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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

GENERAL WATER LICENCE APPLICATION (APPLICATION FOR NEW WATER LICENCE)

The applicant is referred to the NWB's Guide 4: *Guide to Completing and Submitting a Water Licence Application for a New Licence* for more information about this application form.

LICENCE NO:
(for NWB use only)

1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION (name, address)

MPH Consulting Limited
Suite 505, 133 Richmond Street West
Toronto, Ontario M5H 2L3

Phone:416-365-0930
Fax: 416-365-1830
e-mail: psobie@mphconsulting.com

2. APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address)

Paul Sobie, P.Geo., President

Phone: 647-988-0930
Fax: 416-365-1830
e-mail: psobie@mphconsulting.com
(Attach authorization letter)

3. NAME OF PROJECT (including the name of the project location)

Turquetil-Esker Drilling Program, Kivalliq Region, Nunavut

4. LOCATION OF UNDERTAKING

Project Extents

Turquetil Operational Area

NW:	Latitude: (61° 58' 10" N)	Longitude: (95° 57' 47" W)
NE:	Latitude: (61° 58' 39" N)	Longitude: (95° 56' 5" W)
SE:	Latitude: (61° 58' 23" N)	Longitude: (95° 55' 45" W)
SW:	Latitude: (61° 57' 55" N)	Longitude: (95° 57' 27" W)

Esker Operational Area

NW:	Latitude: (61° 35' 11" N)	Longitude: (97° 16' 53" W)
NE:	Latitude: (61° 35' 33" N)	Longitude: (97° 15' 17" W)
SE:	Latitude: (61° 35' 16" N)	Longitude: (97° 14' 59" W)
SW:	Latitude: (61° 34' 54" N)	Longitude: (97° 16' 36" W)

Camp Location(s)

Henik Lake Camp **(not part of this application)**
Latitude: (61° 39 ' 11" N) Longitude: (97° 22' 51" W)

5. MAP - Attach a topographical map, indicating the main components of the undertaking.

Attached:
Figure 1 1:250,000 scale General Location Map,
Figure 2 1:50,000 scale Turquetil Location Map,
Figure 3 1:10,000 scale Turquetil Operational Area Map,
Figure 4 1:50,000 scale Esker Location Map,
Figure 5 1:10,000 scale Esker Operational Area Map

NTS Map Sheet No.: 055E13 (Turquetil) 065H11 (Esker) Map Name: _____ Map Scale: 1:50,000 1:50,000

6. NATURE OF INTEREST IN THE LAND - Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

Surface

X Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: June 2021 Date of expiry: _____

☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)
Date (expected date) of issuance: _____ Date of expiry: _____

X IOL Authorization from Kivalliq Inuit Association (KivIA)
Date (expected date) of issuance: June 2021 Date of expiry: _____

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Other: _____
Date (expected date) of issuance: _____ Date of expiry: _____

Name of entity(s) holding authorizations:
_____

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Indicate the land use planning area in which the project is located.

☐ North Baffin
☐ South Baffin
☐ Akunniq
X Keewatin
☐ Sanikiluaq
☐ West Kitikmeot

Is a land use plan conformity determination required?

☐ Yes X No

If Yes, indicate date issued and attach copy _____
If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

Attached letter dated February 17, 2021 from NPC – File # 149463 (Turquetil-Esker Drilling Program)

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Is an Article 12 Part 4 screening determination required?

X Yes ☐ No

If Yes, indicate date issued and attach copy Screening in Progress – NIRB File No. 21EN009
If No, provide written confirmation from NIRB confirming that a screening determination is not required.

9. DESCRIPTION OF UNDERTAKING – List and attach plans and drawings or project proposal.
See Attached Project Summary and Figures 1-5

10. OPTIONS – Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.
No alternative methods or locations were considered, as both sites have received past drilling programs that have had positive results which we can use for siting our own work. Henik Lake Camp is well positioned to support the project, and can accept fixed wing supply flights direct from Thompson, MB allowing for minimal interaction with Nunavut communities. The intent is to upgrade and winterize the camp this summer.

11. CLASSIFICATION OF PRIMARY UNDERTAKING - Indicate the primary classification of undertaking by checking one of the following boxes.

☐ Industrial
☐ Agricultural
X Mining and Milling (includes exploration/drilling/exploration camps)
☐ Conservation
☐ Municipal (includes camps/lodges)
☐ Recreational
☐ Power
☐ Miscellaneous (describe below):

_____

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings.

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be submitted with a New Water Licence Application. Indicate which SIG(s) are applicable to your application.

☐ Hydrostatic Testing
☐ Tannery
☐ Tourist / Remote Camp

☐ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
☐ Onshore Oil and Gas Exploration Drilling
X Mineral Exploration / Remote Camp
☐ Advanced Exploration
☐ Mine Development
☐ Municipal
☐ General Water Works
☐ Power

12. **WATER USE** - Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

☐ To obtain water for camp/ municipal purposes
X To obtain water for industrial purposes
☐ To cross a watercourse
☐ To alter the flow of, or store water
☐ Other: _____
☐ To divert a watercourse
☐ To modify the bed or bank of a watercourse
☐ Flood control

13. **QUANTITY AND QUALITY OF WATER INVOLVED** - For each type of water use indicated in Block 12, provide the source of water, the quality of the water source and available capacity, the estimated quantity to be used in cubic meters per day, method of extraction, as well as the quantities and qualities of water to be returned to source.

Name of water source(s) (show location(s) on map): Turquetil Drilling – Figure 3 – from Turquetil River, Short Lake, Hook Lake & unnamed lake

Esker Drilling – Figure 5 – from three small unnamed lakes

Describe the quality of the water source(s) and the available capacity: Freshwater lakes, rivers and ponds which will not be affected by the project

Provide the overall estimated quantity of water to be used: Turquetil <40 m^3/day, Esker <40 m^3/day

Provide the estimated quantity(s) of water to be used from each source: Difficult to predict, but each of the proposed pumping sites should see 1-2 weeks of activity in the summer, and the same in the Spring of 2020

Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.) Henik Lake Camp 20-30 m^3/day, Turquetil Drilling <40 m^3/day, Esker Drilling <40 m^3/day

Describe the method of extraction(s): Pumped to holding tanks through meshed water intake lines to ensure no entrapment of fish or other animals

Estimated quantity(s) of water returned to source(s) _____0 m^3/day

Describe the quality of water(s) returned to source(s): N/A_____

14. **WASTE** – Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

☐ Sewage
X Solid Waste
X Hazardous
X Bulky Items/Scrap Metal
☐ Animal Waste
☐ Other (describe): _____

X Waste oil
X Greywater
X Sludges
☐ Contaminated soil and/or water

15. QUANTITY AND QUALITY OF WASTE INVOLVED – For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Solid Waste	Wood, packaging, plastic pails, cloth	Minimal, < 5kg./day	Collected in 205 litre drums and sealed	Backhauled to Arviat or Churchill for disposal
Hazardous Waste	Drill additives, see MSDS Sheets	minimal	Collected and properly stored at camp each shift	Backhauled to Arviat or Churchill for disposal
Bulky Items	Empty drums, propane tanks, drill parts	~2 drums/day per drill rig ~1 propane tank/week/rig	Stacked safely at Henik airstrip	Backhauled to Arviat for re-use
Waste Oil	Motor oil	minimal	Collected and properly stored at camp each shift	Backhauled to Arviat or Churchill for disposal
Greywater	Drill water	<40m³/day/rig	Collected in hand dug sumps at least 31m from high water mark of nearest water body	
Sludge	Drill sludge	0.14m³/100m of drilling (est. 6,000m)	Collected in hand dug sumps at least 31m from high water mark of nearest water body	Settled sludge will be shoveled back down the drill hole

16. OTHER AUTHORIZATIONS – In addition to the sub-surface and surface land use authorizations provided in Block 6, indicate any other authorizations required in relation to the proposed undertaking. For each provide the following:

Authorization: None

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES - Describe direct, indirect, and cumulative impacts related to water and waste.

MPH Consulting Limited is fully committed to implementing its proposed exploration project in an environmentally responsible manner to protect and sustain the environment.

Water usage will be minimal (~80 cubic metres/day) and restricted to drilling operations only. All greywater and water/drill cuttings used by the drill will be drained to sumps located a minimum of 31 metres from the normal high-water mark of any water body. Drill operations will be conducted in an environmentally friendly manner and fuel caches will be checked daily for potential leakage. All trenches/pits/sumps will be backfilled and contoured when operations are complete.

The total estimated surface disturbance for all of the drill sites (approximately 30-50 for each year of the permit) is estimated to be a maximum of 0.3-0.5 ha/year. The small quantities of benign drill cuttings (0.14 m^3/ 100m drilled) generated at each drill site will be re-deposited back down the hole if possible before freezing, or deposited in natural depressions or sumps and will affect small areas of sparsely vegetated tundra within the footprint of the disturbed area at each drill site. All garbage, fuel drums and equipment will be removed from each drill site.

Mitigation measures to be undertaken to reduce, control or eliminate potential environmental effects include:

1. Only environmentally acceptable and approved muds and additives (as per DIAND regulations) are to be used during drilling operations.
2. Drill holes to be plugged and permanently sealed if artesian flow is encountered.
3. All fuel caches will be located a minimum of 30 meters from the normal high-water mark. Spill kits will be present at all fuel caches and drilling operations.
4. MPH possesses and maintains a current Emergency Response Plan including a Fuel Spill Contingency Plan (Attachment C) that all employees and contractors are required to adhere to. These policies also include safety, emergency, fire and medi-vac procedures and are described in detail in MPH's Safety Manual/Field Guide (Attachment D).
5. All incinerator residual, non-combustible garbage, bulk metal scraps, hazardous waste, empty drums and propane tanks will be backhauled to Arviat for disposal in approved facilities.

Any environmental impacts as a result of the proposed exploration activities can be mitigated. In total, the residual environmental effects of MPH's entire exploration program on the Turquetil-Esker Drilling Project are expected to be negligible. No other mineral exploration activities or other industrial development projects are currently known or planned for the area, which further reduces the potential for cumulative effects.

18. WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in

precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

N/A

19. INUIT WATER RIGHTS

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

The quantity and quality of water flow through IOL will not be affected by the minimal usage which may occur if water is drawn from the Turquetil River for drilling operations. KIA land use permit applications include fees paid in advance for water usage (40m^3/day x 180 days = 7,200m^3/year as a maximum)

20. CONSULTATION – Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

No consultation meetings to date due to Covid travel restrictions. Phone call was made to Steve England, Hamlet of Arviat in January. Luis Manzo of the KIA kindly made presentations in Arviat the week of May 10th.

21. SECURITY INFORMATION

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut,* Indian and Northern Affairs Canada, 2002.

Demobilization of the drilling equipment and fuel would be the major liability, which to Arviat would cost ~$100,000.

22. FINANCIAL INFORMATION

Provide a statement of financial responsibility. Will be provided asap. Contract with financing mining company has not been signed yet.

If the applicant is a business entity, provide a list of the officers of the company. Paul Sobie, sole officer and director.

If the applicant is a business entity attach a copy of the Certificate of Incorporation or evidence of registration of the company name. Attached.

23. STUDIES UNDERTAKEN TO DATE - List and attach copies of studies, reports, research, etc.

MPH is not aware of research studies undertaken in either of the operational areas. There are a number of industry reports on past exploration programs for each site.

24. PROPOSED TIME SCHEDULE – Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

Construction
Proposed Start Date: July/2021_ (month/year) Proposed Completion Date: _____July/2023 (month/year)

Operation
Proposed Start Date: _____July/2021 (March in subsequent years) Proposed Completion Date: _____Oct each year
(month/year) (month/year)

Closure
Proposed Start Date: _____not known (month/year) Proposed Completion Date: _____not known (month/year)

Post - Closure
Proposed Start Date: _____not known (month/year) Proposed Completion Date: _____not known (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction
☐ Winter ☐ Spring X Summer ☐ Fall ☐ All season

Operation
X Winter X Spring X Summer ☐ Fall ☐ All season

Closure
☐ Winter ☐ Spring X Summer ☐ Fall ☐ All season

Post - Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

25. PROPOSED TERM OF LICENCE

Number of years (maximum of 25 years): _____5 years

Requested Date of Issuance: ___July/2021 Requested Expiry Date: _____ July/2026

(month/year) (month/year)

(The requested date of issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. **ANNUAL REPORTING** – If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

27. **CHECKLIST** – The following must be included with the application for the water licensing process to begin.

Written confirmation from the NPC confirming that NPC's requirements regarding land use plan conformity have been addressed.

X Yes ☐ No If no, date expected _____

Written confirmation from the NIRB confirming that NIRB's requirements regarding development impact assessment have been addressed.

☐ Yes X No If no, date expected June/2021

Completed General Water Licence Application form.

X Yes ☐ No If no, date expected _____

Information addressing Supplemental Information Guideline (SIG) , where applicable (see Block 11)

X Yes ☐ No If no, date expected _____

English Summary of Application.

X Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun Summary of Application.

X Yes ☐ No If no, date expected _____

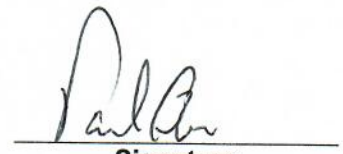
Application Fee of $30.00 CDN (Payee Receiver General for Canada).

X Yes ☐ No If no, date expected _____

Water Use Fee Deposit of $30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

X Yes ☐ No If no, date expected _____

28. SIGNATURE

PAUL SOSIE	PRESIDENT		18/05/21
Name (Print)	**Title (Print)**	**Signature**	**Date**