Wek'èezhìi
Land and Water Board

STAFF REPORT

Company: BHP Billiton Diamonds Inc. (BHPB)	
Location: Ekati Diamond Mine	**Water Licenses:** MV2001L2-0004; MV2001L2-0008: MV2003L2-0013 and MV2002L2-0002
Date Prepared: December 13, 2006	**Meeting Date:** December 19, 2006
Subject: Review comments on the proposal to amalgamate Type B water licenses for road watering into Type A water licenses	

1. Purpose/Report Summary

The purpose of this staff report is to present to the Board the review comments received on the proposal made by Board staff to regulate the road watering activities, currently licensed under the Type B water licenses, under BHPB's Type A water licenses.

Specifically, this report is provided to assist the Board in making rulings on the following three questions related to the amalgamation of the licenses:

a) Are the road watering activities regulated under the Type B water licenses within the scope of the Type A water licenses?

b) Do the conditions of the Type A water licenses allow for the road watering activities currently regulated under the Type B water licenses?

c) Do the conditions of the Type A water licenses ensure the protection of affected waters to an equal or greater extent than the existing Type B water licenses?

2. Background

At the last Board meeting, Board staff proposed an alternative regulatory approach for the road watering activities currently regulated by two Type B water licenses (MV2001L2-0004 and MV2002L2-0002). These Type B licenses allow freshwater to be withdrawn and applied to roads for dust control. The alternative regulatory approach involves the cancellation of the Type B water licenses and the regulation of the road watering activities under the Type A water licenses, a more stringent type of license. The Board agreed to consider this approach.

The process for considering this approach involves a number of steps, the first being the solicitation of input from stakeholders on the three factors that must be satisfied in order for the Board to proceed with cancelling the licenses. The three factors are:

- the road watering activities must be within the scope of the Type A water licenses
- the conditions of the Type A water licenses must allow for the road watering activities to occur
- the conditions of the Type A licenses must ensure the protection of affected waters to an equal or greater extent than the existing Type B licenses.

Input was solicited from stakeholders by way of a letter signed by the Chair that outlined the proposed alternative regulatory approach and the background for the three factors listed above. The comment deadline was set for December 15, 2006.

3. Review Comments

Although no written comments were received to date, I spoke with Sean Kollee of the Independent Environmental Monitoring Agency and with Anne Wilson of Environment Canada. Both indicated that they support the alternative regulatory approach.

Any comments received following the submission of this staff report will be provided to the Board at the meeting.

4. Conclusion

There appears to be no concerns with either the proposed regulatory approach or the three factors for consideration.

5. Recommendation

I recommend that the Board rule that all three factors are satisfied and proceed to the next step in the process for considering this regulatory approach. The next step, if the Board rules that the three factors are satisfied, is to notify all parties of the Board's ruling and to request that BHPB notify the Board whether or not the company wishes to proceed with the cancellation of the licences.

If BHPB agrees to proceed with the cancellation of the Type B licences, a public hearing will have to be advertised. If BHPB disagrees, BHPB will submit a renewal application for WL MV2001L2-0004 within 60 days of their notification.

6. Attachments

- Excerpts from my last staff report on this issue (November 30, 2006) that provide further detail on the three factors for consideration.

Respectfully submitted,

SBaines

Sarah Baines
Technical Coordinator

EXCERPTS FROM MY NOVEMBER 30, 2006 STAFF REPORT

Proposed Regulatory Approach

With the goal of more effectively regulating water use and waste disposal at the Ekati Mine, Board staff proposes to regulate road watering activities under the provisions of BHPB's two Type A water licences:

- The Sable Haul Road watering activities under Water Licence MV2001L2-0004 would be regulated through a drawdown plan in accordance with part E, item 2 of Water Licence MV2001L2-0008[i] (the Sable, Pigeon, Beartooth expansion licence).
- The Misery Haul Road watering activities under Water Licence MV2002L2-0002 would be regulated through a drawdown plan in accordance with part D, item 1 of Water Licence MV2003L2-0013[ii] (the main licence).

Implementing this approach would require the cancellation of the two Type B licences under the provisions of section 18(1)(c)(iii) of the *Northwest Territories Waters Act,* followed by BHPB's submission of the two drawdown plans described above. The drawdown plans would be subject to stakeholder review and would require approval by the Board before activities commence.

Factors for Consideration

For the Board to proceed with this approach to regulating road watering activities, it must be satisfied that the activities are within the scope of the corresponding Type A water licence; that the conditions of the corresponding Type A water licence allow for the activities; and that the that the conditions of the Type A licences ensure the protection of affected waters to an equal or greater extent than the existing Type B licences.

A) Scopes of the Type A water licences

The scopes of the two Type A water licences[iii] both allow for the use of water for activities associated with diamond mining and milling in specific watersheds. The Board recognizes that the Misery and Sable haul roads and associated water intake structures cross areas between these watersheds, however, the road watering activities were assessed in the 1995 Environmental Impact Statement for the main licence[iv] and the 2001 Environmental Assessment Report for the expansion licence[v].

B) Type A water licence conditions

Sable Haul Road: Road watering is a recognized use of water under part D, item 1 of Water Licence MV2001L2-0008 which states that BHPB *"...shall obtain water for road watering and associated uses from Two Rock Lake Sedimentation Pond...or as otherwise approved by the Board."* This implies that the Board has the flexibility to evaluate other sources of water for the watering of the Sable Haul Road.

Misery Haul Road: Part C, item 1 of Water Licence MV2003L2-0013 states that BHPB *"...shall obtain water for domestic purposes, processing and associated uses from Grizzly Lake, Little Lake,...or as otherwise approved by the Board."* This implies that the Board has the flexibility to evaluate other sources of water for the watering of the Misery Haul Road.

C) Protection of affected waters

If this regulatory approach is adopted, the road watering activities would be subject to all conditions of the Type A licences and would have to be carried out in accordance with the approved drawdown plans.

[i] Part E, item 2 of Water Licence MV2001L2-0008 reads as follows:

Prior to the commencement of dewatering or draw-down of and lakes, the Licensee shall submit to the Board for approval, a Dewatering Plan for each lake that shall include, but not be limited to, the following information:

- *a) volume of water to be dewatered from each source;*
- *b) the expected quality of water to be discharged to the receiving environment;*
- *c) a schedule for dewatering and daily discharge rates;*
- *d) pumping methods including locations of intake and outflow structures;*
- *e) the design of any erosion protection structures in the discharge areas;*
- *f) the description of procedures for visual inspections of any erosion along the affected water course;*
- *g) the frequency and locations for water quality monitoring as referred to in the "Surveillance Network Program";*
- *h) the frequency, location and procedures for monitoring glow rates in the discharge stream;*
- *i) the design of pipeline and related facilities;*
- *j) the procedures and rates for dewatering during the winter months to minimize erosion of the downstream watercourses, adjacent shorelines and damage to fish habitat; and*
- *k) the identification of any treatment that may be used to ensure that effluent quality criteria are met, in accordance with Part G, Item 11(d).*

[ii] Part D, item 1 of Water Licence MV2003L2-0013 reads as follows:

Prior to the commencement of Dewatering or Drawdown of any natural water bodies, excluding the Drawdown of Grizzly Lake, Little Lake and Thinner Lake (Misery Camp), the Licensee shall submit to the Board for approval, a Dewatering or Drawdown Plan for each water body that shall include, but not be limited to, the following information:

- *a) volume of water produced by Dewatering or Drawdown of each water body;*
- *b) a schedule for Dewatering or Drawdown and maximum pump rates;*
- *c) pumping methods including locations of intake and outflow structures;*
- *d) the design of any erosion prevention structures in the areas where water or Waste is discharged;*
- *e) the description of procedures for inspecting any erosion along the affected watercourse;*
- *f) a description of and mitigation measures for any predicted hydrological or water quality impacts to downstream water bodies;*
- *g) the schedule and locations for water quality monitoring;*
- *h) the frequency, location and procedures for monitoring flow rates in the discharge stream and in the receiving water body;*
- *i) the design of any pipelines and related facilities; and*
- *j) the procedures and rates for Dewatering or Drawdown to minimize erosion of downstream water bodies and adjacent shorelines, and, in winter, damage to spawning habitat from the development of icings, overflows or glaciation.*

[iii] Scope of Water Licence MV2001L2-0008

This Licence entitles BHP Billiton Diamonds Inc. to use water, dewater Sable, Pigeon, and Beartooth Lakes for the purpose of mining, to drawdown Two Rock Lake, divert Pigeon Stream around the Pigeon Pit, pipe water from Bearclaw Lake outflow around Beartooth Pit, use water from Ursula and Upper Exeter Lake, deposit processed kimberlite into the Beartooth Pit for the purpose of creating a pit lake, and dispose of waste for industrial undertakings in diamond mining and milling production and associated uses in the ***Koala, Pigeon and Sable Watersheds****, Northwest Territories as shown on Figure 6, 8 & 10 of the Class A Water Licence and Land Use Permits supporting document, submitted August 21, 2001…* ***[emphasis added]***

Scope of Water Licence MV2003L2-0013

This Licence entitles BHP Billiton Diamonds Inc. (the Licensee) to divert water from Upper Panda Lake to Kodiak Lake, and to use water and dispose of Waste for the purpose of mining the Panda, Koala, Koala North, Misery and Fox kimberlite pipes and for operating the processing facilities and infrastructure associated with diamond mining within the ***Koala, Misery, King-Cujo and Desperation-Carrie Watersheds of the Lac de Gras basin****, Northwest Territories.* ***[emphasis added]***

The activities listed above are to be conducted as described in the 1994 NWT Diamonds Project Description which was assessed in the 1995 Environmental Impact Statement, as subsequently amended through approvals by the Board during the term of Water Licence N7L2-1616, and as described in the Water Licence Renewal Application.

[iv] Volume 3, Section 6.4 in the 1995 Environmental Impact Statement.

[v] Section 4.5.3 in the 2001 Environmental Assessment Report.