

PRELIMINARY SCREENING REPORT FORM

PRELIMINARY SCREENER: Sabrina Sturman REFERENCE / FILE NUMBER: S17X-004 & S17L8-003 APPLICANT: Transport Canada, Prairie and Northern Region – Environmental Service, Contaminated Sites DATE: November 29, 2017	EIRB REFERENCE NUMBER: TITLE: Regulatory Specialist ORGANIZATION: Sahtu Land and Water Board
---	---

Type of Development: (L8) Miscellaneous
 (X) Miscellaneous

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

Project Summary: Transport Canada (TC) divested the Norman Wells Airport to the Northwest Territories in the mid-1990s. As part of the Arctic A Airport Transfer Agreement, TC is obligated to address contamination at the airport that was identified prior to the transfer. TC has remediated several sites at the Norman Wells Airport property and placed hydrocarbon contaminated soils into an on-site land treatment facility (LTF), constructed in 2003. The soils are nearly commercially compliant with CCME guidelines for all contaminants of concern and it is expected that the LTF can be decommissioned in the near future.

Transport Canada, Prairie and Northern Region – Environmental Services, Contaminated Sites (TC-ES) is applying to the Sahtu Land and Water Board for a Type B Land Use Permit, required for installing (drilling) three groundwater monitoring wells, as well as a Type B Water Licence for operation, maintenance, closure and reclamation of the LTF.

Scope: The scope of the proposed undertaking will include:

- Mobilizing drill rig and associated support vehicle to the LTF on Norman Wells Airport property from within the Town of Norman Wells.
- Drilling three boreholes and installing groundwater monitoring wells in vicinity of LTF.
- Drill cuttings (soil) and snow removed during the drilling of boreholes will be placed in drum(s) and after successful completion of well installation will be disposed of within the LTF.
- Domestic wastes including construction material packaging, garbage and food scraps will be placed in appropriate containers and removed from site at end of each day for disposal at the Town of Norman Wells solid waste facility.
- Wells are to be sampled as part of a groundwater monitoring program associated with operation of the LTF. Well decommissioning will be part of LTF closure and reclamation plans (required to be submitted to the SLWB for approval within 6 months of issuance).
- Approximately 3000m³ of soil is located within the windrows of the LTF, with an estimated 500 m³ of soil located immediately above and beneath the liner that will require characterization sampling prior to final site closure.
- Approximately 400 m³ of water is currently retained within the LTF lined area that requires discharge.
- Duration of operation is unknown and dependant on LTF performance.

Principal Activities (related to scoping)

(CHECK ALL THAT APPLY)

- | | | |
|---|---|---|
| <input type="radio"/> Construction | <input type="radio"/> Exploration | <input checked="" type="checkbox"/> Decommissioning |
| <input checked="" type="checkbox"/> Installation | <input type="radio"/> Industrial | <input type="radio"/> Abandonment |
| <input checked="" type="checkbox"/> Maintenance | <input type="radio"/> Recreation | <input type="radio"/> Aerial |
| <input type="radio"/> Expansion | <input type="radio"/> 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 type="radio"/> Water Intake | <input type="radio"/> Sewage | <input checked="" type="checkbox"/> Solid Waste |
| <input checked="" type="checkbox"/> Other: Fuel Storage | | |

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"/> drilling wastes and hydraulic flowback fluids |
| <input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement | <input type="radio"/> Sewage <ul style="list-style-type: none"><input type="radio"/> disposal of sewage |
| <input type="radio"/> Blasting | <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"/> Building | <input type="radio"/> Bulk soil sampling |
| <input type="radio"/> Burning | <input type="radio"/> Gravel |
| <input type="radio"/> Burying | <input type="radio"/> Hydrological Testing |
| <input type="radio"/> Channeling | <input checked="" type="checkbox"/> Site Restoration <ul style="list-style-type: none"><input type="radio"/> fertilization<input type="radio"/> grubbing<input type="radio"/> planting/seeding<input type="radio"/> reforestation<input type="radio"/> scarify<input type="radio"/> spraying<input type="radio"/> recontouring |
| <input type="radio"/> Cut and Fill | <input type="radio"/> Slashing and removal of vegetation |
| <input type="radio"/> Cutting of Trees or Removal of Vegetation | <input checked="" type="checkbox"/> Soil Testing |
| <input type="radio"/> Dams and Impoundments <ul style="list-style-type: none"><input type="radio"/> construction<input type="radio"/> abandonment/removal<input type="radio"/> modification | <input type="radio"/> Stream Crossing/Bridging |
| <input type="radio"/> Ditch Construction | <input type="radio"/> Tunneling/Underground |
| <input type="radio"/> Drainage Alteration | <input type="radio"/> Water Intake |
| <input checked="" type="checkbox"/> <input type="radio"/> Drilling other than Geoscientific | <input type="radio"/> Other |
| <input type="radio"/> Ecological Surveys | |
| <input type="radio"/> Excavation | |
| <input type="radio"/> Explosive Storage | |
| <input checked="" type="checkbox"/> Fuel Storage | |
| <input checked="" type="checkbox"/> Topsoil, Overburden or Soil <ul style="list-style-type: none"><input checked="" type="checkbox"/> fill<input type="radio"/> disposal<input type="radio"/> removal<input type="radio"/> storage | |

NTS Topographic Map Sheet Numbers

NTS Map Sheet #s: (LIST ALL THAT APPLY)

096E

Latitude/Longitude and UTM System:
(DEGREES, MINUTES, SECONDS, MAP SHEET)

Latitude: 65° 16' 33.08" N

Longitude: 126° 46' 30.81" W

Nearest Community and Water Body: The Town of Norman Wells is the nearest community. The nearest water body is the Mackenzie River located approximately 450m to the southwest of the site.

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 Yukon
 Nunavut Wood Buffalo National Park Inuvialuit Settlement Region

N/A

Type of Transboundary Implication:

- Impact / Effect Development

Public Concern

(DESCRIBE)

N/A

PHYSICAL - CHEMICAL EFFECTS

IMPACT

MITIGATION

1. Groundwater

Water table alteration

Water quality changes

1. If fuel spills it may migrate into groundwater.
2. The LTF is lined with a synthetic geomembrane to prevent leaching of contaminants into the subsurface. Monitoring wells located up-gradient and downgradient of the LTF were installed to evaluate the performance of the geomembrane liner, however, due to frost-jacking, require replacement. New wells will be installed.
3. The geomembrane selected for the project was the 30 mil Arctic Liner designed to withstand the harshness of a northern climate and it is also resistant to deterioration from exposure to chemicals such as hydrocarbons. The Arctic Liner is designed for prolonged use and is suitable for multi-year projects.
4. The Licence requires the development of a Water Quality Monitoring Program in order to identify, monitor and mitigate the potential impacts of the LTF on groundwater resources.
5. There is no fuel stored in or around the vicinity of the LTF and hazardous materials (diesel fuel in a 450-litre tank on back of pickup truck, in doubled-walled tank) will only be on-site during the drilling and well installation period which is estimated to be complete in two days.
6. A Spill Contingency Plan has been developed in accordance with INAC's *Guidelines for Spill Contingency Planning*, April 2007.
7. Standard spill kits will be located wherever fuel is used.
8. Portable drip pans will be used during refueling motorized equipment to avoid any leaks/drips on the land
9. If a reportable spill occurs, it will be reported to the NWT 24-Hour Spill Report Line at (867) 920-8130 or spills@gov.nt.ca and GNWT Inspector 867-587-7203.
10. A revised Spill Contingency Plan will be required to be submitted to the Board for approval that includes details specific to the operation, maintenance and closure and reclamation of the LTF.

Infiltration changes

Other:

N/A

IMPACT

MITIGATION

1. Surface Water

Water flow or level changes

Water quality changes

1. There are waters (~400m³) retained within the LTF lined area that requires discharge. Water quality could be impacted as a result of effluent discharge or a spill. The Licensee shall comply with the Effluent Quality Criteria defined in the Water Licence (S17L8-003). The Licensee is required to submit analytical results to the Board and Inspector 10 days prior to discharge, with proposed discharge

location, and cannot commence activity until written approval from Inspector.

2. A Spill Contingency Plan has been developed in accordance with INAC's *Guidelines for Spill Contingency Planning*, April 2007.
3. Standard spill kits will be located wherever fuel is used.
4. Portable drip pans will be used during refueling motorized equipment to avoid any leaks/drips on the land.
5. If a reportable spill occurs, it will be reported to the NWT 24-Hour Spill Report Line at (867) 920-8130 or spills@gov.nt.ca and GNWT Inspector 867-587-7203.
6. Minor spills will be tracked and documented by the Contractor and submitted to the appropriate authority either immediately upon request or at a pre-determined reporting interval.
7. A revised Spill Contingency Plan will be required to be submitted to the Board for approval that includes details specific to the operation, maintenance and closure and reclamation of the LTF.
8. The Licence requires the development of a Water Quality Monitoring Program in order to identify, monitor and mitigate the potential impacts of the LTF, for Board approval
9. The Licence requires an Operation and Maintenance Plan be submitted for Board approval.

- Water quantity changes
- Drainage pattern changes
- Temperature
- Wetland changes / loss
- Other: Increased sedimentation, erosion effects, disturbance of aquatic organisms.
- N/A

IMPACT

MITIGATION

2. Noise

- Noise increase

1. Any increase in noise disturbance from LTF operations, risk closure and reclamation activities and/or monitoring well installation will be temporary and localized in nature and have no anticipated long term effects.

- Noise in/near water
- Other:
- N/A

IMPACT

MITIGATION

3. Land

- Geologic structure changes

✓ Soil contamination

11. Soil contamination may occur as a result of operation of the LTF and is possible in the case of a spill.
12. The Licensee shall ensure all treated soil meets the criteria specified in the Water Licence (S17L8-003).
13. A Spill Contingency Plan has been developed in accordance with INAC's *Guidelines for Spill Contingency Planning*, April 2007.
14. Standard spill kits will be located wherever fuel is used.
15. Portable drip pans will be used during refueling motorized equipment to avoid any leaks/drips on the land.
16. A revised Spill Contingency Plan will be required to be submitted to the Board for approval that includes details specific to the operation, maintenance and closure and reclamation of the LTF.
17. If a reportable spill occurs, it will be reported to the NWT 24-Hour Spill Report Line at (867) 920-8130 or spills@gov.nt.ca and GNWT Inspector 867-587-7203
18. Minor spills will be tracked and documented by the Contractor and submitted to the appropriate authority either immediately upon request or at a pre-determined reporting interval.

✓ Ground disturbance

1. All drilling activities will be occurring around an existing disturbed area adjacent to the Norman Wells Airport.
2. Closure and reclamation activities (soil deposition and re-grading) may impact the current site grade and vegetation. The License requires submission of a Closure and Reclamation Plan to the Board for approval within 6 months of issuance.
3. Standard LUP conditions related to restoration of lands will also apply.

○ Buffer zone loss

○ Soil compaction & settling

○ Destabilization / erosion

✓ Permafrost regime alteration

1. The LTF may impact permafrost regime. Standard Land Use Permit Conditions #36 (Permafrost Protection) has been included in S17X-004 (Condition 12) and the requirements of considerations to be included in the Closure and Reclamation Plan include reference to permafrost.

○ Other:

○ N/A

IMPACT

MITIGATION

4. Non Renewable Natural Resources

✓ Resource depletion

1. Equipment and vehicles using fossil fuels will be utilized in the most efficient manner possible in order to minimize program fossil fuel requirements.

○ Other

○ N/A

IMPACT

MITIGATION

5. Air / Climate / Atmosphere

- | | |
|---|---|
| <ul style="list-style-type: none">✓ Greenhouse gases
✓ Other | <ul style="list-style-type: none">1. Vehicles and equipment, using fossil fuels, emit substances that contribute to air pollution and global warming. The cumulative effects of these activities are an unavoidable impact of fossil fuel usage. The cumulative effects are unknown.
1. Vapours from treatment cell may be noticeable downwind.2. Operation/treatment and closure activities could result in increased dust emissions.3. Air monitoring will be conducted during closure activities. |
|---|---|

BIOLOGICAL ENVIRONMENT

IMPACT

MITIGATION

1. Vegetation

- | | |
|--|---|
| <ul style="list-style-type: none">✓ Species composition
✓ Species introduction
○ Toxin / heavy metal accumulation
○ Loss of timber along seismic lines
✓ Damage to ground vegetation and permafrost

○ Increased fire hazard
○ N/A | <ul style="list-style-type: none">1. Any overburden removed during installation of monitoring wells will be collected and dispersed in the LTF. S17X-004 includes Standard LUP Condition #104 (Disposal of Overburden) that requires the Permittee to disposal of all overburden as instructed by the Inspector.
1. No intentional introduction of non-native vegetation species will occur.

1. Minimal clearing of vegetation is anticipated to complete the undertaking.2. Manual removal will be the primary method, followed by removal of vegetation using powered hand-held tools.3. Minimizing brush removal will mitigate soil erosion and enhance re-growth potential.4. Any overburden removed during the closure and reclamation of the LTF will be spread/dispersed onsite. |
|--|---|

IMPACT

MITIGATION

2. Wildlife & Fish

- Effects on rare, threatened or endangered species

- Fish population changes
- Waterfowl population
- Breeding disturbances
- Population reduction
- Species diversity change
- Health changes (identify)

1. Spills of fuel could be harmful to wildlife and aquatic life.
2. All spills will be cleaned up according to the Spill Contingency Plan.

- Behavioral changes (identify)
- Habitat changes / effects
- Game species effects
- Toxins / heavy metals

1. Wildlife entering the LTF could be exposed to petroleum hydrocarbons. The LTF is fenced to limit access.

- Forestry changes
- Agricultural changes
- Other:
- N/A

INTERACTING ENVIRONMENT

1. Habitat & 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

1. Social & Economic

- Planning / zoning changes or conflicts

Rental house

Airport operations / capacity changes

Human health hazard

1. Hazardous materials on-site will be primarily limited to fuel.
2. Exposure to contaminated soil and leachate may pose a risk to human health.
3. The LTF is fenced to prevent access.
4. Anyone handling hazardous material on-site will be required to wear all personal protective equipment.
5. All personnel are required to support and comply with the consultant's (BluMetric) Environmental, Health and Safety Policy making safety, health and protection of the environment a part of their daily routine and ensuring that they follow safe work methods and relevant regulations.

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

1. Cultural & Heritage

Affects to historic property

Increased economic pressure

Changes to or loss of historic resources

Changes to or loss of archeological resources

Increased pressure on archeological resources

Effects to aboriginal lifestyle

N/A:

Given the location of activities (Norman Wells Airport property) and involvement of minimal ground disturbance during closure and reclamation of the LTF, the risk of impact to buried pre-contact sites is very low. If any new cultural or heritage resource is discovered

during the undertaking, work must cease and the Prince of Wales Northern Heritage Centre shall be contacted immediately. Standard LUP conditions applied that pertain to archaeological and heritage resources

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 CANADA	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
FISHERIES & OCEANS	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA	<input type="radio"/>	<input checked="" type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="radio"/>
CANADIAN NUCLEAR SAFETY COMMISSION	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Territorial			
MUNICIPAL & COMMUNITY AFFAIRS	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
PUBLIC WORKS & GOVERNMENT SERVICES	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ENVIRONMENT & NATURAL RESOURCES	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
INFRASTRUCTURE	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
DEPARTMENT OF HEALTH AND SOCIAL SERVICES	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
PRINCE OF WALES NORTHERN HERITAGE CENTRE	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
INDUSTRY, TOURISM AND INVESTMENT	<input type="radio"/>	<input checked="" type="checkbox"/>	<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 type="radio"/>	<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"/>
FORT NORMAN WELLS METIS LAND CORPORATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
FORT NORMAN WELLS RENEWABLE RESOURCES COUNCIL	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
NORMAN WELLS LAND CORPORATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
NORMAN WELLS RENEWABLE RESOURCE COUNCIL	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TULITA RENEWABLE RESOURCES COUNCIL	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TULITA LAND CORPORATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TULITA BAND COUNCIL	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
TULITA DISTRICT LAND CORPORATION	<input type="radio"/>	<input checked="" type="checkbox"/>	<input type="radio"/>
Local Government			
TOWN OF NORMAN WELLS	<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 effects of the Program on the environment can take place in an environmentally responsible manner provided that mitigation measures are followed.

-	PRELIMINARY SCREENING DECISION
○	Outside Local Government Boundaries
○	The development proposal might have a significant adverse impact on the environment, <i>refer it to the EIRB.</i>
○	<i>Proceed with regulatory process and/or implementation.</i>
○	The development proposal might have public concern, <i>refer it to the EIRB.</i>
○	<i>Proceed with regulatory process and/or implementation.</i>
✓	Wholly within Local Government Boundaries
○	The development proposal is likely to have a significant adverse impact on air, water or renewable resources, <i>refer it to the EIRB.</i>
✓	<i>Proceed with regulatory process and/or implementation.</i>
○	The development proposal might have public concern, <i>refer it to the EIRB.</i>
✓	<i>Proceed with regulatory process and/or implementation.</i>

Preliminary Screening Organization

Sahtu Land & Water Board

Signatures

