NIRB Application for Screening #125419

Transmit Array Antenna farm

Application Type:	New
Project Type:	Scientific Research
Application Date:	11/1/2018 1:42:53 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Proposed Authorization:	from 0001-01-01 to 0001-01-01
Project Proponent:	Ed Riseborough DRDC Ottawa Research Centre 3701 Carling Avenue Ottawa Ontario K1A0Z4 Canada Phone Number:: 613-998-2052, Fax Number::

DETAILS

Non-technical project proposal description

English: This project will build a transmit antenna array that will be driven by electronics that will be housed in 3 modified shipping containers, There will be a 750 KVA generator that will power the electronics. The installation phase will have up to 12 people on site for a period of 3 to 6 weeks. The operations phase will have 3 to 4 people on site for 2 week periods, up to 4 times per fiscal year.

French: Ce projet permettra la construction d'un réseau d'antennes d'émission qui sera commandé par du matériel électronique hébergé dans quatre conteneurs d'expédition modifiés. Une génératrice de 750 kilowatts alimentera ce matériel. Lors de la phase d'installation, une équipe composée d'au plus cinq personnes sera sur place pendant dix semaines. Trois ou quatre personnes seront sur place pendant des périodes de deux semaines et jusqu'à quatre fois par exercice lors de la phase d'exploitation.

Inuktitut: ᒥᓐᓂ ᐱᓕᓇᐊᖅᔪᖅ ᓴᓇᓕᐊᖅᑐᖅ ᓂᐸᖅᓚᔪᒥ ᐅᐊᔨᑯᒥᒥ ᐊᐅᓪᑕᐅᓕᐊᖅᑐᖅ ᐊᐅᓪᐅᑎᓕᖅᓂᑦ ᐃᓕᖅᑎᑕᐅᓕᐊᖅᑐᑦ ᑎᓴᒪᓕ ᐋᖅᑭᑎᐊᖅᑕᐅᔪᒪᔪᓕ ᐅᔪᒃᑕᑯᓴᒍᑦ ᕿᓴᐊᓇᔨᐅᕐᓂᓕ. 750 ᑭᓗᐅᐊᑦᒥ ᐊᐅᓪᐅᑎᒥ ᐅᒪᓚᖅᑯᑎᖅᑎᑦᑎᓕᓕᐊᖅᑐᖅ ᐊᐅᓪᐅᑎᓕᖅᓂᑦ. ᐃᓕᐅᕐᖅᑕᐅᓕᖅᖢᓚ ᐃᓪᖢᓚ ᐃᖅᒃᓇᐃᔨᖅᑎᖅᓴᕐᓕᐊᖅᑐᖅ ᑕᑦᓕᒪᓕᑦ ᐃᓕᖅᓂᑦ ᐃᓕᑭᐅᔨᒥ ᐱᓇᔪᐊᑭᔪᖅᓂᑦ ᖃᔪᓕᖅᑦ. ᐊᐅᓪᑕᑎᓕᒍᑦ ᐃᓪᖢᓚ ᐱᖅᒪᔪᓕᑦ ᑎᓴᒪᓂᑦ ᐃᓕᖅᒃᖃᓕᐊᖅᑐᖅ ᐃᓕᑭᐅᔨᒥ ᐱᓇᔪᐊᑭᔪᖅᓂᑦ ᒪᖃᑭᖅᓚᖅᒪᓕᑎᑎᓂ, ᑎᓴᒪᐃᖅᔪᓕᑎᑎᓂ ᐊᑐᓕ ᑭᓇᐅᔨᓕᓇᓕᔨᑉ ᐊᖃᖏᑲᒪᓕ.

Inuinnaqtun: not required

Personnel

Personnel on site: 12

Days on site: 70

Total Person days: 840

Operations Phase: from 2018-07-10 to 2020-03-31

Operations Phase: from 2020-04-01 to 2023-03-31

Post-Closure Phase: from to

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
One corner of antenna Array	Equipment installation	Crown	Site owned by ECCC. Have an agreement to set up a transmit array with electronics for testing. Partial set up was in the summer 2018. Larger installation next year.	Unknown	Unknown
Shelter location	Equipment installation	Crown	The shelter was installed in summer 2018. 3 more planned for next FY.	Unknown	Unknown
Generator Location	Equipment installation	Crown	Generator installed in the Fall 2017. Larger generator planned for installation next year (not purchased yet).	Unknown	Unknown

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Information is not available			

Authorizations

Indicate the areas in which the project is located:

North Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Environment and Climate Change Canada	Land Use Perrmit N2017N0017 between ECCC and INAC. ECCC is currently working on a LUP amendment to include this project.	Active	2017-07-04	2022-07-03

Project transportation types

Transportation Type	Proposed Use	Length of Use
Land	Pickup truck to get to site. Larger truck/crane to put containers in place.	

Project accomodation types

Other,

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Generator	2	10'Lx4'Wx8'H	To power electronics, and HVAC
Electronics	4	20'Lx8'Wx8'H	Radio Equipment in Shelters

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	1	1000	1000	Liters	200 KW Generator with built in fuel tank. (future 750 KW generator TBD)
R410A	hazardous	1	25	25	Lbs	for HVAC

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0		

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Information is not available				

Environmental Impacts:

Air pollution and noise pollution expected from the generator during operations phase. Operations will be only over a 2 week span up to 4 times a year. Levels to be determined as the generator needs to be purchased. The shipping containers will mounted on cribs with styrofoam sheet between the container and the ground to eliminate heat being disssapated into the permafrost.

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

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

Description of Existing Environment: Physical Environment

The site is located beside an airport, no wetlands or watercourses in the region. The Study Area is located in the tundra, and the ground remains frozen year round (permafrost) with only the top few feet thawing in the summer to allow vegetation to grow (EC 2010). The surrounding area is comprised of gentle rolling hills; however, mountainous terrain is easily visible from the station. A few kilometres to the north, Blacktop Ridge has peaks of up to 825 m. The rock formations around Eureka are quite unique, and the area is known for its Rose rocks and calcite formations (EC 2010).Geological features of the area include glaciers, low mountains, and the Arctic Ocean. Soils consist of marine clays, overlain with fine sands.See attached EED.

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socio-economic Environment

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

See attached EED.

Cumulative Effects

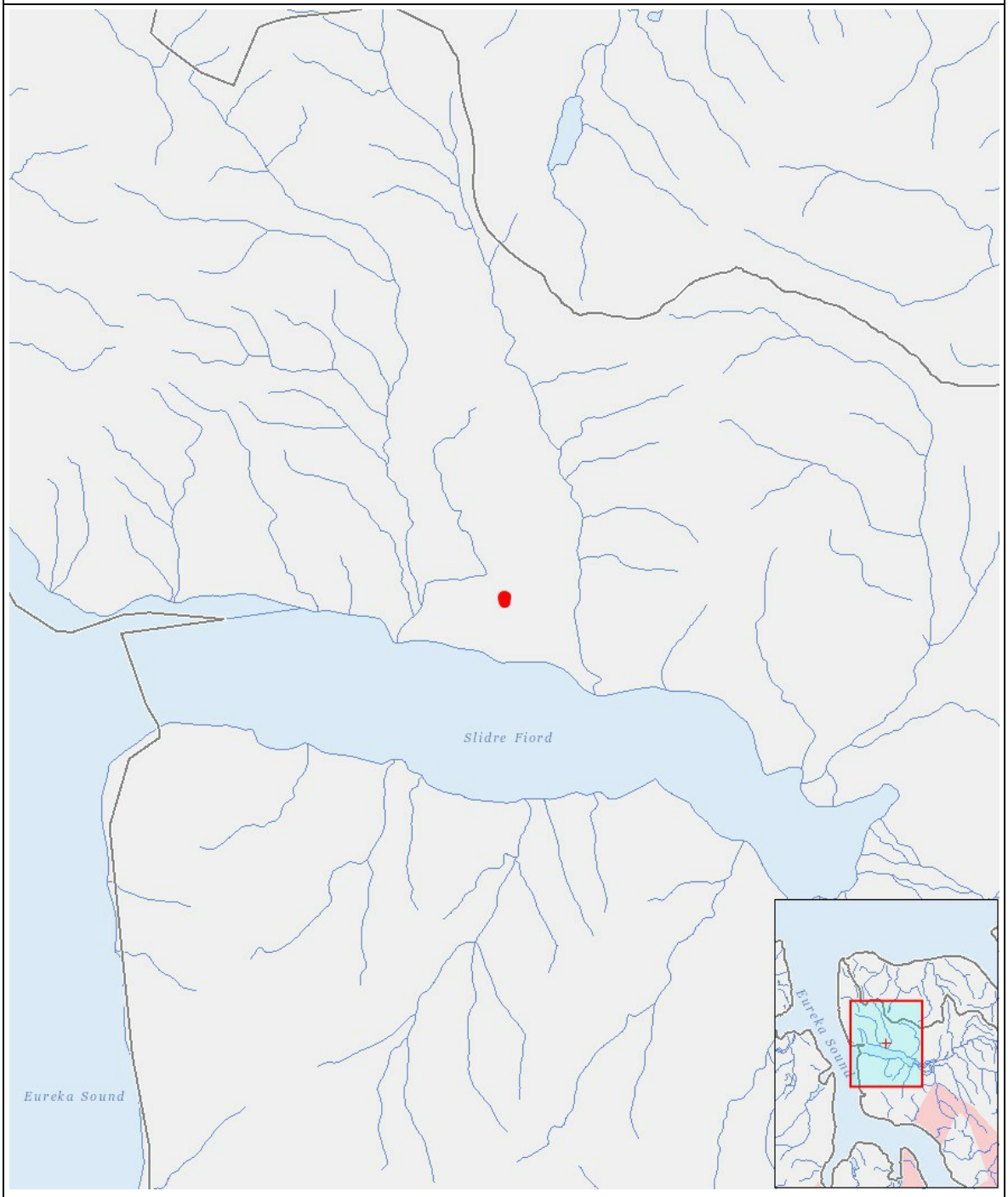
Impacts

Identification of Environmental Impacts

	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
Construction																									
Equipment installation		-	-	N	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																									
Equipment installation		-	-	N	-	-	-	-	-	-	-	M	M		-	-	-	-	-		-	-	-	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	point	One corner of antenna Array
2	point	One corner of antenna Array
3	point	One corner of antenna Array
4	point	One corner of antenna Array (8 by 8)
5	point	Shelter location
6	point	Generator Location