GOVERNMENT OF THE NORTHWEST TERRITORIES

CLOSING ARGUMENTS

FOR

ARCTIC CANADIAN DIAMOND COMPANY
POINT LAKE PROJECT
TYPE A WATER LICENCE AMENDMENT
W2020L2-0004

Submitted to:

Wek' èezhìi Land and Water Board
#1-4905 48th St.
Yellowknife, NT X1A 3S3

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List of Acronyms

Acid Rock Drainage	ARD
Arctic Canadian Diamond Company Limited	Arctic
Caribou Road Mitigation Plan	CRMP
Effluent Quality Criteria	EQC
Environment and Natural Resources	ENR
ERM Consultants Canada Ltd.	ERM
Government of the Northwest Territories	GNWT
Humidity Cell Test	HCT
Information Request	IR
King Pond Settling Facility	KPSF
Mackenzie Valley Resource Management Act	MVRMA
Metal Leaching	ML
Net Acid Generation	NAG
Potentially Acid-Generating	PAG
Shake Flask Extraction	SFE
Waste Rock and Ore Storage Management Plan	WROMP
Waste Rock Storage Area	WRSA
Wek' èezhìi Land and Water Board	WLWB
Wildlife Management and Monitoring Plan	WMMP

1.0 Introduction

This closing submission outlines the Government of the Northwest Territories' (GNWT) concerns and recommendations regarding the proposed Arctic Canadian Diamond Company (Arctic) Point Lake Project Type A Water Licence Amendment W2020L2-0004.

These recommendations are provided for the Wek'èezhìi Land and Water Board (WLWB)'s consideration. This submission takes into consideration all of the documents provided up to January 13, 2022 including the Water Licence Application; information provided through Information Requests; Undertakings and discussions at the September 7-9, 2021 Technical Session; and the November 23-26, 2021 Public Hearing.

Note several of the GNWT's recommendations from our Technical Intervention have been resolved in discussions with Arctic throughout this water licence process. The GNWT would like to thank Arctic for participating in these discussions. However, where required, based on additional information available following the submission of the GNWT's Technical Intervention, amended recommendations have been included for clarity and accuracy. The GNWT appreciates the opportunity to express its concerns and provide recommendations and suggestions to the WLWB on this licence application.

2.0 Point Lake Dewatering

2.1 Dewatering Plan Approval

In the Point Lake Dewatering Plan Version 2.0, Arctic requested that the Plan be approved as part of the Water Licence Amendment process rather than as a subsequent condition of the amended Water Licence.

In response to Undertaking #1, and to support an expedited approval process following licence issuance, Arctic submitted Version 2.1 of the Point Lake Dewatering Plan to the WLWB for review. The GNWT reviewed and submitted comments on the updated plan on January 11, 2022.

While the majority of the GNWT's recommendations have been addressed in the most recent version of the Dewatering Plan, uncertainty remains as to whether version 2.1 of the Plan will comply with the Board's Water Licence conditions and schedules.

Therefore, the GNWT maintains the position stated in Intervention recommendation #1 that there be a condition in the Water Licence requiring submission of a Point Lake Dewatering Plan for approval and that it not be approved prior to licence issuance. The GNWT supports an expedited review

process of the Dewatering Plan to ensure that the start of dewatering of Point Lake is not delayed.

The GNWT Intervention also recommended that a corresponding item be added to Schedule 4 of the Water Licence. The GNWT notes that the draft Water Licence did not include a specific section in Schedule 4 requiring a Point Lake Dewatering Plan.

The GNWT therefore also maintains recommendation #2 that there be a corresponding item added to Schedule 4 of the Water Licence as well, as was done previously for both the Lynx and Jay Dyke and North Dyke Dewatering Plan.

2.2 Sampling Frequency and Location

In the GNWT's Intervention, recommendation #3 was that the Water Licence require daily sampling for pH, total suspended solids, and turbidity at the point of discharge of Point Lake Dewatering to Lac du Sauvage.

The GNWT notes that Version 2.1 of the Point Lake Dewatering Plan has been revised to include daily monitoring of these parameters at the Stage 1 outflow location into Lac du Sauvage. In addition, the draft Water Licence also included daily monitoring at dewatering outflow locations into Lac du Sauvage and Connor Lake.

The GNWT recommendation #3 is therefore considered resolved provided the condition remains in the Water Licence.

3.0 Waste Rock Storage Area (WRSA) Geochemical Characterization

3.1 Overburden Pile

Recommendation #4 of the GNWT's Intervention stated that the Water Licence should include requirements that the Point Lake project specific overburden analyses, as well as rationale to validate or alter the current sampling approach, also be included in the Waste Rock and Ore Storage Management Plan (WROMP).

In their response to Interventions, Arctic stated that they do not object to this recommendation. In addition, this requirement has been included in Schedule 6, item 2, u) of the draft Water Licence.

The GNWT considers recommendation #4 to be resolved.

3.2 Metasediment WRSA

The Point Lake metasediment has been characterized as being primarily Potentially Acid Generating (PAG; 91%) (ERM, 2021). As metasediment makes up the majority of the waste rock at Point Lake, the GNWT is concerned about the potential for metal leaching (ML) and acid rock drainage (ARD) issues developing as a result of the Point Lake project, particularly over the long term.

Throughout this process, the GNWT has made several recommendations to Arctic regarding additional characterization of the Point Lake metasediment, and development of water quality predictions for the surface runoff and seepage from the metasediment waste rock pile. Water quality predictions are necessary for the completion of a King Pond load balance model to ensure that discharge to Cujo Lake can safely continue within the current Effluent Quality Criteria (EQC).

As part of Arctic's response to IR #13, and to increase understanding of metal leaching, Arctic provided Shake Flask Extraction (SFE), and Net Acid Generation (NAG) results from Point Lake Waste Rock analysis for review (ERM, 2021).

The following section summarizes the GNWT's comments and recommendations based on the remaining data gaps in the current geochemical characterization of Point Lake metasediment.

3.2.1 Revisions to the SFE/NAG Testing Memo

In the Intervention, the GNWT made several recommendations regarding additional humidity cell testing, and revisions to Arctic's SFE/NAG testing memo. These recommendations are presented as recommendations #5 and #6 respectively in the GNWT's Intervention. The recommended additions should be made in an updated memo or report in order to further the characterization and geochemical understanding of the Point Lake metasediment. The additional characterization of the metasediment waste rock will reduce uncertainty related to ML/ARD issues and allow for mitigation measures to be developed if necessary.

Part H, Condition 27 of the draft Water Licence requires that Arctic conduct humidity cell testing on Point Lake pit metasediment with 95th percentile solid content/leachate statistics. In addition, Schedule 6, Part H, 6, requires that the additional details and revisions recommended by the GNWT are included in a Seepage Prediction report**.**

The GNWT supports the above conditions being included in the draft Water Licence, and therefore considers recommendations #5 and #6 to be resolved, provided the conditions remain in the Water Licence.

In the Intervention, the GNWT made several recommendations related to the use of the results of humidity cell testing in the development of water quality predictions as well as estimations of the lag time to onset of acidity for the metasediment waste rock pile.

These recommendations have been included by the Board in the draft Water Licence (Schedule 5, Part F Conditions 2, b), xiv, xvi, and 3, g), h), i), Schedule 6, Part H: Condition 6 a), c)).

Therefore, recommendations 7 through 9 regarding humidity cell testing and water quality predictions are also considered resolved, provided the conditions remain in the Water Licence.

3.2.2 Seepage and Pit Wall Runoff Water Quality Predictions

In comments submitted on Arctic's responses to Information Requests, ENR comment ID #3 noted concern regarding the use of Misery pit sump water quality as an analogue for Point Lake water quality in the simplified load balance model for the King Pond Settling Facility (KPSF).

The GNWT noted in their Intervention that the use of Misery pit runoff may have been a useful approximation in the absence of Point Lake Project specific water quality predictions, however once developed project specific water quality predictions should be used to ensure that the KPSF can manage Point Lake mine water.

The GNWT notes that Schedule 5, Part F, item 2 b xxiii of the draft Water Licence requires a "Detailed evaluation of KPSF water management capacity with respect to Point Lake WRSA seepage inputs".

Therefore, the GNWT considers recommendation #10 to be resolved, provided the condition remains in the Water Licence.

4.0 Overburden Pile – Reclamation Uses

In their application, Arctic proposed to leave the overburden pile on site after Closure, with the exception of overburden used to cover the metasediment WRSA. At the Technical Session, Arctic provided rationale that the cost of moving any overburden beyond what will be used to cover the metasediment WRSA, is prohibitive to the feasibility of the Point Lake Project. However, in response to the GNWT's Intervention recommendation that Arctic add the Point Lake overburden to the stockpile of available material to support full remediation of Ekati mine as a whole, Arctic stated they "do not object to this recommendation".

As a result, the GNWT considers recommendation #11 to be resolved.

The GNWT also recommended that Arctic use as much of the available Point Lake Project overburden material as possible for enhancing reclamation efforts at the Ekati site. Overburden is an extremely valuable material for reclamation activities and is more cost effective for remediation than quarrying or transporting granular material to site.

In their response to interventions, Arctic agreed that Point Lake overburden may have beneficial uses for reclamation and closure in the general area in addition to the already prescribed use as the primary closure cover over the Point Lake WRSA (approximately 25% of the stockpile volume) and the planned use in modifying the Lac du Sauvage Road to remove potential barrier effects to caribou. Arctic also noted that the use of Point Lake overburden would be limited to the general area and that Arctic cannot reasonably commit to full utilization (100%) of the stockpile.

The GNWT notes that while Arctic cannot commit to full utilization (100%) of the stockpile, **recommendation #12 be maintained for Arctic to use as much of the available Point Lake Project overburden material as possible for enhancing reclamation efforts at the Ekati site.**

5.0 Definition of Receiving Environment

The GNWT notes that the draft Water Licence contained the use of the term “aquatic” in the definition of the receiving environment. The GNWT notes that ENR has previously commented on this definition in previous water licences and as part of the April 2020 review comment period for Standard Water Licence Conditions. It is the GNWT’s opinion that the receiving environment definition should not be restricted to the aquatic environment.

In response to our recommendations on the definition, Arctic requested that the Board maintain ‘aquatic’ in the definition of Receiving Environment. Ultimately, the Board stated that “The use of this term in the draft Standard Conditions has been reviewed and the definition is appropriate as proposed. EQC are not limited to effluents discharged to the aquatic environment.” The GNWT supports the Board’s decision in the above-noted statement.

The GNWT recommends that the term “aquatic” be removed from the definition of Receiving Environment in the Point Lake Water Licence Amendment.

The GNWT acknowledges that a comment on the definition of receiving environment was not submitted during review of the draft Water Licence, and that this was an oversight. The GNWT respectfully requests that the Board take the GNWT’s recommendation into account in drafting the final Point Lake Water Licence.

6.0 Securities

Following the Public Hearing, the GNWT met with Arctic to further discuss the GNWT’s position on our recommended security estimate. The GNWT would like to thank Arctic for these discussions, and maintains the security estimate included in recommendation #13 of the Intervention.

The GNWT maintains Intervention recommendation #13 that the WLWB set the total security for the proposed Point Lake Project at $28,101,255, with the land liability amount set at $986,852 and the water liability amount set at $27,114,403.

7.0 Wildlife

The GNWT is satisfied that its views on the potential impacts to wildlife habitat of the Point Lake Project and the ways mitigation can be captured in available regulatory instruments are largely reflected in the record. To the extent that the more immediate impacts to wildlife habitat from the Point Lake Project can be mitigated through design features, the GNWT believes that these are best captured in Board authorizations and approved plans, as outlined in the GNWT Undertakings #6 and #8.

The GNWT supports several of the recommendations on the draft Land Use Permit (LUP) submitted by other parties. In particular, the GNWT would like to emphasize support for Tłı̨chǫ Government's recommendation # 5 that the Board require Arctic to flatten/fill the entire length of the Lac du Sauvage Road within a short time after the effective date of the amendment. This aligns with the views raised by GNWT staff during the technical sessions that, while this could be considered a type of reclamation and deferred to the closure and reclamation plan, it should more appropriately be viewed as a habitat mitigation for the Point Lake Project specifically geared towards easing caribou passage, and therefore included in the LUP.

Furthermore, regarding the Tłı̨chǫ Government's recommendations #6 and #9, while the GNWT agrees that it is within the Board's jurisdiction to require improvements to the Misery Road and Sable Road, the GNWT would like to clarify its understanding that ENR does have the authority to require changes to the road structures under the Caribou Road Mitigation Plan (CRMP) which is part of the Minister-approved Wildlife Management and Monitoring Plan (WMMP) for the Ekati Mine. As such, the GNWT suggests that further, more comprehensive discussion of the available data and evidence would be useful in informing what types of revisions to the CRMP are necessary, including potential structural changes. For example, in the case of Misery Road, parties should consider together how much of the caribou avoidance seen in the Independent Environmental Monitoring Agency's animation is likely influenced by road structure factors versus traffic factors or overall mine disturbance. Such discussion would also be helpful with respect to informing improvements for Sable Road, which does not currently have caribou crossings. It is ENR's understanding that Arctic's engagement meeting in mid-February will help establish a direction for that process.
Acknowledging a comment made on the draft LUP recommending a Board-approved WEMP and CRMP in Condition 37, the GNWT does not support this recommendation. To further ENR staff comments made during the Public Hearing, the GNWT does not support Board approval of these plans, as they are already approved as the WMMP for the Ekati mine under Section 95 of the *Wildlife Act*. Board approval of these plans is not ideal or necessary as a WMMP required under Section 95 of the Wildlife Act is more comprehensive given that the WLWB cannot impose requirements related to wildlife

that are unrelated to wildlife habitat. Further, having two approved versions of the same plan does not support the coordinated and integrated approach aspired to in the MVRMA.

As clarification, ENR will not be holding a public review on the Point Lake Addendum to the WMMP prior to the public review that will be part of the process for updating the site-wide WMMP in association with the water licence renewal. However, ENR understands that the Addendum will be discussed at Arctic's Engagement Workshop in mid-February. Subject to any changes committed to at that workshop by Arctic, ENR expects Arctic to proceed with implementing the Addendum and consider it to be part of the WMMP. Further revisions to it will be incorporated into the revised larger site-wide WMMP.

In addition to concerns about impacts to wildlife habitat from the Point Lake Project, intervenors have also raised concerns related to caribou safety and movement through the area of the Point Lake Project and the larger Ekati mine, as well as effectiveness of mine-wide mitigations and monitoring. The GNWT is aware that the scope of this Land and Water Board process to address only wildlife habitat issues has narrowed the range of concerns that could be addressed in this forum, and this is at times frustrating to all parties involved. The GNWT appreciates participants' patience and goodwill throughout the organizational learning process of maximizing effective and efficient integration of legislatively required WMMPs with MVRMA processes. As such, the GNWT encourages parties to make their recommendations for improvement of Arctic's WMMP both in engagement meetings hosted by Arctic and by participating in the upcoming formal review process that will follow the process outlined in the WMMP Guidelines. The extent of pre-engagement necessary prior to the formal WMMP review can be considered by parties in the discussions at Arctic's upcoming meetings in mid-February. ENR will provide Arctic with information about what conditions and requirements will be necessary in the revised WMMP after the Point Lake water licence has been issued and meetings that Arctic has committed to host to discuss mitigation effectiveness and monitoring have been held.

8.0 References

Arctic Canadian Diamond Company (Arctic), 2021. Responses to Information Requests. September 17, 2021

ERM Consultants Canada Ltd. (ERM), 2021. Point Lake Project SFE Leachate and NAG Leachate. 19 October, 2021.