



INDEPENDENT ENVIRONMENTAL MONITORING AGENCY

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August 6, 2008

Violet Camsell-Blondin
Chariperson
Wek'eezhii Land and Water Board
P.O. Box 2130
Yellowknife NT
X1A 2P6

**Re: Comments on the Application for Renewal of the
Sable, Pigeon and Beartooth Water Licence**

Dear Ms. Camsell-Blondin

The Agency offers the following comments on the documents filed with the Wek'eezhii Land and Water Board to support the renewal of the Sable, Pigeon and Beartooth Water Licence (MV2001L2-0008). On February 25, 2008 the Agency sent some preliminary comments to BHP Billiton and we note that BHPB adopted some of our suggestions. However, we still have some outstanding matters as detailed below. The Agency also anticipates that there will be public hearing for this renewal application and that additional comments may be made at that time.

It is also not clear to the Agency how the amalgamation issue may be resolved, and depending on that outcome, we may have additional comments to make on this renewal application.

Our comments are shown below as high, medium and low priorities and concern. Most of these comments are directed at BHPB's proposals for specific changes to the renewal licence terms and conditions but there are some that deal with existing clauses of the licence or other supporting documents including the Sable haul road land use permit.

High priority or concern:

- **Part B, s. 1(o).** We note the proposed change to producing only a summary of the AEMP in the Annual Report. The Agency is of the view that there should be a requirement in Part K for a firm delivery date for the full AEMP monitoring results each year. We would suggest a date of March 31st each year. The summary in the Annual Report should focus on any significant findings or changes and should contain the details required under Part K, s. 7.



- **Part C, s. 1(b).** The proposed wording by BHPB would remove the discretion of the Board to request additional security outside of the Interim Closure and Reclamation Plan process. There may be circumstances where the Board may believe it is necessary to revise security between review and approval of a new ICRP, or in the case of an unexpected or temporary closure. We believe the Board should retain such an option.
- **Part G, s. 11(d).** Proposed changes to the Effluent Quality Criteria (EQC) include dropping several metals. The Agency is of the view that it would be premature to drop cadmium, chromium, lead, zinc, and nitrite in the absence of further work on modelling these contaminants as part of the LCCF modelling initiative and the adoption of the Watershed Adaptive Management Plan. The Agency believes that BHPB should provide further justification for the large increases proposed for arsenic, copper and nickel EQCs.
- **Part I.** This entire section needs to be revised to reflect the current status of the Pit Lakes Studies and the ICRP Reclamation Research Plan, the tundra soil study and the ongoing proposal for a chloride discharge criterion. We note that all of these studies are now overdue from the original licence deadlines.
- **Surveillance Network Program Section A and B(3).** We note that BHPB has agreed that removal of sump stations from SNP for Pigeon (Pi2) and Beartooth (Be2) is not appropriate. We also agree that it would be more important to change these stations to monitor all minewater rather than from individual sumps. We note that BHPB proposes to drop the future Sable sump or minewater station (Sa2) in favour of a station in the upper portion of Two Rock Sedimentation Pond. We would prefer that the minewater from Sable pit be sampled and that if BHPB wishes, another station could be added in the upper portion of Two Rock Sedimentation Pond. Whether this is done as an SNP station or as part of the AEMP is not a great concern, so long as the information is available.
- **Surveillance Network Program Section B(4).** The Agency supports a reduced monitoring frequency but believe it should be weekly rather than monthly.
- **Surveillance Network Program Section B(5).** Sampling should be daily during discharges, rather than weekly, for either the upstream or downstream end of Two-Rock Pond (but not necessarily for both). This should ensure that any pulses of greater-than-normal contaminated water can be captured.
- **Surveillance Network Program Section D(6).** The Agency is of the view that the Board has jurisdiction with regard to any waste (as defined in the NWT Waters Act as “any substance that, if added to water, would degrade or alter or form part of a process of degradation or alteration of the quality of the water to an extent that is detrimental to its use by people or by any animal, fish or plant”) that may be generated by the Project including dust and other aerial emissions that may enter water. The Agency does not agree with deleting this section but would like to see reporting requirements included for any updated air quality monitoring.
- **Sable Haul Road Land Use Permit and Preliminary Haul Road Design.** The Sable haul road preliminary design stipulates a number of considerations for road construction, including keeping road height and slope profile low, minimizing berms, using the proper grade of crush to facilitate movement, and providing caribou crossing areas at key crossing sites (as determined by survey). The document states that BHPB will consult with the communities to verify placement of the caribou

crossings. The Agency supports these initiatives in constructing a more “caribou friendly” road. In addition, the Agency believes that BHPB should attempt to construct most of the road with gentle side slopes, not just at designated caribou crossing (since one can never always predict where caribou will cross). Low profile and ease of access would be critical to reducing the barrier or filter effect of any road. This would also facilitate a better closure option that would reduce the barrier effect of roads after mine closure. Reducing the height of snow berms in winter is another critical factor, as shown in the wildlife effects monitoring undertaken by BHPB. The Agency looks forward to additional opportunities to work with BHPB, the WLWB and the communities in better designing the Sable Haul Road before its construction.

Medium priority or concern:

- **Part B, “dewatering”.** BHPB’s proposed definition would exclude pits or pumping from other man-made features on site. We would prefer that the original definition be retained.
- **Part B, “receiving environment”.** BHPB’s proposed definition removes any reference to any consequential effects from the discharge of Project waste on the terrestrial environment. While we understand the reasons for this, we believe this requires further discussion and consideration.
- **Part C, s. 1(a).** The proposed wording change by BHPB does not acknowledge that the Beartooth pit is already in operation and that security for that pit should be posted within 30 days of issuance of the renewal licence. As BHPB has already posted security for the current Sable, Pigeon and Beartooth licence, it may be possible to reduce this under the new licence to cover Beartooth only.
- **Part E, s. 8 and 10.** The Agency would prefer to see that the word “dewatering” not be removed but replaced with “Dewatering and Draw Down”. This will ensure that even during dewatering of the future pits, there will be some protection of the downstream aquatic environment. In section 10, although a Plan may be approved once, there should be provision for notice to be provided to the Inspector of any planned discharges from the Two Rock Sedimentation Plan.
- **Reduced submission timelines** for documents requiring Board approval (for example, see **Part F, s. 2, 12; Part G, s. 1, 2(a), 3(a); Part J, s. 1**). Reducing approval times from 90 or 60 days to 30 days may not allow for input from interested parties or proper Board meeting scheduling. This may also lead to delays in construction or other activities to be carried out on site.
- **Part F, s. 2(b).** While we understand BHPB’s explanation of why an adaptive management approach may not apply for a short construction period, perhaps adaptive management should be adopted for the operation of the Pigeon and Beartooth diversions rather than monitoring for effects after the fact (add adaptive management requirement to Part F, s. 2(a)). Thresholds may cover water quality variables that are not listed in the Effluent Quality Criteria. The Agency supports the adoption of an adaptive management approach for the construction and operation of this facility.
- **Part F, s. 12.** The Agency is of the view that the portion of this section relating to design requirements to support fish passage and habitat for the Pigeon Stream

- Diversion, both during and after Pigeon pit mining operations, is a sound measure regardless of whether it may be included in a Fisheries Authorization. This is similar to the ongoing issue related to the applicability of the ICRP to pit lakes and fisheries matters.
- **Part G, s. 11(b).** The Agency would suggest adding the words “in the event of an emergency” at the end of this section to clarify when the Inspector would exercise the authority.
 - **Part G, s. 11(c).** The Agency would like additional information to support the deletion of the part of this section that deals with no under ice discharges from Two Rock Sedimentation Pond.
 - **Part G, s. 11(d).** The Agency does not now support the explicit inclusion of a dilution zone. It may be reasonable to set a point where compliance will be reached but we do not see that as being exactly the same thing.
 - **Part G, s. 11(e).** The Agency would suggest adding the words “in the event of an emergency” at the end this section to clarify when the Inspector would exercise the authority.
 - **Part G, s. 12.** The proposed wording by BHPB may allow the Inspector to authorize discharges from the Two Rock Sedimentation Pond that are above the Effluent Quality Criteria. This should be clarified.
 - **Part G, s. 14.** It is not clear what the implications may be for LLCF water management with increased minewater discharges from both Beartooth and Pigeon pits may be. It may be desirable to have a ceiling on the amount of water that can be discharged from each pit to ensure that groundwater and downstream water quality are protected. This is the sort of concern that would be greatly facilitated by amalgamating the two licences.
 - **Part K, s. 4(h).** The Agency does not accept the proposed changes or rationale from BHPB. We suggest that this section be reworded as follow “an evaluation of the cumulative effects to which the Ekati mine contributes”. The Agency would like to ensure that BHPB studies its contributions to cumulative effects in both the Koala-Lac de Gras and Exeter Lake drainage systems.
 - **Surveillance Network Program Section C(2).** The Agency could not locate where in the ICRP Reclamation Research Plan (currently under revision) there would be monitoring of Ursula and Exeter Lakes. It may be preferable to state this requirement in the licence rather than the Plan.

Low priority or concern:

- BHPB’s renewal development indicates that the Environmental Agreement expires “End of Mine, subject to 5 yr reviews”. The Environmental Agreement states: “16.1 This Agreement shall terminate upon full and final reclamation of the Project site in accordance with the requirements of all Regulatory Instruments and the terms of this Agreement and completion of any and all post-closure monitoring and maintenance required in connection with the Project.”
- **Part G, s. 8(b)** BHPB suggests weekly inspections of the Two Rock Lake Sedimentation Pond facilities only when the facility is “operating” or as directed by the Inspector. The frequency of inspections should ensure monitoring of storm events. It may be best to better define “operating” to avoid confusion.

We would be happy to discuss these comments with you at your convenience.

Sincerely,

- Original Signed By-

Bill Ross
Chairperson

cc. Society Members
Laura Tyler, BHPB
Bruce Hanna, DFO
Anne Wilson, Environment Canada