DEPARTMENT: POLLUTION CONTROL AGENCY

STATE OF MINNESOTA
Office Memorandum

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TO: Mr. Bill Johnson
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Mining Director
ECO

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SUBJECT: Minnesota Pollution Control Agency Staff Recommendation on Impact Criteria Related to the Permittability of the Proposed PolyMet Tailings Basin

The Co-Lead Agencies for the PolyMet Environmental Impact Study (EIS), the Minnesota Department of Natural Resources (MDNR), U. S. Army Corps of Engineers (USACE) and U. S. Forest Service (USFS), have requested of Minnesota Pollution Control Agency (MPCA) staff a recommendation on impact criteria that will be used to assist in assessing the permittability of the PolyMet Tailings Basin. Although MPCA staff can recommend such impact criteria, it should be noted that any proposed permit for the facility must first go through the public notice and review process in accordance with state and federal rules before it can be issued.

***Recommendation***

To permit the proposed PolyMet tailings basin facility MPCA would seek evidence the facility will not have a statistically significant impact on sulfate in receiving waters that are wild rice production waters. To evaluate this, MPCA staff recommends the following impact criteria and performance criteria for assessing the proposed facility:

- There should be no discharge of 'surface seepage' from the tailings basin. Any surface seepage must be collected and returned to the tailings basin.

- To ensure 'deep' seepage is as low as practicably possible, the tailings basin should perform equivalent to an engineered lined system with respect to release of seepage to groundwater. This equates to a seepage loss of less than 500 gallons per acre per day.

- Modeling in the EIS must demonstrate that:
  - groundwater quality standards can be met at the facility property boundary,
  - all applicable surface water quality standards can be met in surface waters at the facility,
  - no increase in sulfate loading from existing conditions would occur at PM-11 ('Unnamed' Creek), PM-19 (Trimble Creek) and MLC-2 ('Mud Lake Creek'),
  - the concentration of sulfate in the Embarrass River at PM-13 would decrease from existing conditions, and
  - no statistically significant increase in sulfate would occur in the Embarrass River from upstream of the facility (e.g., PM 12.2) to downstream of the facility (e.g., PM-13).

- Operational monitoring (e.g., capture well flow rates) and ground and surface water quality monitoring conducted during facility operation must verify that:
  - assumptions used in the EIS modeling were correct (e.g., volume of water lost to deep seepage),
  - the EIS modeling demonstrations identified above are actualized,
  - compliance with applicable water quality standards, including pollutants other than sulfate, in surface waters at the facility is achieved, and
  - compliance with applicable ground water quality standards at the facility property boundary is achieved.

- Any discharge to surface waters in the Embarrass River watershed of 'excess' wastewater from the tailings basin during facility operation must meet effluent limitations based on the 10 mg/L wild rice sulfate water quality standard.

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