Environment and Climate Change Canada | Environnement et Changement climatique Canada

Environmental Protection Branch-Prairie and Northern Region
9250 49 Street NW
Edmonton AB
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January 20, 2017

via email to:stephane.robert@agnico-eagle.com

Stephane Robert
Environmental Superintendant
Agnico-Eagle Meadowbank Division
10 200 route de Preissac
Rouyn-Noranda QC
J0Y 1C0

Dear Mr. Robert:

Subject: ***"Environmental Effects Monitoring Cycle 2 Meadowbank Mine Interpretative Report"***

This letter is to advise you that Environment and Climate Change Canada has reviewed your Environmental Effects Monitoring (EEM) biological interpretive report entitled, "Environmental Effects Monitoring Cycle 2 Meadowbank Mine Interpretative Report". The review of interpretive reports takes into account information requirements in the *Metal Mining Effluent Regulations* (MMER) of the *Fisheries Act* and also offers comments on the study based on the EEM Technical Guidance Document and generally accepted standards of good scientific practice.

The review comments are appended. Comments referring to *Metal Mining Effluent Regulations* requirements are in bold and require a response.

Although not required by the MMER, submitting both electronic and hard copy versions of documents would help the Department in managing all the received regulatory information. Please send future electronic copies to Susanne Forbrich (susanne.forbrich@canada.ca)

Canada

Please be reminded that an EEM Study Design must be submitted in writing at least 6 months before a biological monitoring study is conducted. Should you have any questions or concerns regarding the EEM program please do not hesitate to contact Paula Siwik at (780) 951-8824 or paula.siwik@canada.ca.

Sincerely,

Susanne Forbrich
Regional Director
Regional Authorization Officer

Enclosure - Appendix 1 - Meadowbank Phase 2 IR comments

cc:	Paula Siwik	Environment and Climate Change Canada, Edmonton
	Cristina Ruiu	Environment and Climate Change Canada, Regina
	David MacDonald	Environment and Climate Change Canada, Iqaluit
	Amanda Winegardner	Indigenous and Northern Affairs Canada, Iqaluit
	Karen Kharatyan	Nunavut Water Board, Gjoa Haven
	David Hohnstein	Nunavut Water Board, Edmonton

Technical Advisory Panel Review of "Environmental Effects Monitoring: Cycle 2, Meadowbank Mine Interpretative Report" –June 26, 2015

The following comments and recommendations are based on a review of the report by a Technical Advisory Panel (TAP) consisting of representatives from the Nunavut Water Board, Indigenous and Northern Affairs Canada and Environment and Climate Change Canada.

MMER Requirements

1. **Section 4: Schedule 5, subparagraph 16(a)(iii) of the MMER requires calculation of the mean, median, standard error, standard deviation, minimum and maximum values for the benthic invertebrate and sediment endpoints. Please provide that information.**

2. **P. 71: Schedule 5, subparagraph 17 (j) requires that the date of the next biological monitoring study be included in the Interpretative Report.**

General Comments

3. p. 35: Please comment on the age correction factors from cycle 1 and cycle 2. Are they similar?

4. p. 41: A fish study is required for the next EEM biological field work. TAP members are supportive of a lethal study on 20 lake trout. The TAP recommends that both fin rays and otoliths be collected and used for aging as further development of this dataset could be of use over the longer term. The TAP also recommends that non lethal measurements (weight, length, fin rays) be collected on lake trout already caught in the nets after the 20 lethal samples have been collected.

5. The TAP would like to discuss the use of one or more reference lakes with the facility at the study design phase.

6. p. 55: There does seem to be more variability in sample station substrate in Third Portage North relative to Inuggugayualik Lake and Pipedream Lake. TPN station 2 and 5 stand out in a few metrics.

7. p. 55: Does percent total organic carbon (%TOC) in Third Portage North differ significantly from the reference lakes?

8. P. 57: While not strictly required under MMER, an analysis that could be useful would be constrained ordination or direct gradient analysis (as opposed to the indirect analysis using NMDS) to look for relationships between invertebrate community composition and sediment/substrate characteristics. While the interpretive report has noted that there has

been no impact of effluent on invertebrate communities, a better understanding of location-specific drivers of invertebrate composition may be useful in interpreting future studies (especially considering that there have been observations of some differences in substrate between the three sites- comment 6 above).