

Independent Environmental Monitoring Agency



2008-09 Annual Report Summary



Presentation Outline

- Agency 2008-09 Annual Report Summary
- Agency Highlights in 2008-09
- Agency Focus Since April 2009
- Summary

Agency Annual Report Summary 2008-09

“The Monitoring Agency shall report annually.... to BHP, the Minister, and the GNWT. All reports of the Monitoring Agency shall be made available to the Aboriginal Peoples and the general public.”



Environmental Agreement
for BHP Billiton Diamonds Project

Agency Open House in Lutsel K'e--September 2008

Wildlife Effects Monitoring

- 12 years of monitoring results
- 5,367 caribou counted in study area in 2008 (6,000 in 2007)
- More likely to find caribou farther away from the mine
- Caribou observations too few to analyze behaviour
- Higher snow banks and truck traffic decrease chance of caribou crossing roads
- Tracks and observations suggest caribou are not diverted by the LLCF

Wildlife Effects Monitoring

- Grizzly bear monitoring shows no trends through time, changes may not be detectable from current study design
- Better waste management = fewer wildlife incidents (no wolverine problems in 2006-09)
- Wolverine monitoring (DNA) not conducted since 2006
- Diamond mines jointly conducting a review of wildlife monitoring programs with GNWT and other experts

Wildlife Effects Monitoring



**Diamond Mine Wildlife Monitoring Program
Review Workshop
N'dilo September 2009**

Wildlife Effects Monitoring

Recommendation:

BHPB should carry out the wolverine DNA sampling program in 2010.

Wildlife Effects Monitoring

BHPB Response:

We shall continue in discussion with the aim to being involved in the program in 2010.

GNWT Response:

ENR agrees with the recommendations that all three diamond mines continue DNA sampling as the standard technique for detection of potential impacts to wolverine populations, as soon as possible.

Wildlife Effects Monitoring

Recommendation:

The Agency recommends that GNWT-ENR take the lead in coordinating the diamond mines wildlife monitoring program review, including a workshop in Fall 2009 to review program objectives and study designs.

Wildlife Effects Monitoring

BHPB Response:

GNWT-ENR currently takes a proactive and practical approach to the regular reviews of the wildlife monitoring programs for the EKATI Diamond Mine.

GNWT Response:

GNWT – ENR will convene and lead a workshop in Fall 2009 to review the project objectives and study designs of the wildlife monitoring programs for all three diamond mines and GNWT monitoring programs and studies in the area.

Aquatic Effects Monitoring Program

- 2008 AEMP, BHPB states there is no evidence of environmental impacts downstream of the mine
 - Some contaminants approaching CCME Guidelines
 - molybdenum in Leslie declining as Misery ore processing finished
 - nitrates in Leslie and Moose lakes declining
 - Follow-up testing from 2007 fish sampling done in Cell E (as a result of exposure to hydrocarbons of Leslie Lake fish)

Aquatic Effects Monitoring Program

- AEMP Guidelines and Northern Water Standards
 - Agency working with DIAND on TK toolbox
 - Agency provided comments to DIAND on Northern Water Standards background paper
 - Waiting for MVLWB water policy to assist with setting effluent discharge limits

Aquatic Effects Monitoring Program

Recommendation:

DIAND and the Wek'eezhii Land and Water Board, along with other related bodies, should work together with Aboriginal governments and other interested parties to develop scientifically defensible Water Quality Standards for the Northwest Territories. As this work could contribute towards the review of Effluent Quality Criteria in the water licence for the Ekati diamond mine, it needs to be completed well before 2013.

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Aquatic Effects Monitoring

WLWB Response:

A MVLWB Working Group is developing a Water and Effluent Quality Management Policy that will describe how the Land and Water Boards make decisions that will affect water quality in the environment.

BHPB Response:

BHP Billiton would support and participate in an NWT-wide initiative to develop a scientifically defensible process for developing Water Quality Objectives for diamond mines.

DIAND Response:

INAC recognizes that the development of clear guidance for determining water quality objectives and effluent quality criteria is important for regulatory improvement. Funding constraints will affect the pace at which we proceed on this issue.

Air Quality Monitoring Program

- Revised Air Quality Management and Monitoring Plan incorporates agreed upon improvements
- Air Quality Monitoring Report for 2008 not available
- Continuous air quality monitoring building relocated to a better site
- New incinerators on site
 - Not operated in 2007-09
 - need for new Waste Management Plan
- Agency pleased with progress and cooperation of BHPB in improving air quality monitoring and management

**Continuous Air Quality Monitoring Building
at New Site**

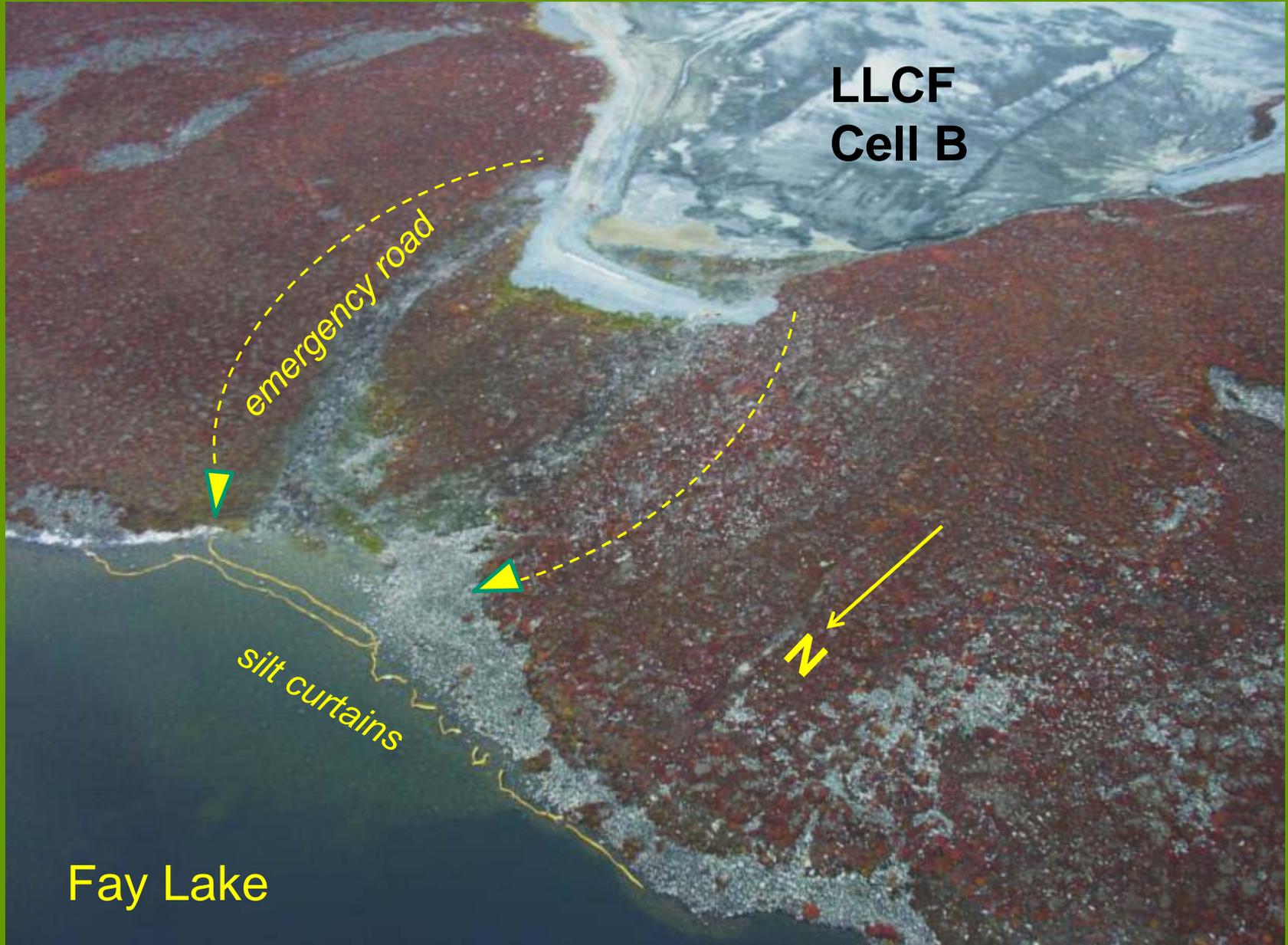


Dust Fall Monitoring Gauges at Old Camp



Tailings and Wastewater Management

- Fay Lake spill reported on May 16, 2008
- BHPB, DIAND, DFO and EC investigated
- BHPB notified all parties and cleaned up the spill well
- No charges laid, further monitoring and remediation necessary
- Exact cause unknown
- BHPB has undertaken extensive work at the north end of Cell B to prevent further spills



Fay Lake

LLCF
Cell B

emergency road

silt curtains

N

September 2008

Tailings and Wastewater Management

- Increasing concentrations of nitrates in Cell E water
- BHPB stopped discharging from the LLCF when above CCME guidelines (2.9 mg/L). Has since adopted the higher Industrial Performance Standard limit (4.5 mg/L)
- BHPB studying addition of phosphorous to reduce nitrate levels in the LLCF
- BHPB applied for use of Beartooth pit for minewater storage (approved by the WLWB in June 2009)

Traditional Knowledge

- No reports from BHPB during 2008-09
- DIAND, with help from the Agency, is working on TK component for AEMP guidelines
- EMAB is developing a proposal for a TK monitoring program; Agency is an observer

Traditional Knowledge

Recommendation:

BHPB should carry out and make public a 10-year review of its use of Traditional Knowledge (TK) in its environmental plans and programs. This review should document how the company has given full consideration to the incorporation of TK into environmental plans and programs, the successes and lessons learned from the TK Studies, and what changes or improvements in adaptive management can be attributed to TK.

Traditional Knowledge

BHPB Response:

At this time BHP Billiton continues to invest its resources into working with the communities in which it operates to develop new, forward-looking Traditional Knowledge initiatives. This approach inherently incorporates past experience in a constructive manner that is clearly focussed on benefitting the development of new initiatives.

Reclamation and Closure

- Revised plan submitted in December 2008
- Outstanding dispute over closure of the pit lakes
 - Company requested ruling from the WLWB on this inclusion of fish habitat restoration in closure plan
 - WLWB ruled it does have jurisdiction
 - BHPB is seeking a judicial review of this decision
- Agency and others find insufficient detail in the Reclamation Research Plans
- Public hearing on the closure plan delayed now due to judicial review

Regional Monitoring and Cumulative Effects

- GNWT held caribou workshop in February 2009
- New caribou study shows 14 km zone of influence around the combined Ekati-Diavik footprint
- BHPB and Diavik coordinated aerial survey of caribou during the summer of 2008
- No further progress on Multi-Project Environmental Monitoring Agency or EMF (new name for CEAMF)

Assessment of the Regulators

- DFO key participant in water licence hearing and ICRP process, good use of outside expertise
- DIAND continued to provide good technical expertise in the review of Ekati environmental reports, thorough and regular site inspections carried out, need for further progress on water quality standards
- GNWT lost its air quality expertise, stronger role needed in ICRP review
- Environment Canada not a regular participant in ICRP process
- Wek'eezhi Land and Water Board is managing the ICRP review process well, amalgamated the two Ekati water licences smoothly

Assessment of BHPB

- Continued cooperation with the Agency and regulators
- Working together with other diamond mines to change and improve wildlife monitoring
- Generally good environmental management at Ekati
- EIR consultations should begin before new report is distributed

Agency Highlights in 2008-09



**Board Meeting in
Lutsel K'e in September 2008**

Communications and Consultation

- Individual Director visits to communities upon request (meetings with YKDFN, presentation at NSMA workshop March 2009)
- Agency Board meeting, Open House and meeting with Chief and Council in Lutsel K'e in September 2008
- Agency held an environmental workshop in December 2008
- External review conducted of the Agency by SENES

Communications and Consultation



Agency Environmental Workshop
December 2008



Agency Annual General Meeting
December 2008

Agency Highlights – 2008-09



Ekati Site Visit in September 2008

Agency Highlights – 2008-09



**Wek'eezhii Land and Water Board
Public Hearing
Sable, Pigeon and Beartooth
Water Licence
March 2009**



Agency Focus Since April 2009

- Intervenor in dispute over pit lakes closure before the WLWB and upcoming judicial review
- Participant in diamond mine wildlife monitoring program review
- Board meeting and Open House held in Gameti in October 2009
- Agency has requested revisions to EIR 2009

Overall Perspective on Ekati

- Good environmental management at Ekati
- Good working relationship with BHPB staff
- Look forward to improved air quality and wildlife monitoring programs
- Need to move forward with Closure Plan and Reclamation Research
- Water quality work requires some attention, including the Adaptive Management Plan and pit lake water quality modelling

THANK YOU



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