



**Mackenzie Valley Land and Water Board**  
**7th Floor - 4922 48th Street**  
**P.O. Box 2130**  
**YELLOWKNIFE NT X1A 2P6**  
**Phone (867) 669-0506**  
**FAX (867) 873-6610**

May 1, 2019

File: MV2019L1-0001

Mr. Matthew Miller  
Northwest Territories Power Corporation  
4 Capital Drive  
HAY RIVER NT X0E 1G2

Email: mmiller@ntpc.com

Dear Mr. Miller:

**Preliminary Screening Determination**  
**Northwest Territories Power Corporation – Jackfish Lake Power Generating Plant**

The Mackenzie Valley Land and Water Board (the MVLWB or Board) met on May 1, 2019 to make a determination on the Preliminary Screening of your Application for Water Licence MV2019L1-0001.

The Board is satisfied that Preliminary Screening of the Applications has been completed in accordance with section 125 of the MVRMA. The Preliminary Screening Report, with Reasons for the Board's Decision, is attached.

If you have any questions or concerns, please contact name at (867) 766-7464 or email [tyree@mvlwb.com](mailto:tyree@mvlwb.com).

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Mavis Cli-Michaud".

Mavis Cli-Michaud  
MVLWB, Chair

Copied to: Distribution List

Attached: Preliminary Screening Report

**Preliminary Screening Report Form**

<b>Preliminary Screener: MVLWB</b>  <b>Reference / File Number: MV2019L1-0001</b>  <b>TITLE: Industrial – Jackfish Power Plant</b>  <b>ORGANIZATION: Northwest Territories Power Corporation</b>  <b>MEETING DATE: May 1, 2019</b>	<b>EIRB</b>  <b>Reference number:</b>
--	---

**Type of Development:**  
(CHECK ALL THAT APPLY)

- |                                     |  |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | New  |
| <input type="checkbox"/>            | Amend, EIRB Ref. #                                 |
| <input checked="" type="checkbox"/> | Requires permit, licence, or authorization         |
| <input type="checkbox"/>            | Does not require permit, licence, or authorization |

**Project Summary:**

The Jackfish Facility is a stand-by plant for the North Slave System (Yellowknife, Ndilo and Dettah). Diesel generating units at Jackfish Lake are only utilized for the following conditions:

- Instantaneous loss of hydro supply (outage);
- Shortage of hydro generating capacity (use exceeds the generating capacity of the hydro units); and
- Diminished hydro supply (low water flows).

There are three separate power generating plants on the shore of Jackfish Lake:

- Cat Plant (built in 1993)
- EMD Plant (built in 1974)
- K Plant (built in 1969)

Each of the plants have separate intake lines and “discharge” lines. The water that is taken from Jackfish Lake is returned to Jackfish Lake through a closed loop system.

**Scope:**

The use of water for cooling system at the Jackfish Lake Generating Facility located in Yellowknife, Northwest Territories.

**Land Use Eligibility - Section 18 Mackenzie Valley Land Use Regulations:**

**Type of Disposition**

**Disposition Number(s)**

- Mineral Claims
- Prospecting Permit (s)
- Mineral Leases
- Oil and Gas: EL/SDL/PL
- Quarry Permit
- Timber Permit
- Other:

Land Reserve R657T – Lot 1054

**Principal Activities (related to scoping) (CHECK ALL THAT APPLY)**

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Construction            | <input type="checkbox"/> Exploration           | <input type="checkbox"/> Decommissioning |
| <input type="checkbox"/> Installation            | <input checked="" type="checkbox"/> Industrial | <input type="checkbox"/> Abandonment     |
| <input type="checkbox"/> Maintenance             | <input type="checkbox"/> Recreation            | <input type="checkbox"/> Aerial          |
| <input type="checkbox"/> Expansion               | <input type="checkbox"/> Municipal             | <input type="checkbox"/> Harvesting      |
| <input checked="" type="checkbox"/> Operation    | <input type="checkbox"/> Quarry                | <input type="checkbox"/> Camp            |
| <input type="checkbox"/> Repair                  | <input type="checkbox"/> Linear / Corridor     | <input type="checkbox"/> Scientific/     |
| <input type="checkbox"/> Research                | <input type="checkbox"/> Sewage                | <input type="checkbox"/> Solid Waste     |
| <input checked="" type="checkbox"/> Water Intake |  |  |
| <input type="checkbox"/> Other:                  |  |  |

**Principal Development Components (related to scoping) (CHECK ALL THAT APPLY)**

- |  |   |   |  |
|--|---|---|--|
| <input type="checkbox"/> Access Road                               | <input type="checkbox"/> construction                               | <input checked="" type="checkbox"/> Waste Management        | <input type="checkbox"/> disposal of hazardous waste |
| <input type="checkbox"/> abandonment/removal                       | <input type="checkbox"/> modification e.g., widening, straightening | <input checked="" type="checkbox"/> waste generation        | <input type="checkbox"/> sewage                      |
| <input type="checkbox"/> Automobile, Aircraft or Vessel Movement   |   | <input type="checkbox"/> disposal of sewage                 |  |
| <input type="checkbox"/> Blasting                                  |   | <input type="checkbox"/> Geoscientific Sampling             |  |
| <input type="checkbox"/> Building                                  |   | <input type="checkbox"/> Trenching                          |  |
| <input type="checkbox"/> Burning                                   |   | <input type="checkbox"/> Diamond drill                      |  |
| <input type="checkbox"/> Burying                                   |   | <input type="checkbox"/> Borehole core sampling             |  |
| <input type="checkbox"/> Channelling                               |   | <input type="checkbox"/> Bulk soil sampling                 |  |
| <input type="checkbox"/> Cut and Fill                              |   | <input type="checkbox"/> gravel                             |  |
| <input type="checkbox"/> Cutting of Trees or Removal of Vegetation |   | <input type="checkbox"/> hydrological Testing               |  |
| <input type="checkbox"/> Dams and Impoundments                     |   | <input type="checkbox"/> Site Restoration                   |  |
| <input type="checkbox"/> construction                              |   | <input type="checkbox"/> fertilization                      |  |
| <input type="checkbox"/> abandonment/removal                       |   | <input type="checkbox"/> grubbing                           |  |
| <input type="checkbox"/> modification                              |   | <input type="checkbox"/> planting/seeding                   |  |
| <input type="checkbox"/> Ditch Construction                        |   | <input type="checkbox"/> reforestation                      |  |
| <input type="checkbox"/> Drainage Alteration                       |   | <input type="checkbox"/> scarify                            |  |
| <input type="checkbox"/> Drilling other than Geoscientific         |   | <input type="checkbox"/> spraying                           |  |
| <input type="checkbox"/> Ecological Surveys                        |   | <input type="checkbox"/> re-contouring                      |  |
| <input type="checkbox"/> Excavation                                |   | <input type="checkbox"/> Slashing and removal of vegetation |  |
| <input type="checkbox"/> Explosive Storage                         |   | <input type="checkbox"/> Soil Testing                       |  |
| <input checked="" type="checkbox"/> Fuel Storage                   |   | <input type="checkbox"/> Stream Crossing/Bridging           |  |
| <input type="checkbox"/> Topsoil, Overburden or Soil               |   | <input type="checkbox"/> Tunnelling/Underground             |  |
| <input type="checkbox"/> fill                                      |   | <input checked="" type="checkbox"/> Other: Water Use        |  |
| <input type="checkbox"/> disposal                                  |   |   |  |
| <input type="checkbox"/> removal                                   |   |   |  |
| <input type="checkbox"/> storage                                   |   |   |  |

**NTS topographic map sheet numbers:**

85J

**Latitude / longitude and UTM system:**

114°23'00"W

62°28'10"N

**Nearest community and water body:**

Yellowknife, NT

Jackfish Lake

Great Slave Lake

**Land Status (consultation information)**

Free Hold/Private

Commissioner's/Territorial Lands

Federal Crown Land

Municipal Land

**Transboundary/Transregional Implications**

British Columbia

Alberta

Saskatchewan

Yukon

Nunavut

National Park

Inuvialuit Settlement Region

Wek'èezhii

Gwich'in

Sahtu

**Type of transboundary implication:**

Impact / Effect

Development

Public concern: \_\_\_\_\_

(Describe.)

**Physical - Chemical Effects**

**Impact**

**1) Ground Water**

water table alteration

water quality changes

infiltration changes

other:

N/A

**Mitigation**

There is the potential for fuel to contaminate groundwater. The risk of spills is reduced by using proper handling, storage and disposal techniques. The impact of spills can be reduced by having an appropriate Spill Contingency Plan and spill kits in place and by training personnel in spill responses. The Spill Contingency Plan, spill reporting procedures, fuel storage practices, and waste management practices are adequate.

**Impact**

**2) Surface Water**

flow or level changes

water quality changes

water quantity changes

drainage pattern changes

temperature

wetland changes/loss

other:

N/A

**Mitigation**

There is the potential for fuel to contaminate surface water. The risk of spills is reduced by using proper handling, storage and disposal techniques. The impact of spills can be reduced by having an appropriate Spill Contingency Plan and spill kits in place and by training personnel in spill responses. The Spill Contingency Plan, spill reporting procedures, fuel storage practices, and waste management practices are adequate.

The water that is being used is for the cooling of diesel generating plants and will increase the water temperature. The impacts of the increase in temperature will be monitored through the aquatic effects monitoring program.

**Impact**

**3) Noise**

noise in/near water

noise increase

other:

N/A

**Mitigation**

There will be an increase in noise in/near water, however the impact is minimal in duration therefore, no mitigation required.

There will be an increase in noise in the area, however the impact is minimal in duration therefore, no mitigation is required.

**Impact**

**4) Land**

geologic structure changes

**Mitigation**

soil contamination

There is the potential for fuel to contaminate soil. The risk of spills is reduced by using proper handling, storage and disposal techniques. The impact of spills can be reduced by having an appropriate Spill Contingency Plan and spill kits in place and by training personnel in spill responses. The Spill Contingency Plan, spill reporting procedures, fuel storage practices, and waste management practices are adequate.

buffer zone loss

soil compaction and settling

destabilization/erosion

permafrost regime alteration

explosives/scarring

other:

N/A

**Impact**

**Mitigation**

**5) Non-renewable natural resources**

resource depletion

other:

N/A

**Impact**

**Mitigation**

**6) Air/climate/atmosphere**

other: green house gasses

The operation will contribute to the increase in green house gas, however no mitigation measures are proposed.

N/A

**BIOLOGICAL ENVIRONMENT**

**Impact**

**Mitigation**

**1) Vegetation**

species composition

species introduction

toxin/heavy accumulation

other: Linear Migration routes, habitat fragmentation

N/A

**Impact**

**Mitigation**

**2) Wildlife and Fish**

effects on rare, threatened or endangered species

fish population changes

The increase in water temperature may impact the fish populations. The impacts of the project in the fish population can be monitored through the implementation of the aquatic effects monitoring program.

waterfowl population changes

breeding disturbance

population reduction

species diversity change

The increase in water temperature may alter or change the diversity of the various species in the lake. The impacts of the project on various species can be monitored through the implementation of monitoring programs.

health changes

behavioural changes

Wildlife may avoid the area when the plants are operation. The use of the plants is intermittent and only required to be running when needed.

habitat changes / effects

game species effects

toxins/ heavy metals

Fish and wildlife exposure to emissions and fuel and oil spills is expected to be minimal. Maintaining equipment will mitigate the impacts.

forestry changes

agricultural changes

other:

N/A

### **Interacting Environment**

#### ***Impact***

#### ***Mitigation***

##### **1) Habitat and Communities**

predator-prey

wildlife habitat/ecosystem composition changes

reduction/removal of keystone or endangered species

removal of wildlife corridor or buffer zone

other:

N/A

#### ***Impact***

#### ***Mitigation***

##### **2) Social and Economic**

planning/zoning changes or conflicts

rental house

- airport operations/capacity changes
- human health hazard
- impair the recreational use of water or aesthetic quality
- affect water use for other purposes
- affect other land use operations
- quality of life changes
- public concern
- other:
- N/A

**Impact**

**Mitigation**

**3) Cultural and Heritage**

- effects to historic property
- increased economic pressure on historic properties
- change to or loss of historic resources
- change to or loss of archaeological resources
- increased pressure on archaeological sites
- change to or loss of aesthetically important sites
- effects to aboriginal lifestyle
- other:
- N/A

- Pursuant to Schedule 4.1 of the **Northwest Territory Métis Nation (NWTMN)** Interim Measures Agreement, the MVLWB determined that written notice was given to the NWTMN and that a reasonable period of time was allowed for NWTMN to make representations with respect to the application.
- Pursuant to subsection 1.6, paragraphs (a) and (b) of the **Akaiitcho Territory Dene First Nations (ATDFN)** Interim Measures Agreement, the MVLWB determined that written notice was given to the ATDFN and that a reasonable period of time was allowed for ATDFN to make representations with respect to the Application.

Preliminary Screener / Referring Body Information

Akaitcho IMA Implementation Office
Bathurst Inlet Development Ltd.
Bathurst Inlet Lodge
BNT Gold Resources Ltd.
CanNor NWT Region
City of Yellowknife
Community Government of Behchoko
Community Government of Gameti
Community Government of Whati
Deline Got'ine Government
Deline Renewable Resources Council
Dene Nation
Deninu K'ue First Nation
Det'on Cho Corporation
Environment and Climate Change Canada
Fisheries and Oceans Canada
Fort Resolution Metis Council
Forward Mining
GLWB
GNWT - ECE
GNWT - ENR
GNWT - ENR - North Slave Region
GNWT - ENR - North Slave Region
GNWT - ENR - South Slave Region - Fort Smith
GNWT - Health
GNWT - INF
GNWT - ITI
GNWT - Lands
GNWT - Lands - Hay River Region
GNWT - Lands - North Slave Region

GNWT - Lands - South Slave Region - Fort Smith
GNWT - MACA
Golder Associates
Hamlet of Fort Resolution
INAC - CARD
INAC - NWT Inspectors
Katloodeeche First Nation
Kitikmeot Inuit Association
Lutsel K'e Dene First Nation - Chief or Wildlife, Lands and Environment
Mackenzie Valley Environmental Impact Review Board
Manitoba Denesuline
MVLWB
National Energy Board
North Slave Metis Alliance
Northwest Territory Metis Nation
NWT & Nunavut Chamber of Mines
NWT- OROGO
Salt River First Nation
Salt River First Nation
Smith's Landing First Nation
Snap Lake Environmental Monitoring Agency - SLEMA
Tlicho Government
Tlicho Lands Protection Department
Town of Fort Smith
Wek' eezhii Renewable Resources Board
Wekweeti Community Government
West Point First Nation
WLWB
Wood
Workers' Safety and Compensation Commission
Yellowknives Dene First Nation



**Reasons For Decision**

(List all reasons and supporting rationales for preliminary screening decision)

**DECISION**

The Mackenzie Valley Land and Water Board (the Board) is satisfied that the preliminary screening of Application MV2019L1-0001 – Northwest Territories Power Corporation – Jackfish Power Plant – Yellowknife, NT has been completed in accordance with section 125 of the *Mackenzie Valley Resource Management Act (MVRMA)*.

The Board is satisfied that communities and First Nations affected by the Application have been notified and provided adequate time to provide comment on the Application as required by land claim and self government agreements, the MVRMA, policy directions relating to Interim Measures Agreements, and any other applicable legislation and agreements.

Having reviewed all relevant evidence on the Public Registry, including the submissions of the Applicant, the written comments received by the Board and any Staff Reports prepared for the Board, the Board has decided that in its opinion:

- The proposed development will not have a significant adverse impact on the environment; and
- The proposed development is not a cause of public concern.

The Board is also of the opinion that the Application can proceed through the regulatory process and that any impacts of the development on the environment can be mitigated through the imposition of terms and conditions.

<b>Preliminary Screening Decision</b>	
<input type="checkbox"/>	<b>Outside Local Government Boundaries</b>
<input type="checkbox"/>	The development proposal might have a significant adverse impact on the environment, <i>refer it to the EIRB.</i>
<input type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input checked="" type="checkbox"/>	<b>Wholly Within Local Government Boundaries</b>
<input type="checkbox"/>	The development proposal is likely to have a significant adverse impact on air, water or renewable resources, <i>refer it to the EIRB.</i>
<input checked="" type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input checked="" type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>

**Preliminary Screening Organization**

Mackenzie Valley Land and Water Board

May 1, 2019

**Signatures**



Mavis Cli-Michaud, Chair