

PRELIMINARY SCREENING REPORT FORM

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|---|--|
| PRELIMINARY SCREENER: Sabrina Sturman REFERENCE / FILE NUMBER: S18L3-001 APPLICANT: Deline Got'ine Government DATE: April 17, 2018 | EIRB REFERENCE NUMBER: TITLE: Regulatory Specialist ORGANIZATION: Sahtu Land and Water Board |
|---|--|

Type of Development: Municipal Water Licence

- Type of Development:**
(CHECK ALL THAT APPLY)
- New Development
 - Amend, EIRB Ref. #
 - Renew, EIRB Ref. #
 - Requires permit, license or authorization
 - Does not require permit, license or authorization

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

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

Other: _____
(DESCRIBE)

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

- | | |
|---|--|
| <input type="radio"/> Access Road <ul style="list-style-type: none"> <input type="radio"/> construction <input type="radio"/> abandonment/removal <input type="radio"/> modification e.g., widening, straightening | <input checked="" type="checkbox"/> Waste Management <ul style="list-style-type: none"> <input checked="" type="checkbox"/> disposal of hazardous waste <input checked="" type="checkbox"/> waste generation |
| <input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement <ul style="list-style-type: none"> <input type="radio"/> Blasting <input type="radio"/> Building <input type="radio"/> Burning <input checked="" type="checkbox"/> Burying <input type="radio"/> Channeling <input type="radio"/> Cut and Fill <input type="radio"/> Cutting of Trees or Removal of Vegetation | <input checked="" type="checkbox"/> Sewage <ul style="list-style-type: none"> <input checked="" type="checkbox"/> disposal of sewage <input type="radio"/> Geoscientific Sampling <ul style="list-style-type: none"> <input type="radio"/> trenching <input type="radio"/> diamond drill <input type="radio"/> borehole core sampling <input type="radio"/> Bulk soil sampling <input type="radio"/> Gravel <input type="radio"/> Hydrological Testing |

- Dams and Impoundments
 - construction
 - abandonment/removal
 - modification
- Ditch Construction
- Drainage Alteration
- Drilling other than Geoscientific
- Ecological Surveys
- Excavation
- Explosive Storage
- Fuel Storage
- Topsoil, Overburden or Soil
 - fill removal
 - disposal storage

- Site Restoration
 - fertilization
 - grubbing
 - planting/seeding
 - reforestation
 - scarify
 - spraying
 - recontouring
- Slashing and removal of vegetation
- Soil Testing
- Stream Crossing/Bridging
- Tunneling/Underground
- Other (describe): groundwater well installation

NTS Topographic Map Sheet Numbers
(LIST ALL THAT APPLY)

NTS Map Sheet #: 96G – 03 1:250,000

Latitude / Longitude and UTM System: Latitude – 65 °, 11' North, Longitude – 123 ° 26', West
(DEGREES, MINUTES, SECONDS, MAP SHEET)

Nearest Community and Water Body: The community of Deline is located about 110 km northeast of Norman Wells. The main water bodies are Great Bear Lake, and Airplane Lake

Land Status (consultation information)
(CHECK ALL THAT APPLY)

- Free Hold / Private Commissioner's Land Federal Crown Land Municipal Land

Transboundary Implications
(CHECK ALL THAT APPLY - IF KNOWN & APPLICABLE)

- British Columbia Alberta Saskatchewan Manitoba Yukon
 Nunavut Wood Buffalo National Park Inuvialuit Settlement Region

Type of Transboundary Implication: Impact / Effect Development

Public Concern _____
(DESCRIBE)

N/A

PHYSICAL - CHEMICAL EFFECTS

IMPACT

MITIGATION

1. Ground Water

water table alteration

water quality changes

1. The storage of waste at the temporary solid waste facility could impact surface and groundwater.
2. Runoff from the temporary solid waste disposal site could impact surface and groundwater.
3. Sewage lagoon failure could contaminate groundwater.
4. Fuel leaks could contaminate groundwater
5. The Deline Got'ine Government has a spill contingency plan to be approved by the Board for all municipal operations that will be adhered to.
6. Regular inspections of the lagoon and fuel storage facilities are completed

as outlined in the Operation and Maintenance Manuals for the Sewage Lagoon and the Temporary and New Solid Waste Disposal Facilities to be approved by the Board.

- infiltration changes
- other: _____

N/A
IMPACT

MITIGATION

2. Surface Water

- flow or level changes
- water quality changes

1. No deleterious materials will be allowed to enter creeks or lakes as per Part D, condition 1 of the WL.
2. Spills in and around the community could affect water quality of Great Bear Lake. located 4,500 m from the sewage lagoon and SWDF.
3. The Deline Got'ine Government has a spill contingency plan in place for all municipal operations that will be adhered to once approved by the Board.
4. Response to spills is to stop any infiltration or flow to water bodies located 4,500 m away from the sewage lagoon.
5. All spills and unauthorized discharges of waste or water shall be reclaimed as per Part g, condition 4 of the WL.

- water quantity changes

1. The Deline Got'ine Government requires 30,000m³ of water per year from Great Bear Lake, which is a negligible amount. The renewal licence grants the same water usage.

- drainage pattern changes

- temperature

- wetland changes / loss

1. The new sewage lagoon incorporates various wetlands to contain and treat the effluent prior to discharging into Great Bear Lake. Lagoon failure could result in contamination to wetland by overloading of organics.
2. The wetland treatment system is continuous discharge with SNP stations located along the pathway to the receiving environment (Great Bear Lake).
3. Mitigation of lagoon failure is to construct temporary berms to contain sewage.

- other: _____

- N/A

IMPACT

MITIGATION

3. Noise

- noise increase

1. Vehicles servicing the solid waste facility, sewage lagoon, and water treatment plant will temporarily influence air and noise increase, and is expected in and around the community.

- noise in/near water

- other: _____

- N/A

IMPACT

MITIGATION

4. Land

geologic structure changes

soil contamination

1. The storage of waste at the solid waste facility could impact soil quality.
2. The Deline Got'ine Government has a spill contingency plan in place for all municipal operations that will be adhered to once approved by the Board.

buffer zone loss

soil compaction & settling

1. Soil is compacted at the solid waste facility due to movement of machinery and compaction of the garbage.
2. This compacting of the soil will help lessen the impact of rainwater and surface water infiltration into the soil and ground water.
3. The solid waste site is to be accessed by roads.

destabilization / erosion

1. Erosion of dikes can be caused by wave action, on the inside of the lagoon cells, and surface runoff on the inside or outside of the lagoon cells. The problems can be aggravated by animal burrows.
2. Regular monitoring and maintenance are required to control berm erosion as per Operation and Maintenance Manuals and Part D, condition 10 of the WL.
3. Another method of berm protection uses grass or other vegetative cover.

permafrost regime alteration

1. The landfill operation could remove any permafrost in the area. The area is characterized with discontinuous permafrost.

other: _____

N/A

IMPACT

MITIGATION

5. Non Renewable Natural Resources

resource depletion

other: _____

N/A

IMPACT

MITIGATION

6. Air / Climate / Atmosphere

burning of Garbage

vehicle exhaust

1. Vehicles servicing the solid waste facility, sewage lagoon, and water treatment plant will temporarily influence air and noise increase, and is expected in and around the community.
2. Mitigation of vehicle exhaust can be made by limiting vehicle idling and keeping vehicles in good running condition.

N/A

BIOLOGICAL ENVIRONMENT

IMPACT

MITIGATION

1. Vegetation

species composition

1. Large weeds and shrubs can cause erosion of lagoon leading to contamination. These are removed regularly from the outside slope of the lagoon berm.
2. Surface weeds in the lagoon can use oxygen necessary for the proper functioning of the lagoon. These plants are skimmed off the surface of the lagoon regularly.

species introduction

toxin / heavy accumulation

1. Possibility of accumulation of toxins from contaminants leaching out from the landfill.

other: _____

N/A

IMPACT

MITIGATION

2. Wildlife & Fish

effects on rare, threatened or endangered species

fish population changes

1. DFO recommended in the previous WL review that a fish screen be installed on the intake pipe that meets the Freshwater Intake End-of-Pipe Fish Screen Guideline. The screen is present on the intake pipe.

waterfowl population changes

breeding disturbances

population reduction

species diversity change

health changes (identify)

1. Lagoon failure could result in contamination to surrounding wetlands and vegetation areas and overloading of organics to wetland and downstream aquatic environments that may cause adverse impacts to aquatic life.
2. Mitigate potential impact by implementing Spill Contingency Plan by constructing temporary berms to contain sewage.
3. Minimal risk to aquatic life if all sewage lagoon engineer design specifications are met.

behavioural changes (identify)

habitat changes / effects

game species effects

toxins / heavy metals

forestry changes

agricultural changes

other: _____

N/A

INTERACTING ENVIRONMENT

IMPACT

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

2. Social and Economic

planning / zoning changes or conflicts

increase in urban facilities or services use

1. Displacement of large populations of large game animals is not likely, because the development is within municipal boundaries.
2. Most of the larger mammals like caribou or moose and smaller fur bearing animals like marten, lynx and wolverine avoid or do not often come into town or even near the outer edges of town.
3. Garbage at the Solid Waste Disposal Facility attracts bears which can be mitigated through construction of fencing as recommended in the Operations and Maintenance Manual.

1. The storage of waste at the solid waste facility could attract wildlife.

MITIGATION

1. Displacement of large populations of large game animals is not likely, because the development is within municipal boundaries.
2. Most of the larger mammals like caribou or moose and smaller fur bearing animals like marten, lynx and wolverine avoid or do not often come into town or even near the outer edges of town.
3. Wildlife may be attracted to the solid waste disposal facility. Proper fencing will help control wildlife access.
4. Lagoon failure could result in contamination to surrounding wetlands and vegetation areas and overloading of organics to wetland and downstream aquatic environments that may cause adverse impacts to aquatic life.
5. Mitigate potential impact by implementing Spill Contingency Plan by constructing temporary berms to contain sewage.

MITIGATION

- rental house
- airport operations / capacity changes
- human health hazard

1. Proper operation and maintenance of the water treatment plant will prevent any human health problems associated with drinking water.
2. Proper precautions are followed during routine handling of sodium hypochlorite to limit the potential for negative impacts to the environment and human health.
3. Proper operation and maintenance of the sewage lagoon will prevent any potential contamination that may impact human health.

- 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

- affects to historic property
- increased economic pressure
- changes to or loss of historic resources
- change to or loss of archaeological resources
- increased pressure or archaeological sites
- change to or loss of aesthetically important site
- affects to aboriginal lifestyle
- other: _____
- N/A

PRELIMINARY SCREENER / REFERRING BODY INFORMATION
(CHECK ALL THAT APPLY)

| | RA or DRA | ADVISE | PERMIT REQUIRED |
|---|-----------------------|-----------------------|----------------------------|
| Federal | | | |
| ATOMIC ENERGY CONTROL BOARD | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| CANADIAN HERITAGE | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| CANADIAN TRANSPORTATION AGENCY | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ENVIRONMENT AND CLIMATE CHANGE CANADA | <input type="radio"/> | ✓ | <input type="radio"/> |
| FISHERIES & OCEANS | <input type="radio"/> | ✓ | <input type="radio"/> |
| ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA | <input type="radio"/> | ✓ | <input type="radio"/> |
| CANADIAN NORTHERN ECONOMIC DEVELOPMENT AGENCY - NWT REGION | <input type="radio"/> | ✓ | <input type="radio"/> |
| INDUSTRY CANADA | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| NATIONAL DEFENSE | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| NATIONAL ENERGY BOARD | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| NATURAL RESOURCES | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PUBLIC WORKS & GOVERNMENT SERVICES | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| TRANSPORT CANADA | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| CANADIAN NUCLEAR SAFETY COMMISSION | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Territorial | | | |
| MUNICIPAL & COMMUNITY AFFAIRS | <input type="radio"/> | ✓ | <input type="radio"/> |
| EDUCATION, CULTURE AND EMPLOYMENT | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ENVIRONMENT & NATURAL RESOURCES | <input type="radio"/> | ✓ | <input type="radio"/> |
| INFRASTRUCTURE | <input type="radio"/> | ✓ | <input type="radio"/> |
| DEPARTMENT OF HEALTH AND SOCIAL SERVICES | <input type="radio"/> | ✓ | <input type="radio"/> |
| PRINCE OF WALES NORTHERN HERITAGE CENTRE | <input type="radio"/> | ✓ | <input type="radio"/> |
| INDUSTRY, TOURISM AND INVESTMENT | <input type="radio"/> | ✓ | <input type="radio"/> |

| | | | |
|---|-----------------------|-------------------------------------|-----------------------|
| LANDS | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |
| OFFICE OF THE REGULATOR OF OIL AND GAS OPERATIONS | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |

Boards

| | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| GWICH'IN LAND & WATER BOARD | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| SAHTU LAND & WATER BOARD | <input checked="" type="checkbox"/> | <input type="radio"/> | <input checked="" type="checkbox"/> |
| MACKENZIE VALLEY LAND & WATER BOARD | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |
| MACKENZIE VALLEY ENVIR. IMPACT REVIEW BOARD | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |
| SAHTU LAND USE PLANNING BOARD | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |
| SAHTU RENEWABLE RESOURCES BOARD | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |
| SAHTU HEALTH BOARD | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |

Aboriginal / First Nation

| | | | |
|-----------------------------------|-----------------------|-------------------------------------|-----------------------|
| SAHTU SECRETARIAT INCORPORATED | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |
| DELIN RENEWABLE RESOURCES COUNCIL | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |

Local Government

| | | | |
|--------------------------|-----------------------|-------------------------------------|-----------------------|
| DELIN GOT'INE GOVERNMENT | <input type="radio"/> | <input checked="" type="checkbox"/> | <input type="radio"/> |
|--------------------------|-----------------------|-------------------------------------|-----------------------|

REASONS FOR DECISION

(LIST ALL REASONS AND SUPPORTING RATIONALES FOR PRELIMINARY SCREENING DECISION)

- Adequate time has been given to Reviewers to provide potential environmental impacts and mitigation measures on information as requested from the Proponent during the initial review period.
- The services covered by a municipal Water Licence are a necessary component of community operations. By adhering to the Terms and Conditions of the Licence, the community will minimize potential impacts.

| PRELIMINARY SCREENING DECISION | |
|-------------------------------------|--|
| <input type="radio"/> | Outside Local Government Boundaries |
| <input type="radio"/> | The development proposal might have a significant adverse impact on the environment, <i>refer it to the EIRB.</i> |
| <input type="radio"/> | <i>Proceed with regulatory process and/or implementation.</i> |
| <input type="radio"/> | The development proposal might have public concern, <i>refer it to the EIRB.</i> |
| <input type="radio"/> | <i>Proceed with regulatory process and/or implementation.</i> |
| <input checked="" type="checkbox"/> | Wholly within Local Government Boundaries |
| <input type="radio"/> | 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="radio"/> | 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

Signatures

Sahtu Land and Water Board _____

M. D. D. Little
