



February 10<sup>th</sup>, 2017

Karen Kharatyan  
Manager of Licensing  
Nunavut Water Board  
P.O Box 119  
Gjoa Haven, NU X0B 1J0

**Re: Agnico Eagle Mines – Meliadine Division Response to Sewage Treatment Plant Final Design and Construction Drawings Recommendation**

Dear Mr. Kharatyan,

As requested, the following information and comments are intended to address the recommendation outlined in the below letter:

- INAC – January 26, 2017, *Indigenous and Northern Affairs Canada's Review of Agnico Eagle Mines Limited's Submission of Final Design and Construction Drawings for Sewage Treatment Plant, Water Licence 2AM-MEL 1631 Part D, Item 1 & 2 - Meliadine Gold Project*

Should you have any questions or require further information, please do not hesitate to contact me.

Regards,

A handwritten signature in blue ink, appearing to be "Manon Turmel". The signature is stylized with a large, sweeping loop at the end.

Manon Turmel  
manon.turmel@agnicoeagle.com  
819-759-3700 x 8025  
Environmental Compliance Counselor



**Comment:** The provided document entitled 'Meliadine Sewage Treatment Plant' contains design of sewage treatment system for a maximum daily flow rate of 216 cubic meters. The average Biological Oxygen Demand (BOD) in the influent has been reported to be 200-360 mg/L. The water quality parameters for raw sewage (chemical oxygen demand or COD, total suspended solids or TSS, nitrate, nitrite, pH, total phosphorus, ammonia, total kjeldahl nitrogen or NTK, fecal coliforms and total coliforms) and treated sewage (BOD, COD, TSS, nitrate, nitrite, pH, total phosphorus, ammonia, NTK, fecal coliforms and total coliforms) have not been mentioned in the design report.

**Recommendation:** INAC recommends the licensee to mention the concentrations of water quality parameters for untreated sewage (influent) and treated sewage (effluent) in the provided report. The water quality parameters regarding sewage treatment plant are BOD, COD, TSS, nitrate, nitrite, pH, total phosphorus, ammonia, total kjeldahl nitrogen or NTK, fecal coliforms and total coliforms.

**Agnico Eagle Mines response:**

*The table below includes the concentrations for water quality parameters at the influent and at the effluent of the sewage treatment plant (STP). Most of the concentrations have been provided by the STP supplier and others have been based on information from Agnico Eagle's Meadowbank Mine. These parameters will be included in the weekly performance monitoring of the STP.*

Criteria	Influent Average	Effluent Quality
BOD	200-300 mg/L	<25 mg/L
COD	500 mg/L*	<50 mg/L
TSS	50-350 mg/L	<25 mg/L
Ammonia Nitrogen (NH <sub>3</sub> -N)	40-50 mg/L	0.89 mg/L
NO <sub>3</sub> (nitrate)	0.02 mg N/L*	50 mg N/L
NO <sub>2</sub> (nitrite)	0.01 mg N/L*	2 mg N/L
Tot.Kjeldahl Nitrogen	45-60 mg/L	12-19 mg N/L*
T-Phosphorus	5-12 mg/L	10 mg/L*
pH	6.5 - 8.5	6 - 9
Tot. Coliforms	15,900,000*	1000 cfu/100 mL
Fecal Coliforms	4,800,000*	1000 cfu/100mL

*\*Data from Meadowbank*