



September 26th, 2018

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

**Re: Agnico Eagle Mines – Meliadine Division Response to the Saline Water Treatment Plant Recommendations from CIRNAC**

Dear Mr. Dwyer,

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

- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) Technical Review Comments on the Design Report for the Saline Water Treatment Plant at Meliadine – Agnico Eagle Mines Limited.

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

Regards,

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Environmental Compliance Counselor



**Comment:** The design report explained the capacity for saline water both in the underground and at surface. However, the design report did not discuss any contingencies.

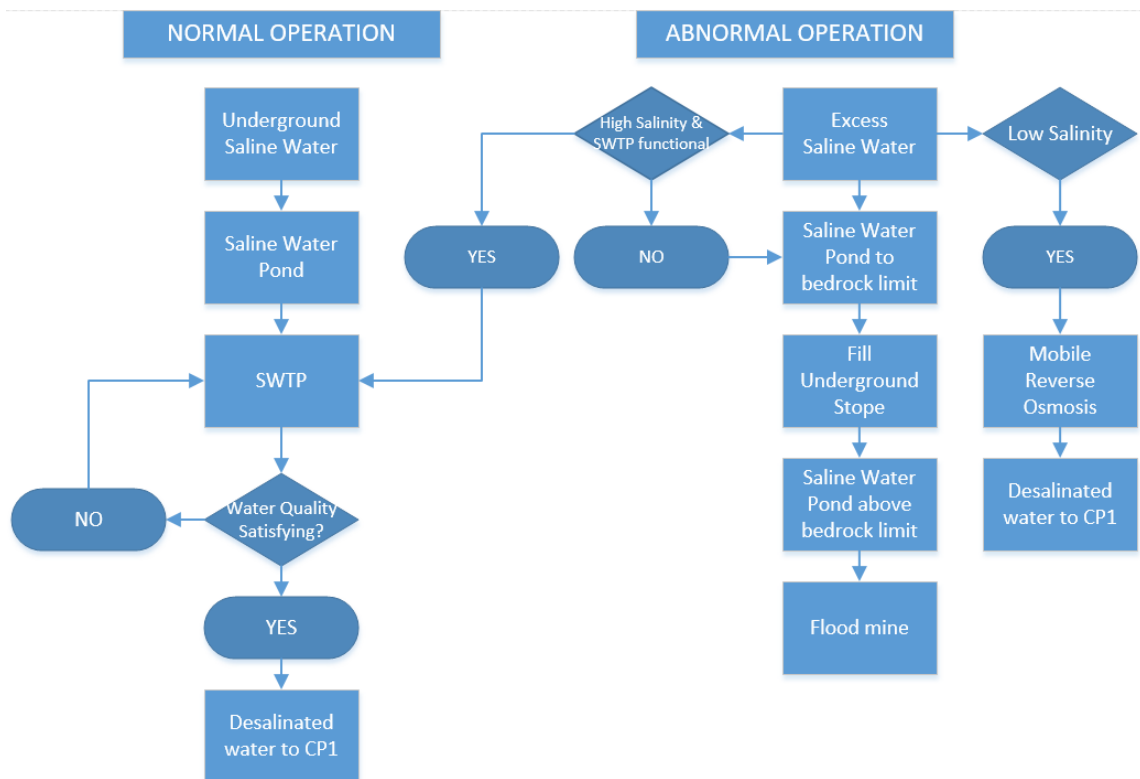
**Recommendation:** CIRNAC recommends that the design report include contingencies such as, but not limited to, long term breakdown of the treatment plant or inefficiencies of the plant and greater than expected inflows of saline water in the underground workings.

AEM Response:

Potential issues could arise during the operation of the Saline Water Treatment Plant (SWTP) and mitigation measures have been implemented to prevent and minimize the risks of releasing non-compliant levels of constituents to the environment. Below is a summary of the two most significant potential issues with their respective contingency plans.

- Underground saline water inflows in the mine:

In case of significantly higher underground saline water inflows in the mine, or of a major malfunction of the SWTP, the following contingency plan for storage has been developed. On the left is presented operations under normal conditions, and on the right are operations under abnormal conditions:





- Levels of constituents in CP1:

In the event that levels of constituents such as TDS are too high for discharge to the environment, the effluent will be ceased immediately. Different mitigation measures will be implemented separately or combined, depending on the criticality of the situation:

- Lower concentrations of constituents in the effluent generated by the SWTP.
- Treat water in CP1 (or waters added to CP1) with a reverse osmosis process.
- Depending if the water levels in CP1 are at a safe elevation with respect to the dike's operation criteria, optimize the pond's storage capacity to collect precipitation and spring melt.

**Comment:** High iron concentrations were reported in Table 1 of the design report. However, in the subsequent description following Table 1 and Table 2, the proponent does not intend to monitor or treat iron.

**Recommendation:** CIRNAC recommends that the applicant either include iron for treatment, or provide justification as to why they will not be monitoring or treating the high concentration of iron.

AEM Response:

AEM will include the iron parameter in the SWTP's effluent measurement. The SWTP aims to remove dissolved components and produce salt. Iron will be treated in the process and precipitated in the salt along with other dissolved components. Furthermore, the SWTP's post-treatment (reverse osmosis) is an additional step that will lower remove iron as well. It is therefore not expected to have high concentrations of iron in the SWTP's effluent.