



INDEPENDENT ENVIRONMENTAL MONITORING AGENCY

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January 11, 2017

Laurie McGregor
Environmental Assessment Analyst
Department of Environment and Natural Resources
Government of the Northwest Territories
P.O. Box 1320, Yellowknife, NT
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Re: 2016 Environmental Impact Report – Final Review Comments

Dear Ms. McGregor,

The Independent Environmental Monitoring Agency (Agency) has reviewed Dominion Diamond Ekati Corporation's (DDEC) 2016 Environmental Impact Report. The 2016 version of the EIR has greatly improved from previous years. The Agency was pleased to see that many of our comments were incorporated into this current version of the EIR. In our opinion, the 2016 EIR is satisfactory and therefore should be considered for approval. The following comments have been provided which we suggest would further improve future versions of the document.

General Comments

Future submission dates

The Environmental Agreement (EA) states '*BHP shall prepare and submit to the Minister, the GNWT, the Monitoring Agency and the Aboriginal Peoples a comprehensive report (the "Environmental Impact Report") on April 30, 2000 and on each third April 30 thereafter until full and final reclamation of the Project site has been completed in accordance with the requirements of all Regulatory Instruments and the terms of this Agreement*'. All previous EIRs have followed the 3 year submission requirement, however in July 2015, DDEC requested the GNWT delay the submission date to align with relevant monitoring programs. The request was accepted resulting in the current submission of the EIR in 2016. It is not clear whether future EIRs are to be submitted in accordance with the original schedule described in the EA or continue every 3 years from the current submission.

Recommendation: Future EIRs be submitted every 3 years from the current submission (2016 EIR), unless otherwise justified and approved by the GNWT. Therefore, the next EIR would be submitted in 2019.

Plain Language EIR Report

The Plain Language EIR Report was not available to the public and participants until the day before the 2016 EIR Public Workshops in September 2016 and the hard copies of the report were only available on the first day of the workshop. This left insufficient time for participants to read and review the report and inhibited the participant's ability to participate effectively in discussions and provide meaningful feedback.

Recommendation: Future EIRs be submitted with sufficient time for the public to review prior to workshops being held in order to solicit meaningful discussions and feedback.

The Plain Language EIR Report did not contain the graphs or diagrams that were presented during the public information sessions. These graphs and diagrams were helpful to summarize the results of the environmental monitoring programs in a visual format.

Recommendation: DDEC include simplified graphs and diagrams to support the results written in the Plain Language EIR Report.

Chapter 4: Environmental Management Framework

Section 4.4: Adaptive Management

As stated by the Agency in reviewing the previous EIR (2012), there is a need for a clear distinction between environmental protection strategies/activities that are adaptive management and those that are simply implementation of best practices. There have been noticeable improvements in this regard in the 2016 EIR. Adaptive management was thoroughly and effectively defined in section 4.4. All of the Response Plans are indisputable examples of adaptive management being implemented at Ekati to address the most serious water quality changes. However, in subsection 4.4.1 (Fine PK Deposition) the use of Beartooth pit for mine water and PK deposition could be considered the only instance of adaptive management in this discussion of FPK management. The rest of this subsection seems to be describing best practices. A more definitive example of adaptively managing PK would be to explain what operational changes were made to depositing and managing PK in the Long Lake Containment Facility (LLCF) that incorporate lessons learned from the unexpected PK spill into Fay Bay from Cell B in 2008.

Also, in subsection 4.4.5 (Roads), the design and siting of caribou crossings, while addressing unpredicted issues around caribou interactions with roads, are not in themselves examples of adaptive management. Adaptive management occurs when a threshold is exceeded and a change in action occurs. Adaptive management would occur if monitoring detects non-use of some crossing sites or suggests other sites would be more appropriate, and therefore new crossing sites are built. Similarly, the introduction of motion-sensitive cameras for monitoring caribou can lead to adaptive management if it informs changes in road berm construction to

better facilitate caribou movement. Traffic management details read more like best practices to avoid vehicle/caribou conflicts than adaptive management.

Recommendation: Section 4.4 should take care to exclude from the listing of adaptive management activities that are more accurately defined as operational best practices.

Chapter 5: Air

Section 5.4.1: Environmental Risks and Management: Particulate Matter

On page 5-26 of the Report, greenhouse gas emissions (in tCO₂e) from the Ekati mine are compared to territorial and national annual tCO₂e emissions. Based on this comparison, the report concludes '*air emission reduction programs at the Ekati mine have been effective ...*'. In the opinion of the Agency, the validity of this conclusion is questionable as many different factors contribute to determine territorial and national tCO₂e emission trends (i.e., the state of national and global economies) which are not directly relevant to a continually operating mine. While it is correct that DDEC's tCO₂e emission trends are favourable compared to territorial and national emission trends, it would be informative if DDEC could provide alternative defensible rationale (i.e., tCO₂e unit efficiency) for their stated conclusion.

Recommendation: DDEC should provide defensible rationale in support of their conclusion that air emission reduction programs at the Ekati mine have been effective.

Chapter 6: Land

Section 6.1.4: Community Involvement and Traditional Knowledge

This section summarizes community involvement in land programs at the mine site and states on page 6-4 that '*Previous environmental work at the mine site has successfully incorporated Traditional Knowledge (TK) into the environmental activities*'. The Agency is concerned that this statement may be over simplifying a very complex matter – that being the incorporation of TK into mine management planning and programs.

In its 2015-16 Annual Report, the Agency made the following recommendation:

Recommendation #3 (Traditional Knowledge): The Agency recommends DDEC document the implementation, successes, and lessons learned from Traditional Knowledge studies and how it is incorporated into environmental management at Ekati Mine.

Recommendation: While the Agency acknowledges DDEC efforts to involve community Elders and youth in land programs and on matters related to wildlife, it would be informative if DDEC would, in addition to summarizing what community involvement has taken place related to

land reclamation, state how TK has been incorporated into Ekati's management planning and programs.

Chapter 7: Water

Section 7.1.4: Community Involvement and Traditional Knowledge

For Community involvement in fish monitoring, p. 7-21 of the draft June 2016 EIR stated *'Associated with the Jay Project permitting, a shoal survey on the shores of Lac du Sauvage was conducted with Yellowknives Dene First Nation member...'*(sic). The Agency commented that this statement is void of detail and that it would be useful to know what aspects of the shoal was surveyed and what role the YDFN member(s) played in the assessment. For example, was their role to assist the biologists or to provide fish/fish habitat TK? The Agency notes this statement has been removed from the November 2016 EIR to be deferred to the next EIR in 2019, as explained in EIR Appendix F, p. 14.

It was not the Agency's intention that the statement be removed as fish shoal surveys is another example of community involvement and use of traditional knowledge. The Agency's desire is that DDEC provide greater detail when describing input received from community representatives and traditional knowledge holders.

Section 7.2.2.6: Changes in Water Quality of Wasterock Seepage

Page 7-72 details the 2012 and 2013 finding of hydrocarbons in seepage from the Coarse Kimberlite Reject Storage Area (CKRSA). Hydrocarbons were no longer found in the seepage from CKRSA in subsequent years. If the source is the Contaminated Snow Containment Facility or other facilities within the WKRSA system that contain hydrocarbon-contaminated snow, soil and rock, then it would be instructive for mitigation purposes to learn how that contamination is making its way through the CKRSA and out beyond its confines.

Recommendation: The EIR should explain the possible source of hydrocarbons in CKRSA seeps, why hydrocarbons were no longer present there in 2013 and 2014, and relate that to the discussion of fish exposure in Section 7.2.3.3.

Table 7.5-1. Key Environmental Risks for Water

There is an inconsistency within the summary of residual risks for water. The 2nd bullet states that of the 19 increasing water quality variables downstream of the LLCF, *'nitrate and potassium ...have been identified as the highest risk.'* The bullets above and below mention risks to drinking water safety and insufficient food supply for fish, but this one makes no mention of what biota could be adversely affected by high nitrate and potassium concentrations.

Recommendation: EIR should identify what the risks of elevated nitrate and potassium concentrations are for water bodies downstream of the LLCF, including what biota would be the recipients of adverse effects.

Chapter 8: Wildlife

General comments

Monitoring and mitigation programs in the wildlife sections are well-detailed. Mitigation has been effective for many potential impacts, most notably that there has not been a single caribou injured or killed as a result of a vehicle strike.

Some future actions are presented to address environmental risks. We note that much focus and ink are spent on arguably less important topics (e.g., breeding bird interactions), while more effort could have been given to topics such as changes in caribou migration. The summary of key environmental risks and looking forward provide a good wrap-up of ongoing concerns. Given the importance of changes in caribou migration routes, it would have been nice to see trend data presented on changes in migration.

8.3 Long-term Predictions

8.3.1 Caribou:

The caribou section provides very little in the way of long-term predictions or assessment of trends. For example, trends in the zone of influence (ZOI) up to 2009 or 2012 could be discussed.

Recommendation: DDEC should provide more long-term trend data and assessment of these trends.

8.4 Environmental Risks and Management

8.4.1 Caribou Migration Routes:

This section summarizes various studies that have supported examination of changes in migration routes, including the satellite collars. However, no data on trends in migration routes are actually provided.

Recommendation: DDEC should provide data examining trends in migration routes as shown from the collar data.

Should you have any questions concerning these comments, the Agency would be pleased to discuss them at your convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jaida Ohokannoak", with a long horizontal flourish extending to the right.

Jaida Ohokannoak

Chairperson

Cc: DDEC – April Hayward
DDEC – Harry O’Keefe
Tlicho Government - Sjoerd van der Wielen
Yellowknife Dene First Nation – Alex Power
Lutsel K’e Dene First Nation – Lauren King
North Slave Metis Alliance – Shin Shiga
Kitikmeot Inuit Association – Jared Ottenhof
Indigenous and Northern Affairs Canada – Jennifer O’Neil