

GOVERNMENT OF THE NORTHWEST TERRITORIES
CLOSING ARGUMENTS

FOR

PINE POINT MINING LIMITED
CONFIRMATION AND EXPLORATION PROGRAM
TYPE A WATER LICENCE APPLICATION
MV2020L8-0012

Submitted to:

Mackenzie Valley Land and Water Board
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List of Acronyms

Brodie Consulting Limited	BCL
Carbonaceous Biochemical Oxygen Demand	CBOD
Canadian Council of Ministers of the Environment	CCME
Closure and Reclamation Plan	CRP
Coliform Forming Units	CFU
Effluent Quality Criteria	EQC
Government of the Northwest Territories	GNWT
Groundwater Management Plan	GMP
Mackenzie Valley Land and Water Board	MVLWB
Pine Point Mining Limited	PPML
Surveillance Network Program	SNP
Total Dissolved Solids	TDS
Water Management Plan	WMP
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 Pine Point Mining Limited (PPML) Confirmation and Exploration Program Type A Water Licence Application MV2020L8-0012.

These recommendations are provided for the Mackenzie Valley Land and Water Board's (MVLWB) consideration. This submission takes into consideration all of the documents provided up to May 14, 2021 including the Water Licence Application; information provided through Information Requests; Undertakings and discussions at the January 26-28, 2021 Technical Session; and the April 28-30, 2021 Public Hearing.

Note several of the GNWT's recommendations from our Technical Intervention have been resolved as a result of discussions with PPML. The GNWT would like to thank PPML 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 purposes. The GNWT appreciates the opportunity to express its concerns and provide recommendations and suggestions to the MVLWB on this licence application.

2.0 Annual Water Licence Report

As per the GNWT's intervention recommendation, PPML agreed to include the recommended pump test information in the Annual Water Licence Report, and these items were included in Schedule 1, item 1.j) of the draft water licence.

The GNWT therefore considers recommendation #1 to be resolved.

3.0 Groundwater Management Plan

3.1 Submit Groundwater Management Plan for Approval

PPML provided a framework for a Groundwater Management Plan (GMP) as a component of their water licence application. In their response to review comments, additional information was provided by PPML that will need to be included into the GMP for this project. The GMP will need to include descriptions and locations of the proposed activities, methodology for monitoring to execute the monitoring program, reporting requirements, and the water quality compatibility protocol. The GNWT provided additional comments on this item during review of the draft water licence.

The GNWT notes that in the draft water licence, the Board refers to this plan as a Water Management Plan (WMP). The GNWT will refer to this plan as the WMP throughout the remainder of this document.

In the intervention, the GNWT recommended that a WMP be submitted 90 days prior to commencing any hydrogeological investigations. In their response to interventions, PPML disagreed with this timeline and proposed 30 days. The GNWT therefore revised this recommendation at the Public Hearing and recommended that the WMP be submitted for review and Board approval a minimum of 60 days prior to hydrogeological investigations.

During the Public Hearing, PPML committed to providing the WMP for review on the day following licence issuance. This allows all parties sufficient time to complete a comprehensive review and provide input on the document through a formal public review process. The GNWT supports this as a number of recommendations have been made regarding improvements to this plan, and a thorough review period prior to the start of testing is required.

The GNWT notes however that the draft water licence currently requires that the WMP be submitted 90 days following the effective date of the licence. GNWT notes that in order to avoid delays in the start of hydrogeological testing, and given PPML has committed to submitting this plan on the day following licence issuance, there is no need to wait 90 days for the submission of this plan. The licence condition should reflect PPML's commitment to submit this plan immediately following licence issuance.

The GNWT therefore maintains the revised recommendation #2 that the WMP be submitted for review and Board approval 60 days prior to commencing any hydrogeological investigations.

3.2 Water Management Plan Uncertainties

As stated in the GNWT's presentation at the Public Hearing, there remain several uncertainties related to certain aspects of the WMP.

The GNWT acknowledged during their presentation at the Public Hearing that PPML's response to interventions and discussions during the Public Hearing provided additional context and description for some of the noted uncertainties. This included clarifying that the upper bound will be mostly represented by receiving water quality prior to testing. The GNWT is supportive of this position and recommends that this, as well as other uncertainties noted in the intervention, be further described in the next version of the WMP to allow parties the opportunity to provide further feedback.

As such, the GNWT maintains intervention recommendation #3 as follows:

The GNWT recommends that the WMP be updated to clarify and resolve the uncertainties summarized here:

- **Inclusion of pit chemocline influence on the compatibility assessment.**
- **Description of methodology for the development of the depth-average TDS concentration and specific conductivity–TDS relationship.**

- **Clarification on which guidelines are being referenced in Figure B1 of the April memorandum.**
- **Clarification on methodology for the calculation of the “upper bound”.**
- **The well to well and pit to well scenarios should consider an evaluation against appropriate guidelines that are protective of the receiving environment.**
- **The compatibility assessments should be made between samples collected prior to groundwater testing, and not in relation to the database presented in the April memorandum.**

4.0 Fish Presence in Pits

At the beginning of this process, the GNWT was concerned that receiving water quality and potential fish presence in pits was not being sufficiently assessed.

In their response to interventions, PPML confirmed that surveys of fish presence in pits would be conducted prior to water transfers. PPML also added acute toxicity testing for the source pit water that has passed the proposed two step screening process prior to any transfer.

PPML noted during the Public Hearing presentation that additional details on the screening for fish presence will be provided for review in the WMP. The GNWT is satisfied with PPML’s commitment to screen for fish presence prior to conducting water transfers.

The GNWT acknowledges that Schedule 4, item 1.e) of the draft water licence includes requirements for information regarding fish-bearing pits. Given that PPML has agreed to conduct fish presence surveys in pits prior to water transfers, the GNWT remains supportive of this condition being added to the water licence to ensure presence is determined prior to transfers. The GNWT defers to Environment and Climate Change Canada on the determination whether water transfers would be considered a deposit of deleterious substances to fish frequented waters.

The GNWT notes that while intervention recommendations #5, and #6 are considered resolved, the GNWT maintains recommendation #4 as follows:

4. The GNWT recommends that the Water Licence include a condition that requires fish presence determinations in a pit prior to water being discharged into it.

5.0 Water Quality Compatibility Criteria

The GNWT believes that the water transfer criteria should be adjusted to achieve conditions that protect the receiving environment and aim to not degrade receptor water quality.

As noted in the intervention as well as in the public hearing presentation, the GNWT accepts PPML's proposed 30% difference between source and receptor water quality provided additional recommendations included in our intervention, and as refined in these closing arguments, are also implemented. These additional precautionary elements are recommended to account for the aforementioned uncertainties, such as the potential for water quality to change during pumping as groundwater recharges.

The GNWT notes that regarding intervention recommendation #7 parts a through d, PPML agreed to the recommendation in their response to interventions (a, b, and d) or PPML agreed to consider the GNWT's position when updating the WMP (as per discussions on June 1, 2021). As a result, the GNWT considers recommendation #7 (parts a through d) to be resolved.

In their response to interventions, PPML also agreed to recommendation #8. In response to recommendation #9, PPML provided a description of their plan for monitoring water quality during testing. The GNWT therefore considers intervention recommendations #8 and #9 to be resolved as well.

Further, the GNWT reviewed and supports PPML's proposed monitoring frequency and recommended that it be included in the water licence, and not solely in a management plan. The GNWT maintains the following recommendation made in comments on the draft water licence:

GNWT comment ID 12: The GNWT recommends that the monitoring frequencies provided by PPML in their response to interventions be included in Annex A – Surveillance Network Program (SNP) section of the Water Licence.

6.0 Wastewater Treatment

In the intervention, the GNWT recommended that the water licence include conditions and EQC for a modular water treatment plant. The GNWT notes that both of these recommendations were agreed to by PPML, and included in the draft water licence.

Recommendations #10 and #11 from the intervention are therefore considered resolved.

7.0 Offsite Waste Disposal

In the intervention, the GNWT recommended that the Board not include authorization for a landfarm in the water licence. The GNWT also recommended that a revised Waste Management Plan be submitted within 30 days of licence issuance to revise statements regarding hydrocarbon impacted material and runoff, as well as vehicle wash station runoff being shipped offsite for disposal. PPML agreed to these recommendations, and they were included in the conditions of the draft water licence.

The GNWT therefore considers intervention recommendations #12, #13, and #14 to be resolved.

8.0 Testing Locations

Earlier in the process, the GNWT was concerned that testing may occur on water bodies that had not been included in the water withdrawal plan, and was concerned that testing may exceed the allowable withdrawal limits of a particular water body. As stated in the GNWT presentation at the Public Hearing, the GNWT had additional discussions with PPML where it was clarified that all potential locations for groundwater testing were provided with the water withdrawal plan.

Given that these water bodies have been assessed, and reviewed within the Water Withdrawal Plan, **the GNWT considers recommendation #15 to be resolved.**

9.0 Surveillance Network Program

Throughout this process, the GNWT has recommended that PPML consider an SNP to monitor water quality during groundwater testing. PPML has maintained their position that such monitoring be included as part of the WMP. However, the GNWT maintains that in order to comply with the legislation and regulations, certain requirements for monitoring and testing are required as conditions in the water licence. The GNWT notes that the use of water associated with groundwater testing is the reason that a Type A water licence is required. It is therefore fitting that restrictions on such water use and testing be included in the licence rather than a plan. To be clear, the *Waters Act* and Regulations govern the use of water and deposit of waste on territorial lands in the NWT. This legislation also provides the Minister of ENR approval authority over licences that allow the use of waters and deposit of waste.

The GNWT reviewed the draft SNP and provided comments on it as well as the draft water licence. In these reviews, the GNWT provided several recommendations on SNP stations as well as monitoring frequency. Those comments and recommendations have been summarized below, and will serve as a revision to recommendation #16 from the GNWT intervention.

We note that in order to track the quantity of water used from each water source, separate SNP stations are required for each source. This is necessary in order to ensure that the maximum withdrawal limits (daily and annual) are not exceeded.

GNWT also recommended that each source and receiving water body be assigned its own SNP station in order to better monitor and track any changes in water quality and volumetric data throughout testing as the quality of pit water or groundwater has the potential to degrade during recharge.

The GNWT's revised recommendation #16 is as follows:

16. a) GNWT recommends that each individual water source be designated as an SNP station during reporting so that the quantity of water used from each individual water source can be measured and reported.

b) GNWT recommends that each source and receiving waterbody involved in the hydrogeological testing be assigned its own SNP station ID during reporting.

10.0 Reclamation Security

Throughout the water licence process, the GNWT and Brodie Consulting Limited had extensive dialogue with PPML on reclamation security.

As stated during the Public Hearing presentation, the GNWT finds the PPML revised security estimate to be reasonable for the proposed scope of exploration work. The GNWT modified recommendation #17 for reclamation security to match the estimate provided by PPML.

The GNWT maintains the recommendation made at the Public Hearing that the security estimate be set at \$1,060,755 with a land and water liability split set at \$743,457 and \$317,298 respectively.

11.0 Wildlife Management and Monitoring Plan

On August 18, 2021, PPML submitted to ENR its Tier 1 Wildlife Management and Monitoring Plan (WMMP) for the Confirmation and Exploration Program Version 1.1. It is currently posted to the MVLWB's online review system for public review until September 20th, 2021.

PPML will have two weeks to respond to reviewer comments and make adjustments to the WMMP as necessary. The Minister of ENR will use this information in addition to the information available on the MVLWB's public registry, in making a decision on whether to accept, reject or conditionally approve the final WMMP.