Independent Environmental Monitoring Agency
P.O. Box 1192, Yellowknife, NT X1A 2R2 ▪ Phone (867) 669 9141 ▪ Fax (867) 669 9145
Website: www.monitoringagency.net ▪ Email: monitor1@yk.com

April 19th, 2004

Ian Goodwin
Manager, Environment, Community and External Affairs
BHP Billiton Diamonds Inc.
1102 4920-52nd Street
Yellowknife, NT X1A 3T1

Dear Ian,

RE: Rescan February 2004 Proposal to Update Ekati Air Dispersion Model

We have appreciated the opportunity to review the terms of reference for the above work before the project is undertaken, and hope that the attached comments by an independent reviewer will assist your consultant in refining the approach to be used.

For a number of reasons, our reviewer makes the case that the CALPUFF model is to be preferred for the new modeling work over the ISC3 model. We tend to support this view, largely due to CALPUFF's ability to handle time-varying emission inputs which characterize the predominant activities at the site such as blasting and rock-hauling, and which are not accurately captured in ISC3.

More importantly from the Agency's perspective is the need to ensure that particulate matter deposition can, and will, be modeled. Because of the concern of our aboriginal members about the impact of dust on caribou forage, we view PM deposition as an important priority for monitoring at the site, and we do not support Rescan's proposal to omit this from the program. Rescan's objections to incorporating particulate deposition in the modeling because of the non-availability of default values for tundra are countered in our consultant's report.

CALPUFF also has the important advantage of modeling for deposition of sulphates and nitrates (not possible in ISC3), as well as ammonia, and our consultant clearly takes a strong position that these ought to be done. Deposition of these substances can affect vegetation, and to the extent that they have the potential to negatively affect caribou habitat in the claim block, we would support the need to include this component in the modeling. The company should note that the World Health Organization's SO_2 guideline for the protection of lichen is currently set at annual mean of only 10 $\mu g/m^3$. The WHO annual average ammonia guideline for the protection of vegetation is 8 $\mu g/m^3$. Future

assessment of air emissions impacts to vegetation at Ekati should take these levels into account.

The Agency also recommends on-going collaboration between BHPB and both RWED and Environment Canada as the TOR are refined and the modeling work carried out.

In closing, we reiterate our appreciation for the opportunity to comment on the TOR, and note also the helpful step taken by the company to defer the previously scheduled vegetation sampling for 2004 until the modeling has been completed and appropriate sampling sites identified. Hopefully, this will be done in sufficient time so as to allow the work to be completed in the 2004-2005 season.

As a reminder, we observe that there was a recommendation arising out of our workshop this spring on BHPB's 2003 environmental monitoring results that dealt with the need to monitor dust blowing off cell B in the LLCF. This work could be done through the use of portable mini-volume samplers, and would not have to be deferred until the modeling is completed.

Sincerely,

-ORIGINAL SIGNED BY-

William A. Ross
Chairperson

Cc: Society members, IACT members

Attachments:

1. "Peer Review of Proposed Update to EKATI Mine's Air Dispersion Modelling Assessment" Dan Hrebenyk, Senes Consultants Ltd. April, 2004.