

December 7, 2011

Nunavut Water Board  
PO Box 119  
Gjoa Haven, NU  
X0B 1A0

**Re: Responses to Comments on Application No. 4 to Amend Type A Water Licence  
2AMDOH-0713**

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Dear Ms. Beaulieu,

Hope Bay Mining Ltd. ("HBML") has reviewed the comments provided by the Kitikmeot Inuit Association, Aboriginal Affairs and Northern Development Canada and Environment Canada to the Nunavut Water Board in respect of HBML's Application No. 3 to amend Type A Water Licence 2AM-DOH0713 and is pleased to provide the following additional information in response to these comments. For ease of reference, the comments and responses are presented in tabular form.

<b>Comment</b>	<b>HBML Response</b>
<b>Kitikmeot Inuit Association</b>	
No Comments.	Noted.
<b>Aboriginal Affairs and Northern Development Canada</b>	
<i>The AANDC Water Resources Division currently does not have any concerns with HBML's re-organization of HBML's existing Temporary Waste Rock Pad to accommodate the increased amount of underground waste rock.</i>	Noted.
<i>Note on Monday, Dec. 5 David Abernathy (AANDC) clarified the second bullet of the Nov. 25 2011 AANDC submission and provided the following comments/</i>	HBML will ensure that all mineralized underground waste rock will be returned underground as backfill through progressive and final reclamation procedures.

<p><i>recommendations in its place (see email correspondence attached at Appendix A):</i></p> <p>-The AANDC Water Resources Division does not object to HBML's plans to use non-mineralized underground waste rock for surface construction purposes and have excess material be reclaimed in-place on the waste pile.</p> <p>-HBML should ensure that all mineralized underground waste rock will be returned underground as backfill through progressive and final reclamation procedures.</p>	
<p><i>HBML must ensure that underground waste rock segregated for surface construction purposes will be analyzed to the same degree at surface aggregate (quarry) sources.</i></p>	<p>The geochemical sampling and analyses proposed for the underground rock that could potentially be used for construction is more extensive than the sampling and analyses completed for the surface quarries. This reflects the potential for increased variability and higher sulphide content in some of the rock units that may be encountered in the underground mine.</p>
<p><i>If approved, the revisions to waste rock and ore management practices should be incorporated into the Interim Closure and Reclamation Plan and Final Mine Closure and Reclamation Plan submissions required by Part L, Items 4 and 6 of the project's water licence.</i></p>	<p>HBML will ensure that next revision of the Closure and Reclamation Plan addresses the changes proposed in the Waste Rock and Ore Management Plan.</p>
<p><b><i>Environment Canada</i></b></p>	
<p><i>EC would like to highlight the inconsistency of the bolded text at page 10 of the Plan with that of the geochemistry profile provided for diabase in Table 2 which indicates that the majority of the samples were non-PAG based on</i></p>	<p>HBML acknowledges that there is an inconsistency between Table 2 and the bolded text referenced in Environment Canada's comment, and is prepared to revise this sentence in the WRMP with an errata sheet as follows: <b>"However, the majority (92%) of the gabbro samples, and an appreciable portion (38%) of the diabase were classified as PAG or uncertain by TIC/NP ratios." Management procedures are not affected by this change.</b></p>

<p><i>NP/AP ratios and TIC/AP ratios. To that end EC recommends the text of the Plan be updated to reflect the results provided in Table 2.</i></p>	
<p><i>According to page 20 of the Plan, to confirm the geochemistry of the waste rock and thus it's placement on the waste rock pads, the sampling frequency for confirmatory testing will be as follows:</i></p> <ul style="list-style-type: none"> <li><i>• In the diabase, one sample for every 60 metres of mining (approximately 5,000 tonnes of rock) will be collected and submitted for full ABA tests.</i></li> </ul> <p><i>As per the Mine Environment Neutral Drainage Prediction Manual (Price, 2009), EC recommends the Proponent increase their sample collection from 1 to 3 samples per 5000 tonnes of diabase rock. Considering this waste rock may be used as construction material, EC believes this is a more prudent way to confirm these materials are non-PAG.</i></p>	<p>HBML believes that Environment Canada has misunderstood the intent of the recommendations provided in the Mine Environment Neutral Drainage Prediction Manual. An extract of the text on sampling frequency is provided at Appendix B of this letter. The Manual clearly states that the “<i>final sampling frequency be determined site specifically based on the variability of analysis results for critical parameters, prediction objectives and required accuracy</i>”, and that the recommended sampling frequencies (Table 8.2 in the MEND guideline, excerpt shown below) are only a starting point for determining sample numbers.</p> <p>As of December 2010 when the WRMP was submitted, HBML had tested 34 diabase samples, and the results showed extremely low variability in sulphur and NP content. All of the operational monitoring data for diabase (to be reported to NWB in March 2012) is consistent with the pre-mine data, and has also shown very low variability. Geologically, the diabase is expected to be highly uniform because it is an intrusive volcanic that was emplaced after the mineralization (sulphides and gold) that is associated with the Hope Bay deposits. The low variability in sulphur and NP content of this unit indicates that a relatively low sample frequency is appropriate. Despite this, a frequency of 1 sample per 5000 tonnes of rock is not generally considered to be low.</p> <p>Although HBML does not agree that the table in the MEND manual is applicable given the site specific conditions, our geochemical consultants (SRK) have indicated that the MEND manual table on monitoring frequency should be interpreted as follows: In the absence of site specific data, the recommended sample frequency for a rock unit with a mass of &lt;100,000 tonnes would be 8 samples, or 1 sample/12,500 tonnes. For a unit of &lt;1,000,000 tonnes, the recommended sample frequency would be 26 samples, or 1 sample/38,000 tonnes. For the diabase unit with a projected volume of 143,000 tonnes, the total number of samples following the MEND table would be only 4 to 12 samples.</p>

	<p>At the frequency proposed in the WRMP, HBML intends to collect 1 sample per 5000 tonnes of rock, and will generate a total of 29 samples over the course of development.</p> <p>Therefore, despite the low variability, the proposed frequency far exceeds the recommendations in the table. HBML believes the sampling frequency for the diabase should be maintained at 1 sample per 5000 tonnes.</p>
<p><i>According to page 21 of the Plan, before approving use of non-mineralized waste rock for construction, the following criteria need to be met:</i></p> <ul style="list-style-type: none"> <li>• <i>Non-mineralized diabase would need to have a sulphur content of less than 0.2%</i></li> </ul> <p><i>EC does not recommend ARD potential be assessed on %S alone but in combination with NP. Therefore, EC recommends NP also be analyzed for diabase prior to its use in construction.</i></p>	<p>As stated in the plan, diabase will be sampled and tested for full ABA at a frequency of 1 sample per 5000 tonnes of waste rock. The full ABA tests will include TIC and NP. Therefore, it will be possible to assess the ARD potential based on these other parameters. Nonetheless, due to the very low sulphur content, the diabase is considered to have a very low potential for ARD even where TIC and/or NP concentrations are very low. Therefore, the criteria used to determine whether this material is suitable for construction will be the sulphur content, as stated in the plan.</p>

Should you have any questions, please do not hesitate to contact me at [Chris.Hanks@Newmont.com](mailto:Chris.Hanks@Newmont.com) or at (720) 917-4489.

Sincerely,

Chris Hanks  
VP Environmental Affairs  
Hope Bay Mining Ltd.

**Appendix A: Email Correspondence from David Abernathy (AANDC) to  
Nunavut Water Board Clarifying Comments re Amendment No. 4**

-----Original Message-----

From: David Abernethy [<mailto:David.Abernethy@aandc-aadnc.gc.ca>]

Sent: Monday, December 05, 2011 12:10 PM

To: Phyllis Beaulieu

Cc: Ian Parsons; Kevin Robertson; Sexsmith, Kelly

Subject: Water Licence 2AM-DOH0713, Amendment Application No.3 - Point of Clarification

Hi Phyllis,

I would like to provide some clarification to a recommendation included in the Nov. 25, 2011 submission made by Aboriginal Affairs and Northern Development Canada (AANDC) for the above-referenced water licence amendment application. More specifically, the second bulleted recommendation that addresses the management of underground waste rock. AANDC supports Hope Bay Mining Ltd.'s request to use non-mineralized (non-potentially acid generating) underground waste rock for surface construction purposes and have excess material remain in-place on the waste pile. As described in the submitted Dec. 2010 Waste Rock and Ore Management Plan, this pile's final surface would be contoured and reclaimed in place. All mineralized (potentially acid generating) waste rock would be returned underground as backfill.

As a result, please disregard the second bullet of the Nov. 25, 2011 AANDC submission. The following comments/ recommendations are provided in its place for the Nunavut Water Board's consideration:

-The AANDC Water Resources Division does not object to HBML's plans to use non-mineralized underground waste rock for surface construction purposes and have excess material be reclaimed in-place on the waste pile.

-HBML should ensure that all mineralized underground waste rock will be returned underground as backfill through progressive and final reclamation procedures.

This point of clarification is in response to a conversation that I had with Kelly Sexsmith, Principal Environmental Geochemist of SRK Consulting earlier today. Ms. Sexsmith prepared HBML's Doris North Waste Rock and Ore Management Plan.

Please feel free to contact me to further discuss this email,

David

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David Abernethy

Regional Coordinator | Coordinateur régional Water Resources Division |  
Gestion de l'eau Nunavut Regional Office | Bureau régional du Nunavut  
Aboriginal Affairs and Northern Development Canada Affaires | Affaires  
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## Appendix B – Excerpt from Mine Environment Neutral Drainage Prediction Manual

Table 8.2 provides a suggested initial sampling frequency based on tonnage of disturbed rock when sampling a geologic unit or a mine component without any prior information to use as a guide. In the past, the sampling frequencies in Table 8.2 have been incorrectly described as “the recommended sampling frequency in British Columbia” without indicating that this is only a suggested starting point and is not the

*The recommendation here and previously is that the final sampling frequency be determined site specifically based on the variability of critical parameters, prediction objectives and required.*

required final number of samples. The recommendation here and previously is that the final sampling frequency be determined site specifically based on the variability of analysis results for critical parameters, prediction objectives and required accuracy. Despite previous misrepresentation, Table 8.2 is a potentially useful starting point and has been retained for this purpose.

Table 8.2 Suggested initial sampling frequency based on tonnage when sampling without prior information (adapted from BCAMDTF, 1989).

Tonnage of Unit (metric tonnes)	Minimum Number of Samples
< 10,000	3
< 100,000	8
< 1,000,000	26
< 10,000,000	80