



**Mackenzie Valley Land and Water Board**  
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## Staff Report

<b>Applicant:</b> De Beers Canada Inc.	
<b>Location:</b> Kennady Lake, NT	<b>Application:</b> MV2005L2-0015
<b>Date Prepared:</b> February 11, 2015	<b>Meeting Date:</b> February 12, 2015
<b>Subject:</b> An Updated Construction Water Management Plan and a Request to Modify a Compliance Date	

### 1. Purpose/Report Summary

The purpose of this Report is to present to the Mackenzie Valley Land and Water Board (MVLWB or the Board):

- a) an update to the Construction Water Management Plan (Plan) as submitted by De Beers Canada Inc. (De Beers) under Water Licence (Licence) MV2005L2-0015; and
- b) a request to modify the compliance date of a revised plan.

### 2. Background

- December 16, 2014 – Version 3 of the Plan is conditionally approved by the Board;
- December 20, 2014 – De Beers submits the revised Plan (Version 4) to address the requested updates as outlined in the Board’s conditional approval letter;
- December 22, 2014 – Written confirmation of conformity is granted by Board staff;
- February 9, 2015 – De Beers seeks clarification on the regulatory process if a pumping rate increase was requested;
- February 10, 2015 – Board staff respond to De Beers that the request being proposed is a change to a Board approved plan, and therefore a revised Plan is to be resubmitted to the Board for approval;
- February 11, 2015 – De Beers resubmits the revised Plan (Version 5) for Board approval and a request to modify the compliance date; and
- February 12, 2015 – The Plan (Version 5) is presented to the Board.

### 3. Discussion

#### **Construction Water Management Plan (Plan)**

##### Background

De Beers submitted the Plan (Version 3) on September 15, 2014 to address engagement and engineering updates. The Board conditionally approved the Plan on October 16, 2014 following the resubmission of the Plan in accordance with the requested updates and written confirmation of conformity from Board staff. On October 20, 2014 De Beers resubmitted the updated Plan (Version 4) to address the requested updates as specified by the Board which was confirmed by Board staff on October 22, 2014.

##### Requested Change

On February 9, 2015 De Beers submitted a letter to the Board seeking clarification on the regulatory process if a pumping rate increase was requested. The increase would allow De Beers to achieve the dewatering/construction schedule. Board staff responded on February 10, 2015 stating that the Plan (Version 4) was submitted in accordance with Part G, item 3 of the Licence and contained information as outlined in Schedule 5, item 1 (including daily flow rates). The Plan (Version 4) was sent for review and was subsequently approved by the Board on October 22, 2014. As the request being proposed is a change to a Board approved plan, a revised Plan shall be resubmitted to the Board for approval.

The current average discharge or pumping rate from Kennady Lake (Area 3) to Lake N11 or Area 8 that is indicated within the Plan (Version 4) is a rate of  $0.73\text{m}^3/\text{s}$ , which was based on an estimated pumping capacity of the site dewatering infrastructure at the time. The latest assessment of the dewatering infrastructure's capability indicates that a discharge rate of  $1.5\text{m}^3/\text{s}$  is well within the operational limits of the infrastructure and consistent with the engineering design of pumps, piping and the outfall/diffuser into Lake N11 and Area 8.

De Beers submitted a request on February 11, 2015 to increase the current discharge rate to Lake N11 to a range of  $0.77\text{m}^3/\text{s}$  to  $1.5\text{m}^3/\text{s}$  to account for any changes to flow conditions. The Area 8 discharge rate will not change from the originally approved rate of  $0.77\text{m}^3/\text{s}$ .

##### **Request to Modify Compliance Date**

As specified under Part B, item 7, De Beers has submitted a request to modify the compliance date of the revised plan as required under Part G, item 18 which states:

“The Licensee shall adhere to the approved Plans referred to in Part G, item 2 (Waste Management Plan); Part G, items 3, 4, and 5 (Water Management Plans); Part G, item 11 (Erosion and Sediment Management Plan); Part G, item 12 (Explosives Management

Plan); Part G, item 14 (Geochemical Characterization and Management Plan); Part G, item 15 (Dyke A Construction and Management Plan); Part G, item 16 (Dyke Construction and Management Plan) and Part G, item 17 (Processed Kimberlite and Waste Rock Management Plan), and shall annually review the Plans and make any necessary revisions to reflect changes in operations, or as directed by the Board. Revised plans shall include a brief summary of the changes made, and shall be presented in a format consistent with the Mackenzie Valley Land and Water Board's *Standard Outline for Management Plans*. Revised Plans shall be submitted to the Board for approval at least sixty (60) days prior to any proposed changes to the requirements in the approved Plan."

De Beers submitted this request as the increase to the flow rate does not represent a change in either a compliance condition, a monitoring or action level which was previously approved by the Board; only a change in the capacity of the pumps.

#### **4. Comments**

Part G, item 7 a) of the Licence sets out the maximum daily flow rate at the outlet of Lake N11 at 500,000m<sup>3</sup>/d, taking into consideration that the discharge rate does not cause the total flow rate (pumped and natural) at the outlet of Lake N11 to exceed the two-year maximum daily flow rate. Specific action levels, as outlined in the Plan, were set by De Beers to ensure protection to the receiving and downstream environment. Part G, item 8 of the Licence further directs De Beers to cease winter discharge when the established action levels are exceeded.

During Drawdown of Kennady Lake, winter Discharge into Lake N11 shall cease if the winter Discharge Action Levels in the approved Construction Water Management Plan (pursuant to Part G, item 3) are exceeded. The Licensee may recommence winter Discharge upon written authorization from an Inspector.

#### **5. Reviewer Comments**

Board staff determined that review of the proposed change could occur through discussions with the Inspector. This was deemed appropriate as the proposed increase to the flow rate would still be under the maximum daily flow rates at the outlet as indicated in Part G, item 7 a) of Licence MV2005L2-0015 which was assessed during the regulatory review period. As well, the action levels as outlined in the Plan, which were set to ensure protection to the receiving and downstream environment, have not changed and shall still be adhered to. The Inspector stated they can support the increase flow rate into Lake N11.

## 6. Security

n/a

## 7. Conclusion

Board staff concludes that the updates to the Plan will not adversely affect the receiving or downstream environment as the change to the flow rate would still be under the maximum daily flow rates at the outlet (as indicated in Part G, item 7 a) of Licence).

## 8. Recommendation

Board staff recommends that the Board approve the:

1. Construction Water Management Plan (Version 5); and
2. Request to modify the compliance date of the Construction Water Management Plan.

## 9. Attachments

- [Water Licence Conditions](#)
- [Reasons for Decision](#)
- [De Beers' Letter to the Board seeking clarification on the Regulatory Process – Feb 9, 2015](#)
- [Board staff Response to De Beers' Feb 9, 2015 Letter](#)
- [Construction Water Management Plan \(Version 5\)](#)
- Draft Decision Letter

Respectfully Submitted,



Angela Love  
Regulatory Officer