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Prairie & Northern Region
Environmental Protection Operations (EPO)
5019 52nd Street, 4th Floor
Yellowknife, NT X1A 2P7

December 23, 2013

EC file: 5100 000 012 /015

MVEIRB file: EA1314-01

Chuck Hubert
Senior EA Officer
Mackenzie Valley Review Board
#200 Scotia Center, 5102- 50th Avenue
Yellowknife, NT X1A 22N7

Via Online Submission

Attention: Mr. Hubert

**RE: EA1314-01 – Dominion Diamond Ekati Corporation (DDEC) - Review
of developer's proposed Terms of Reference – Jay-Cardinal Project**

Environment Canada (EC) has reviewed the proposed Terms of Reference submitted by DDEC for the Jay-Cardinal Project. The following specialist advice in the attached "Reviewer Comment Table" is provided pursuant to EC's mandated responsibilities arising from the *Canadian Environmental Protection Act, 1999* (CEPA), the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act* (MBCA) and the *Species at Risk Act* (SARA).

If there are any changes to the provided plans and/or more information becomes available, EC should be notified, as further review may be necessary. Please do not hesitate to contact me at (867) 669-4724 or via email at sarah-lacey.mcmillan@ec.gc.ca.

Sincerely,

Sarah-Lacey McMillan
Senior Environmental Assessment Coordinator
Environmental Protection Operations
Prairie and Northern Region
Environment Canada

cc: Carey Ogilvie Head Environmental Assessment North (NT & NU), EPO
EC Review Team

Canada

www.ec.gc.ca

GENERAL INSTRUCTIONS FOR EXCEL TEMPLATE:

1. Do not leave blank rows above or between comments.
2. Do not modify or delete the instructions or the column headings (*i.e.* the grey areas).
3. Each comment must have an associated topic and recommendation.
4. All formatting (*i.e.* bullets) will be lost when this file is uploaded to the Online Comment Table.
5. If necessary, adjust the cell width and height in order to view all text.
6. Cutting and pasting comments from WORD documents cannot include hard returns (spaces between paragraphs).
7. If you would like to create paragraphs within a single cell, please use a proper carriage return (ALT & ENTER).

| <u>TOPIC</u> | <u>COMMENT</u> | <u>RECOMMENDATION</u> |
|---|--|---|
| <i>Be as specific as you think is appropriate; for example a section or page of the document, a recommendation #, general comment, etc.</i> | <i>Comments should contain all the information needed for the proponent and the Board to understand the rationale for the accompanying recommendation.</i> | <i>Recommendations can be for the proponent or for the Board. Recommendations should be as specific as possible, relating the issues raised in the "comment" column to an action that you believe is necessary.</i> |
| General | Editorial: "rational" should be replaced with "rationale" in several instances. | |
| Section 3.2.4 Description of the Existing Environment - Biophysical Environment (page 11, item 9.c.) | It states "describe each species in terms of the requirements listed in item #10 above". Is this an error in itemizing, should it read item #8? | Editorial: clarification required on reference made in item 9.c. |
| Section 3.3.1.2 Subjects of Note (SoN) - SoN-4 Impacts to wildlife and wildlife habitat from project components | Further additions to the description (incorporating seasonal variation and the sensitivities of specific life cycle stages) of the impacts to all wildlife value components, species-at-risk, and respective habitats from project-related changes. | SoN-4 should include a sub-bullet outlining the "potential for disruption to predator-prey relationships" |
| Section 3.3.1.2 Subjects of Note (SoN) - SoN-4 Impacts to wildlife and wildlife habitat from project components | Further additions to the description (incorporating seasonal variation and the sensitivities of specific life cycle stages) of the impacts to all wildlife value components, species-at-risk, and respective habitats from project-related changes: fifth bullet "potential for disruption of animal movements and migration patterns" | SoN-4, fifth bullet should include "population cycles, home ranges distribution and abundance" |

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| Section 2.3 Geographic Scope - (page 5, item 4) | Due to the diversion of water to surrounding water bodies, the quantity of water should be included as a reasonable foreseeable Project-related impact. | Change the end of this item to "...including those on water quality, water quantity, fisheries, and the human environment." |
| Section 3.2.4 - (page 10, item 5) | The list of parameters is reasonably comprehensive but could be more efficiently expressed. | Bullets could be organized as follows: Metals (total and dissolved - full suite, including mercury) Physicals (pH, conductivity, turbidity, hardness, alkalinity) Dissolved oxygen Total suspended solids |
| Section 3.2.4 Description of the Existing Environment - Biophysical Environment (page 11, item 6) | The aquatic habitats and organisms assessed should include those organisms in surrounding water bodies expected to be affected by the influx of water, as well as the water regimes on the project site and downstream. | Add to the end of the second sentence "...and surrounding water bodies likely to experience changes to water quantity due to the Project." In addition an editorial: correct duplicate numbering. |
| Section 3.2.4 Description of the Existing Environment - Biophysical Environment (page 12, item 12.b) | It would be useful to specify characterization. | Add "including particle size analysis and total metals..." |
| Section 3.3.1.1 Key Lines of Inquiry (page 18, item KLI-1) | The effects of rewatering of the lake after mining is complete should be included in this section. | Include a bullet outlining "closure hydrology issues associated with water sources used during rewatering of Lac du Sauvage". |
| Section 3.3.1.1 Key Lines of Inquiry (page 18, item KLI-2) | Treatment contingencies should be identified for all phases of the water management activities. | Add a statement in the paragraph: Estimates of predicted contaminant concentrations should include a description of any mitigation or treatment used in predicting levels. |
| Section 3.3.1.1 Key Lines of Inquiry (page 18, item KLI-2) | The rewatering of the lake after mining is complete should be included in this section. | Include a bullet outlining "water quality during rewatering of Lac du Sauvage". |
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