NIRB Application for Screening #125415
CAM-M, Cambridge Bay Water Use Licence Renewal

Application Type:	New
Project Type:	Defence
Application Date:	10/29/2018 1:26:06 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Proposed Authorization:	from 0001-01-01 to 0001-01-01
Project Proponent:	Jeremy Laflamme DND 455 Boulveard de la Carriere Gatineau Quebec J8Y 6V7 Canada Phone Number:: 8199394934, Fax Number::

DETAILS

Non-technical project proposal description

English: CAM-M, Cambridge Bay 3BC- CAM0919Water Licence Renewal and AmendmentThe North Warning System in Canada is a chain of unmanned radar sites that provides aerospace surveillance, established to detect and allow for an early response to potential threats entering North American air space. It is part of Canada's North American Aerospace Defense Command (NORAD) agreement with the United States, and an essential capability in our efforts to maintain Canada's sovereignty. Raytheon Canada Limited has the contract with the Department of National Defence to operate and maintain the North Warning System radar site CAM-M, Cambridge Bay. CAM-M is situated in Nunavut in the Kitikmeot Region on Victoria Island adjacent to the community of Cambridge Bay. It is located on a hill top, about 30 m above sea level, of a gently rising plateau broken by innumerable swamp-margined lakes and ponds.CAM-M is a Long Range Radar Site (LRR) and a Logistics Support Site for the North Warning System. CAM-M is staffed with an annual average site population of 18 to 22 people per day. Site numbers increase during the summer due to seasonal construction and occasional large groups of Third Party visitors.CAM-M is one of 11 LRRs of the North Warning System; the LRRs are located across the Yukon, Northwest Territories, Nunavut, and down the Labrador coast. The facilities are remotely monitored and controlled from North Bay on a 24/7 basis. The information they receive is automatically sent to the Canadian Air Defence Sector located at 22 Wing, CFB North Bay over a long-haul satellite communications network.

French: N/A

Inuktitut: CAM-M, ᐃᖃᓗᒃᑑᑎᐊᖅ 3BC- CAM0919ᐃᒥᕐᒧᑦ ᓚᐃᓵᓯᖓ ᓄᑖᕈᖅᑎᑕᐅᓂᖓ ᐊᓯᔾᔨᕐᓂᖓᓪᓗᑦᐅᐊᓐᓇᒥ ᑕᕿᖅᑰᑎᖃᕐᕕᒥᓃᑦ ᑲᓇᑕᒥ ᐊᑦᑎᖅᓯᒪᓐᖏᑦᑐᑦ ᖃᐅᔨᓴᐅᑏᑦ ᖃᖓᑕᕗᓂᑦ ᐅᐊᑦᑎᔩᑦ, ᐋᖅᑭᑦᑕᐅᓯᒪᕗᑦ ᖃᐅᔨᓴᐅᑎᐅᓪᓗᑎᒃ ᓴᖅᑭᖅᑐᖃᕐᓂᖅᑲᑦ ᐅᓗᕆᐊᓇᖅᑐᒥᓪᓘᓐᓃᑦ ᑲᓇᑕᒥ ᓯᐊᓚᒪᐃᓪᓘᓐᓃᑦ ᐊᓂᕐᓂᖃᕐᓇᖏᑦᑐᖓᓐᓂ. ᐃᓚᒋᓪᓗᓂᐅᒃ ᑲᓇᑕᐅᑦ ᐊᓂᕐᓂᖃᕐᓇᖏᑦᑐᒥᑦ ᓴᐳᓐᓂᐊᕈᑎᓂᑦ (NORAD) ᐊᖏᕈᑕᐅᓯᒪᔪᑦ ᒥᐊᓕᖓᓄᑦ, ᐊᒻᒪᓗ ᑲᒪᒋᔭᐅᖃᓯᐅᔾᔭᐅᓗᑎᑦ ᑎᒍᒥᐊᖅᑕᐅᓗᑎᑦ ᑲᓇᑕᒥ ᓇᓗᓇᐃᒃᑯᓯᖅᓱᖅᑕᐅᓯᒪᓗᑎᑦ. ᕿᐃᑎᐊᓐ ᑲᓇᑕ (Raytheon Canada Limited) ᑳᓐᑐᕋᖃᑦᑐᖅ ᐅᓇᓕᕐᓴᓂᑦ ᐊᐅᓚᑦᑎᖁᔨᓪᓗᑎᑦ ᑲᒪᓗᑎᓪᓗ ᐅᐊᓐᓇᖓᓂ ᑕᕿᖅᑰᑎᖃᕐᕕᓂᖅᒥᑦ ᖃᐅᔨᓴᕐᕕᒻᒥᑦ CAM-M−ᒥᑦ, ᐃᖃᓗᒃᑑᑎᐊᖅᒥ. CAM-M ᓄᓇᕗᒻᒦᑦᑐᖅ ᕿᑎᖅᒥᐅᓂᑦ ᑕᓯᐅᔭᕐᔪᐊᒦᖅᑐᖅ ᐃᖃᓗᒃᑑᑎᐊᑉ ᖃᓂᖓᔭᖓᓂ. ᖃᖅᑲᒦᑦᑐᖅ, ᐳᖅᑐᓂᓕᒃ 30−ᒦᑕᓂᑦ ᓯᒪᕕᒻᒥ, ᖃᖅᑲᔮᖅᒦᖅᑐᖅ ᒪᓴᕈᕝᕕᒻᒦᑦᑐᓂ ᑕᓯᐅᔭᓂᓪᓗ.CAM-M ᑕᑭᕘᓪᓗᓂ ᖃᐅᔨᓴᕐᕕᒃ (LRR) ᐊᒻᒪᓗ ᐃᑲᔪᖅᑐᐃᔾᔪᑕᐅᓪᓗᓂ ᐊᔾᔨᖏᓐᓄᑦ ᐅᐊᓐᓇᖓᓂ ᑕᕿᖅᑰᑎᖃᕐᕕᓂᕐᓂᒥᑦ. CAM-M ᐃᖅᑲᓇᐃᔭᖅᑎᖅᑲᑲᐃᓐᓇᕙᑦᑐᖅ ᐃᓄᒋᐊᓐᓂᓕᓐᓂᑦ 18−ᒥᑦ 22−ᒧᑦ ᖃᐅᑕᒫᑦ. ᐊᐅᔭᒃᑯᑦ ᐊᒥᓲᓂᖅᓴᐅᕙᑦᑐᑎᑦ ᓴᓇᔭᖅᑐᖅᑐ ᐊᔾᔨᖏᓐᓂᓪᓗ ᐳᓚᕋᕐᕕᐅᓪᓗᓂ.CAM-M ᐃᓚᐃᔭᐅᔪᖅ 11−ᓂᑦ LRRs ᑕᕿᖅᑰᑎᖃᕐᕕᓂᕐᓂᑦ; ᑖᒃᑯᐊ LRR ᕚᑳᒦᑦᑐᑦ, ᓄᓇᑦᑎᐊᕐᒥ, ᓄᓇᕗᒻᒥ ᓈᒃᑐᐊᓗ ᓯᔾᔭᖕᒥᓐᓂ. ᐅᖓᓯᑦᑐᒦᑦᑐᑦ ᑕᒪᒃᑯᐊ ᐊᐅᓚᑕᐅᓪᓗᑎᓪᓗ North Bay−ᒥ ᖃᐅᑕᒫᑦᑎᐊᑦ (24/7). ᑐᑭᓯᒋᐊᕈᑏᑦ ᐃᒻᒥᓂᒃ ᑐᕚᑎᕆᖃᑦᑕᖅᑐᑦ ᑲᓇᑕᐅᑉ ᐅᓇᓕᕐᓴᖃᐱᖕᒥᓄᑦ ᑕᐃᑲᓂ 22 ᐊᕕᑦᑐᖅᓯᒪᔪᓂᑦ, CFB North Bay−ᒥ ᖃᖓᑦᑕᖅᑎᑕᐅᓯᒪᔪᒃᑯᑦ.

Inuinnaqtun: N/A

Personnel

Personnel on site: 18

Days on site: 365

Total Person days: 6570

Operations Phase: from 2019-03-31 to 2029-03-31

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
CAM-M, North Warning System site	Site Cleanup/Remediation	Crown	CAM-M was built in the 1950's as one of the Distant Early Warning Line (DEW Line) radar sites. In the 1980's, the DEW line in Canada evolved into the North Warning System (NWS). CAM-M was modernized as part of this transition. Over the years, the Prime Mission of the radar sites remains unchanged: to detect airborne objects within the Arctic surveillance area.	None known.	Cambridge Bay, Nunavut, 2.5 km east on the north shore of the main inlet and 4 km away by road.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Information is not available			

Authorizations

Indicate the areas in which the project is located:

Kitikmeot

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Nunavut Water Board	Water Licence 3BC-CAM0919	Active	2009-09-10	2019-08-31
Nunavut Water Board	Water licence number to be determined. This licence is to replace Water Licence 3BC-CAM0919. Dates are estimates only.	Not Yet Applied	2019-03-31	2029-03-31

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Transportation to the site is by commercial air carriers. Helicopter and fixed wing aircraft are used to support adjacent NWS sites/	
Water	Transportation of bulk materials, dry goods, and fuel are completed by ship.	
Land	Transportation around the site is by pick-up truck. Heavy equipment is also used as required.	

Project accomodation types

Permanent Camp

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Pickup Truck	6	5.8x2x2.4 m	Transportation
Grader	1	9.1x2.5x3 m	Road maintenance
Dozer	1	5.8x3.4x3.6 m	earthworks, snow clearing
Water truck	1	3x5x2.7 m	moving water
Loader	1	7x3.8x2.3 m	Earthworks, snow clearing, moving materials.
Dump truck	1	3x5x2.7 m	Earthworks, snow clearing
Snow plow	2	3x5x2.7 m	Snowclearing
mini-excavator	1	3x2.2x1 m	Earthworks

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Aviation fuel	fuel	1	946300	946300	Liters	Power generation
Aviation fuel	fuel	1	75000	75000	Liters	Power generation
Aviation fuel	fuel	1	4100	4100	Liters	Refuel Equipment (trucks, etc.)
Aviation fuel	fuel	2	69200	138400	Liters	Aviation
Aviation fuel	fuel	1	946300	946300	Liters	Aviation / Power generation
Oil	hazardous	25	205	5125	Liters	Engine maintenance
glycol	hazardous	2	205	410	Liters	maintenance
Paint	hazardous	1	205	205	Liters	Site maintenance
Batteries	hazardous	1	205	205	Liters	Power generation

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
10	Pipeline / truck	Water supply lake. See attached document Annex Q4 – CAM-M Site Plan.pdf for location.

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Other	Combustible wastes	20,000 kg	Municipality of Cambridge Bay landfill	None
Other	Hazardous	50 drums, 2 crates	Licensed Waste HAZMAT Disposal Facility (off-site)	None
Site Cleanup/Remediation	Hazardous waste	To be determined	Hydrocarbon impacted soil may be disposed of in a landfarm, if approved.	See attached document Annex A3 - CAM-M Landfarm Plan.pdf for additional details.
Other	Sewage (human waste)	1,400,000 L/year	Discharged to the environment (includes grey water)	Prior to discharge, the waste is treated with a tertiary sewage treatment plant

Environmental Impacts:

Potential impact: IF hydrocarbon impacted soil is not properly handled THEN the amount of impacted soil could increase Mitigation: Impacted soil will be handled as described in the attached document Annex A3 - CAM-M Landfarm Plan regarding construction, operation, environmental control, and closure of the landfarm.

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

The North Warning System Office (NWSO) occasionally has a requirement to remediate spills on-site. Given the effort involved, landfarming impacted soil will only be considered where it is the best option for remediating a spill (e.g. treating the soil from a large spill instead of shipping it off-site for treatment).See attached document Annex A3 - CAM-M Landfarm Plan for details.

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

See attached document Annex Q3 - CAM-M Site Description.pdf

Description of Existing Environment: Biological Environment

See attached document Annex Q3 - CAM-M Site Description.pdf

Description of Existing Environment: Socio-economic Environment

The community of Cambridge Bay, 2.5 km east of the CAM-M site is an important transportation and communications centre in the central arctic.

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

The attached document Annex Q2 - Spill Contingency Plan.pdf includes a risk analysis of spills on the North Warning System (Table 8-1), including the impact, probability, and mitigations.

Cumulative Effects

None identified.

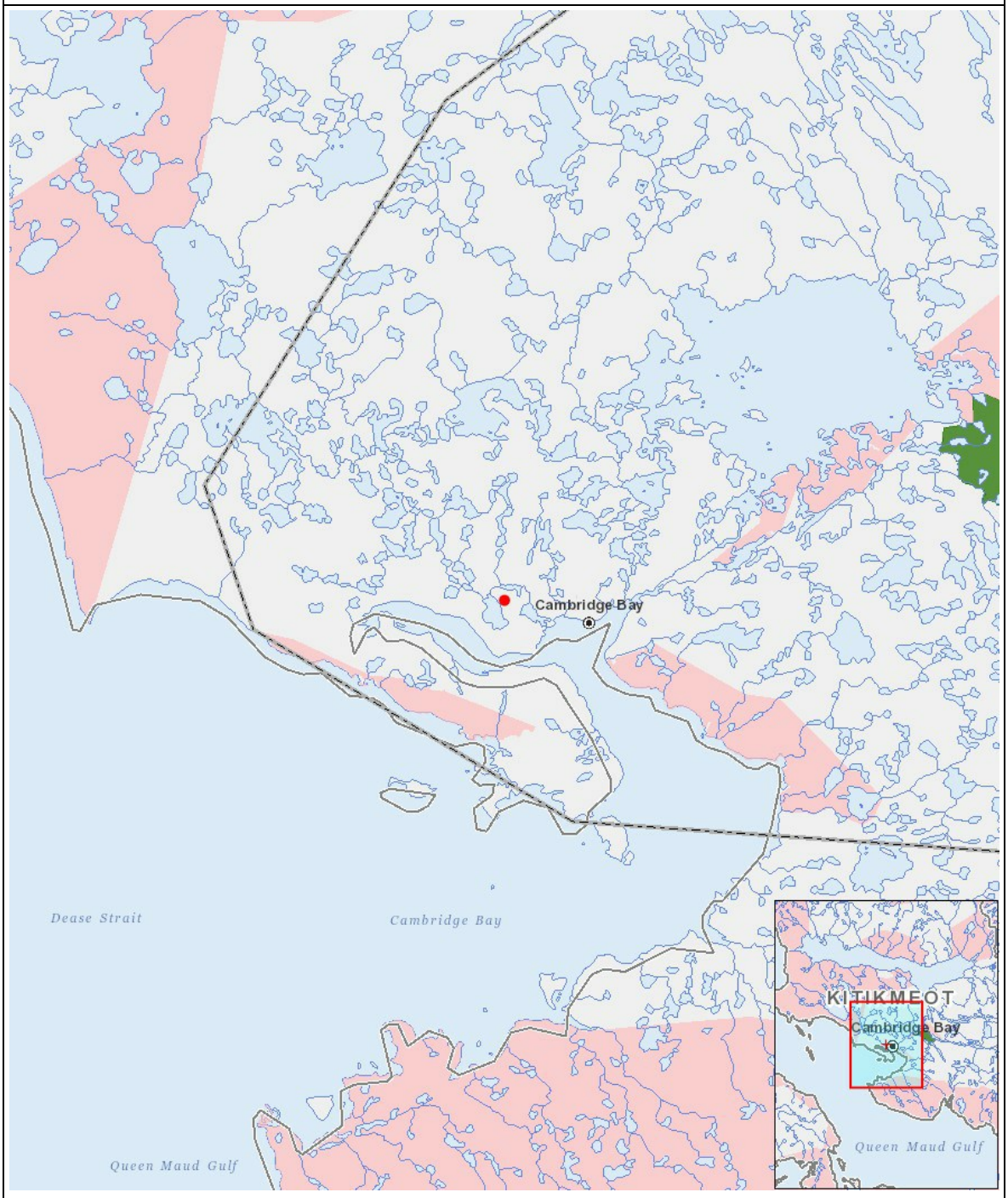
Impacts

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																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																									
Site Cleanup/Remediation		-	-	-	-	-	-	-	-	-	N	-	-	-		-	-	-	-	-		-	-	-	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

PROJECT MAP



LIST OF PROJECT GEOMETRIES:

1	point	CAM-M, North Warning System site