᑦ

ᐊᖏᑕᑯᓕᓂᐊᕐᓂᖅ

ᐱᓕᓐᐊᓐᖏᐅᔪᒪᔪᒍᑦ ᐱᓕᓐᐊᓐᖏᐅᓂᐊᖅᑐᖅ	ᖃᓄᐃᔨᑐᖅ ᐊᖏᑕᑯᖅ	ᖃᓄᐃᑎᒋ ᐊᖏᑕᑯᑦ ᓴᖅᑭᐊᓂᐊᖅᑐᓐᖏᐅᖅᓯᑦ	ᖃᓄᖅ ᐊᖏᑕᖅᑕᐅᓂᐊᖅᐸ	ᓴᓗᒻᒪᖅᓴᐅᑎᓴᖏᓐᓄᐅᓂᐊᖅᑐᑦ
Quarry/Borrow pit	ᐅᓴᕋᐃᔨᐃᓂᖅ ᓄᓇᒥᑦ ᓄᑎᓚᓂᖅ ᐊᑐᐸᐅᔭᓇᓲᖏᑦᑕᓂᖅ, ᓇᓱᕐᓗᑯᓂᖅ	1,000,000 cubic metres	Overburden will be stockpiled for specific uses as determined by the Hamlet or stored within the quarry sites to be recycled by way of reclamation once the quarry site is depleted of useable material.	NIL

ᐊᓭᑎᒥᐅᑕᓂᑐᑦ ᐊᖏᖅᑕᐅᓱᒪᔪᑦ

The natural vegetation such as moss and other arctic plants on the surface will be disturbed or destroyed within the excavation area within quarry boundaries. This is unavoidable due to the nature of quarry operations. Additional environmental impacts and the mitigation measures are outlined the Spill Contingency and the dust mitigation measures Plans attached to this application.

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

Any unsuitable overburden material encountered will be stripped from the working area and stockpiled in separate, designated areas, or discarded. Excavation depth will depend on the terrain features but will typically involve digging 1 to 4 metres down from the surface. Proper drainage of the sites will be maintained to ensure medium to large size puddles/ponds do not form. The extraction face will maintain a safe angle to prevent landslides and personnel or public injury. Since each site contains a varying mixture of gravel, sand, and silt; a screener will filter aggregate to its desired specifications. Stockpiling will be permitted within the sites, but such piles will adhere to the restrictions outlined in the Dust Management Plan. All mobile equipment will not refuel on site, but instead will use the local gas station in Arviat. There will be no petroleum stored on site, but a screener and other mobile equipment may be parked overnight. These types of equipment are equipped with diesel tanks. The capacity of each tank is outlined in the Spill Contingency Plan. Prospective site #3 contains a publicly used road. To minimize any hazards or injury to the public, and if the Hamlet deems it necessary, boulders will be placed along the road certain heavy traffic areas within the quarry boundary to prevent traffic from entering the extraction area. The Hamlet has no set operating times regarding quarry extraction but activates usually cease at approximately 9:00PM. This prevents the possibility of traffic collisions during the night when visibility is low. The Hamlet extracts material using their own mobile equipment under an assumed municipal permit, but private individuals and contractors are required to obtain a quarry permit from the Hamlet. Once a permit is obtained, the private individual(s) or contractor(s) extract aggregate to the permitted amount using their own mobile equipment. Due to limited municipal personnel and resources, supervision of extraction by private individuals or contractors may not occur. Annual extraction

quantities are not known due to the sporadic nature of both the public and private sector construction projects. The permit will contain terms and conditions that will require the contractor to follow any conditions imposed by the Nunavut Planning Commission, Nunavut Impact Review Board, The department of Culture & Heritage, or other regulatory authorities. Once the quarry is depleted of useable material, quarry operations cease. Steep slopes will be levelled to a safe angle by the Hamlet. Any ditches will be filled and levelled with the quarry base. All mobile equipment will be removed. Unnatural waste, debris, scrap, and other garbage will be removed. Due to limited capacity and resources, replanting is not feasible.

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

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All sites have similar terrain features and contain vegetation typically found in Nunavut such as moss and other arctic plants. All quarry sites are relatively flat and mostly contain construction grade aggregate. The other areas contain pit-run, sand, and other finer material that have limited uses will be stockpiled. There is a waterbody within prospect #3 with an approximate diameter of 193 metres with unknown marine biology and depth. Another notable narrow waterbody is contained with Prospect #3 with length of 283 metres and a width of 30 metres. The marine biology and depth of unknown. A 31-metre buffer zone will be maintained from the waterbody to ensure they are not disturbed. Prospect #3 contains a public recreational road through the middle that is used by the resident of the community to travel north of the community. The road will be unaltered, although there may be upgrades to certain portions of the road to accommodate heavier traffic. There is no evidence of thermokarst ponds, ice lensing, ground or rock instability and seismicity within all sites. Surface and bedrock geology, permafrost, and sediment and soil quality for any site is not known.

ᒫᓐᓇ ᐊᕙᑎᐅᑉ ᖃᓄᐃᑦᑐᓪᓚᕆᐅᓂᖓ: ᐆᒪᔪᖅᑕᖃᕐᓂᖓ

All sites contain vegetation typically found in Nunavut such as moss and other arctic plants. There are no wildlife or bird migration routes nor is there any species of concern within any boundary.

ᐃᓱᓗ ᐊᐸᑎᐅᐸ ᖃᓄᐃᑦᑐᓕᕆᐅᓂᖏᓐᓄᑦ: ᐃᓄᓕᕆᓂᕐᒧᖏᓐᓄᑦ-ᐱᔪᓕᓕᐊᓕᕆᓂᕐᒧᖏᓐᓄᑦ

Quarry sites C, D, & E contain recreational cabins and a beach area within their boundaries. The Hamlet has not indicated what they plan to do with these sites but aggregate extraction during the early days will avoid and maintain a safe distance from these recreationally used areas. An archeological assessment study will be completed this summer to ensure there are no protected areas within all quarry boundaries. There is no subsistence harvesting, tourism, trapping or guiding operations within the quarry sites. Since both sites are 5 kilometres or further from the community of Arviat, quarry operations by way of the extraction process will minimally affect the well-being of the local residence.

Miscellaneous Project Information

Additional information can be seen in the Dust Management and Spill contingency

ᓄᓇᓄᐃᖃᑦᑕᐅᓂᖓᓂᑦ ᐊᐅᑐᖃᑦᑕᐅᓯᒪᔪᑦ ᖃᓄᐃᑦᑐᑐᓂᖓᓂᑦ ᐸᓪᓕᐅᒥᐅᔪᖃᑦᑕᐅᓂᐊᖅᓂᖓᓂᓪᓗ

The local Hamlet will be the administrator of all sites. They will be used by both the Hamlet and the public. The Hamlet will issue quarry permits to the public and these quarry permits will come with the following conditions: No extraction of aggregate will occur within 31 metres of any waterbody. The contractor will inform the Hamlet the date and time when they plan to extract the material to ensure the Hamlet, if deemed necessary, supervise the extraction of aggregate. The extraction of aggregate and their surroundings, is done in an environmentally sound manner that is satisfactory to the Hamlet and/or NIRB. Excavation is not to occur outside of the established quarry boundary. Stockpiling of aggregate will be located at least 31 metres from any waterbody to avoid water siltation and obstruction. Access to and from the quarry site will only be done through designated roads. Once extraction of aggregate is complete then the contractor will remove all types of their equipment from the site and slops grade reduction with use of unsuitable stockpiles and uncrushed rocks. The contractor will follow the quarry plans.There will be no petroleum stored on site, but the equipment used in the extraction of aggregate such as loaders and excavators do have diesel tanks attached to them. The Hamlet and private contractors will be required to follow the Spill contingency plan.

Cumulative Effects

Since roads to all quarry sites already exists and services recreational traffic to and from Arviat. Any added cumulative effects from quarry operations relating to human activity will be minimal.

Impacts

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	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
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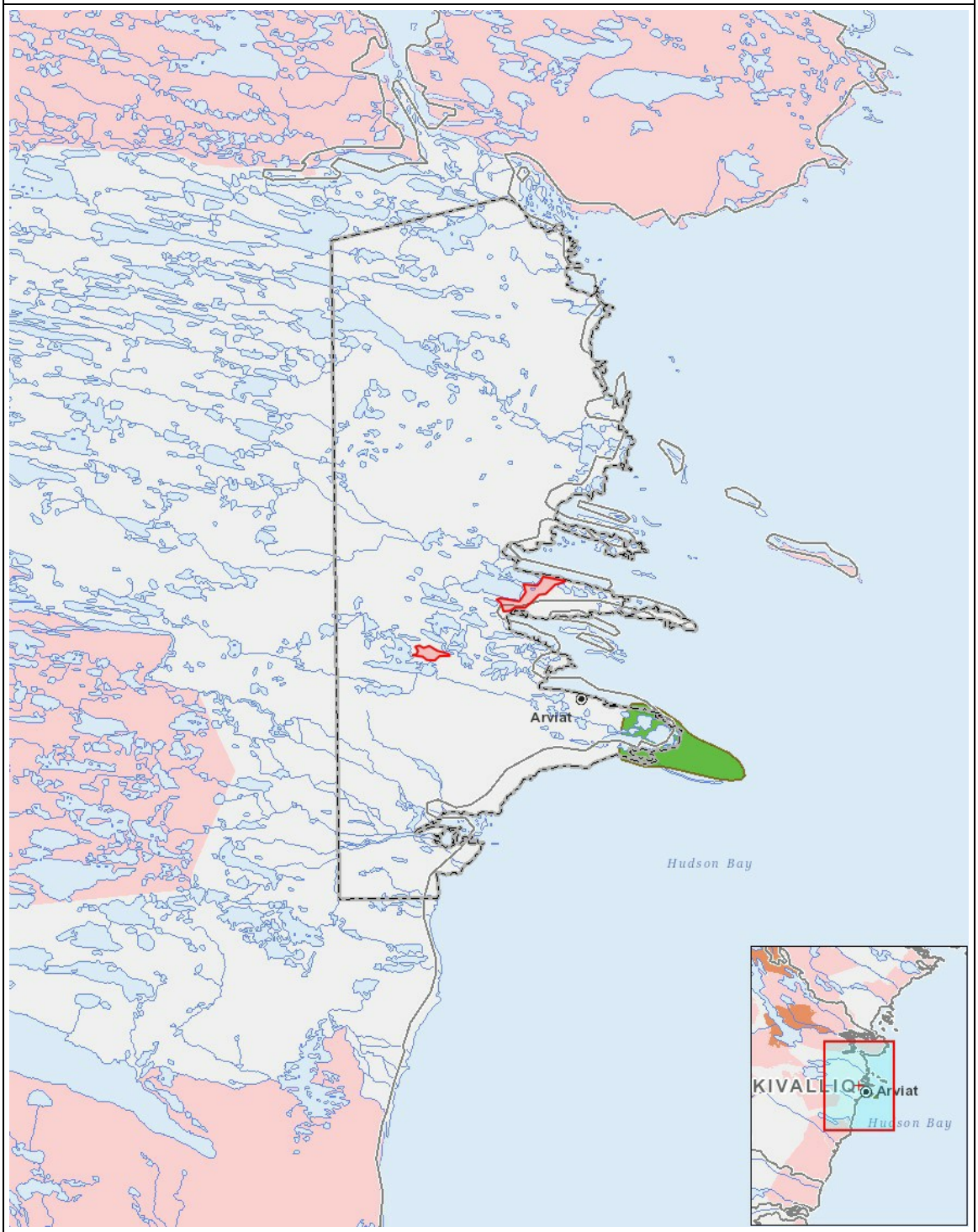
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
ᐅᓴᖏᑦᑕᕐᓂᖅ																									
Quarry/Borrow pit		-	U	U	-	-	-	M	U	U	-	-	M		M	-	-	-	-		-	P	P	P	-
ᐃᑐᑦᑎᓗᓂᖅ																									
Quarry/Borrow pit		-	U	U	-	-	-	N	U	U	-	-	N		N	-	-	-	-		-	P	P	P	P

(P = ᐊᑲᐅᓇᕈᑎᓴᓐᓇᖅᑐᑦ, N = ᐊᑲᐅᖏᑦᔪᑕᐅᓴᓐᓇᖅᑐᑦ <ᓪᓚᐅᒥᔪᔪᖅᑐᖅᑕᐅᓴᓐᓇᖅᑐᑦᑐᑦᓗ, M = ᐊᑲᐅᖏᑦᔪᑕᐅᓴᓐᓇᖅᑐᑦ <ᓪᓚᐅᒥᔪᔪᖅᑐᖅᑕᐅᓴᓐᓇᖅᑐᑦᓗ, U = ᖃᐅᔨᒪᓐᓇᖏᑦᑐᖅ)

ᓇᒋᒪᖏᓗᖅ ᐱᓕᕆᐊᒃᓴᐅᔪᖅ



List of Project Geometries

1	polygon	Quarry sites A & B (AKA. Prospects #1 & 2)
2	polygon	Quarry sites C,D,& E (AKA. Prospects #3)