

Attachment 1: Land Use Permit Application
Form

Land and Water Boards of the Mackenzie Valley



LAND USE PERMIT APPLICATION FORM

Subsection 19(2) and Schedule 2 of the [Mackenzie Valley Land Use Regulations](#)

Use an "X" to indicate which Board the Application is being made to:	Mackenzie Valley Land and Water Board:		Sahtu Land and Water Board:	X
	Wek'èezhìi Land and Water Board:		Gwich'in Land and Water Board:	

To complete this Form, please refer to the LWB [Guide to the Land Use Permitting Process](#) (Guide) and fill in the grey fields; attach additional pages, as necessary. Indicate N/A in the grey fields for Items or parts of Items that are not applicable. An application package checklist is provided in the Guide. Review the following LWB guidance for formatting your Application Package:

- [Document Submission Standards](#)
- [Standard Outline for Management Plans](#)

If applicable, provide the existing or current Land Use Permit file number:			
Use an "X" to indicate if this Application is accompanied by an Application for a Water Licence:	Water Licence – in a non-federal area:		X
	Water Licence – in a federal area:		

1. NAME AND CONTACT INFORMATION – APPLICANT

Project Name:	Norman Wells Goose to Bear Island Flowline Replacement		
Applicant's Name:	Jeremy Smith, P.Eng		
Position:	Project Manager		
Company Name:	Imperial Oil Resources N.W.T. Limited (Imperial)		
Mailing Address:	505 Quarry Park Blvd SE		
Community:	Calgary	Telephone:	(587) 962-4620 (office)
Prov/Terr:	Alberta	Email:	jeremy.e.smith@exxonmobil.com
Postal Code:	T2C 5N1	Other:	(403) 305-6254 (cell)

2. NAME AND CONTACT INFORMATION – APPLICANT’S HEAD OFFICE

Include a Certificate of Corporate Registration from the Government of the Northwest Territories in your Application Package.

Use an “X” to indicate this information is the same as Item 1 above:			X
Name:			
Position:			
Company Name:			
Mailing Address:			
Community:			
Prov/Terr:		Telephone:	
Postal Code:		Email:	
Field Supervisor:		Other:	

3. NAME AND CONTACT INFORMATION – CONTRACTORS AND SUB-CONTRACTORS

Include relevant names, responsibilities, and contact information. An additional table should be added for each contractor and sub-contractor.

Name:			
Position:			
Company Name:			
Mailing Address:			
Community:		Telephone:	
Prov/Terr:		Email:	
Postal Code:		Other:	

X	Use an “X” to indicate that contractor and/or subcontractor information is not available at this time.
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4. LOCATION OF ACTIVITIES

Use the grey fields below to provide or reference the following information:

Traditional Place Name: Tłegóhłı; Goose Island, Bear Island

Maps and Geographic Information System (GIS) Data: Include a map in your Application Package identifying local geographic features, watercourses and water sources, project structures, and location(s) of any proposed waste deposits. Provide geographic coordinates (latitude and longitude) of project features, and the maximum and minimum project boundary in degrees, minutes, seconds, or decimal degrees. Include GIS data in your Application Package, if applicable. Refer to the LWB [Geospatial Data Submission Standards](#) for providing geographic information.

Minimum latitude:	65°15'44.04"N	Maximum latitude:	65°16'2.70"N
Minimum longitude:	126°53'10.12"W	Maximum longitude:	126°54'22.77"W

NTS Map Sheet No.: Provide the map sheet number: 096E/07

GIS Data: Use an “X” to indicate if GIS data is attached. Attached: X Not Available:

Land Types: Use an “X” to indicate the type(s) of the land on which the activities are proposed:

Free Hold/ Private:	X	Commissioner’s/ Territorial Lands:		Federal Land:		Municipal Land:	
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5. ELIGIBILITY

Refer to section 18 of the [Mackenzie Valley Land Use Regulations](#). Use an “X” to indicate which one applies:

18(a)(i):		18(a)(ii):		18(a)(iii):		18(b):	X
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6. RIGHTS AND/OR CONTRACTS TO SUPPORT ELIGIBILITY

Contact Indigenous, federal, and territorial governments, and other parties to ensure all appropriate rights, authorizations, permissions, dispositions, and contracts have been obtained or are in the process of being obtained (e.g., mineral exploration rights, quarry permits, licences of occupation, leases, access agreements and authorizations, etc.). List and provide confirmation of other authorizations that relate to the proposed activities; reference these in your Application Package (e.g., rights, permits, licences, etc.).

The proposed Project is being conducted on land owned by Imperial (LTO Plan 4237 / Lot 502) on Goose and (LTO Plan 4238 / Lot 501) Bear Islands within the Mackenzie River.

7. PERMIT TYPE AND CRITERIA

Refer to sections 4 and 5 of the [Mackenzie Valley Land Use Regulations](#). Use an “X” to indicate which permitting criteria apply:

Type A			Type B			Type C	
4(a)(i):		4(b)(i):	X	5(a)(i):		(SLWB and WLWB only):	
4(a)(ii):		4(b)(ii):		5(a)(ii):			
4(a)(iii):		4(b)(iii):		5(a)(iii):			
4(a)(iv):		4(b)(iv):		5(a)(iv):			
4(a)(v):				5(a)(v):			
				5(a)(vi):			

8. PROJECT DESCRIPTION

Include a project description in your Application Package, or for small-scale projects, describe the proposed activities in the grey field provided below. For each and all proposed water uses, include the name and type (e.g., lake, river) of water source(s), and the purpose and quantity of water to be used (rates, volumes (m³/day)).

Production was shut-in and winterized on Artificial Islands 5 and 6, as well as Bear and Frenchy's Islands, and has remained shut-in since July 2022 following a flowline failure within the Line 490 corridor.

In order to resume full production at NWO. Imperial intends to replace the lines by HDD.

The Project includes the following land use activities:

- Vegetation clearing, grubbing and removal
- Site grading
- Surface casing installation
- Pipe stringing and welding
- HDD activities including drilling a pilot hole, ream passes and pullback
- Hydrostatic pressure testing
- Tie-in to existing flowlines and electrical cable interconnects
- Backfill and restoration
- Clean-up and final reclamation

The HDD involves drilling a single hole between Goose and Bear Islands, approximately 610 to 762 millimetres (mm) in diameter (24 to 30 inches), and approximately 1.0 to 1.5 kilometres (km) in length (Attachment 3: HDD Plan and Profile; Attachment 2: Replacement Activities Location Map). The span between islands is approximately 0.6 km at the drill location. Drilling depth is planned to be at least 15 metres (m) below the lowest point in the riverbed. This depth gives the installed infrastructure more vertical separation from the body of water to minimize the risk of future line exposure. Once the hole is complete, the pipeline will be pulled through the hole, tested, and tied-in to existing flowlines.

HDD equipment will be mobilized to site in February 2025, and drilling will begin in June 2025. It is estimated that drilling will be completed in August 2025. HDD equipment will be demobilized in late August 2025, and remaining construction equipment will be demobilized in February 2026.

Imperial has applied to the Canadian Energy Regulator (CER) for an approval to conduct the Project. The [CER application](#) presents an overview of the Project, as well as associated economic, engineering, engagement, and environmental information. Relevant information from the CER application has been included with this application.

Imperial will use water from its existing NWO water allocation (S13L1-007) for the Project. Waste generated from the project will primarily consist of garbage (packaging, oily rags, etc), drilling waste from the HDD, and hydrostatic pressure test water. The NWO has a [Waste Management Plan](#) in place for management of these waste streams – this will be followed for disposal of wastes generated by the project.

Indicate the total number of hectares to be used in each phase of the project, as well as through the life of the project.

Approximately 3.6 hectares will be used to complete the Project. The workspace needed for drilling and pipe stringing predominantly follows existing clearings, but some new clearing will be required.

9. CAMP

Describe the proposed camp size and layout. Indicate the number of person-days; explain, with rationale, any variations in the number of people that may be on site over the life of the project.

No camp will be required. Existing accommodations in the Town of Norman Wells will be used.

10. ROADS AND ACCESSES

Provide detailed information about the construction, location, and decommissioning of any roads and accesses.

Use an "X" to indicate if this is to be a pioneered road or access:	Yes		Use an "X" to indicate if the route has been laid out or ground-truthed:	Yes	X
	No	X		No	

The HDD equipment will be transported via ice road and barge to the site. Once at Goose and Bear Islands, existing access routes will be used to access the Project locations.

11. PROPOSED WASTE MANAGEMENT METHODS

Use the grey fields below to provide or reference the following information:

Waste Management Plan: Include a Waste Management Plan in your Application Package, if applicable, or for small-scale projects, describe the proposed waste management activities in the grey fields provided below. A template for the Plan can be found in the LWB [Guidelines for Developing a Waste Management Plan](#).

Waste Type	Management Method(s)
Garbage:	The Waste Management Plan (WMP) for the NWO will be used for waste disposal on this Project (Section 4.2.3 Domestic Waste and pdf page 60).
Sewage (Sanitary and greywater):	As the Project site is located at an existing operation, field personnel will use available washrooms associated with the Imperial Norman Wells Operation site.
Brush and trees:	Wastes from the clearing of trees and brush will be mulched on site or if removal from site is required, it will be handled as described in Section 4.2.1 of the approved WMP .
Overburden (Organic soils, waste material, etc.):	Overburden (topsoil and subsoil) removed to accommodate the Project will be stockpiled and returned following completion of the Project.
Drilling Waste (HDD):	HDD drilling waste (drill cuttings and fluids) will be managed at the F-31X Treatment and Injection Facility at the NWO (WMP Section 6.1). Stored drill cuttings will be processed dependent upon the liquid to solid ratio of the waste, as per the WMP. Cuttings with lower liquid content will be managed at the NWO site biocell (WMP Section 6.2), and waste with a high liquid content will be managed using the F-31X treatment and injection facility process (WMP Section 6.1).
Hydrostatic Test Water:	Fresh water from will be used for hydrostatic testing. Hydrostatic testing water will be transported from the NWO central processing facility (CPF) to the work location for this project and stored in temporary tanks or water trucks.

	Water used for hydrostatic testing will be either stored and reused and/or produced through the existing flowline system and managed back at the CPF. There are no planned discharges to water or overland.
Other (describe):	Oily rags and other common wastes will be stored in waste totes on site and taken offsite for disposal as described in the WMP.

Off-site Disposal: If waste is proposed to be disposed of off-site within the NWT, written confirmation (e.g., an email, letter, etc.) from the facility/facilities indicating they will accept the waste is required. Include it/these in your Application Package. Please note this information will be required by the Board prior to commencement of activities.

12. EQUIPMENT

Identify the types of equipment proposed to be used.

Number	Type/Description	Size (weight in tonnes)	Proposed use
1	HDD Rig	45	Drilling
1	Mudplant	37.5	Fluid management
2	Mud pump	6	Fluid management
2	Transfer pump	1.5	Fluid management
2	Excavator	30	General use
2	Small excavator or pipelayer	20	Pullback string handling
2	Dozer	25	Grading
1	Mulcher		Brushing/clearing
1	Generator	5	Power
1	Vac truck	20	Fluid management
2	Water trucks	20	Fluid management
1	Pressure truck	20	Fluid management
3	Temporary tanks (water)	400 bbl (or other available standard sizes)	Fluid management
6	Pickup trucks		Transportation and welding

13. FUEL

Identify all fuel types proposed to be used.

Type of Fuel	Number of containers	Capacity of containers (e.g., litres, pounds)	Type of container (e.g., barrel, tank, tidy-tank)	Proposed storage or staging location(s)
Diesel:	1	5000 L	Tank	Entry site
Diesel:	2	450 L	Tidy tank	Truck mounted; entry/exit locations
Gasoline:	2	450 L	Tidy tank	Truck mounted; entry/exit locations
Aviation Fuel:				
Propane:	4	20 lb	Cylinder	On welding trucks
Other: Acetylene	2	70 lb	Cylinder	On welding trucks

14. METHODS OF FUEL TRANSFER

Describe the proposed methods to transfer fuel.

A [Fuel Management Plan](#) for the NWO has been previously approved. This plan will be used identify fuel containment types, responsibilities and the required handling procedures for the Project.

15. SPILL CONTINGENCY PLAN

Include a Spill Contingency Plan in your Application Package, if applicable, or for small-scale projects, provide relevant details in the grey field provided below. An example of this Plan can be found in the INAC [Guidelines for Spill Contingency Planning](#).

A [Spill Contingency and Response Plan](#) for the Norman Wells Operation has been previously approved. This plan will be used to prevent or mitigate potential effects of unauthorized releases (spills) and present Project personnel with the appropriate action response should a spill occur.

Additionally, an Inadvertent Fluid Release Contingency Plan has been prepared for the Project and included in the CER application for approval for the Replacement Activity (Attachment 5: EPP, Appendix B). This plan will be used prevent and/or mitigate potential effects of inadvertent releases of drilling fluid.

16. PROPOSED PROJECT SCHEDULE AND TERM

Indicate the proposed project start and completion dates and the time of year the project activities are planned to occur. Describe any anticipated temporary closure(s) or seasonal shutdowns. Indicate the term requested.

Start Date:	February 1, 2025	Completion Date:	March 31, 2026
The HDD equipment will be mobilized to site via ice road. It is estimated that this will be possible beginning February 1, 2025. Brushing and HDD workspace preparation will begin April 2025, followed by pipeline stringing and welding in May 2025. Drilling activities will also begin in June 2025, and continue until August 2025, followed by tie in and testing. HDD equipment will be demobilized on the last barge on the Mackenzie River in late August, 2025, with remaining construction equipment being demobilized in February 2026 via ice road.			
Term of Permit Requested:	2 years		

17. POTENTIAL ENVIRONMENTAL IMPACTS OF THE PROJECT AND PROPOSED MITIGATIONS

If the proposed project, or parts of the proposed project, may be exempt from preliminary screening, describe the rationale for the exemption in the grey field below. Include the date of the most recent screening, and/or the environmental assessment or impact review number.

If it is determined that a preliminary screening under Part 5 of the MVRMA is required, Imperial submits that the scope should be specific to the flowline replacement activities in the regulatory submissions given that an approved screening exists for the NWO.

An environmental review of the Project was completed to evaluate anticipated and potential environmental effects. This is presented as Attachment 10: Environmental Interactions Table.

Unless the project could be exempt from preliminary screening, using the Impact-Mitigation Table below, or the more detailed Table in Appendix D of the [Guide](#), identify all potential impacts and possible mitigations that are relevant to the proposed project, and indicate whether any of the mitigation measures have been developed as a result of input from affected parties. Possible potential impacts are listed below; however,

these lists are not exhaustive and may not apply to all projects. All information provided should reflect the size, scale, and nature of the proposed project. Cumulative impacts and climate change must be considered. Attach additional pages if needed. Use landscape orientation if preferred.

Potential Impacts <i>Use an "X" to indicate which apply</i>	X	Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i>
ABIOTIC COMPONENTS		
Land		
Soil contamination	X	Soil contamination from unintentional releases of fuels. Proposed mitigation: <ul style="list-style-type: none"> • Use secondary containment for equipment (pumps, generators to reduce the likelihood of spills. In the event of a spill, protocols identified in the Spill Contingency and Response Plan will be followed.
Soil compaction	X	Compaction, rutting, admixing or loss of soil structure through vehicle and equipment movement. Proposed mitigation: <ul style="list-style-type: none"> • Clearing should be done during dry conditions to the extent practicable to limit disturbance to soil and vegetation. • Soil disturbance including grubbing will occur only within the approved clearing limits. • Minimize soil stripping and grading to the extent possible.
Destabilization/erosion	X	Soil loss through wind and water erosion following vegetation clearing Proposed mitigation: <ul style="list-style-type: none"> • Soil disturbance including grubbing will occur only within the approved clearing limits. • Where activities during adverse weather conditions have the potential to result in wind/water erosion, excessive rutting, decreased soil capability or the potential for serious harm to fish and fish habitat, temporary shutdowns may be necessary. Temporary shutdowns will be based upon discussions between the Construction Manager, Contractor and Imperial Environment and Regulatory Advisor or Environmental Inspector. The Construction Manager must authorize resumption of work in consultation with the Imperial Environment and Regulatory Advisor or the Environmental Inspector prior to restart. • The need for and location of ESC measures will be determined by the Environmental Inspector and installed prior to the commencement of work in the area. • Conduct ground disturbance activities in a manner to avoid or reduce erosion and the discharge of

<p align="center">Potential Impacts Use an "X" to indicate which apply</p>	<p align="center">X</p>	<p align="center">Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i></p>
		<p>sediment-laden runoff from directly entering natural drainage systems.</p> <ul style="list-style-type: none"> • Manage the potential for off-site migration of sediment through the installation of erosion and sediment control (ESC) measures (e.g., erosion control matting, sediment fence) as identified by the Environmental Inspector. • ESC and stabilization measures will be maintained and monitored during project activities until vegetative cover is established. Where evidence of erosion is identified, corrective control measures should be implemented as soon as conditions permit.
<p>Change in soil structure</p>	<p align="center">X</p>	<p>Loss or alteration (e.g., admixing) of topsoil/strippings during soil handling and storage</p> <p>Proposed mitigation:</p> <ul style="list-style-type: none"> • Minimize soil stripping and grading to the extent possible. • Stockpile topsoil and subsoil separately with adequate spacing between piles. If space is limited, maintain separation between soil piles using appropriate barriers. • Salvage topsoil to the colour change (transition layer), bottom of the duff layer or 15 cm, whichever is deepest. Where there is little or no topsoil, salvage all available root zone material to the colour change or 15 cm, whichever is greater.
<p>Inability to support vegetation</p>	<p align="center">X</p>	<p>Soil loss through wind and water erosion following vegetation clearing.</p> <p>Proposed mitigation:</p> <ul style="list-style-type: none"> • Prepare the site in such a manner as to facilitate reestablishment of natural vegetation. Revegetation by natural recovery is anticipated. This will be evaluated during post-construction environmental monitoring. • Reclamation activities will be planned to align with the Norman Wells Operations Interim Closure and Reclamation Plan • Replace topsoil as evenly as possible over areas where topsoil was salvaged. Postpone topsoil replacement during wet weather or high winds to limit potential damage to soil structure or erosion of topsoil. • Conduct post-construction environmental monitoring following completion of construction activities. Undertake site visits in the spring and late summer and document any of the following:

Potential Impacts <i>Use an "X" to indicate which apply</i>	X	Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i>
		<ul style="list-style-type: none"> ○ Erosion, subsidence or soil slumping ○ Ponding water ○ Vegetation conditions ○ Debris or waste materials
Other		
Water		
Groundwater		
Water table alteration		N/A
Infiltration changes		N/A
Changes in water quality		N/A
Temperature changes		N/A
Other		
Permafrost		
Loss or change in extent		N/A
Changes in seasonal fluctuations		N/A
Change in persistence		N/A
Other		
Surface Water		
Water flow or level changes (permanent, temporary, seasonal)		N/A
Drainage pattern changes		N/A
Temperature changes		N/A
Changes in water quality	X	<p>Increased suspended sediment concentrations and transport in surface water due to vegetation clearing and potential for inadvertent release of drilling fluids to the watercourse.</p> <p>Proposed mitigation:</p> <ul style="list-style-type: none"> • Work areas will be inspected daily to confirm no substantial erosion or sedimentation is occurring. • Contain all drilling water and drilling waste for reuse or disposal. • Pressure and fluid volumes will be monitored on the rig during drilling; if a loss of pressure or fluid is detected, the Fluid Release Contingency Plan (EPP – Appendix B) will be followed. • Follow the Inadvertent Fluid Release Contingency Plan (Attachment 5; EPP - Appendix B) in the event of an observed or suspected return of drilling fluid to surface or to a waterbody. • The Drilling Contractor shall monitor the volume, pressure and parameters of drilling fluid to detect any losses during drilling operations.

Potential Impacts <i>Use an "X" to indicate which apply</i>	X	Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i>
		<ul style="list-style-type: none"> If an inadvertent return of drilling fluid is identified offsite, cleanup procedures will be developed in consultation with the Imperial Environment and Regulatory Advisor and Environmental Inspector.
Wetland impairment		N/A
Changes to aquatic habitat (see Biotic section below)		N/A
Other		
Air		
Changes in air quality	X	Criteria Air Contaminant (CAC) emissions from equipment and vehicles burning hydrocarbon fuel. Proposed mitigation: <ul style="list-style-type: none"> During construction, motorized construction equipment should be equipped with functioning mufflers and silencers. Company and construction personnel should avoid excessive idling of vehicles; vehicles and equipment should be turned off when not in use unless required for operation. Equipment must be well-maintained during construction and maintenance activities to reduce emissions.
Harm to living things		N/A
Increased greenhouse gases	X	Release of direct GHG emissions during construction due to equipment and vehicles burning hydrocarbon fuel, change in land cover, including decay of cleared vegetation. Proposed mitigation: <ul style="list-style-type: none"> During construction, motorized construction equipment should be equipped with functioning mufflers and silencers. Company and construction personnel should avoid excessive idling of vehicles; vehicles and equipment should be turned off when not in use unless required for operation. Equipment must be well-maintained during construction and maintenance activities to reduce emissions.
Other		
BIOTIC COMPONENTS		
Vegetation		
Direct loss of vegetation	X	Direct loss or alteration of vegetation from vegetation clearing and ground disturbance. Proposed mitigation: <ul style="list-style-type: none"> Clearing activities should be monitored by the Environmental Inspector to ensure clearing is limited to approved limits of clearing. Do not allow clearing or grubbing beyond the staked or flagged workspace boundaries.

Potential Impacts <i>Use an "X" to indicate which apply</i>	X	Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i>
		<ul style="list-style-type: none"> • Prepare the site in such a manner as to facilitate reestablishment of natural vegetation. Revegetation by natural recovery is anticipated. This will be evaluated during post-construction environmental monitoring. • Conduct post-construction environmental monitoring following completion of construction activities. Undertake site visits in the spring and late summer and document any of the following: <ul style="list-style-type: none"> ○ Erosion, subsidence or soil slumping ○ Ponding water ○ Vegetation conditions ○ Debris or waste materials
Loss of Species at Risk or may-be-at-risk plants	X	Direct loss or alteration of vegetation from vegetation clearing and ground disturbance. Proposed mitigation: <ul style="list-style-type: none"> • Do not allow clearing or grubbing beyond the staked or flagged workspace boundaries. • Prepare the site in such a manner as to facilitate reestablishment of natural vegetation. Revegetation by natural recovery is anticipated. This will be evaluated during post-construction environmental monitoring.
Change in species composition		N/A
Introduction of non-native (invasive) species	X	Alteration of vegetation communities arising from the introduction or spread of alien and invasive alien plant species through vehicle and equipment movement. Proposed mitigation: <ul style="list-style-type: none"> • Equipment will arrive at site clean and free of soil and vegetative debris. Any equipment which arrives in a dirty condition will not be allowed on site until it has been cleaned.
Effects on plant health (dust, metals, toxins)		N/A
Increased risk of fire		N/A
Compaction of vegetation		N/A
Other		
Terrestrial Wildlife Habitat		
Direct loss or removal of habitat, dens, or nests	X	Direct loss or alteration of habitat from vegetation clearing and ground disturbance. Proposed mitigation: <ul style="list-style-type: none"> • Conduct pre-disturbance inspection to identify protected environmental features (e.g., dens, raptor nests) in and adjacent to the disturbance footprint prior to commencement of construction.

<p align="center">Potential Impacts</p> <p align="center"><i>Use an "X" to indicate which apply</i></p>	<p align="center">X</p>	<p align="center">Potential Project Impacts and Proposed Mitigations</p> <p align="center"><i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i></p>
		<ul style="list-style-type: none"> • Tree and vegetation removal (including brushing) should be completed outside the primary nesting period for migratory birds (May 7 – August 10) to avoid disturbance to nesting birds protected under the Migratory Birds Convention Act (MBCA). • Complete migratory bird nest sweeps as necessary prior to vegetation removal if vegetation removal is planned during the migratory bird nesting period. • In the event an active bird nest is identified, the nest will be subject to site-specific mitigation measures. Appropriate mitigation measures will be selected by the Environmental Inspector or Wildlife Resource Specialist. • Protocols identified for the Norman Wells Operation will be followed.
<p>Loss or removal of keystone species and/or Species at Risk habitat</p>		<p>N/A</p>
<p>Fragmentation of wildlife corridor</p>		<p>N/A</p>
<p>Direct injury or mortality</p>	<p align="center">X</p>	<p>Construction-related works and activities resulting in accidental mortality of small, less mobile species; wildlife-human conflict.</p> <p>Proposed mitigation:</p> <ul style="list-style-type: none"> • No construction personnel shall harass, threaten or injure wildlife. • Construction personnel are not permitted to hunt or fish on the work site. • If large wildlife is encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site. • Report any incidents with nuisance wildlife or collisions with wildlife to the Environmental Inspector, who will notify applicable regulatory authorities as appropriate. • Cap pipe ends to limit the potential for wildlife to become trapped or confined. If pipe caps are not installed, check for confined or trapped animals prior to pipe movement/installation.
<p>Disturbances to key lifecycle stages: breeding, feeding, nesting, staging</p>	<p align="center">X</p>	<p>Construction-related works and activities resulting in physical destruction of key habitat features (e.g., nests, dens, roosts).</p> <p>Proposed mitigation:</p> <ul style="list-style-type: none"> • Tree and vegetation removal (including brushing) should be completed outside the primary nesting period for migratory birds (May 7 – August 10) to avoid disturbance to nesting birds protected under the Migratory Birds Convention Act (MBCA).

Potential Impacts <i>Use an "X" to indicate which apply</i>	Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i>
	<p style="text-align: center;">X</p> <ul style="list-style-type: none"> • Complete migratory bird nest sweeps as necessary prior to vegetation removal if vegetation removal is planned during the migratory bird nesting period. • In the event an active bird nest is identified, the nest will be subject to site-specific mitigation measures. Appropriate mitigation measures will be selected by the Environmental Inspector or Wildlife Resource Specialist.
Effects on population abundance	N/A
Change in species diversity	N/A
Effects on wildlife health (toxins, metals, etc.)	N/A
Changes to migratory movement patterns	N/A
Changes to predator-prey relationships	N/A
Human-wildlife conflicts	<p style="text-align: center;">X</p> <p>Vehicle-wildlife collisions; Wildlife-human conflict.</p> <p>Proposed mitigation:</p> <ul style="list-style-type: none"> • No construction personnel shall harass, threaten or injure wildlife. • Construction personnel are not permitted to hunt or fish on the work site. • Firearms are not permitted in vehicles, on worksites or at any associated facilities. • If large wildlife is encountered during construction, personnel are required to move away from the animal and wait for the animal to move off the construction site. • Report any incidents with nuisance wildlife or collisions with wildlife to the Environmental Inspector, who will notify applicable regulatory authorities as appropriate.
Other	
Aquatic Habitat	
Breeding disturbances	N/A
Change in species diversity	N/A
Effects on health (toxins, metals, sediment, etc.)	<p style="text-align: center;">X</p> <p>Change in fish health from accidental release.</p> <p>Proposed mitigation:</p> <ul style="list-style-type: none"> • Store deleterious substances (including fuel) at least 100 m from watercourses and wetlands. • Ensure all containers, hoses and nozzles are free of leaks. • Use secondary containment when storing deleterious substances. • Refuelling should be undertaken a minimum of 100 m from wetlands and watercourses to reduce potential impacts to surface water quality if a spill occurs. If maintaining a 100 m refuelling distance is not possible, special refueling procedures for

Potential Impacts <i>Use an "X" to indicate which apply</i>	Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i>
	<p style="text-align: center;">X</p> <p>sensitive areas should be undertaken subject to approval by the Environmental Inspector.</p> <ul style="list-style-type: none"> • Equipment or machinery shall not be washed within 100 m of watercourses or wetlands. • Use secondary containment for equipment (pumps, generators) to reduce the likelihood of spills. • Contain all drilling water and drilling waste for reuse or disposal. • Follow the Inadvertent Fluid Release Contingency Plan (Appendix B) in the event of an observed or suspected return of drilling fluid to surface or to a waterbody. • The Drilling Contractor shall monitor the volume, pressure and parameters of drilling fluid to detect any losses during drilling operations. • If an inadvertent return of drilling fluid is identified offsite, cleanup procedures will be developed in consultation with the Imperial Environment and Regulatory Advisor and Environmental Inspector.
Changes to migratory movement patterns	N/A
Changes to predator-prey relationships	N/A
Effects on population abundance	N/A
Change in species diversity	N/A
Other	
CULTURAL COMPONENTS	
Wildlife Harvesting	
Loss or reduction in game species populations	N/A
Effects on traditional land use, subsistence, and harvesting rights	N/A
Other	
Cultural Integrity and Heritage Resources	
Change to or loss of cultural integrity	N/A
Change to or loss of traditional lifestyle	N/A
Change to or loss of heritage resource	N/A
Other	
Social and Economic Well-being	
Increased human health hazard and risk	N/A
Economic opportunities or losses (employment, training)	
Change in ecological, cultural, social, or economic values identified for protection in approved Land Use Plans	N/A
Impairment of the recreational or traditional uses of the land or water	N/A
Impairment of the aesthetic quality of the land or water	N/A

Potential Impacts <i>Use an "X" to indicate which apply</i>	X	Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i>
Changes to the use of the area by other non-Indigenous people (e.g., trappers, outfitters, residents, hunters, forest harvesters, other authorized projects)		N/A
Other		

18. CLOSURE AND RECLAMATION

Use the grey field below to provide or reference the following information:

Closure and Reclamation Plan: Include a Closure and Reclamation Plan in the Application Package, if applicable, or for small-scale projects, describe the proposed closure and reclamation activities in the grey field provided below. Describe any temporary closure(s) and seasonal shutdowns. Please also refer to the LWB/AANDC [Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories](#).

Closure Cost Estimate: Prepare a Closure Cost Estimate and include it in your Application Package. Applicants are encouraged to contact Board staff, prior to applying, to determine which closure-cost-estimate template is most suited to the activities being applied for. Guidance is provided in section 2.2 of the LWB/GNWT/CIRNAC [Guidelines for Closure and Reclamation Cost Estimates for Mines](#). If the Application is submitted concurrently with a Water Licence Application, the estimate should include a breakdown of water- and land-related activities and liabilities.

Closure and Reclamation:

The Project is planned to replace existing NWO infrastructure. The lines installed will become part of Imperial NWO infrastructure and will be incorporated into the NWO's existing closure and reclamation plans. Further, the cost differential from the current closure cost estimate is not a material change.

No long-term disturbance to the land is anticipated to result from the HDD operations. Clean-up and restoration will be managed in accordance with the project EPP, and reclamation activities will be planned to align with the [Norman Wells Operations Interim Closure and Reclamation Plan](#). Following completion of the HDD activities any debris, matting and geotextile used during HDD activities will be removed. Drilling waste will be removed, and the entry and exit pits of the HDD will be backfilled and recontoured to restore pre-construction grade and drainage. Topsoil will be replaced and the site will be prepared in a manner facilitating re-establishment of natural vegetation.

A closure cost estimate (Attachment 6) has been prepared for the HDD portion of the project.

19. ADDITIONAL SUPPORTING INFORMATION

Use the grey field below to provide or reference the following information:

Engagement: Conduct engagement, prepare an Engagement Record and Engagement Plan in accordance with the LWB [Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits](#), and include them in your Application Package. Templates are provided in the Guidelines. Please also refer to [Information for Proponents on MVLWB's Engagement Requirements](#).

Land Use Plans: Contact the applicable Land Use Planning Board or the Tłı̨ch̨ Government for assistance in interpreting the requirements of the relevant land use plan(s). Include a Land Use Plan Conformity Table, or if applicable, written confirmation of conformity from the Tłı̨ch̨ Government, in your Application Package, demonstrating how the project meets the requirements of the Land Use Plan, if applicable.

Traditional Knowledge (TK): Provision of TK is mandatory for applications to the SLWB. Other applicants are strongly encouraged to include TK.

Studies Undertaken to Date: List any relevant studies that support the proposed activities and include them in your Application Package.

Engagement and Traditional Knowledge:
 Imperial has an existing [Community Engagement Plan for Sahtu Settlement Area Communities](#). Under this Plan, Imperial conducts ongoing and long-term engagement with Indigenous communities and stakeholders relating to its business in the Sahtu Settlement Area (SSA), including annual review meetings with the Government of Canada represented by the Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) and the Sahtu Secretariat Incorporated (SSI) representatives.

Imperial has provided Indigenous communities and stakeholders with information regarding the replacement of the flowlines and associated HDD, including information regarding the geotechnical investigation required to inform the design of the HDD, and endeavored to address any associated concerns. Further information regarding the engagement completed to-date is found in the attached Engagement Record for this Project (Attachment 7).

Studies Undertaken to Date
 Imperial conducts annual bathymetric surveys as part of the requirements of the NWO Water Licence S13L1-007, including bathymetric surveys. Results of these and other annual inspections are submitted annually to the SLWB. The most recent report is located [on the SLWB registry](#).

As part of engineering the HDD, a geotechnical investigation ([Land Use Permit Application currently under review with SLWB](#)) is planned between June 1 and August 31, 2024. This investigation will inform the design of the HDD.

Land Use Plan
 The Sahtu Land Use Plan does not apply to the Project, because the Project is within the municipal boundary of Norman Wells.

Eligibility:
 The proposed Project is being conducted on land owned by Imperial (LTO Plan 4237 / Lot 502) on Goose and (LTO Plan 4238 / Lot 501) Bear Islands within the Mackenzie River – Attachment 8 – Land Titles, and Attachment 9 – Proof of Incorporation.

20. FEES

Refer to the [Guide](#) for assistance in determining relevant fees.

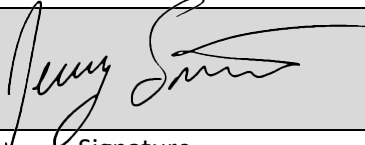
Type of Fee	Amount (\$)
Application fee (if applicable):	\$150
Land-use fees (for federal areas only):	\$
Total Fees:	\$150

If fees are submitted separately, indicate how and when they will be delivered to the Board's office.

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21. SIGNATURE

Jeremy Smith, P.Eng	Project Manager
Applicant's Name (print) or Company Name	Position (print)

	May 1, 2024
Signature	Date

Review the application package checklist provided in the Guide, and submit completed applications to the Regulatory Manager or Executive Director identified on the "Contact Us" pages of the respective Land and Water Board (www.mvlwb.com, www.wlwb.ca, www.slwb.com, www.glwb.com).