



## Memorandum

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Foth Infrastructure & Environment, LLC  
2737 South Ridge Road, Suite 600  
P.O. Box 12326 • Green Bay, WI 54307-2326  
(920) 497-2500 • Fax: (920) 497-8516  
www.foth.com

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TO: Brad Moore, PolyMet Mining, Inc.  
Jon Cherry, PolyMet Mining, Inc.

CC: Kathy Osborne, Foth Infrastructure & Environment, LLC  
Master File 12P777 - 5000

FR: Kris Baran, Foth Infrastructure & Environment, LLC  
Curt Dungey, Foth Infrastructure & Environment, LLC  
Steve Donohue, Foth Infrastructure & Environment, LLC

RE: PolyMet – Proposed SDEIS Financial Assurance Language

This memorandum was prepared by Foth Infrastructure & Environment, LLC (Foth) on behalf of Poly Met Mining, Inc. (PolyMet) in support of the NorthMet Mine and Ore Processing Facilities (Project).

### **Introduction**

The purpose of this document is to provide proposed language for the financial assurance section of the Supplementary Draft Environmental Impact Statement (SDEIS) and establish a basis for the evaluation of the financial assurance instruments for the proposed Project.

A description of the Closure Reclamation Estimate that will be associated with the Closure Reclamation Plan for the Project is provided, including a range of preliminary estimated costs for remediation, reclamation, relocation of materials, structure removal, long-term monitoring and maintenance, and administration and project management.

In addition to the above, the document includes an overview discussion of the approach and considerations to be taken by PolyMet in developing its closure reclamation plan cost.

As a condition of its Permit to Mine, PolyMet will be required to ensure that there will always be sufficient funds available to the Minnesota Department of Natural Resources (MDNR) to finance activities necessary to reclaim the Project site after closure and corrective actions necessary to remedy noncompliance with the permit. These “financial

assurance” requirements are mandated by chapter 93 of the Minnesota Statutes, governing mineral lands, and by chapter 6132 of the Minnesota Rules, governing nonferrous mining operations. The financial assurance requirements applicable to the PolyMet project are entirely a matter of Minnesota law and lie within the sole jurisdiction of the MDNR. At this time, there are no federal financial assurance requirements that apply to the project, nor are any federal agencies required or authorized by law to impose such requirements on the project.

This document is organized into the following components:

- ◆ Overview of financial instruments that are typically used to provide financial assurance at a mining facility;
- ◆ Scope and timing of financial assurance under Minnesota law; and
- ◆ Financial assurance requirements for the Project, including a description of the process for implementing financial assurance.

## **Financial Assurance Instruments**

Minnesota Rules, chapter 6132 requires that financial assurance provided to the MDNR must meet five criteria:

- ◆ Assure *sufficient funds* to cover the costs estimates in the closure reclamation plan and any corrective action plan;
- ◆ Assure that the funds will be *available* to the MDNR whenever they may be needed;
- ◆ Assure that the funds will be fully *valid, binding, and enforceable* under state and federal law;
- ◆ Assure that the funds will *not be dischargeable through bankruptcy*; and
- ◆ Be *approved* by the MDNR Commissioner.

There are several types of financial assurance instruments (mechanisms) that have been accepted and applied to metallic mining projects. While the Minnesota Rules, chapter 6132 do not specifically describe the types of financial instruments that would be acceptable for financial assurance, there are several types of financial instruments that can be used for metallic mining projects. These include different combinations of one or more of the following financial assurance instruments:

- ◆ Trust Funds or Escrow Account;
- ◆ Surety Bonds;
- ◆ Letters of Credit;
- ◆ Certificate of Deposit (Cash);

- ◆ Insurance Policies.

A generic description of these financial assurance mechanisms follows:

### ***Trust Funds***

If a trust fund is established, funds are placed with a bank or other financial institution, and money is deposited and specifically designated for closure and postclosure reclamation activities. The permittee pays into the trust fund for a specified period of time such that sufficient funds are maintained and available in the event that operations cease.

### ***Surety Bonds***

A mining permittee may secure a guarantee from a surety company (in the form of a bond) such that all closure and postclosure reclamation activities will be fulfilled. If the permittee fails to meet the requirements specified in the bond, the surety company is liable for the costs. If using a surety bond, the permittee must also establish a trust fund, into which the surety company will make payments if the permittee fails to comply with its financial responsibilities. The money deposited into the trust fund can then be used to pay a third party to perform the reclamation activities.

A permittee may use two types of bonds to meet the financial assurance requirements: a payment bond or performance bond. A payment bond guarantees that if the permittee fails to pay for closure and postclosure reclamation activities, the surety company will pay the costs into the standby trust fund. A performance bond guarantees that if the permittee fails to perform the required closure and postclosure reclamation activities, the surety company will either perform the required activities or pay sufficient funds into the standby trust fund.

### ***Letter of Credit***

A mining permittee may obtain a Letter of Credit from an institution that has the authority to issue such letters. The Letter of Credit is equal to the amount of the costs estimated and is adjusted annually. The permittee also establishes a trust fund into which the letter of credit issuing institution will pay if the permittee fails to meet its closure and postclosure reclamation requirements.

### ***Certificate of Deposit***

Under this mechanism, an operator satisfies the financial assurance requirements by placing funds in an insured, non-negotiable certificate of deposit or time deposit account held by a bank or other financial institution regulated and examined by a federal or state agency. If this tool is used, the certificate of deposit account is in the sole name of the regulatory agency.

### ***Insurance Policy***

A mining permittee may obtain an insurance policy for a face value amount at least equal to the cost estimate for closure and postclosure expenses. The face amount, which is the

total amount the insurer is obligated to pay under the policy, is equal to the amount of the costs estimated and is adjusted annually. The insurer is licensed by a state (use of offshore insurers is not allowed) and may not cancel, terminate, or fail to renew the policy unless the permittee fails to pay the premiums.

As long as the financial instruments meet the criteria set forth in Minnesota Rules, chapter 6132, different types of financial instruments may be appropriate for use at different times during the life of a mining operation or to assure different kinds or amounts of costs. Thus, a total financial assurance package may include a mix of different instruments, and this mix may vary from year to year. The MDNR will evaluate and approve or disapprove financial assurance instruments when an application for a Permit to Mine is submitted and during each annual review of a permittee's closure reclamation and corrective action plans.

### **Scope and Timing of Financial Assurance under Minnesota Law**

Under Minnesota Rules, part 6132.1200, a permittee is required to provide financial assurance that will ensure funds for two types of activities:

- ♦ *Reclamation activities*, including closure and postclosure maintenance activities, that will be needed if mining operations cease; and
- ♦ *Corrective actions* as required by the MDNR if noncompliance with permit conditions occurs.

These funds must be readily available to the MDNR, such that they may be utilized by the agency if the permittee fails to perform any of the required reclamation activities or corrective actions.

### **Reclamation Activities**

Under Minnesota Rules, chapter 6132, a permittee prepares a *Contingency Reclamation Plan* as part of its application for a Permit to Mine. The permittee also submits an updated closure reclamation plan annually as part of its annual report to the MDNR. This plan must identify reclamation activities, including closure and postclosure maintenance activities that would be implemented in the event (i.e., the "contingency") that mining operations were to cease during the following calendar year. The plan identifies methods, a sequence, and a schedule for reclamation activities that will meet the regulatory requirements of Minnesota Rules, chapter 6132. It also includes cost estimates and sufficient financial assurance mechanisms to guarantee that the identified activities can be performed if operations were to cease within the year.

Given the closure reclamation plan must be reviewed and updated annually, the amount of financial assurance required to implement the plan will also change from year to year, with the permittee increasing its financial assurance in some years and being released from existing financial assurance in other years. By requiring an annual review and update to the closure reclamation plan, Minnesota Rules, chapter 6132 ensures that no

mining operations will occur that result in the need for reclamation, closure, or postclosure activities for which sufficient funds are not available.

### **Corrective Actions**

Minnesota Rules, chapter 6132 also requires a permittee to take immediate corrective actions to remedy any violation of its Permit to Mine or, if appropriate, to submit for MDNR approval a corrective action plan addressing those violations. If required, a corrective action plan must contain a documented estimate of the costs to perform the corrective action, and it must contain financial assurances in an amount equal to that cost estimate. The permittee must maintain this financial assurance until the MDNR determines it is no longer necessary.

A permittee's annual report to the MDNR must also address corrective actions, describing all actions taken during the previous year, the anticipated actions to be taken during the upcoming year, and a cost estimate for implementing those actions. Thus, as with closure reclamation plans, the cost estimates and associated financial assurances for corrective actions are subject to annual review and will change from year to year. As with closure reclamation plans, this annual review ensures that there will always be sufficient funds available to the MDNR to undertake any necessary corrective actions if the permittee does not do so.

### **Financial Assurance Requirements for the Project**

As required by Minnesota Rules, chapter 6132, PolyMet will submit a proposed closure reclamation plan to the MDNR as part of its application for a Permit to Mine. PolyMet will also propose financial instruments to assure the costs of implementing the reclamation activities identified in the plan. The MDNR will review and approve, disapprove, or modify the proposed plan and financial instruments when it acts on PolyMet's Permit to Mine application. PolyMet will not submit any corrective action plan with its Permit to Mine Application, as there are not now any permit violations requiring remediation.

### **Scope of Activities under PolyMet's Closure Reclamation Plan**

As discussed above, PolyMet's closure reclamation plan and related financial assurance approach will be revised annually to reflect the current state of its mining operations and the activities necessary for reclamation if its operations were to shut down during each ensuing calendar year. However, in general, PolyMet's closure reclamation plan will cover the following types of activities:

#### **Remediation**

Remediation will include the investigation and cleanup of contamination caused by past mining operations. (The remediation of contamination generated by past permitted mining operations is different from corrective actions required under the proposed Permit to Mine application.)

## **Reclamation**

Reclamation will include the stabilization and re-vegetation of land surface occupied by Project facilities. Such activities will include:

- ◆ Fencing the pit perimeters;
- ◆ Sloping and seeding the overburden portion of the pit walls;
- ◆ Constructing pit outlet structures;
- ◆ Shaping and covering the Category I waste rock stockpile;
- ◆ Removing culverts, dikes, ditches, and ponds, followed by grading and seeding;
- ◆ Constructing mitigation wetlands on vacated stockpile locations;
- ◆ Closing and covering the Hydrometallurgical Residue Facility;
- ◆ Reseeding all areas, including erosion repairs; and
- ◆ Reclaiming the Flotation Tailings Basin.

## **Relocation**

Relocation will include the transfer of waste rock from the Category 2/3 Waste Rock Stockpile and the Category 4 Waste Rock Stockpile to the East Pit.

## **Structure Removal**

Structure removal will include the demolition of buildings and facilities, such as pipelines and power lines, and will also include the management of asbestos containing materials, mercury containing devices, and opened product containers.

## **Monitoring and Maintenance**

Monitoring and maintenance will include all activities that must continue after operational facilities have been discontinued and made safe and stable, as well as postclosure water treatment measures. These activities will include the following:

- ◆ Treatment of East Pit water in the wastewater treatment facility (WWTF) to remove constituents discharged from areas containing backfilled rock;
- ◆ Monitoring and maintenance of the cover and slopes of the Category I Waste Rock Stockpile;
- ◆ Collection and pumping of groundwater from the Category I Waste Rock Stockpile to the WWTF;
- ◆ Treatment of West Pit overflow in the WWTF with a reverse osmosis system;
- ◆ Maintaining the slopes and cover and managing the drainage water from the Hydrometallurgical Residue Facility;
- ◆ Monitoring the Flotation Tailings Basin dams and maintaining the slopes and cover;
- ◆ Collecting and pumping water from the Flotation Tailings Basin to the WWTF for later discharge or transfer to the Mine Site for pit flooding;

- ◆ Monitoring and reporting water quality; and
- ◆ Developing non-mechanical treatment systems.

### **Administration and Project Management**

Administration is the process of state personnel issuing purchase orders for pre-prepared packages for all reclamation tasks including Project Management. It is assumed that as part of the Permit to Mine, PolyMet will prepare design packages, secure approval of those designs, obtain bids for implementation of those designs, and prepare procurement packages. Project Management is the process of managing the actual implementation of reclamation activities.

The specific nature of the reclamation activities included within PolyMet's closure reclamation plan will vary from year to year, depending on the nature of the mining operations during any one year. In this regard, the annual review and update of the plan will allow for incorporating within it, as appropriate, any necessary adaptive mitigation measures identified in the Adaptive Water Management Plan.

### **Estimated Amounts to be Assured by PolyMet and Potential Financial Assurance Instruments**

Just as the specific nature of the activities in the closure reclamation plan will vary from year to year, the estimated costs of performing them, and thus the required financial assurances provided by PolyMet to the MDNR, will also vary from year to year as presented in Table 1 below. For example, if mining operations were to cease at the end of Year 1, total reclamation costs would include the remediation of legacy areas of contamination and the removal of existing LTV Steel Mining Company structures, but would not yet need to address large waste rock stockpiles. The total reclamation costs to be assured for Year 1 are estimated to range from \$50,000,000 to \$90,000,000 with a 10% contingency factor included to account for uncertainties associated with the cost estimate. If, on the other hand, closure occurs at the end of Year 20, the total reclamation costs are estimated to range from \$120,000,000 to \$170,000,000. Thus, the amount of financial assurance provided by PolyMet will generally increase over the course of its mining operations.

Note that the numbers presented in Table 1 are preliminary estimates. More detailed estimates will be prepared and incorporated into the Permit to Mine application. There are uncertainties involved with completing a financial assurance estimate before completing the final project design, operating practices and permit requirements. The calculation of the financial assurance estimate prepared under the Permit to Mine application may fall outside the ranges above based on the final project requirements.

In addition to the costs of the closure reclamation plan, PolyMet will also incur ongoing annual monitoring costs after water management as the project site reaches steady state. Depending on the year of closure, those costs are estimated to range from \$3,500,000 to \$6,000,000. Once again, these estimated costs include a 10% contingency factor. PolyMet will also guarantee these costs through its financial assurance instruments.

At part of its Permit to Mine application and each year thereafter, PolyMet will propose to the MDNR a mix of instruments to assure payment of the following year's estimated reclamation costs.

**Table 1**  
**Closure Cost Estimate**  
**(Chapter 6132.1200 Financial Assurance)**

	Year of Closure (end of year)			
	Year 1	Year 11	Year 20	Steady State Long-Term Care
<b>TOTAL</b>				
Estimated Range	\$50,000,000 - \$90,000,000	\$160,000,000 - \$200,000,000	\$120,000,000 - \$170,000,000	\$3,500,000 - \$6,000,000

Note: Costs based on preliminary reclamation estimates prepared by PolyMet. There are uncertainties involved in calculating Financial Assurance estimates before completing the final project design, operating practices, and permit requirements. The final financial assurance estimate completed under the Permit to Mine application may fall outside the estimate ranges above.

Prepared by: CED1  
Checked by: KKB