

September 7, 2022

Your Reference
Land Use Permit (Permit) Application
MV2022S0011Shannon Allerston
Regulatory Specialist
Mackenzie Valley Land and Water
Board
7th Floor, 4922 48th St.
PO Box 2130
Yellowknife, NT X1A 2P6**Geotechnical Investigation**

Dear Shannon,

On July 19, 2022, AECOM Canada Ltd. received your letter outlining further requirements for the Application for Land Use Permit (Permit) MV2022S0011 for the Geotechnical Drilling at several Yellowknife Pumphouses.

We have compiled items identified in your correspondence and provide a revised application for your review. Supporting documents are included for approval:

- LWB Permit Application Form
 - o Attachment 1: Figures of Geotechnical Drilling
 - o Attachment 2: City of Yellowknife Acceptance of Drill Cuttings
 - o Attachment 3: Waste Management Plan
 - o Attachment 4: Spill Contingency Plan
 - o Attachment 5: Engagement Plan

I look forward to your comments.

Yours sincerely,

Ryan King
Market Sector Leader, Conveyance, Water
AECOM Canada Ltd.
T: 1.306.280.4471
E: ryan.king@aecom.com

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:	X	Sahtu Land and Water Board:	
	Wek'èezhìi Land and Water Board:		Gwich'in Land and Water Board:	

To complete this Form, please refer to the MVLWB [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 MVLWB 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:	N/A		
Use an "X" to indicate if this Application is accompanied by an Application for a Water Licence:	Water Licence – in a non-federal area:		
	Water Licence – in a federal area:		

1. NAME AND CONTACT INFORMATION – APPLICANT

Applicant's Name:	Wendy Newton		
Position:	Manager, Sustainability & Solid Waste, Public Works & Engineering		
Company Name:	City of Yellowknife		
Mailing Address:	4807-52 Street P.O. Box 580		
Community:	Yellowknife	Telephone:	1-867-920-5689
Prov/Terr:	Northwest Territories	Email:	wnewton@yellowknife.ca
Postal Code:	X1A 2N4	Other:	

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:	Ryan King		
Position:	Market Sector Leader, Conveyance, Western Canada, Water		
Company Name:	AECOM Canada Ltd.		
Mailing Address:	200 – 2100 8 th Street East		
Community:	Saskatoon	Telephone:	1-306-280-4471
Prov/Terr:	Saskatchewan	Email:	Ryan.King@aecom.com
Postal Code:	S7H 0V1	Other:	1-639-638-8150 (Main Office)

Name:	Shawn Madden		
Position:	Sonic Drilling Manager		
Company Name:	Earth Drilling Co. Ltd.		
Mailing Address:	2903 61 Ave SE		
Community:	Calgary	Telephone:	1-587-577-8844
Prov/Terr:	Alberta	Email:	Shawn.Madden@earthdrilling.ca
Postal Code:	T2C 1R2	Other:	1-403-700-8778 (Main Office)

	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:

Figures showing the location of activities are included in Attachment 1.

Traditional Place Name:	Sqômbak’è (Yellowknife)
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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 MVLWB [Geospatial Data Submission Standards](#) for providing geographic information.

Minimum latitude:	62.510429°	Maximum latitude:	62.516318°
Minimum longitude:	-114.307749°	Maximum longitude:	-114.312353°

Figures with coordinates for each proposed work area are included in Attachment 1.

NTS Map Sheet No.: Provide the map sheet number: 085J09

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

Free Hold/ Private:		Commissioner's/ Territorial Lands:	X	Federal Land:		Municipal Land:	X
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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 project will perform Geotechnical Drilling on three parcels of Municipal Land used for City of Yellowknife water conveyance infrastructure.

- 1) Pumphouse No. 1 located adjacent to City of Yellowknife Water Treatment Plant, along the shoreline of Yellowknife Bay (Group 964, Plan 200).
- 2) Pumphouse No. 2 located adjacent to the Yellowknife River (Group 964, Plan 883).
- 3) Lift Station No. 1 located at the corner of Franklin Ave./School Draw Ave. (Block 78, Group 4437)

The project will apply for a City of Yellowknife Application to Occupy and Perform Geotechnical Testing on Municipal Land.

Highway Operations at the Government of the Northwest Territories will be notified prior to proposed geotechnical investigations along the Pumphouse No.2 Road and Highway 4/Ingraham Trail. Drill locations will be within the existing access road easement and public highway right-of-way. Signage and traffic control will be put in place during drilling activity in these locations.

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):		5(b)(i):	
4(a)(ii):		4(b)(ii):		5(a)(ii):		5(b)(ii):	
4(a)(iii):		4(b)(iii):		5(a)(iii):		(SLWB and WLWB only):	
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. 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)). Indicate the total number of hectares to be used in each phase of the project, as well as through the life of the project.

On behalf of the City of Yellowknife, AECOM is planning to undertake a geotechnical drilling program as part of the pre-design geotechnical investigation work required for the City of Yellowknife proposed Submarine Waterline Replacement Project. The future submarine waterline replacement work and associated pumphouse upgrades will be submitted separately for regulatory approvals once preliminary designs and project planning activities are complete. The geotechnical investigation includes drilling boreholes at Pumphouse No.1 and No.2, along Pumphouse No. 2 Access Road and Highway 4, and at Lift Station No.1.

A total of twelve (12) boreholes will be drilled for the geotechnical program over approximately twelve days.

- Pumphouse No.1 - three (3) boreholes will be drilled at this site with two (2) locations drilled to refusal with standard penetration test (SPT) sampling for the full depth of overburden and one (1) location drilled and cored to a depth of seven (7) meters below the bedrock surface. Expected depth of overburden is between four (4) and eleven (11) meters based on historical data.
- Pumphouse No.2 - three (3) boreholes will be drilled at this site with two (2) locations drilled to refusal with SPT sampling for the full depth of overburden and one (1) location drilled and cored to a depth of seven (7) meters below the bedrock surface. Expected depth of overburden is between thirteen (13) and twenty-one (21) meters based on historical data.
- Pumphouse No.2 Access Road and Ingraham Trail (Hwy 4) - four (4) boreholes will be drilled adjacent to the roadways and within the easement boundaries. These locations will be drilled five (5) meters deep or to refusal on bedrock. No historical data from these areas is available.
- Lift Station No. 1- two (2) boreholes will be drilled at this wastewater lift station located at the corner of School Draw and Franklin Avenue. One (1) location will be drilled to bedrock refusal and the second location drilled and cored to a depth of 5 m below the bedrock surface.

Map figures showing the areas for the proposed borehole drilling locations are provided in Attachment 1 with the application package. The area required at each drill location to host the truck mounted drill, the pipe truck, and two support trucks is approximately 350m². The total combined work area for the 12 locations is approximately 4,200m² or 0.42 hectares total.

The investigation also includes installation of two monitoring wells (one at each pumphouse location) to the full depth of the bedrock, complete with monitoring well protectors at the surface. Upon completion of the monitoring well installation, two in-situ pump tests will be completed to estimate groundwater in-flow rates and inform future contractors of site conditions. Boreholes without monitoring wells will be backfilled with bentonite chips.

For the Pumphouse No.2 Access Road and Ingraham Trail, AECOM will use delineators and flaggers in areas, if necessary, to allow the safe flow of traffic and to protect drilling equipment and workers. Before mobilizing to the sites, AECOM will develop a project-specific safety plan, in consultation with the drilling contractors so that the safety features and any potential hazards of the equipment being used on the project are included in the plan.

AECOM's field representatives will monitor the drilling of the boreholes and log subsurface conditions

and found ice conditions (if encountered). Standard penetration testing will be performed every 1.5 m to assess the soil strength (if unfrozen soil), and disturbed soil samples will be collected at regular intervals, or as warranted by changes in subsurface stratigraphy.

Clean, municipal water will be made available from the City of Yellowknife for use during drilling activities. Small volumes of water may be used during drilling to provide a pressure head within the well to mitigate sluffing, and/or as a lubricant, estimated to be less than 3 m³ total. Any waste generated by the geotechnical drill project will be managed in accordance with the project Waste Management Plan (WMP). All drill cuttings resulting from the geotechnical investigation will be taken to the City's Solid Waste Facility. Minimal water will be used during coring and would be below surface. Any water that surfaces would contain suspended drill cuttings and would be contained by creating small, localized drainages at the work site for the drill cuttings to settle and be collected.

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.

The geotechnical investigation is scheduled to occur over 12 days in Yellowknife area; therefore, no camp will be required.

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	
	No	X		No	X

The proposed geotechnical program will use existing City of Yellowknife and Territorial roads to access the drilling locations. Drill locations will be located within City of Yellowknife lease areas and within the existing easement boundaries of Pumphouse No. 2 Access Road and the Ingraham Trail.

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 MVLWB [Guidelines for Developing a Waste Management Plan](#).

Waste Type	Management Method(s)
Garbage:	Site personnel will collect and dispose of all generated waste (PPE, food, packaging, etc.) through City of Yellowknife municipal waste disposal.
Sewage (Sanitary and greywater):	The drill crew members will use locally available public washrooms, as needed.
Brush and trees:	No vegetation clearing will be required to complete this work.
Overburden (Organic soils, waste material, etc.):	The geotechnical program will be conducted with truck-mounted drilling equipment on urban lease locations and active Territorial roads. All soils removed during borehole drilling will be placed in soil bags and brought to the municipal waste disposal area, as directed by the City of Yellowknife.
Other (describe):	The City of Yellowknife will accept all drill cuttings resulting from the Geotechnical Investigation at the City's Solid Waste Facility, provided they are not contaminated with any hazardous materials. <i>Written confirmation attached.</i>

A copy of the drilling project's Waste Management Plan is provided with the application in Attachment 3.

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	Pick-up Truck *No larger than a ¾ ton	< 4 tonnes	Transportation for Geotechnical personnel
1	Gus Pech Brat-a-Sonic Truck Drill 50K Head – Truck Mount Sonic	24.3 tonnes	Drilling Operations
1	Support Truck *No larger than a ¾ ton	< 4 tonnes	Drilling Operations
1	Pipe Truck with Picker	24.3 tonnes	Drilling Operations

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	400 L	Support Truck fuel tank	Within truck body
	1		Slip Tank	On Support Truck
	1		Drill Rig fuel tank	Within truck body
	1		Pipe Truck fuel tank	Within truck body
Gasoline:	1	130 L	Pick-up Truck fuel tank	Within truck body
Aviation Fuel:	N/A			
Propane:	N/A			
Other: (describe)	N/A			

14. METHODS OF FUEL TRANSFER

Describe the proposed methods to transfer fuel.

All gasoline fueling will occur within the City of Yellowknife at suitable fuel stations. Diesel re-fueling will be from a slip tank (primarily for the drill rig) and/or at suitable fuel stations within the City.

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](#).

The City of Yellowknife Spill Contingency Plan (SCP) is provided with the application package. The SCP covers potential materials that may be spilled during the Project including gasoline and diesel.

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:	September 2022	Completion Date:	December 2022
The geotechnical investigation is anticipated to take place during the period of September-December 2022. The drilling program is expected to take 12 days to complete.			
Term of Permit Requested:		Two (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.

The proposed project is seeking exemption from preliminary screening for the Geotechnical Investigation activities outlined in this application. The supporting rationale includes the following:

- **Small-Scale:** At this point the project activities are limited to the geotechnical investigation, with the sole intent to drill twelve (12) boreholes to establish ground conditions and install groundwater depth monitoring wells in two of the boreholes. Any additional future project work will be covered under a separate Land Use Permit.

- **Short-Term:** The project is limited to the time required to perform the drilling operations, which is estimated to take 12 days.
- **Minimal Footprint:** The footprint of the project activities during operation will be limited to the size of the drilling equipment and support trucks, approximately 350 m². Two monitoring wells will be left in place adjacent to existing City of Yellowknife pumphouse infrastructure. The remaining boreholes will be backfilled with bentonite chips. All drill cuttings will be removed from site once drilling is complete. Access to drilling locations will be via existing roads, and the drill site will be proximate to existing roads/parking areas.
- **Low-Risk:** Small volumes of water used to facilitate drilling will be clean municipal water from the City of Yellowknife. No materials will be stored on site. Limited fuel will be brought to site via the fuel tanks within each vehicle, and one (1) slip tank for refilling the drill rig, as required. Waste will be disposed of in appropriate disposal locations within the City of Yellowknife.

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.

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	Potential soil contamination could occur due to a hydrocarbon spill from mobile equipment. In the event of a spill, protocols identified in the SCP will be followed.
Soil compaction	X	Soil compaction is unlikely to occur as the geotechnical investigation will be completed on existing roadways and parking areas.
Destabilization/erosion		Not applicable
Change in soil structure		Not applicable
Inability to support vegetation		Not applicable
Other		Not applicable
Water		
Groundwater		
Water table alteration		Not applicable
Infiltration changes		Not applicable
Changes in water quality	X	No change in water quality is anticipated to occur. It is uncertain if groundwater will be encountered during drilling; however, all boreholes will be plugged with bentonite.
Temperature changes		Not applicable
Other		Not applicable
Permafrost		

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>
Loss or change in extent	X	Permafrost degradation is unlikely to occur. However, best management practices will be followed including the backfilling of boreholes.
Changes in seasonal fluctuations		Not applicable
Change in persistence		Not applicable
Other		Not applicable
Surface Water		
Water flow or level changes (permanent, temporary, seasonal)		Not applicable
Drainage pattern changes		Not applicable
Temperature changes		Not applicable
Changes in water quality		Not applicable
Wetland impairment		Not applicable
Changes to aquatic habitat (see Biotic section below)		Not applicable
Other		Not applicable
Air		
Changes in air quality	X	Temporary, localized air emissions from the drill rig equipment and pickup truck. No equipment will be left to idle during the investigation. Minimal dust may be generated during the investigation and will be watered down as needed.
Harm to living things		Not applicable
Increased greenhouse gases	X	Greenhouse gases released during operation of the drill rig equipment and support trucks will lead to a minimal increase in greenhouse gases.
Other		Not applicable
BIOTIC COMPONENTS		
Vegetation		
Direct loss of vegetation		Not applicable
Loss of Species at Risk or may-be-at-risk plants		Not applicable
Change in species composition		Not applicable
Introduction of non-native (invasive) species	X	Personal gear, equipment, vehicles, and machinery originating from outside of the NWT will be cleaned and dried at its place of origin prior to entering the NWT to mitigate the potential transport and introduction of non-native plant species (including noxious weeds) to the project areas during the drilling program.
Effects on plant health (dust, metals, toxins)		Not anticipated to occur.
Increased risk of fire		Not applicable
Compaction of vegetation		Not anticipated to occur.
Other		Not applicable
Terrestrial Wildlife Habitat		
Direct loss or removal of habitat, dens, or nests		Not anticipated to occur.

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>
Loss or removal of keystone species and/or Species at Risk habitat		Not applicable
Fragmentation of wildlife corridor		Not applicable
Direct injury or mortality		Not anticipated to occur.
Disturbances to key lifecycle stages: breeding, feeding, nesting, staging	X	Disturbances to lifecycle stages may occur, however the geotechnical investigation will occur within urban areas on existing roadways with regular daily vehicle traffic.
Effects on population abundance		Not applicable
Change in species diversity		Not applicable
Effects on wildlife health (toxins, metals, etc.)		Not applicable
Changes to migratory movement patterns		Not applicable
Changes to predator-prey relationships		Not applicable
Human-wildlife conflicts		Not applicable
Other		Not applicable
Aquatic Habitat		
Breeding disturbances		Not applicable
Change in species diversity		Not applicable
Effects on health (toxins, metals, sediment, etc.)		Not applicable
Changes to migratory movement patterns		Not applicable
Changes to predator-prey relationships		Not applicable
Effects on population abundance		Not applicable
Change in species diversity		Not applicable
Other		Not applicable
CULTURAL COMPONENTS		
Wildlife Harvesting		
Loss or reduction in game species populations		Not applicable
Effects on traditional land use, subsistence, and harvesting rights		Not applicable
Other		Not applicable
Cultural Integrity and Heritage Resources		
Change to or loss of cultural integrity		Not applicable
Change to or loss of traditional lifestyle		Not applicable
Change to or loss of heritage resource		Not applicable
Other		Not anticipated to occur. The Wîlîjîdeh area (Yellowknife River), close to where Pumhouse #2 is located, is known to be a sacred spiritual, cultural, harvesting, and gathering area for the Yellowknives Dene First Nation, as well as a popular recreational area for the public. Geotechnical project activity is limited to the existing pumhouse lease area and access road rights-of-way that are actively used. No clearing or new disturbance of land will be required.

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>
Social and Economic Well-being	
Increased human health hazard and risk	Not anticipated to occur.
Economic opportunities or losses (employment, training)	Not applicable
Change in ecological, cultural, social, or economic values identified for protection in approved Land Use Plans	Not applicable
Impairment of the recreational or traditional uses of the land or water	Not anticipated to occur.
Impairment of the aesthetic quality of the land or water	Not applicable
Changes to the use of the area by other non-Indigenous people (e.g., trappers, outfitters, residents, hunters, forest harvesters, other authorized projects)	Not applicable
Other	Not applicable

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 MVLWB/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 MVLWB/INAC/GNWT [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.

A formal closure and reclamation plan will not be needed for this short-term geotechnical drilling program.

The scope of the project activities is limited to the drilling of twelve (12) boreholes. Two of the new boreholes will become groundwater depth monitoring wells, one at each of the Pumphouses. The geotechnical drilling will be conducted with truck-mounted drilling equipment operating on City of Yellowknife infrastructure lease locations and existing roadways. All drill cuttings will be removed from site and disposed of in the City of Yellowknife's Solid Waste Facility. Boreholes without monitoring wells will be backfilled with bentonite chips, and no further restoration is anticipated to be required.

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 MVLWB [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 Tłıchǫ Government to discuss conformity with the relevant land use plan(s). Include a Land Use Plan Conformity Table in your Application Package, demonstrating how the project meets the requirements of the Land Use Plan, if applicable.

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

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

Engagement with potentially affected parties is underway in accordance with the project's Engagement Plan. The Engagement Plan and records obtained to date are summarized and provided as a supporting document to this Land Use Permit Application


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):	N/A
Total Fees:	\$150

21. SIGNATURE

Wendy Newton	Manager, Public Works & Engineering
Applicant's Name (print) or Company Name	Position (print)

	August 23, 2022
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).

Attachment 1

Figures – Location of Activities

Attachment 2

Waste Acceptance Confirmation

Attachment 3

Waste Management Plan

Attachment 4

Spill Contingency Plan

Attachment 5

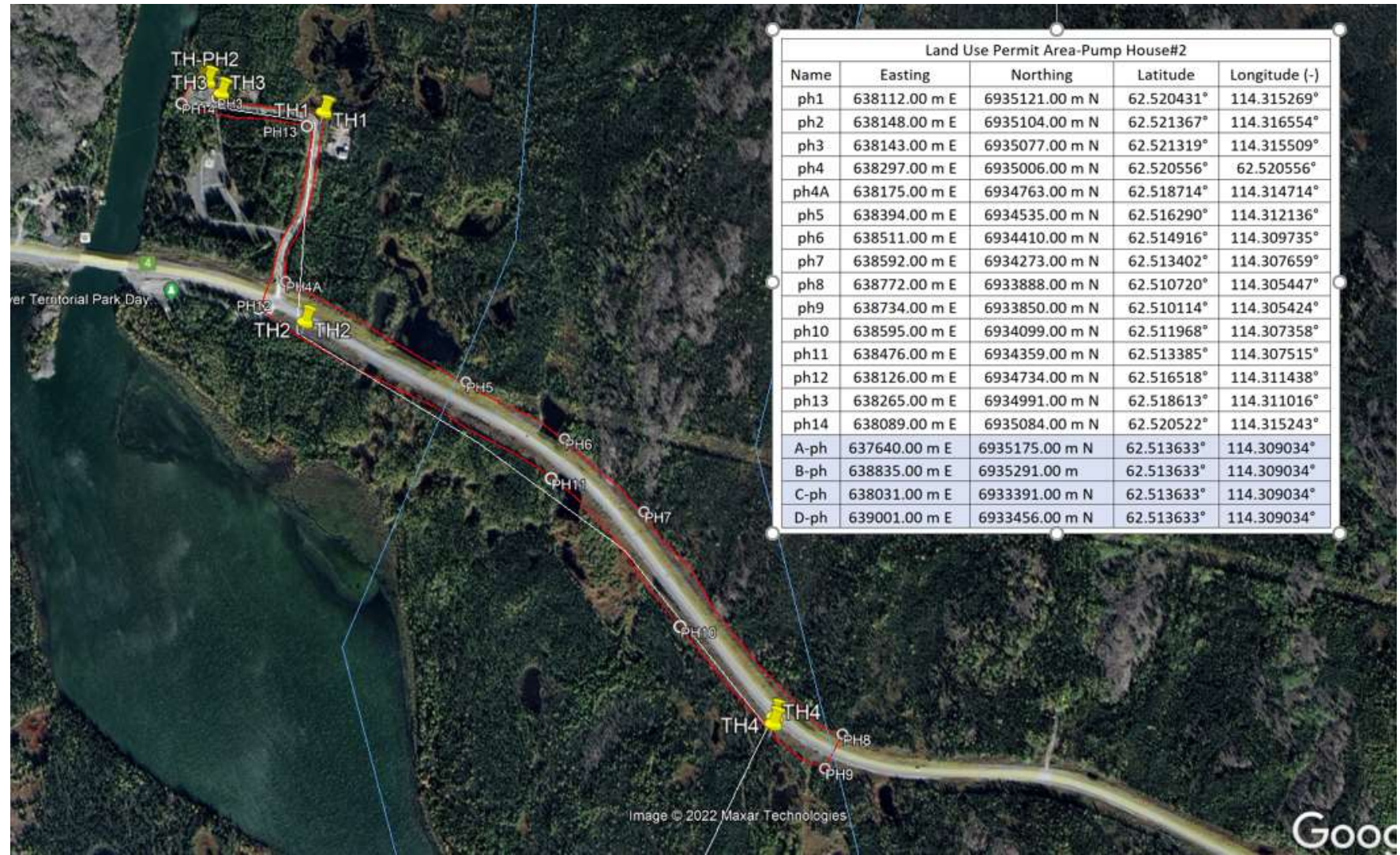
Engagement Plan and Records

Sketch 1: General location of the work (Pumphouse #1, Pumphouse #2 and Lift Station):



Sketch 2: Land Use Permit Area – Pumphouse #2

The application requests the area within the red lines to be permitted.



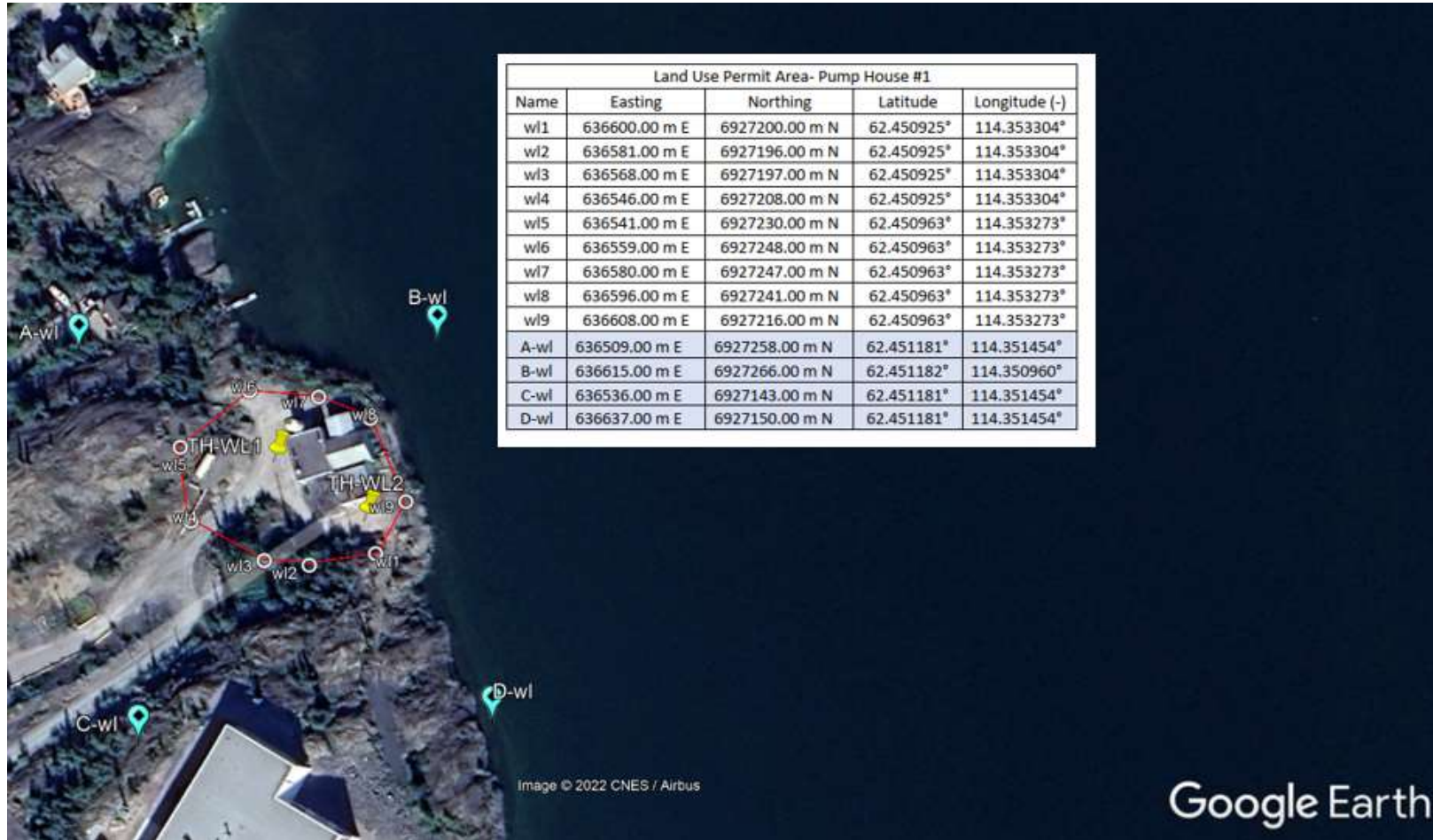
Sketch 3: Land Use Permit Area – Lift Station

The application requests the area within the red lines to be permitted.



Sketch 4: Land Use Permit Area – Pumphouse #1

The application requests the area within the red lines to be permitted.



From: Wendy Newton <wnewton@yellowknife.ca>
Sent: Friday, June 24, 2022 9:30 AM
To: King, Ryan
Subject: Acceptance of Cuttings from Geotechnical Drilling Program

Hi Ryan,

The City will accept any drill cuttings resulting from the Geotechnical Investigation for the Submarine Pipeline Project (Pump Houses 1 & 2) and the Lift Station #1 Project. All cuttings are to be taken to the City's Solid Waste Facility for disposal, provided they are not contaminated with any hazardous materials (i.e. hydrocarbons). Any cuttings suspected of being contaminated with hydrocarbons or other hazardous materials are to be disposed of at an appropriate facility.

Regards,

Mársi | Kinanāskomitin | Thank you | Merci | Haǵ' | Quana | ᑭᓄᓐᓂᓐᓂᓐᓂᓐ | Quyanainni | Máhsi | Máhsi | Mahsi

Wendy Newton, P.Eng.
Acting Director
Public Works & Engineering
City of Yellowknife
T: 867.920.5689
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yellowknife.ca
Hours of Work: 7:30am to 4:00pm



I acknowledge that I reside and work in Chief Drygeese territory.

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