

From: Colbey Sullivan

To: Rep. Jean Wagenius

11/17/14

Rep. Wagenius,

You raised several issues of concern and requested a set of questions that could be asked during the February 11th meeting of the Environment, Natural Resources, and Agriculture Finance Committee. The topic of that meeting is the financial assurance component of the proposed NorthMet copper-nickel-precious metals mining project near Hoyt Lakes.

Context

In December 2013, the DNR, the United States Army Corps of Engineers, and the United States Forest Service released a Supplemental Draft Environmental Impact Statement (SDEIS) for PolyMet Mining Inc.'s proposed NorthMet mining and land exchange projects.^{1[1]} Under state and federal law, an environmental impact analysis is required before the agencies may authorize the proposed projects.^{2[2]} The agencies are accepting public comments on the SDEIS through March 13th of this year.

State and federal agencies will use the final EIS to determine whether to issue required permits and other authorizations for the NorthMet projects. In particular, DNR will use the final EIS to evaluate PolyMet's anticipated application for the required state Permit to Mine.^{3[3]}

Financial Assurance

Under state mining statutes and rules, a Permit to Mine applicant must demonstrate to DNR sufficient financial assurance and DNR must review the adequacy of each operator's financial assurance annually.^{4[4]} Financial assurance means a surety bond, insurance policy, trust fund managed by the state, or other financial arrangement that demonstrates an applicant/permittee's access to sufficient financial resources to comply with all permit requirements, including any reclamation and corrective actions that the Permit to Mine and associated environmental laws require. See the end of this document for full text of DNR's mining financial assurance rule.

SDEIS

1[1] Minnesota Department of Natural Resources, United States Army Corps of Engineers, and United States Forest Service. November 2013. *NorthMet Mining Project and Land Exchange*. 2,169 pages.

2[2] National Environmental Policy Act (42 USC 4321-4347), and the Minnesota Environmental Policy Act, (Minnesota Statutes, section 116D).

3[3] Minnesota Statutes, § 93.481.

4[4] Minnesota Statutes, § 93.49; Minnesota Rules part 6132.1200.

Although financial assurance is not a required component of the EIS, the agencies do discuss financial assurance briefly in the SDEIS document. Relevant excerpts include:

- “Per the State Permit to Mine, financial assurance would be required to ensure a source of funds that could be used by the MDNR in the event that PolyMet fails to complete closure and reclamation activities. Reclamation and post-reclamation cost estimates must be updated on an annual basis to account for the activities completed during the previous year. Estimates must be made for the contingency funds required in the event of unplanned closure during the course of the year.” (p. 1-18 and 1-19)
- “The level of engineering design and planning required to calculate detailed financial assurance amounts is typically made available during the permitting process and was not available at the time that this SDEIS was prepared.” (p. 3-136)
- “Financial assurance could be required indefinitely and could include self-sustaining instruments as discussed in the following sections.” (p. 3-136)
- “**Cost Coverage and Estimation** Financial assurance must cover the reclamation and post-reclamation activities that would incur costs to execute required funding. These activities include (but are not limited to):
 - implementation of corrective actions that may become necessary to address any permit noncompliance;
 - demolition of all structures;
 - remediation of any sites where petroleum products, reagents, additives, or other potential pollutants may have been released;
 - implementation of reclamation such as:
 - fencing the perimeters;
 - sloping and seeding the overburden portion of the pit walls;
 - constructing the East Pit outlet structure;
 - shaping and covering the Category 1 Stockpile;
 - removing culverts, dikes, ditches, and ponds, followed by grading and seeding;
 - constructing mitigation wetlands on the vacated stockpile locations;
 - closing and covering the Hydrometallurgical Residue Facility;
 - reseeding all areas; and
 - reclaiming the Tailings Basin.
 - long-term post closure monitoring and maintenance including:
 - monitoring and maintenance of the covers, slopes and containment systems of the Category 1 Stockpile, Hydrometallurgical Residue Facility, and Tailings Basin;
 - treatment of East Pit water and West Pit water in the WWTF collecting and pumping water from the Tailings Basin to the WWTP for discharge or transfer to the Mine Site for pit flooding;
 - off-site disposal of pore water from Hydrometallurgical Residue Facility;
 - monitoring and reporting groundwater and surface water quality; and
 - developing and implementing non-mechanical water treatment systems.
 - project management and site security for the above.” (pp. 3-136 and 3-137)

- **“Financial Assurance Instruments** The financial instruments must be robust enough to address a wide variety of contingencies such as (but not limited to):
 - physical difficulties in implementing reclamation plans;
 - escalating standards of closure, reclamation, and long-term monitoring;
 - unanticipated liabilities;
 - unplanned cessation of mining;
 - failure of the mining company; and
 - failure or limitations on the ability of third parties to pay reclamation costs.
 The financial assurance instruments for the NorthMet Project Proposed Action must:
 - be available and made payable to the MDNR when needed;
 - be sufficient to cover the costs estimated;
 - be fully valid, binding, and enforceable under state and federal law;
 - not be dischargeable through bankruptcy; and
 - be approved by the MDNR.” (p. 3-138)
- “The final Reclamation Plan (to be applied at the end of mining) and the Contingency Reclamation Cost Estimate (contingency for mine closure prior to the planned 20-year Life of Mine) would be developed by PolyMet and its consultants based on detailed engineering studies that would be finalized through permitting (pursuant to the EIS process). As required, PolyMet would ensure that the financial assurance amount is established as a function of (but not limited to) the following three main variables:
 - extent of surface disturbance and potential releases from waste storage facilities,
 - reclamation and long-term care standards (including mechanical water treatment), and
 - reasonable assessment of the costs to execute the Contingency Reclamation Plan.” (p. 3-137)
- “PolyMet intends to propose financial instruments based on appropriateness and compatibility with the specific activities for which assurance is being provided. It is likely that different instruments would be proposed to assure different components of the reclamation cost estimate and so would likely use more than one instrument at any point in time. For example, while insurance policies may not be appropriate for primary assurance, they could provide meaningful additional support over and above the expected costs or activities.” (p. 3-138)

Potential Questions

Per your request, the following are potential questions that could be raised during the public hearing:

1) **Unanticipated liabilities.** The SDEIS document notes that the financial assurance instrument “must be robust enough to address a wide variety of contingencies such as...unanticipated liabilities”. What liabilities will be included? How will they be quantified? How will PolyMet and DNR account for the uncertainty inherent in estimating unanticipated liabilities? Does this category include costs to remediate potential degradation of surface or groundwater due to unanticipated spills, seepage, or other factors? If so, how will PolyMet and

DNR estimate the cost and probability of this? Will PolyMet and DNR look to the experience of comparable mining projects? What specific comparables exist? How common is unanticipated pollution that requires remediation?

2) **PolyMet insolvency.** Similarly, the SDEIS document states that the financial assurance instrument must be robust enough to withstand the failure of the mining company and/or a failure of a third party to pay reclamation costs. How will PolyMet and DNR structure the financial assurance instrument(s) to accomplish this? Are there examples to draw from? To accomplish this objective, does DNR require parent companies or majority shareholders to be a party to the state Permit to Mine and assume the incumbent contractual liabilities?

3) **Evolving science.** According to the SDEIS, PolyMet and DNR will determine financial assurance requirements by modeling future costs and reviewing the estimates annually in light of actual activity and measurements at the site. How will the measurement and modeling be adjusted over time, to reflect the developing science of effects from minerals and wastes? Will this science require statutory changes to have effect, or will DNR determine how measurements and scientific developments will change required reclamation? Will the financial assurance instruments be automatically adjusted to reflect these changes or will this need to be negotiated/agreed to by PolyMet?

4) **Financial assurance calculation – length of liability.** The SDEIS notes that once the project ends, water treatment and monitoring will be required until the relevant legal standards for surface and groundwater quality are met. The SDEIS agencies modeled 200 years of treatment for the mine site, and 500 years for the plant site. The actual treatment/monitoring period is unknown, but anticipated to be long-term. Given the uncertainty about the extent of the treatment/monitoring period, how will PolyMet and DNR estimate financial assurance requirements that protect taxpayers both now and, potentially, centuries into the future? Will financial assurance requirements initially be based on the SDEIS's modeling of 200 and 500 years of treatment/monitoring, with the ability to annually revise the period/cost downward based on actual monitoring data at the site? What is the net present value of 200 years of treatment and monitoring at the mine site and 500 years of treatment and monitoring at the plant site, assuming a realistic rate of inflation over the periods? Will this potentially very long period of time factor into the form of the financial assurance instruments that are provided (such as requiring backup or alternative assurance instruments or funding with government securities)?

5) **Potential revenue-liability mismatch.** Assuming the life of the mining project is 20 years but anticipated treatment and monitoring costs plus the remediation of any unanticipated pollution could continue for centuries, is it mathematically possible to develop a financial assurance instrument that will both a) adequately protect taxpayers and b) allow for a profitable mining project?

6) **Facility obsolescence.** The water treatment system envisioned in the SDEIS would have at least four components: a waste water treatment facility for the mine site, a waste water treatment facility for the plant site, a stockpile cover system, and a tailings basin cover system. What is the useful life of each of these facilities? Assuming the SDEIS's modeled 200/500-

year treatment period, how often would each facility require maintenance or replacement? How will PolyMet and DNR estimate and incorporate these foreseeable costs into the financial assurance calculation?

7) Evolving water quality standards. Applicable water quality standards may change over the life of the project and post-closure water treatment and monitoring. If the standards become more stringent, project costs may rise. By law, DNR must review the project's financial assurance annually and make any needed adjustment accordingly. Based on experience, does DNR anticipate that the project will be "grandfathered" and exempt if more stringent standards arise? If not, and anticipated treatment costs increase, how will DNR estimate the corresponding increase in project costs and financial assurance? How, mechanically, will the financial assurance instrument(s) be modified to reflect the increase in liability?

8) Proper assurance instrument for uncertain, long term liability. The SDEIS models centuries of treatment and monitoring liability. Based on historical evidence, one could argue that the modeled 200/500-year treatment and monitoring period will extend well beyond the viable lifetime of the project proposer, third-party financial institutions, or even the DNR as we know it today. Of the available financial instruments, which have proven sufficient to shield taxpayers from liability over an unknown but potentially very long term period? What examples exist? If none exist, how will PolyMet and DNR mitigate this uncertainty? If the DNR requires a state-run trust fund, would the fund be managed by the State Board of Investment?

9) Adequacy of assurance laws. Does DNR believe current financial assurance statutes and rules are sufficient to protect the taxpayer from assuming any project or pollution cleanup costs?

10) Groundwater hydrology. According to the SDEIS, the project could impact groundwater resources. What tools or resources are currently available to understand groundwater hydrology on the project site and in the surrounding area? Is it necessary to have a firm understanding of groundwater hydrology in order to accurately estimate project impacts, issue state permits, and implement a meaningful groundwater monitoring system for the project?

11) Public input. Does DNR hold public hearings to solicit feedback on the financial assurance component of a Permit to Mine application? Will there be public hearings for this permit?

12) Engineering standards. The SDEIS notes that PolyMet is not required to provide the level of engineering design and planning required to calculate detailed financial assurance amounts until PolyMet applies for Permit to Mine. This information will influence the financial assurance requirement. What if any control will DNR have over these detailed engineering design and facility/equipment plans? Does DNR routinely require the best-available pollution control technology, regardless of cost?

13) Annual financial assurance review. The law requires DNR to annually review the adequacy of the project's financial assurance. Will DNR's initial financial assurance

requirements assume the continued use of current pollution control technology for the life of the project, or will DNR assume that PolyMet will successfully adopt the lower-cost, non-mechanical effluent treatment systems envisioned in the SDEIS? Would implementation of these alternative systems lower the project cost and corresponding financial assurance?

14) **Project impact modeling.** Financial assurance will be based, at least initially, on modeled/estimated impacts. The 200/500-year treatment/monitoring periods are derived from a set of models with a 90 percent significance, or a 90 percent chance that the evaluation standards would not be exceeded. Typically, a 90 percent significance level will establish a range, based on variance and error estimates. What are the ranges of how long reclamation efforts will have to go on, at a 90 percent modeling significance? Is it possible that the ranges extend longer than 200 and 500 years? What steps has DNR taken to verify the model's ability to accurately anticipate nonferrous mining project impacts?

15) **Financial assurance civil penalties.** State statute and DNR rules authorize the agency to pursue civil penalties if a permittee fails to comply with DNR's financial assurance requirements. Has DNR assessed these penalties before? What were the circumstances? Were the laws sufficient to empower DNR to pursue and collect adequate penalties?

16) **Proposal evaluation.** DNR rules require the agency to "evaluate all financial assurance cost estimates and adjustments to cost estimates using individuals with documented experience in material handling and construction and mining costs" and "in evaluating financial assurance, (the commissioner) shall use individuals with documented experience in the analysis." How will this process work? Which mining and finance experts will DNR consult? What are their qualifications? Will there be an opportunity for public review of the experts' comments?

6132.1200 FINANCIAL ASSURANCE.

Subpart 1. Purpose. The purpose of financial assurance is to ensure that there is a source of funds to be used by the commissioner if the permittee fails to perform:

A. reclamation activities including closure and postclosure maintenance needed if operations cease; and

B. corrective action as required by the commissioner if noncompliance with design and operating criteria in the permit to mine occurs.

Subp. 2. Contingency reclamation cost estimates. Persons intending to conduct a mining operation shall submit, as part of the application for a permit to mine, a documented estimate of costs necessary to implement the contingency reclamation plan under part 6132.1300, subpart 4. This estimate shall include closure and postclosure maintenance activities required if operations cease within the first calendar year.

A. The permittee shall annually adjust the contingency reclamation cost estimate under part 6132.1300, subpart 4.

B. Cost estimates shall be based on the following:

(1) current dollar value at the time of the estimate; and

(2) the cost to the commissioner of administering and hiring a third party to implement the contingency reclamation plan.

C. No salvage value attributed to the sale of wastes, facility structures, equipment, land, or other assets shall be used for estimating purposes.

Subp. 3. Corrective action cost estimates. When the commissioner determines that a corrective action plan is required under part 6132.3100, subpart 2, item B, subitem (2), the permittee shall submit a documented estimate of costs to perform the corrective action before implementation.

A. The permittee shall annually adjust cost estimates for corrective action undertaken according to an approved corrective action plan under part 6132.1300, subpart 5.

B. Cost estimates shall be based on the following:

(1) current dollar value at the time of the estimate; and

(2) the cost to the commissioner of administering and hiring a third party to conduct corrective action activities.

Subp. 4. Management of financial assurance. Financial assurance shall be managed according to items A to H.

A. The commissioner shall evaluate all financial assurance cost estimates and adjustments to cost estimates using individuals with documented experience in material handling and construction and mining costs. Costs incurred by the commissioner in hiring third parties to perform the evaluation must be paid by the applicant.

B. Financial assurance in the amount equal to the contingency reclamation cost estimate under subpart 2 shall be:

(1) submitted to the commissioner for approval before issuance of a permit to mine and before granting an amendment to the permit;

(2) continuously maintained by the permittee; and

(3) annually adjusted as follows:

(a) if the new cost estimate approved by the commissioner is greater than the amount of the existing financial assurance, the permittee shall provide additional financial assurance in an amount equal to the increase; or

(b) if the new cost estimate approved by the commissioner is less than the amount of existing financial assurance, the permittee shall be released from maintaining financial assurance in an amount equal to the decrease.

C. Financial assurance in the amount equal to the corrective action cost estimate under subpart 3 shall be:

(1) submitted to the commissioner for approval as part of the corrective action cost estimate under subpart 3;

(2) continuously maintained by the permittee until the commissioner determines it is no longer necessary; and

(3) annually adjusted as follows:

(a) if the new cost estimate approved by the commissioner is greater than the amount of the existing financial assurance, the permittee shall provide additional financial assurance in an amount equal to the increase; or

(b) if the new cost estimate approved by the commissioner is less than the amount of existing financial assurance, the permittee shall be released from maintaining financial assurance in an amount equal to the decrease.

D. Financial assurances may be canceled by the permittee, on approval by the commissioner, only after it is replaced by an alternate mechanism or after the permittee is released from financial assurance according to item H.

E. The permittee must ensure that the provider of financial assurance gives the commissioner 120 days' notice prior to cancellation of the financial assurance mechanism. Upon receipt of this notice, the commissioner shall initiate a proceeding to access the financial assurance according to part 6132.1200, subpart 6.

F. If the permit to mine is assigned under part 6132.4700, the new permittee must be in compliance with requirements of this part before the commissioner approves the assignment. On the assignee's demonstration of compliance with this part, the former permittee shall be released from the requirements of this part.

G. Financial assurance must meet the criteria of subpart 5.

H. The commissioner shall release the permittee from the responsibility to maintain financial assurance when the commissioner determines, through inspection of the mining area, that:

- (1) all reclamation activities have been completed according to this part and the permit to mine;
- (2) conditions necessitating postclosure maintenance no longer exist and are not likely to recur;
and
- (3) corrective actions have been successfully accomplished.

Subp. 5. Criteria for financial assurance. Financial assurance for reclamation and for corrective action must meet the following criteria:

- A. assurance of funds sufficient to cover the costs estimated under subparts 2 and 3;
- B. assurance that the funds will be available and made payable to the commissioner when needed;
- C. assurance that the funds will be fully valid, binding, and enforceable under state and federal law;
- D. assurance that the funds will not be dischargeable through bankruptcy; and
- E. all terms and conditions of the financial assurance must be approved by the commissioner. The commissioner, in evaluating financial assurance, shall use individuals with documented experience in the analysis. The reasonable cost of the evaluation shall be paid by the applicant.

Subp. 6. Forfeiture of financial assurance. Financial assurance must be made available to the commissioner under items A to C when the operator is not in compliance with either the contingency reclamation plan or the corrective action plan.

A. A proceeding to access financial assurance shall be commenced by:

- (1) serving an order to forfeit the financial assurance on the person, institution, or trustee holding the financial assurance; and
- (2) serving a notice of measures required to correct the situation and the time available for correction on the permittee.

B. If conditions that provided grounds for the order are corrected within a period established by the commissioner and if measures approved by the commissioner are taken to ensure that the conditions do not recur, the order shall be canceled.

C. If the conditions that provided grounds for the order are not corrected, the commissioner shall proceed with accessing and expending the funds provided by this part to implement the contingency reclamation or corrective action plans.

Subp. 7. Failure to comply. The commissioner may take one or more of the following actions if failure to comply with any portion of this part occurs:

- A. deny the permit to mine;
- B. suspend the permit to mine under part 6132.4500;
- C. assess civil penalties under part 6132.5100;
- D. revoke the permit to mine under part 6132.4600; or
- E. modify the permit to mine under part 6132.4300.

Statutory Authority: MS s 93.44 to 93.51; 103G.222

History: 17 SR 2207

Posted: June 11, 2008
