

Preliminary Screening Report Form

Preliminary screener: MVLWB Reference / File number: MV2019X0004 TITLE: Former Weather Station Remediation ORGANIZATION: Environment and Climate Change Canada MEETING DATE: May 1, 2019	EIRB Reference number:
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Type of Development:
(CHECK ALL THAT APPLY)

- New
- Amend, EIRB Ref. #
- Requires permit, licence, or authorization
- Does not require permit, licence, or authorization

Project Summary:

1. Hazardous Materials Abatement (asbestos and lead) - conducted as required prior to building demolition, containerized and shipped for disposal at KBL in Yellowknife.
2. Building Demolition – clean wood waste is expected to be burned on-site under the conditions of a Burn Permit and in conformance with the GNWT open burning guidelines. Other waste material will be transported off-site.
3. Landfill Excavation – Two existing waste disposal areas will be excavated. Soils meeting applicable criteria, as outlined in the RAP and HHERA will be used as backfill. Solid waste material will be removed for disposal off-site at an approved and appropriate location (location to be determined).
4. Contaminated Soils - Contaminated soils from the excavated landfill and several small fuel spill locations will be excavated, containerized, and shipped off-site to KBL in Yellowknife. Contaminated soils at the former tank farm, former month tank, and around several buildings will be left in-situ as described in the HHERA and RAP.
5. Surface Debris Removal – Material scattered across the site will be collected and transported off-site for final disposal.
6. Potential Borrow – Source identified if needed to support landfill backfilling, contaminated soils excavations, and associated contouring requirements.
7. Contaminated Groundwater – To accelerate the breakdown of hydrocarbon contaminants in groundwater at the former fuel storage area, hydrogen peroxide solutions will be injected into selected groundwater monitoring wells. Seven such injection events and follow-up monitoring programs are planned for the next 25 years.
8. Future Monitoring – Groundwater and surface water monitoring will be implemented to track the long-term attenuation of residual contamination.
9. Other – ECCC and its contractor (Tetra Tech) have committed to carry out a radiation survey of the site in response to community concerns regarding a historic satellite crash in the area (1978 Kosmos 954 incident).

Scope:

- a) Building decommissioning and site remediation;
- b) Use of heavy equipment and machinery;
- c) Use of camp, including accommodation building; and
- d) Fuel storage;

Land Use Eligibility - Section 18 Mackenzie Valley Land Use Regulations:
18(b)

Type of Disposition

Disposition Number(s)

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

Federal Real Property (DFRP) identification number is 20920

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

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

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

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

NTS topographic map sheet numbers:

75K11

Latitude / longitude and UTM system:

62°42'37" N to 62° 42' 49" N

109° 09' 37" W to 109° 10' 24" W

Nearest community and water body:

Lutselk'e and Great Slave Lake

Land Status (consultation information)

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

Transboundary/Transregional Implications

- | | | | |
|---|--|---|--------------------------------|
| <input type="checkbox"/> British Columbia | <input type="checkbox"/> Alberta | <input type="checkbox"/> Saskatchewan | <input type="checkbox"/> Yukon |
| <input type="checkbox"/> Nunavut | <input type="checkbox"/> National Park | <input type="checkbox"/> Inuvialuit Settlement Region | |
| <input type="checkbox"/> Wek'èezhii | <input type="checkbox"/> Gwich'in | <input type="checkbox"/> Sahtu | |

Type of transboundary implication:

Impact / Effect

Development

Public concern: _____
(Describe.)

Physical - Chemical Effects

Impact

Mitigation

1) Ground Water

water table alteration

water quality changes

Hazardous materials and solid wastes, including metals, hydrocarbon-impacted soils and groundwater, lead, asbestos, sewage, greywater, food waste, fuel, and various debris will be handled, moved and stored prior to final disposal. Permit conditions and waste handling practices identified in the Draft Permit and Waste Management Plan are designed to contain waste and minimize potential impacts associated with any spills. There are 29 existing groundwater monitoring wells that will be improved and used to monitor conditions at the site following remediation.

infiltration changes

Contaminated groundwater and injected hydrogen peroxide solutions have the potential to migrate toward Great Slave Lake. Three nearshore monitoring wells and four offshore surface water sampling locations will be used to monitor the success of the hydrogen peroxide treatment method being proposed to oxidize hydrocarbons found in the groundwater in the former fuel storage area. Hydrogen peroxide oxidizes quickly and is not considered an environmental contaminant on its own. If hydrocarbon contaminated groundwater is detected in the monitoring wells or at nearby surface water sampling sites, ECCC has committed to either revise the monitoring plan, enhance attenuation efforts, and/or implement active remediation (i.e. source removal, barriers, or treatment).

other:

N/A

Impact

Mitigation

2) Surface Water

flow or level changes

water quality changes

Hazardous materials and solid wastes, including metals, hydrocarbon-impacted soils and groundwater, lead, asbestos, sewage, greywater, food waste, fuel, and various debris will be handled, moved and stored prior to final disposal. Permit conditions and waste handling practices identified in the Draft Permit and Waste Management Plan are designed to contain waste and minimize potential impacts associated with any spills. There are 29 existing groundwater monitoring wells that will be improved and used to monitor conditions at the site following remediation. All heavy equipment will be washed and free of contaminants and dirt prior to arrival.

water quantity changes

drainage pattern changes

Remedial activities associated with building demolition, waste excavation and contaminated soils removal will result ground disturbances. ECCC has committed to re-contouring excavations so that they blend into the natural topography and promote positive drainage. A potential borrow source has been identified, if required.

temperature

wetland changes/loss

other:

N/A

Impact
3) Noise

noise in/near water

Mitigation

This impact is unavoidable during active remediation activities but will be seasonal and of short duration.

noise increase

This impact is unavoidable during active remediation activities but will be seasonal and of short duration.

other:

N/A

Impact
4) Land

Mitigation

geologic structure changes

soil contamination

Hazardous materials and solid wastes, including metals, hydrocarbon-impacted soils and groundwater, lead, asbestos, sewage, greywater, food waste, fuel, and various debris will be handled, moved and stored prior to final disposal. Permit conditions and waste handling practices identified in the Draft Permit and Waste Management Plan are designed to contain waste and minimize potential impacts associated with any spills. Some highly contaminated surface soils will be excavated and removed from site, while others, that have been determined to pose no risk to human health or wildlife, through the risk assessment, will remain onsite.

buffer zone loss

soil compaction and settling

Some soil compaction at settling is likely to occur as a result of the use of heavy equipment on site. ECCC has committed to re-contouring disturbed area so that they blend into the natural topography and promote positive drainage. A potential borrow source has been identified, if required

destabilization/erosion

Erosion and sediment control measures will be required at AEC 5 (West Waste Disposal Area) due to the steep grade towards Great Slave Lake. Potential for erosion may also exist at the barge landing site and proposed borrow site. Draft permit conditions require the development of a Sediment and Erosion Control Plan so that any mitigations required to address potential erosion issues will be clearly defined prior to operations.

permafrost regime alteration

explosives/scarring

other: cumulative effects

The bounding coordinates for the remediation project have been included, as well as GIS data. The goal of this project, however, is to minimize and reduce the impacts of previous disturbances to the site, thereby having a net positive impact on cumulative effects compared to baseline.

N/A

Impact
5) Non-renewable natural resources

Mitigation

resource depletion

other:

N/A

Impact

Mitigation

6) Air/climate/atmosphere

other: This impact is unavoidable during active remediation activities but will be seasonal and of short duration. ECCC also proposes to carry out open burning of clean wood waste and brush. It has committed to conform with the GNWT open burning guidelines.

N/A

BIOLOGICAL ENVIRONMENT

Impact

Mitigation

1) **Vegetation**

species composition

species introduction All heavy equipment will be washed and free of contaminants and dirt prior to arrival.

toxin/heavy accumulation

other: fire ECCC’s proposal to open burn clean wood waste and brush poses a fire hazard. Draft permit conditions require fire fighting equipment to be available on site and ECCC should adhere to the Forest Fire Prevention and Suppression Guidelines. ECCC has committed to obtaining a Permit to Burn from the GNWT. Burns authorized under a Permit to Burn is exempt from Preliminary Screening if it is not greater than an area of 25 m2. If merchantable wood is involved, either merchantable firewood or saw timber, it should be cleanly set to one side of the operation and made available for recovery.

N/A

Impact

Mitigation

2) **Wildlife and Fish**

effects on rare, threatened or endangered species The project area overlaps with the ranges of the following NWT-listed and/or pre-listed species: Boreal Caribou – Threatened in the NWT; Barren-ground Caribou - Threatened in the NWT; Grizzly Bear – Special Concern in NWT; Little Brown Myotis (bat) – Special Concern in the NWT; Northern Myotis (bat) – Special Concern in the NWT; and Wood Bison – Threatened in the NWT. ENR stated that it was of the opinion that the scope, nature, areal extent, scale and/or timing of the proposed project are such that the likelihood of impacts to NWT-listed or pre-listed species at risk is minimal. As noted in the Project Description, evidence of one species of management concern (Barn Swallow nest) was observed in the second floor of the Radio Control Building. The Project is aware that the destruction or disruption of active bird nests must not occur as per the Migratory Bird Convention Act, and appropriate care will be taken during remediation activities to not disrupt the nest if active. The current plan is to determine if the nest is active. Removal of the nest would only be conducted before or after the nesting period or if the nest is inactive. However, if the nest is active regular monitoring will be undertaken and detailed nest monitoring records and photos of all visits will be used to determine nest occupancy. The Project is aware that in the territories, the nesting period is defined as from May 15th or the date when adults are first seen building or occupying the nest, whichever is earlier, to August 31st or the date when a bird is last seen at the nest, whichever is later. If species at risk are encountered during project undertakings, the primary mitigation measure should be avoidance. The Proponent should avoid contact with or disturbance to each species, its habitat and/or its residence and submit sightings of species at risk and monitoring information to ENR’s Wildlife Management Information System (WMIS). Draft Permit conditions require the minimization of activities when caribou, migratory birds, and/or species at risk are encountered.

fish population changes

waterfowl population changes

breeding disturbance

Critical breeding periods for NWT raptors can start as early as the 1st week of April and last up until 3rd week of September, depending on the species and location. The Project is aware that the destruction or disruption of active bird nests must not occur as per the Migratory Bird Convention Act, and appropriate care will be taken during remediation activities to not disrupt the nest if active. Draft Permit conditions require the minimization of activities when caribou, migratory birds, and/or species at risk are encountered.

population reduction

species diversity change

health changes

behavioural changes

habitat changes / effects

No bear dens, beaver lodges, muskrat push-ups or bat hibernacula were noted during previous environmental surveys of the Fort Reliance Project area and no work is anticipated to be required beyond the end of September. However, if any beaver lodges, muskrat push-ups or bat hibernacula are found ECCC has committed that appropriate measures will be taken to avoid disturbing them and to protect them.

game species effects

Draft Permit conditions require the minimization of activities when caribou, migratory birds, and/or species at risk are encountered.

toxins/ heavy metals

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
- increase in urban facilities or services use
- 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

This remediation project is designed to remove existing human (and wildlife) health hazards currently present at the site.

Impact
3) Cultural and Heritage

Mitigation

- 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

This project involves the demolition of historic property. Commemoration of the area will be completed following remediation.

An Archaeological Overview Assessment (AOA) and Archaeological Impact Assessment have been completed and no resources have been identified as threatened by this project. If new areas of disturbance are required, an additional AOA will be required as provided in the draft Permit.

In general, feedback from the Lutselk'e Dene First Nation supported the demolition of buildings and removal of contaminants from the site since the Fort Reliance area is very significant for cultural, spiritual, and traditional use activities.

- 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 **Akaiicho 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
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
GNWT – ECE
GNWT – ENR
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
Katlodeeche First Nation
Lutsel K'e Dene First Nation - Chief or Wildlife, Lands and Environment
Mackenzie Valley Environmental Impact Review Board
Manitoba Denesuline
MVLWB
North Slave Metis Alliance
Northwest Territory Metis Nation
NWT & Nunavut Chamber of Mines
NWT- OROGO
Parks Canada
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
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 MV2019X0004, Environment and Climate Change Canada, Former Weather Station Remediation Project, Fort Reliance, 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 the terms and conditions in the attached Land Use Permit.

As a result, the Board, having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the Mackenzie Valley Land Use Regulations has decided that this Land Use Permit be issued subject to the terms and conditions contained therein.

Preliminary Screening Decision	
<input checked="" type="checkbox"/>	Outside Local Government Boundaries
<input type="checkbox"/>	The development proposal might have a significant adverse impact on the environment, <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>
<input type="checkbox"/>	Wholly Within Local Government Boundaries
<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 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>

Preliminary Screening Organization

Mackenzie Valley Land and Water Board

May 1, 2019

Signatures

Mavis Cli-Michaud, Chair