



**Independent Environmental Monitoring Agency**

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**Summary of Discussion from the  
Inter-Agency Coordinating Team (IACT)  
Meeting of June 13<sup>th</sup>, 2003**

**Participants:**

John Witteman	BHP Billiton (BHPB)
Jane Howe	BHPB
Chris Hanks	BHPB
Ian Goodwin	BHPB
Lionel Marcinkoski	RWED
Ken Hall	RWED
Graham Veale	RWED
Anne Wilson	Environment Canada
Dave Fox	Environment Canada
Dave Balint	DFO
Eric Yaxley	Dep. of Indian and Northern Affairs (DIAND)
Darnell McCurdy	DIAND
Latisha Heilman	MVLWB
Carole Mills	Environmental Monitoring (Agency)
Sean Kollee	Agency

Meeting began at 1:15pm

**Chair: Eric Yaxley (DIAND)**

Due to the large number of new participants in the meeting round table introductions occurred. Draft copies of the notes from the previous IACT meeting (May 9<sup>th</sup>) were distributed and comments were invited on the notes up until June 20<sup>th</sup>.

Eric mentioned that having a revolving chair for IACT meetings is possible at the request of any party. Agenda items for the meeting were solicited earlier in the week and a number had been added including:

- Water Licence Compliance (BHPB)
- BHPB Impact 2003 Report
- Further discussion of using IACT as a forum to discuss the WL renewal and technical advice
- Air Quality (BHPB 2001 Air Quality Monitoring Report)
- Follow up items from last meeting

*Water Licence Compliance (BHPB)*

John presented SNP station location and water licence compliance slides (attached as Appendix A). He listed all the non-compliant tests that have been identified, by SNP station, date and parameter from 2000 through 2002 and offered potential explanations for the 'exceedences'.

The issue of the difference between field and laboratory pHs was discussed by the group in order to develop ideas to improve the accuracy of the field pHs. John felt that differences between the field and laboratory samples were thought to be due to temperature differences, the effect of the bottle or QA/QC. Darnell discussed the possibility of on site lab testing. John replied that he prefers to use an independent lab for compliance testing.

Follow-up Item - John and Darnell report back on how in-house samples compare to the lab results and this was agreed to.
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John handed out the BHPB environmental workshop presentations from 2003 on CD. Jane mentioned that all formal correspondence to BHPB (the YK office) would go through Ian Goodwin.

*Impact 2003*

BHPB followed the format of the Impact 2000 Report in creating the current edition. Carole mentioned the Agency has had a quick review and appreciates the trends and adaptive management table (table 9). The Agency has not gone into the specifics of each item in the table however. She discussed a possible due date for comments to BHPB and the Agency has sent a note to the communities offering assistance in responding to the document.

John mentioned that major impacts of the mine were predicted in EIS such as land disturbance. Habituation of wildlife such as grizzly has been evident to mine personnel. The wolverine problem identified over the past years has been improved by better waste control and proper disposal of juice containers. John offered to provide the document to any party that was missing it. Chris mentioned the joint plain language version is scheduled for release in mid-July for both the Impact 2003 report and EA/WL 2002 reports.

Carole mentioned that the plain language summary should accompany the technical report to ensure the review period begins at the time both are distributed as stated in the EA. BHPB responded that the plain language version is made after the technical version and is more time consuming to produce due to the longer design and production schedules. Sean suggested it could be helpful for BHPB to distribute the plain language version prior to community visits. BHPB replied that it would continue to consult the communities that it visits prior to distribution of the plain language report through subsequent visits.

*Due dates for review of BHPB reports*

Eric discussed the procedure for resolving issues with the content of BHPB reports and the discontinuation of DIAND as the clearinghouse for minor comments. He stated that 45 days is a short period to have the minister involved in deficiencies, for minor issues comments can be sent to BHPB beyond the review deadline with the objective of improving the next report. IACT was also viewed as a good forum to set timelines for responses on BHPB reports.

BHPB mentioned that the communities report directly to it all comments and it agreed to respond/deal with community issues even if they were beyond the 45-day review period. BHPB also mentioned that the volume of material sent to each community is large enough that they cannot be expected to handle and respond to all reports. John discussed combining the Impact 2006 with the EA and WL report for 2006. This was considered favourably by IACT, but needs further discussion at a later date.

*IACT as a Water Licence (WL) renewal venue and a forum for technical advice*

Due to the absence at the last meeting of some key parties this initiative was discussed again. Lionel mentioned that trend analysis and a comparison of current conditions to the existing licence criteria and Sable, Pigeon and Beartooth criteria would be helpful, and that a moving bar will likely move lower rather than higher. BHPB should then look at options to manage, treat or mitigate potential water parameters of concern through the period of licence approval. Carole committed the Agency to get the minutes of IACT out quickly for review when the WL renewal is discussed.

The process for using IACT was discussed, such as adding the WL discussion as a final item in a meeting, possibly with a separate chair. An issue of non-attendance of parties at meetings was raised and its effect on delaying the process considered. If BHPB submits an early application to the MVLWB then a working group with a TOR can be set up that is more formalized and ensure full participation. In the interim the minutes from the IACT should be sent to the MVLWB. If or when a working group is created for the renewal of the license, a TOR will be created for that working group. The TOR formalizes the whole process thus ensuring that every organization on the distribution list, including aboriginal people, will be invited to participate in the meetings. Aboriginal parties to the Environmental Agreement will definitely be invited to participate or to send their technical staff. Having community representation on technical issues is difficult and BHPB encouraged the technical representatives from the communities to join any working group that is led by the MVLWB. Potential lack of funding in the communities for technical review was mentioned.

Carole mentioned that DIAND Waters had sent a letter to the agency agreeing to WL renewal discussions at IACT meetings if minutes could be placed on the MVLWB registry as well as the Agency registry. DFO has not had as much discussion with BHPB or the Agency on this issue and requested to review the DIAND waters comments. DFO has since agreed that IACT is a good technical venue. Latisha mentioned that the IACT minutes are currently sent to her and she would be responsible for getting them onto the

MVLWB registry. The Diavik TAC makeup was discussed and how it reports directly to the MVLWB board members not through the MVLWB project officer.

*Securities*

Eric mentioned that DIAND would be requesting additional securities from BHPB (based on the resolution within DIAND legal staff of the fulfillment of necessary securities based on an ILOC vs. a Guarantee). The corporate guarantee is not a cash commitment although the Government requested the guarantee at that time it was delivered. Helen Butler (BHPB) is also working on this issue.

*Asphalt plant*

John mentioned that a Calgary company has been contracted by BHPB to take air quality samples from the asphalt plant. BHPB is looking into suspended solids from the stack and believes all hydrocarbons will be volatilized at 300°C. BHPB is currently sorting the piles and will then crush the material to less than one-inch in size. It will take two days for BHPB to complete the processing once it is initiated. John mentioned the volume of material is 10,000 cubic meters, all contaminated above 2,500 ppm from spills of hydrocarbons and other liquids. Samples were taken from the pile and this data was distributed by BHPB, as well BHPB agreed to send out further data from samples taken from the contaminated material as well as any new data as it becomes available.

Distribute data on asphalt plant and contaminated material – John
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BHPB attempted land farming as an alternative to using the asphalt plant. Other options suggested include shipping the soil out and an incinerator that operates at higher temperatures. BHPB then mentioned another option is freezing in the waste rock pile that prevents seepage of the hydrocarbons.

RWED and EC mentioned their interest in potential hydrocarbon emissions and percent efficiency of combustion of the stack. Their concern is substances such as engine oil that are built to function at high temperatures and can resist combustion. RWED and EC mentioned that B-TEX, ethylene, xylene and pH are the parameters of greatest interest in stack testing. BHPB mentioned a risk analysis for the process would take it some time. RWED described the proven thermal desorption process, the first step is to drive contaminants out of the soil via heat, and a secondary combustion chamber is then used to burn the gases that come out of the material. Partial volatilization is a concern because it creates secondary products of combustion.

*Air quality*

Anne mentioned that she had attached this item to the agenda and invited Dave Fox (EC) to attend (He reviewed the 2001 BHPB air quality report). Graham Veale (RWED) also attended the meeting for this reason. Dave described his review of the air quality report. The HVAS on top of the accommodation building is poorly sited and the other (at Grizzly Lake) is suspect due to its proximity to a generator. The instruments were positioned due to access to power and this requires a second look to see where the instruments are more appropriate.

Modeling in 1995 that was used is no longer as valid due to changes in spatial configurations and magnitudes of the current mine operation. Dave has recommended a newer modeling program (an updated ISC model would be more appropriate). Potential pH changes from deposition could be modeled, using a 'CALPUF' model and smaller size fractions, pm10 and pm2.5. If there are any issues of concern identified by the model an appropriate monitoring program can then be developed with more intensive examination of specified areas.

Another concern is the BHPB production to emission rate comparison of SO<sub>2</sub>, NO<sub>x</sub>, and pm10. Diavik has one half of the ore production of BHPB but its pm10 emissions are thought to be higher than BHPB, likely one estimate is incorrect. After every mine expansion he felt estimates should be updated so reviewers can have confidence in the emissions numbers and impact. Estimates of future operations to compile additional air quality predictions should also be conducted. Using a modeling domain large enough to include Diavik emissions for a cumulative impact assessment was a final recommendation on modeling from Dave.

For the BHPB air quality program the claim boundary was used as the zone of influence. This should be done at the edge of the mine footprint as in the Diavik and Snap Lake mines. The boundaries of the claim block were seen as too far away and allow near total dispersion of emissions other than finer particles such as nitrates and sulphates.

BHPB inquired about the legislation that BHPB would be required to conduct this enhanced modeling and potential monitoring under. It was discussed that the EA in a general sense addresses the need for a monitoring program for air quality and that is what BHPB has followed, monitoring air quality every three years. EC is suggesting that it is unclear what the current air quality situation is, the mine has changed and the model used at the time is no longer relevant. Carole mentioned that Agency met with EC and RWED on air quality and the community concerns usually relate to dust and wildlife. The Agency also favours BHPB redoing the model so that it can provide greater comfort that a more intensive monitoring program is unnecessary. The Agency is also cognizant of the modeling being potentially expensive. BHPB responded that it is actual data collection where you gain confidence about effects due to the mine. EC wants to review the model and inputs prior to further commenting on what an appropriate monitoring program would be. EC and the Agency mentioned they would be sending comments to BHPB soon on this topic.

#### *Misery Surplus Water Atomization Program Monitoring*

Anne, Allison Armstrong (BHPB) and Jane have been working on the proposal to MVLWB for the monitoring program of the land treatment project. Those willing to be on the working group (Diavik, DFO, DIAND Waters, GNWT, Agency – reviewer only) will be able to contribute to the monitoring program. Due to limitations in the monitoring budget some elements of the program will go under existing mine monitoring programs. A tracer will likely be put into the water (bromide) to track where the spray will be deposited to focus monitoring efforts next year. Surface water quality, active layer

volumes, soil ecology through the U. of Sask., soil chemistry, immediate water quality in lake and small mammals will likely be elements of the monitoring program. The program will be an evolving document to allow opportunities to improve it. The initial study will be conducted for 3 years and the water licence is for 5 years for the project. Due to low quantities of contaminants in the mine water, either greater concentrations or volumes may be necessary to determine what level the system can perform at. EC is not proposing using more concentrated mine water. Air quality monitoring will be added to the 2004 AQ monitoring program. The deadline for comments is so soon because the system needs to be initiated quickly. The end of the month was the preferred deadline for comments to EC and BHPB to allow the MVLWB to expedite the licence.

*End of agenda items*

*Other Updates*

Darnell updated the group on his recent inspection of May 29<sup>th</sup> and 30<sup>th</sup>. This has already been distributed to the group. He felt that the landfarm is an issue that requires substantial work from BHPB to improve it. Darnell had hoped the asphalt plant was to be the way to deal with contaminated soils because of the snow piles and volume of material prevent any readily available quick fix. Approvals for using DL10 in specific areas for dust control were granted to BHPB by Darnell. Due to the perceived risk between fugitive dust and the product itself a 30-metre setback on water bodies was part of the authorization. BHPB agreed to a monitoring program this summer to sample seeps in the vicinity of the DL10 application and after heavy rainfall. A Culvert at 7.2 km was approved on the Misery road. Two ephemeral headwater streams affecting Fox pit are still an issue and DFO has given advice to BHPB. A Plan from BHPB to meet the DFO requirement was sent to Darnell for review. Darnell has closed off spills where contaminated material from the pits went to the waste rock pile only. Ponding of water on the north side on the explosive storage building will be managed by sloping the area to prevent accumulation of water. For the Fox tank farm fuel spill work is still being completed and BHPB will do a seep sample around the farm. A seep would only likely occur after a rainfall to mobilize the diesel. In response to a question he replied that water in a fuel tank farm is hauled away to coarse reject pile for safety purposes and drains into LLFC rather than Kodiak.

Latisha (MVLWB) granted an Extension for the seepage survey review until the 20<sup>th</sup> of June.

Jane mentioned last month that everyone from IACT is invited up to the mine for an annual visit. A late August site visit could be coordinated, possibly a Thursday and Friday overnight stay to ensure ample time to tour the expansion sites.

Carole mentioned the Agency board meeting occurred at the mine over a weekend visit. The environment team was impressive to the Directors and through the environment committee spill reporting and improved management has occurred. She also mentioned the NSMA has repositioned their representative on the Agency and Dave Osmond will be fulfilling the role (taking over from Bob Turner who remains EMAB chair).

*IACT June 13<sup>th</sup>, 2003 Summary Notes*

Chris mentioned the WL application would essentially be an update of the original licence. A starting point is the question of was the environment protected under the current licence and how did the mine perform? An overview of the licence could be helpful to the group and BHPB agreed to do this, and BHPB encouraged IACT to list problems and issues reviewers have with the original water licence (N7L2-1616) and carry on from there.

*Next IACT Meeting to be re-scheduled for August*