ᓄᓇᕗᒥ ᐊᕙᑎᓕᕆᔨᒃᑯᑦ ᑲᑎᒪᔨᖏᑦᑎᑐᑦ ᑐᒃᓯᕋᓲᑦ ᕿᒥᕐᕈᔭᒃᓴᖅ #125419

Transmit Array Antenna farm

ᑐᒃᓯᕋᓲᑕᐅᔪᖅ ᖃᓄᐃᑦᑑᓂᖓ:	Amendment
ᐱᓕᕆᐊᓇᔭᐅᔪᒪᔫᑉ ᖃᓄᐃᑦᑑᓂᖓ:	Scientific Research
ᐅᓪᓗᖓ ᑐᒃᓯᕋᓲᑎᓕᐊᕕᓂᐅᑉ:	11/1/2018 1:42:53 PM
Period of operation:	from 0001-01-01 to 0001-01-01
ᑲᔪᓯᒃᑲᐃᔨᐅᓂᐊᕐᓯᒋᔭᐅᔪᑦ:	from 0001-01-01 to 0001-01-01
ᐱᓕᕆᐊᖃᕈᒪᔪᖅ:	Ed Riseborough DRDC Ottawa Research Centre 3701 Carling Avenue Ottawa Ontario K1A0Z4 Canada ᐅᖄᓚᐅᑏᑦ: 613-998-2052, ᓱᑲᔪᒃᑯᑦ:

ᑐᓴᐅᒪᔭᒃᓴᑦ

ᖃᓄᐃᑦᑑᑎᓂᒃ ᐱᓕᕆᐊᖃᕐᓂᐊᕆᐊᖅᑲᓐᓂᒃ

ᖃᓪᓗᓈᑎᑐᑦ: 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.

ᐅᐃᕖᑎᑐᑦ: Not required.

ᐃᓄᒃᑎᑐᑦ: ᐅᓇ ᐱᓕᕆᐊᖑᔪᖅ ᓴᓇᓗᑎᒃ 16x16 ᓇᐸᔪᒥᒃ ᓈᓚᐅᑎᓄᑦ ᐋᓐᑎᓇ ᐃᓚᖃᖅᑐᖅ 30 ᕗᑦ ᑕᒡᕗᖓ ᐊᑐᓂ ᐊᑕᔪᑦ ᓇᐸᔪᒧᑦ (ᓱᕐᕋᓂᖓ 3 – ᑑᓵᔫᓐᓇᐅᑎᓕᒃ 120 ᒦᑕ X 120 ᒦᑕ). ᐅᓇ ᐊᖕᖏᒡᓕᒥᐊᕿᑖ 8x8 ᓈᓚᐅᑎᑦ ᐋᓐᑕᓇᖓ ᓯᐅᑎᖑᐊᑦ ᑕᐃᑲᓃᑦᑕᓅᖅᑐᑦ ᐅᓃᑲᒥ (ᓱᕐᕋᓂᖓ 2 - ᑑᓵᔫᓐᓇᐅᑎᓕᒃ 60 ᒦᑕ x 60 ᒦᑕ). ᓱᕐᕋᓂᖓ 2 ᐊᒻᒪᓗ ᓱᕐᕋᓂᖓ 3 ᓴᓇᔫᓂᖓᑕ ᐃᓂᖏ ᐊᔾᔨᒌᙱᑦᑐᑦ ᑕᑯᔭᓐᓇᖅᑕᑎᑦ ᓴᕿᔫᖅᑐᑦ 1-ᒥ ᐋᕿᒃᓱᕈᓯᖓᓂᑦ ᖃᕆᓴᐅᔭᕐᒥᑦ. ᐅᓇ ᐊᔾᔨᖓ ᐋᓐᑕᓇ ᓯᐅᑎᖑᐊᑦ ᓈᓚᐅᑎᓄᑦ ᑐᓴᖅᓴᐅᑎᑦᑎᐊᕈᓐᓇᐅᑎᑦ ᐋᕿᒃᓯᕈᓯᐊ ᓴᕿᔫᖅᑐᖅ 2-ᒥ ᑕᒡᕙᓂ ᑲᑎᖓᔪᓂ. ᐊᓯᐊᓂᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐃᓂᖓ ᓇᐸᔪᖅ ᓇᑎᖅᑲᖅᑐᖅ ᐋᓐᑕᓇᖃᕈᑦ, ᓄᓇᒧᑦ ᒪᖕᖑᒃᑎᑦᑎᓂᐊᙱᑦᑐᑦ. ᐊᑐᓂ ᐋᓐᑕᓇ ᓇᐸᓗᓂ ᐃᐱᐅᑕᖅᑲᕐᓗᓂ ᑲᑎᖓᔪᓄᑦ ᑎᓴᒪᓂᒃ 75 ᓯᓐᑕᒦᑕᕐ ᐅᑯᐊᓗ ᐃᔾᔪᒦᑦᑐᑦ. ᐅᑯᐊ ᐋᓐᑕᓇ ᑲᑉᐳᑎᓯᒪᓂᐊᖅᑐᑦ ᑲᑉᐳᔭᐅᑎᑦᑎᒍᑦ ᐃᓂᓕᐅᖅᓯᒪᔪᒥᑦ 3 ᐅᒡᕚᓘᓐᓃᑦ 4 ᓴᓇᓯᒪᔪᑦ ᐅᒥᐊᕐᔪᐊᑦ ᐅᓯᕕᖕᒥᓐᓂᒃ. ᐅᑯᐊ ᔫᑦ ᑭᒃᑭᐊᒃᓯᒪᓂᐊᖅᑐᑦ ᕿᔪᖕᒧᑦ ᐃᑭᐊᕐᒥᖅᑲᖅᑐᖅ ᐊᒃᑐᖅᑕᐅᓗᐊᕐᓂᐊᙱᒻᒪᑕ ᖁᐊᕐᒥᑦ ᐊᖑᓐᓇᙱᑦᑐᒥᑦ ᐊᒻᒪᓗ ᐃᓂᓕᐅᖅᓯᒪᔪᑦ ᓴᕿᔫᖅᑐᖅ 1-ᒥ ᐋᕿᒃᓯᕈᓯᖓᓂᑦ ᖃᕆᓴᐅᔭᕐᒥᑦ. ᐃᖏᕐᕋᔪᓐᓇᖅᑐᖅ 750 ᑭᓗᒍᐊᑦ ᔭᓄᓚᐃᑕᒧᑦ. ᐅᐊᔭᖏᑦ ᐊᑐᖅᑕᐅᓗᑎᒃ ᑲᑎᖓᑎᑦᑎᕕᐅᓗᓂ ᐋᓐᑎᓇᖓᓄᑦ ᓯᐅᑎᖑᐊᖏᓐᓄᑦ ᑖᒃᑯᐊ ᐅᓯᑲᖅᑕᐅᑎᑦ ᔫᑦ. ᐅᓇ ᐃᓕᐅᖃᖅᑕᐅᓂᖓ ᓱᕐᕋᓂᖓ ᓴᓇᔭᐅᓂᖓᑕ ᐊᑐᕆᐊᖃᖅᑐᑦ 12 ᐃᓄᖕᓂᒃ ᐃᓂᖓᓂ 3 ᑎᑭᓪᓗᒍ 6 ᐱᓇᓱᐊᕈᓯᕐᓄᑦ. ᐅᓇ ᐃᖏᕐᕋᑎᑕᐅᓂᖓᑕ ᓱᕐᕋᓂᖓ ᓴᓇᔭᐅᓂᖓᑕ, ᖃᓄᓇᑦᑐᑐᐃᓐᓇᓂᒃ ᐱᓕᕆᓂᐊᖅᑐᑦ ᑑᓵᒃᔪᑎᓕᕆᔾᔪᑎᓂᒃ, ᐊᑐᕆᐊᖃᖅᑐᑦ 3 ᑎᑭᓪᓗᒍ 4 ᐃᓄᖕᓂᒃ ᐃᓂᖓᓂ 2 ᐱᓇᓱᐊᕈᓯᕐᓄᑦ, ᑎᑭᓪᓗᒍ 4-ᖏᖅᓱᕐᓗᑎᒃ ᐊᕐᕌᒍᒥ.

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

ᐱᓕᕆᐊᕆᔭᐅᓂᐊᖅᑐᑦ

ᓇᒥ	ᖃᓄᐃᑦᑑᒥᑦ ᐱᓕᕆᐊᖃᕐᓂᐊᖅᐸ	ᑭᒃᑯᑦ ᓄᓇᖁᑖᓂ	ᑐᓴᐅᒪᔭᒃᓴᑦ ᓄᓇᐅᑉ ᖃᓄᖅ ᐊᑐᓚᐅᓚᐅᖅᓯᒪᔭᕆᐊᖓᓐᓂᒃ	ᐃᑦᓴᕐᓂᑕᖃᕐᐱᐅᕙᓗᐅᖅᐸ ᐃᓄᒃᓄᑦ ᓇᔪᖅᑕᐅᖃᑦᑕᕐᓂᖁᕙᓗ ᑕᐃᑦᓯᒪᓂᑐᖃᐅᓕᖅᑐᖅ	ᖃᓂᓐᓂᖅᐹᖅ ᓄᓇᓕᒥᔭᐅᔪᖅ ᐊᒻᒪᓗ ᓴᐳᒻᒥᒃᓰᐱᐅᕙᓗ ᓯᓇᓄᑦ
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

ᓄᓇᓕᐅᑉ ᐃᓚᐅᖃᑕᐅᓂᖓ ᓄᓇᓖᓪᓗ ᐊᐱᒃᑐᖅᓯᒪᐅᕐᓂᖕᒐᓄᑦ ᐃᑲᔪᑕᐅᔪᓐᓇᖅᑐᑦ

ᓄᓇᓕᒥᔭᖅ	ᐊᑏᑦ	ᑲᑐᔾᔨᐊᖃᑎᒌᒥᔭᖅ	ᖃᖓᓗ ᑐᓴᖅᑎᑕᐅᓚᐅᕆᐊᖏᓐᓂᒃ
Information is not available			

ᓇᐃᓴᓐᓰᑦ ᐱᒍᖅᓇᐅᑏ ᐊᖏᖅᑕᐅᓯᒪᔪᑦ

ᓇᒦᒥᐊᖏᓐᓂᒃ ᐱᓕᕆᐊᕆᕝᕕᐅᓂᐊᖅᑐᑦ ᑎᑎᕋᕐᓗᒥᑦ:

North Baffin

ᓇᐃᓴᓐᓰᑦ ᐱᒍᖅᓇᐅᑏ ᐊᖏᖅᑕᐅᓯᒪᔪᑦ

ᒐᕙᒪᒋᔭᐅᔫᑉ ᐊᕕᒃᑐᖅᓯᒪᐅᕐᓂᖕᒐᓐᓂ ᒪᓕᒐᕐᓈᖕᒐᔪᓂᒃ ᐱᖁᔭᕐᓈᖕᒐᔪᓂᒡᓗ ᑲᒪᔩᑦ ᐱᔪᖅᓇᐅᑎᑖᕈᑎᓂᒃ ᓇᐃᓴᓐᓯᓄᓪᓗ ᑲᔪᓯᒃᑲᐃᔩᑦ	ᖃᓄᐃᑦᑐᓪᓚᓇᐅᕙ ᓇᐃᓴᓐᓯᑖᕈᑕᐅᔪᖅ ᐱᔪᖅᓇᐅᑎᑖᕈᑕᐅᔪᖅ ᐊᖏᖅᑕᐅᔪᕐᓘᓐᓃᑦ	ᒫᓐᓇ ᖃᓄᐃᓕᖓᕙ	ᐅᓪᓗᒥ ᑐᓂᔭᖅ/ ᑐᒃᓯᖅᑑᑕᐅᓚᐅᖅᓯᒪᔪᖅ	ᑭᒡᓕᖃᕐᕕᖓ
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	ᓱᓇᒍᑦ ᐊᑐᒐᐅᓂᐊᖅᐸ	Length of Use
Land	Pickup truck to get to site. Larger truck/crane to put containers in place.	

Project accomodation types

ᐊᓯᖓ,

ᐊᑐᓚᐅᓂᐊᖅᑐᖅ

ᐱᖃᑦ ᐊᖏᕆᔨᖅ ᐊᑐᖅᑕᐅᓂᐅᓴᔨᖅ ᐃᓕᖅᓱᐅᑎᓄᕆᑦ ᐃᒋᑕᐃᑦ, ᒥᑦᓄᐊᕈᑎᑦ, ᖅᖏᓕᑕᓱᖅ, ᓄᓇᓱᐅᑦ ᐊᓱᖏᑦᓄ

ᐊᖏᕆᔨᖅ ᐱᖃᑦ ᐊᑐᓚᐅᓂᐊᖅᑐᖅ ᖅᖄᐃᑦᑐᓂᖏᖅ	ᖅᖃᑦᓱᐅᓕᑦ	ᐊᖏᕆᓂᖏᑦ - ᐳᖅᑐᓂᖏᑦ	ᓱᓇᒧᑦ ᐊᑐᓚᐅᓂᐊᖅᐸ
Generator	2	10'Lx4'Wx8'H	To power electronics, and HVAC
Electronics	4	20'Lx8'Wx8'H	Radio Equipment in Shelters

ᑎᑎᕆᐅᓱᓇᓄᒍ ᐅᖅᓱᓵᕆᐃᐃᑦ ᐊᑦᑕᓇᖅᑐᖅᑕᓬᓐᓄ ᐊᑐᖅᑕᐅᓂᐊᕐᓂᖏᑦ

ᓱᓇᒧᑦ ᐅᖅᓱᓵᕆᓚᐅᑎᖅ ᐅᖅᓱᓵᕆᓚᖅᑎᖅ	ᖅᖃᑦᓱᐅᓕᑦ	ᐃᓐᓴᕆᐅᑎᖅ ᐃᒪᖅᑎᑎᕆᔨᓇᓂᖓ	ᑲᑎᒪᔨᓄ	ᐃᓐᓴᕆᐃᑦ ᐊᒥᓱᓂᖏᑦ	ᓱᓇᒧᑦ ᐊᑐᓚᐅᓂᐊᖅᐸ
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

ᐃᒪᖅ ᐊᑐᖅᑕᐅᔨᒧᑦᑐᖅ

ᐅᓪᓗ ᑕᒧᖅ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᖅ	ᖅᖄᓂᖅ ᐃᒥᖅᑕᖅᖃᑕᖅᓂᐊᖅᐸᑦ	ᓄᑭᑦ ᐃᒥᖅᑕᖅᖃᑕᖅᓂᐊᖅᐸᑦ
0		

ᐊᑲᑕᔪᑦ

ᐊᑲᑕᔪᓪᓗᓂᐊᕐᓂᖅ

ᐱᓕᓇᐊᓇᔭᐅᔨᒪᔨᒧᑦ ᐱᓕᓇᐊᓇᔭᐅᓂᐊᖅᑐᖅ	ᖃᓄᐃᐃᑦᑐᖅ ᐊᑲᑕᔪᖅ	ᖃᓄᐃᑎᒋ ᐊᑲᑕᔪᑦ ᓴᖅᑭᐊᓂᐊᖅᑐᓇᔭᐅᐅᓪᑦ	ᖃᓄᐃᓂᖅ ᐊᑲᑕᖅᑕᐅᓂᐊᖅᐸ	ᓴᓗᒪᖅᓴᐅᑎᑲᑲᓚᖅᓂᐅᓂᐊᖅᑐᑦ
Information is not available				

ᐊᐢᑎᒥᐅᑕᓂᑐᑦ ᐊᑲᑐᖅᑕᐅᓯᒪᔨᑦ

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

ᐃᒡᓗ ᐊᕐᑎᐅᕆᑦ ᖃᓄᐃᑦᑐᑦᓯᓇᐅᔪᖓᓂᒃ: ᓄᓇᕆᑦ ᖃᓄᐃᑦᑐᑐᔪᖓᓂᒃ

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.

ᐃᒡᓗ ᐊᕐᑎᐅᕆᑦ ᖃᓄᐃᑦᑐᑦᓯᓇᐅᔪᖓᓂᒃ: ᐅᒪᔨᖅᑕᖃᖅᓂᒃ

ᐃᒡᓗ ᐊᕐᑎᐅᕆᑦ ᖃᓄᐃᑦᑐᑦᓯᓇᐅᔪᖓᓂᒃ: ᐃᓄᓕᓇᓂᕐᒧᖓᓕᒫᑦ-ᐱᓕᕆᓕᐊᓕᓇᓂᕐᒧᖓᓕᒫᑦ

Miscellaneous Project Information

ᓄᓗᓇᐃᖅᑕᐅᓂᖏᑦ ᐊᑲᖅᑕᐅᔨᒪᔭᑦ ᖃᓄᐃᑦᑐᓂᖏᑦ ᕿᓚᐅᒥᔪᔪᖅᑕᐅᓂᐊᖅᓂᖏᑦᓗ

See attached EED.

Cumulative Effects

Impacts

ᓄᓗᓄᐃᖅᑕᐅᓂᖅᑎᑦ ᐊᐸᑎᒥᐅᑕᓯᑦᑐᑦ ᐊᑲᑐᖅᑕᐅᓯᒪᔪᑦ

	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
ᓴᓇᓂᖅ																									
Equipment installation		-	-	N	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
ᐅᔾᕿᑲᑦᓂᖅ																									
Equipment installation		-	-	N	-	-	-	-	-	-	-	M	M		-	-	-	-	-		-	-	-	-	-
ᐃᑐᑦᑎᓇᓂᖅ																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = ᐊᑲᐅᔨᑭᑎᔪᓐᓇᖅᑐᑦ, N = ᐊᑲᐅᖏᑦᔨᔪᑕᐅᔪᓐᓇᖅᑐᑦ ᕿᓚᐅᒡᔨᔪᓂᖅᑐᑕᐅᔪᓐᓇᖅᑐᑦ, M = ᐊᑲᐅᖏᑦᔨᔪᑕᐅᔪᓐᓇᖅᑐᑦ ᕿᓚᐅᒡᔨᔪᓂᖅᑐᑕᐅᔪᓐᓇᖅᑐᑦᓗ, U = ᖃᑲᐅᔨᒪᓐᓇᖅᑐᑦ)

ᓇᒋᒪᖏᕆᖅ ᐱᓕᓇᐊᓇᓵᐅᐊᔪᖅ

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