Hope Bay Mining Ltd.
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889 Harbourside Drive
North Vancouver, BC
V7P 3S1
T 604.985.2572
F 604.980.0731
www.newmont.com

April 16, 2010

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1JO

Attn: Phyllis Beaulieu, Manager of Licensing
Dionne Filiatrault, Executive Director

Dear Ms. Beaulieu and Ms. Filiatrault;

Application for Amendment No. 3 of Water Licence No. 2BE-HOP0712 (amendment regarding drilling water sources)

We are pleased to submit three copies of our amendment application No. 3 for Type B Water Licence No. 2BE-HOP0712. Please find the following documents enclosed:

- Water Licence Application form designating this submission as an ***AMENDMENT***;
- Executive summary in English (translations were not available at the time of submittal but will follow as soon as they are available);
- Memo regarding Fresh Water Waterbody Selection for Regional Drilling;
- Memo by Rescan reviewing the waterbody selection criteria; and
- A cheque in the amount of $60.00 for the application fee and water use fee.

Should you have any questions regarding this submission or require any additional information, please do not hesitate to contact me at Chris.Hanks@Newmont.com.

Sincerely,

Christopher C. Hanks
Digitally signed by Christopher C. Hanks
DN: cn=Christopher C. Hanks, o=Hope Bay Mining Company, ou=Environment and Social Responsiblity, email=chris.hanks@newmont.com, c=US
Date: 2010.04.22 12:06:32 -06'00'

Chris Hanks
Director, Environmental & Social Responsibility
Hope Bay Mining Ltd.

cc. Stephanie Autut, NIRB
KIA

P.O. Box 119
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

WATER LICENCE
APPLICATION FORM

Application for: (check one)

☐ **New** ☐ **Renewal** ☒ **Amendment** ☐ **Assignment** ☐ **Cancellation**

LICENCE NO:
(for NWB use only)

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

Hope Bay Mining Ltd.
300-889 Harbourside Drive
North Vancouver, BC V7P 3S1

Phone: 604 985 2572
Fax: 604 980 0731
E-mail: chris.hanks@newmont.com

2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)

Phone:
Fax:
E-mail:

3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)

Latitude: (68°3’48” N) Longitude: (106°37’12” W)
NTS Map Sheet No. 77A/03 Scale: 1:50,000

4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)

HBML is seeking to amend Part C, Condition 1 and 3 of 2BE-HOP0712 so that HBML may apply defined criteria to select drill water sources, rather than drawing water exclusively from the sources outlined on the June 2007 drawing as currently designated in 2BE-HOP0712. The attached Executive Summary provides proposed language for this change, and the attached memo entitled, "Fresh Water Waterbody Selection for Regional Drilling covered by 2-BEHOP0712 provides more detail with respect to HBML's proposed criteria.

5. TYPE OF PRIMARY UNDERTAKING (A supplementary questionnaire **must** be submitted with the application for undertakings listed in **“bold”**)

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

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

6. WATER USE

- ☒ To obtain water
- ☐ To cross a watercourse
- ☐ To modify the bed or bank of a watercourse
- ☐ Flood control
- ☐ To divert a watercourse
- ☐ To alter the flow of , or store, water

- ☐ Other (describe):

7. QUANTITY OF WATER INVOLVED (cubic metres per day including both quantity to be used and quality to be returned to source)

Water use
- ☒ $100m^3$/day or less
- ☐ Greater than $100m^3$/day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.)50 c.m/day camp, 80 c.m/day exploration drilling

Water returned to source
0 m^3/day

8. WASTE (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.)

- ☒ Sewage
- ☒ Solid Waste
- ☐ Hazardous
- ☒ Bulky Items/Scrap Metal
- ☒ Waste oil
- ☒ Greywater
- ☒ Sludges
- ☐ Other describe):

Note that no changes are proposed to waste disposal practices - these will continue to be consistent with the current licence terms and conditions.

9. OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (give name, mailing address and location; attach if necessary)

Land Use Permit

DIAND	☐ Yes	☒ No	If no, date expected _____
Regional Inuit Association	☒ Yes	☐ No	If no, date expected _____
Commissioner	☐ Yes	☒ No	If no, date expected _____

10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES (direct, indirect, cumulative impacts, etc.) There will be no signfiicant changes to environmental impacts of the Windy Camp as a result of the proposed changes and increase in water use.

NIRB Screening ☐ Yes ☒ No If no, date expected _____

11. INUIT WATER RIGHTS

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?
No

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined? n/a

12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)

Nuna Logistics and Kitnuna Projects : Cambridge Bay - contracted for winter road haulage and maintenance
Braden Bury Expediting: Yellowknife - expediting services
SRK Consulting - project engineering
Rescan Environmental Services - environmental monitoring and environmental analysis
Geotech Drilling Services Ltd. (Prince George and Vernon, BC) and Forage Orbit Garant Drilling (Val d'Or, QC): - surface exploration drilling contractor
Great Slave Helicopters: Yellowknife - provide helicopter support as required

13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)

No specific studied have been undertaken with respect to this change.

14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN

Supplementary Questionnaire (where applicable: see section 5) ☒ Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun/English Summary of Project ☐ Yes ☒ No If no, date expected April 30, 2010

Application fee of $30.00 (Payee Receiver General for Canada) ☒ Yes ☐ No If no, date expected _____

Water Use fee of $30.00 (unless otherwise indicated in Section 9 of the *NWT Waters Regulations;* Payee Receiver General for Canada)
☒ Yes ☐ No If no, date expected _____

15. PROPOSED TIME SCHEDULE (unless otherwise indicated, the NWB will consider the application for a five (5) year term)

☐ one year or less (or) ☒ Multi Year

Start Date: May 20, 2007 Completion Date: June 30, 2012

Chris Hanks	Director, Environment and Social Responsibility	Christopher C. Hanks Digitally signed by Christopher C. Hanks DN: cn=Christopher C. Hanks, o=Hope Bay Mining Company, ou=Environment and Social Responsiblity, email=chris.hanks@newmont.com, c=US Date: 2010.04.22 17:12:29 -06'00'	April 1, 2010
Name (Print)	**Title (Print)**	**Signature**	**Date**

For Nunavut Water Board office use only

APPLICATION FEE **Amount: $_____** **Pay ID No.: _____**

WATER USE DEPOSIT **Amount: $_____** **Pay ID No.: _____**

Executive Summary
Application for Amendment No. 3 of Water Licence No. 2BE-HOP0712

Currently, Part C, Condition 1 of 2BE-HOP0712 states that: "…Drill water shall be obtained from local water source(s), proximal to the drilling targets as outlined in the application and detailed on the June, 2007 drawing entitled *"Hope Bay Exploration Drilling Water Sources"*. " Part C, Condition 3 states that,

> If the Licensee requires water in sufficient volume that the source water body may be drawn down the Licensee shall, at least 30 days prior to commencement of use of water, submit to the Board for approval, information on the water body that includes, but is not limited to: volume of water required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.

Hope Bay Mining Ltd. ("HBML") is requesting that the Nunavut Water Board ("NWB"):

1. amend Part C, Condition 1 to permit HBML to apply NWB approved criteria for the selection of appropriate drill water sources and delete the reference to the June, 2007 drawing in Part C, Condition 1 of 2BE-HOP0712; and
2. amend Part C, Condition 3 to specify that additional NWB notice and approval would only be required for source water body drawdowns in excess of 2 cm.

The enclosed memo entitled, "*Fresh Water Waterbody Selection for Regional Drilling covered by 2BE-HOP0712*" provides further details on suggested drill water source selection criteria and rationale for the change. As contemplated in the June 2007 drawing, water sources include the Koignuk River.

If the NWB approves HBML's proposed drill water source criteria and HBML's amendment request, HBML suggests it would be appropriate for the NWB to:

- delete the reference to the June, 2007 drawing in 2BE-HOP0712 and revise Part C, Condition 1 as follows:

> The Licensee shall obtain all water for domestic camp use from Windy Lake, not exceeding 20 cubic metres *per* day. Drill water shall be obtained from local water source(s), proximal to the drilling targets ~~as outlined in the application and detailed on the June, 2007 drawing entitled *"Hope Bay Exploration Drilling Water Sources".*~~ and including lakes and the Koignuk River. The Licensee shall withdraw drill water only from water bodies possessing a surface area greater than or equal to 15,000 m^2. The volume of water for drilling purposes shall not exceed 80 cubic metres *per* day.

- revise Part C, Condition 3 as follows:

  If the Licensee requires water in sufficient volume that the source water body may be drawn down <u>in excess of 2 cm</u>, the Licensee shall, at least 30 days prior to commencement of use of water, submit to the Board for approval, information on the water body that includes, but is not limited to: volume of water required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.

Fresh Water Waterbody Selection for Regional Drilling covered by 2BE-HOP0712

Introduction

Hope Bay Mining Ltd. requests that the company be permitted to draw water for drilling purposes from any water body in the Hope Bay Belt that exceeds a surface area of 15,000 m^2. The company will ensure that the amount of water extracted for drilling within any drill season from any individual water body will not draw down the level of that water body by greater than 2cm.

Background

Currently, license 2BE-HOP0712 allows water to be drawn for drilling purposes from the blue highlighted lakes on the attached map. As the regional exploration program has developed at Hope Bay, there is now a need to be able to access other sources of water not currently permitted.

The role of HBML's regional exploration program is to test for potential mineralization throughout the Hope Bay Belt, and exploration priorities are constantly changing as drilling results are received and new exploration concepts are developed. Because of this, it would be useful to identify drill water sources that could be used along the entire Hope Bay Belt based on size criteria, instead of permitting individual water sources on an as needed basis. HBML proposes that the following criteria be used by the Exploration and the Environmental and Social Responsibility Departments to determine whether a body of water contains sufficient water so that water volumes will not be significantly affected by a regional drilling program.

Objectives:

Identify possible waterbodies for drill water use based on their surface area and a maximum drawdown amount that is well within natural lake water level variability.

Rationale:

"Showing leadership in environmental stewardship" is a Newmont Core Value, and HBML intends to fulfill this corporate policy by being very conservative in estimating impacts of its work on the water bodies of the Hope Bay Belt. As such, we propose a maximum lake water level drawdown amount of 2 cm. It is believed that this amount of drawdown is well within natural lake water level variability, and will therefore meet fish and fish habitat protection needs.

Typically, a diamond drill will use between 5 and 7 m^3 of water per day while drilling, and drill holes will normally take 3 to 10 days to be completed. An estimate of the <u>maximum</u> amount of water used in drilling one drill hole, therefore, would be 70 m^3 (7

m^3 times 10 days). To err on the side of caution, it is proposed to assume that a drill hole will use 100 m^3 of water.

By a simple calculation, we can determine that the surface area of a water body that would be drawn down by 2 cm with the loss of 100 m^3 of water (assuming zero recharge of the water body) is 5,000 m^2. This would represent the smallest body of water that could support the completion of one drill hole without significant impact on the amount of water in the water body. If this water body were circular, it would have a diameter of approximately 80 m.

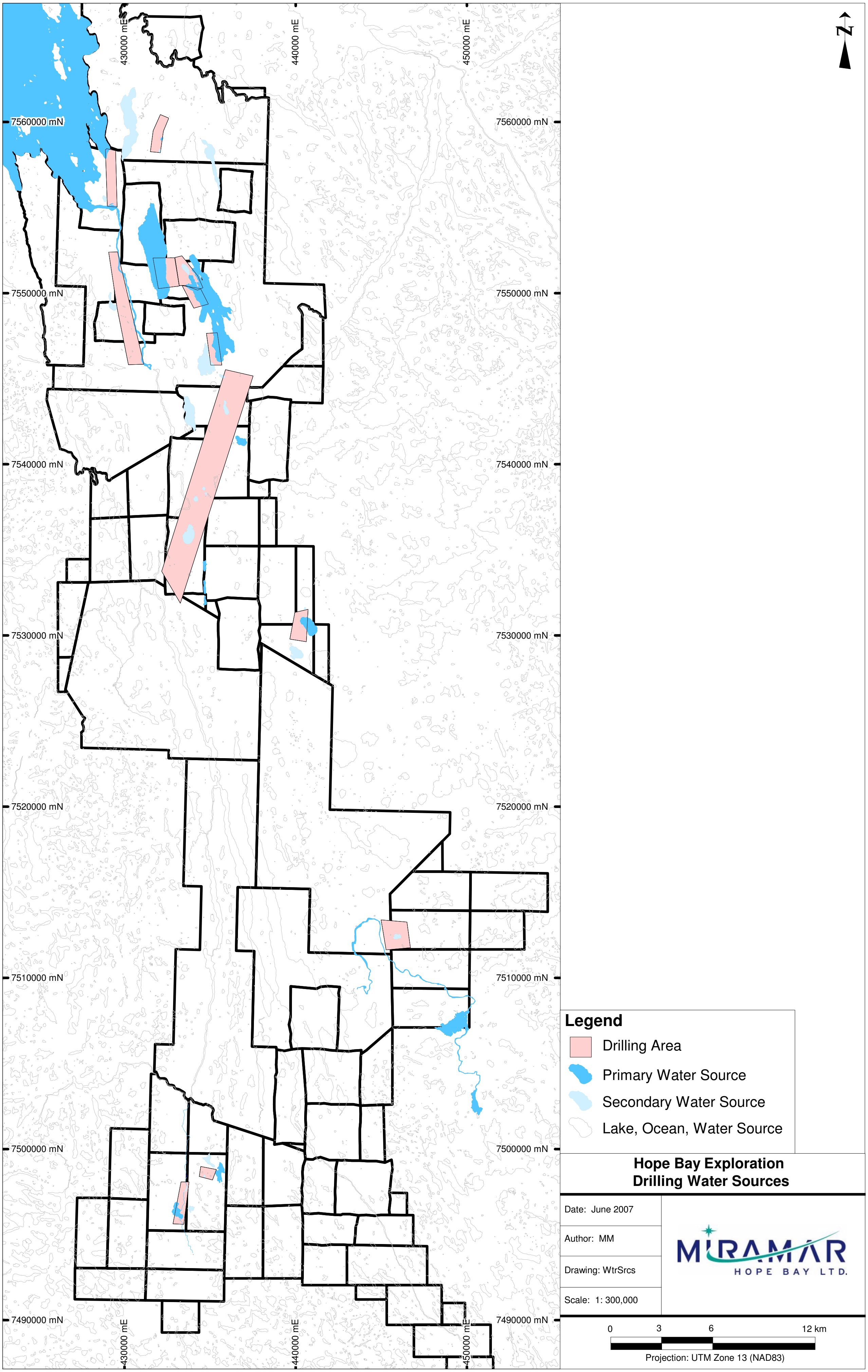
Implementation:

While a conservative estimate of water usage has been used in the above calculation, to ensure that the smaller water bodies in the belt will not be impacted, HBML will commit to withdrawing water only from water bodies possessing a surface area greater than or equal to 15,000 m^2. This surface area is equivalent to a waterbody able to support 3 drill holes with no more than 2 cm of drawdown in the absence of any water renewal. See Table 1 for examples of "threshold lake surface areas. Additionally, HBML will follow the DFO protocols when identifying winter water sources, with required bathymetric surveys being conducted with GPR or as approved by DFO.

Table 1. Example calculations of "threshold" lake surface areas required for drill water use purposes per year.

# of Drill Holes	Calculated total withdrawal volume (m^3)	Calculated Minimum Lake Surface Area Required (m^2)	Actual Minimum Lake Area (m^2)
1	100	5,000	15,000*
3	300	15,000	15,000
5	500	25,000	25,000
7	700	35,000	35,000
10	1,000	50,000	50,000

The above values are calculated based on a 'threshold' drawdown amount of 2 cm, and the assumption that each hole requires 100 m^3 of water.
**no lake with a surface area less than 15,000 m^2 will be used as a water source.*


430000 mE
440000 mE
450000 mE
7560000 mN
7550000 mN
7540000 mN
7530000 mN
7520000 mN
7510000 mN
7500000 mN
7490000 mN
N
Legend
Drilling Area
Primary Water Source
Secondary Water Source
Lake, Ocean, Water Source
Hope Bay Exploration
Drilling Water Sources
Date: June 2007
Author: MM
Drawing: WtrSrcs
Scale: 1: 300,000
MIRAMAR
HOPE BAY LTD.
0
3
6
12 km
Projection: UTM Zone 13 (NAD83)

Memorandum

DATE: April 15 2009

Refer to File No.: 1009-002-01\PM\c\HBB drill water drawdown

TO: Chris Hanks, Hope Bay Mining Limited (HBML)

FROM: Katsky Venter (M.Sc.), Michael McGurk (Ph.D., R.P.Bio.) and Bob Askin (M.Sc., P.Eng., P.Geo.)

CC: Deborah Muggli (Ph.D.)

SUBJECT: Potential effects on fish and fish habitat of water level drawdown in lakes of the Hope Bay Project area as a result of drilling activities

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This memorandum provides the profession judgment of three Rescan scientists on the potential effects on fish and fish habitat in lakes of the Hope Bay Project area that may be caused by extraction of water from those lakes for drilling purposes.

In the document entitled “Fresh Water Waterbody Selection for Regional Drilling covered by 2BE-HOP0712” (which is attached to the “Application for Amendment No. 3 of Water Licence No. 2BE-HOP0712”), HBML proposes to limit the drawdown of any lakes used as water sources for drilling to a maximum of 2 cm. In our professional opinion, a drawdown of this amount would have no significant impact on fish or fish habitat because it lies within the normal range of seasonal water level variation in lakes of the Hope Bay Project area. Lake water levels vary naturally on an hourly, daily, seasonal and annual basis as a result of variation in rainfall, evaporation and ice formation and break-up. Hydrological studies conducted by Rescan in lakes of the Hope Bay Project area in 2009 show that these factors can cause seasonal changes in water level of 30 cm or more. Moreover, normal wind-induced wave action can cause local variation in the height of the wetted shoreline that exceed 2 cm. Fish of these lakes have adapted to variation in water elevations of this magnitude.

Therefore, we believe that HBML’s proposal to limit drawdown to a maximum of 2 cm meets DFO’s Nunavut Operations Statement for Mineral Exploration Activities; Water Withdrawal, section 11.2:

> 11.2. Ensure water withdrawal volumes do not impact fish or fish habitat. Withdrawals from fish-bearing waters should not result in any noticeable change in water level or downstream flows, particularly during sensitive life stages (e.g., by dewatering spawning or egg incubation areas).