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FOX-M, Hall Beach Water Use Licence Renewal

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New

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Defence

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10/29/2018 1:39:22 PM

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

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Jeremy Laflamme

DND

455 Boulevard de la Carriere

Gatineau Quebec J8Y 6V7

Canada

ᐃᓴᓂᓐᐃᓐ: 8199394934, ᐃᓴᓂᓐ:

$\gamma_b \Delta^c \dot{\gamma} \Pi \sigma^b \quad \Lambda_{\text{C}} \sim \Delta^{\gamma_b} \gamma \sigma \Delta \sim \Delta^a L^a \sigma^b$

١٦٤٥٧٨٩:

The 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 FOX-M, Hall Beach. FOX-M is situated in Nunavut in the Qikiqtani Region on the Melville Peninsula; it is on the eastern side of a coastal plain that extends from Hall Lake to Foxe Basin. The nearest community is Hall Beach which is 3 km away by road.FOX-M is a Long Range Radar Site (LRR) and a Logistics Support Site for the North Warning System. FOX-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.FOX-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.

▷ΔΑΠΝΩ^c: N/A

[illegible]

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

$\Lambda \subset \mathbb{N} \triangleleft \mathbb{N} \hookrightarrow \Sigma \triangleleft^{\text{qb}} \mathcal{C}$

Inuktitut Name	Name in English	Name in Inuktitut	Description in English	Description in Inuktitut
FOX-M, Main site	Site Cleanup/Remediation	Crown	FOX-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). FOX-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.	Two previously recorded sites occur in the vicinity of FOX-M. The recorded locations of both of these sites place them well off of the site facilities.

[illegible]

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Information is not available			

South Baffin

[illegible]

Transportation Type	Transportation Description	Length of Use
Air	Transportation to the site is by commercial aircraft. Helicopter and fixed wing aircraft are used to access adjacent sites	
Water	Transportation of bulk materials, drygoods and fuel to the site is completed by ship.	
Land	Travel around the site is by pick-up truck. Heavy equipment is used as required.	

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Λ⁵Δ^c Δ^aΓ²Δ^{5b} Δ^{5b}CDσD⁴Δ^{5b} Δ^cΔ^{5b}ΓDΠ^cΓ^c Δ^jCDΔ^c, Γ^cΔ^cΠ^c, Δ^{5b}Δ^cΔ^jΔ^{5b}, Δ^cΔ^c Δ^cΔ^{5b}Δ^cΔ^c

በበፍጥረቱ ላይ ስለሚገኝ ምርት ምርመራ ማድረግና ምርት ማረጋገጥ

ΔL⁹⁶ ΔD⁹⁶ C D L⁹⁶ D⁹⁶

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6	Water line / Water truck	Man-made water reservoir

$\triangleleft^b C d^c$
$$\Delta^b C j_c n_\sigma \Delta^q \sigma^q$$

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Other	የአካባቢያዊ ደረሰው ብሔራዊ መንግሥት	18000 kg	Hamlet of Hall Beach Landfill	None
Landfarm	የአካባቢያዊ ደረሰው ብሔራዊ መንግሥት	To be determined	Hydrocarbon impacted soil may be disposed of in a landfarm, if approved.	See attached document Annex A3 - FOX-M Landfarm Plan.pdf for details.
Other	የአካባቢያዊ ደረሰው ብሔራዊ መንግሥት	45 drums, 2 crates	Licensed Waste HAZMAT Disposal Facility (off-site)	None
Other	የአካባቢያዊ ደረሰው ብሔራዊ መንግሥት	1,200,000 L	Discharged to the environment	Prior to discharge, the waste is treated with a tertiary sewage treatment plant

$$\Delta^{\circ} \text{G}^{\circ} \text{ for } \text{C}_2\text{H}_2 \rightarrow \text{C}_2\text{H}_4 = -141 \text{ kJ mol}^{-1}$$

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 - FOX-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 Owice (NWSO) occasionally has arequirement to remediate spills on-site. Given the ewortinvolved, landfarming impacted soil will only be consideredwhere 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 the attached document Annex A3 - FOX-M Landfarm Plan.pdf 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

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

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

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FOX-M is located approximately 3 km south of the community of Hall Beach. Hall Beach has a population of approximately 850 people.The Nunavut Planning Commission (NPC) has determined that this project proposal is outside the area of an applicableregional land use plan.

Miscellaneous Project Information

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

Cumulative Effects

None noted.

Impacts

$\mathbf{e} \rightarrow \mathbf{e} \Delta^{\mathfrak{b}} \mathbf{C} \triangleright \sigma^{\mathfrak{a}} \mathbf{r}^{\mathfrak{c}} \quad \mathbf{d} \mathfrak{c} \cap \Gamma \triangleright \mathbf{C} \dot{\sigma}^{\mathfrak{c}} \mathbf{D}^{\mathfrak{c}} \quad \mathbf{d}^{\mathfrak{b}} \mathbf{D}^{\mathfrak{b}} \mathbf{C} \triangleright \mathbf{r}^{\mathfrak{c}} \mathbf{L}^{\mathfrak{c}}$

[illegible]
$$(P = \langle b \rangle \dot{\Delta} \dot{P} \cap \dot{r}^a \dot{e}^{\dot{b}})^C, N = \langle b \rangle \dot{b} \dot{r}^{\dot{b}} \dot{r} \langle \dot{r}^a \dot{e}^{\dot{b}} \rangle^C \langle \dot{e} \dot{r}^{\dot{b}} \dot{r} \dot{r}^{\dot{b}} \rangle^{\dot{b}} \langle \dot{r}^a \dot{e}^{\dot{b}} \dot{r}^C \rangle^C, M = \langle b \rangle \dot{b} \dot{r}^{\dot{b}} \dot{r} \langle \dot{r}^a \dot{e}^{\dot{b}} \rangle^C \langle \dot{e} \dot{r}^{\dot{b}} \dot{r} \dot{r}^{\dot{b}} \rangle^{\dot{b}} \langle \dot{r}^a \dot{e}^{\dot{b}} \rangle^C, U = \dot{b} \dot{r} \dot{r}^L \dot{e}^{\dot{b}} \dot{r}^C \dot{b})$$

PROJECT MAP



LIST OF PROJECT GEOMETRIES:

1	point	FOX-M, Main site
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