

General information

Public comment period begins: January 31, 2018

Public comment period ends: 4:30 p.m. on March 16, 2018

Name and address of Permittee:	Facility name and location:	MPCA contact information:
PolyMet Mining, Inc. P.O. Box 475 Hoyt Lakes, MN 55750-0475	PolyMet Mining, Inc. 6500 County Road 666 Hoyt Lakes, MN 55750 St. Louis County	Draft PolyMet Air Permit Comment – 4 th floor Industrial Division Minnesota Pollution Control Agency 520 Lafayette Road North St Paul, MN 55155
		Web Portal: http://polymet.mn.gov/ Phone: (651) 757-2455 or (833) 722-9016

The Minnesota Pollution Control Agency (MPCA) Commissioner has made a preliminary determination to issue this permit for a term of approximately five years. A draft permit and technical support document are available for review on the MPCA Public Notices webpage at <http://www.pca.state.mn.us/publicnotices>, the MPCA PolyMet webpage at <https://www.pca.state.mn.us/northmet>, or at the MPCA office address listed above. The MPCA will mail or email a copy of the draft permit upon request. Comments, petitions, and other requests must be received at the MPCA in writing via the web portal or by mail on or before the public comment period end date and time identified above.

Description of Part 70 Operating Permit for PolyMet Mining, Inc.

The permit action is for construction and operation of the facility. The permit action is the issuance of the Part 70 Operating Permit; therefore, the draft permit has been placed on public notice.

PolyMet Mining, Inc. (PolyMet) is proposing to develop the NorthMet copper-nickel-gold/platinum-group-metal (AuPGM) mine and associated processing facilities in northeastern Minnesota for the NorthMet Project (Project). The mining and processing operations will be located in an existing mining region and will use existing infrastructure as much as possible.

The Project area, which includes the Mine Site, Plant Site, and the Transportation and Utility Corridors (primarily Dunka Road), is located in St. Louis County, Minnesota, at the eastern end of the Mesabi Iron Range. The Mine Site is located within the Superior National Forest in an area that has not previously been mined. It is located approximately 6 miles south of the City of Babbitt and directly south of the Peter Mitchell Mine, which is an active taconite/iron mine. The Plant Site is located southwest of the Mine Site at the former LTV Steel Mining Company (LTVSMC) taconite facility, which PolyMet purchased from Cliffs Erie LLC.

The Project design basis is to mine and process an average of 32,000 tons of ore per day (11,680,000 tons of ore per year). PolyMet will restart and use existing portions of the LTVSMC infrastructure and crushing and grinding capability with upgraded pollution control equipment. Construction of the Project may occur in phases, with the Crusher/Concentrator/Flotation portion of the Plant Site likely completed and operating prior to the construction of the Hydrometallurgical Plant.

Operations at the Mine Site will include point and fugitive sources of air emissions. Point source emissions from support activities associated with mining operations include heaters, emergency generators, and lime storage and handling. Fugitive source emissions from mining operations include waste rock, ore, and overburden loading/unloading and truck traffic. Portable crushing and screening equipment will also be operated at the Mine Site to prepare approved material for use in construction, for blast hole stemming, and for use as railroad ballast.

Mining preparation begins by removing overburden with diesel-hydraulic shovels, haul trucks, and other excavating equipment. Overburden is stored in temporary and permanent stockpiles near the mine pits to minimize the time and travel distance for haul truck round trips. After overburden stripping, waste rock and ore is blasted and then loaded into mine trucks by diesel-hydraulic shovels. The mine is considered operational upon the commencement of blasting of waste rock and ore or 15 days after the commencement of blast hole drilling, whichever occurs first. The ore is hauled by mine trucks out of the pits to the rail transfer hopper to be delivered to the Plant Site. An ore surge pile is located near the rail transfer hopper to allow ore shipment to continue during a temporary interruption in ore mining. Waste rock is transported to a temporary or permanent stockpile or transported to a mined out pit for disposal.

Plant Site operations include point and fugitive sources of air emissions. Point source emissions from the Plant Site operations include crushing, grinding, and screening operations; material handling and storage; and mineral processing operations including an autoclave and hydrometallurgical process tanks. There are also combustion-related emissions from space heaters, emergency

engines, and a startup boiler for the autoclave. Fugitive sources of emissions at the Plant Site include construction activities at the flotation tailings basin and the hydrometallurgical residue cells along with wind erosion during flotation tailings basin operation. Other fugitive emission sources at the Plant Site include outdoor process consumable storage and handling and miscellaneous truck traffic.

Ore from the Mine Site is delivered by rail to the Coarse Crusher building where it undergoes two stages of crushing and screening before it is transferred to a semi-autogenous grinding (SAG) mill and ball mill for further size reduction. The ground ore is fed to the flotation process, which separates the nickel, copper, cobalt, and AuPGM bearing minerals into a concentrate streams and sends the remaining material (flotation tailings) to the flotation tailings basin. The flotation process produces separate copper-rich and nickel-rich flotation concentrate streams that can be sold or, after construction of the Hydrometallurgical Plant, the nickel-rich concentrate can be further processed to produce a higher quality nickel/cobalt concentrate product and an AuPGM concentrate product. The operation of the hydrometallurgical plant also allows for enrichment of the copper concentrate product.

A summary of the Potential to Emit (PTE) in tons per year is as follows:

	PM tpy	PM₁₀ tpy	PM_{2.5} tpy	SO₂ tpy	NO_x tpy	CO Tpy	CO_{2e} tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential to Emit (with fugitive emissions)	2,530.3	885.43	266.65	8.28	107.34	114.45	160,679	49.52	5.33 (Nickel)	19.37
Total Facility Limited Potential to Emit (without fugitive emissions)	178.66	170.22	166.31	7.17	100.74	112.94	160,679	49.35	5.33 (Nickel)	19.37

PM = Particulate Matter

PM_{2.5} = PM, 2.5 microns and smaller

NO_x = Nitrogen Oxides

CO = Carbon Monoxide

HAP = Hazardous Air Pollutant

PM₁₀ = PM, 10 microns and smaller

SO₂ = Sulfur Dioxide

VOCs = Volatile Organic Compounds

CO_{2e} = Carbon Dioxide Equivalents as defined in Minn. R. 7007.0100

The Permittee is required to submit a pollution prevention progress report pursuant to Minn. Stat. § 115D.08.

The preliminary determination to issue this air permit is tentative.

Procedure for public participation

As stated in Minn. R. chs. 7000 and 7001, there are three formal procedures for public participation in the MPCA's consideration of this matter. Interested persons may:

- (1) Submit written comments on the draft permit.
- (2) Petition the MPCA to hold a public informational meeting.
- (3) Petition the MPCA to hold a contested case hearing.

Submitting written comments

To submit comments or petitions to the MPCA through the mail you must state:

- (1) Your interest in the permit application or the draft permit.
- (2) The action you wish the MPCA to take, including specific references to the section of the draft permit you believe should be changed.
- (3) The reasons supporting your position, stated with sufficient specificity as to allow the MPCA to investigate the merits of the position.

Public informational meeting

A public informational meeting is an informal meeting during which interested persons can ask questions concerning the proposed facility. MPCA staff will be present to provide information. If an interested person would like the MPCA to hold a public informational meeting, the person should include all information identified above and in addition include a statement of the reasons the person desires the MPCA to hold a public informational meeting and the issues that the person would like the agency to address at the public informational meeting. Public informational meetings on the draft air permit, the draft water quality permit, and the draft 401 certification for the NorthMet Project will be held on:

- (1) Wednesday, February 7, 2018
 Mesabi East High School
 601 N 1st St W, Aurora, MN 55705
 4:00-9:00 p.m. open house
 6:00-9:00 p.m. public comment forum

- (2) Thursday, February 8, 2018
Duluth Entertainment Convention Center (DECC)
350 Harbor Drive, Duluth, MN 55802
1:00-9:00 p.m. open house
6:00-9:00 p.m. public comment forum

These public meetings are being held jointly with the Minnesota Department of Natural Resources on their draft permit to mine.

During the open house, technical staff will be available to answer questions on the draft permits. PolyMet representatives will also be present. Comments on the draft permits will be accepted at these meetings. Stenographers will be available to record oral comments. In addition, comment boxes will be available for submitting written comments.

In case of a weather-related cancellation, the following alternative meeting dates have been established: 1) Wednesday, February 21, 2018, at the Mesabi East High School as a substitute for the February 7 meeting; and 2) Thursday, February 22, 2018, at the DECC as a substitute for the February 8 meeting. The MPCA will notify the public of any cancellations, time, or venue changes via the state's PolyMet email distribution list, press release, and/or social media.

All meeting materials, and draft permits when they are available, will be posted on the MPCA's website.

Contested Case Hearing

A contested case hearing is a formal proceeding before an administrative law judge empowered to advise the MPCA regarding issues of fact. As described in Minn. R. 7000.1800, persons who submit petitions for a contested case hearing must also state the issues they propose to address in a contested case hearing, the specific relief requested or resolution of the matter, and the reasons (which may be in the form of proposed findings) supporting an MPCA decision to hold a contested case hearing. Failure to comply with these rules exactly may result in a denial of the request. To the extent known, the petitioner may also submit a list of prospective witnesses to be called at a hearing, a proposed list of publications, references, or studies to be introduced at a hearing and the approximate time required for the petitioner to present the matter at a hearing. The decision whether to hold a contested case hearing will be made under Minn. R. 7000.1900.

Additional Information

The MPCA also has a draft 401 Certification and a draft water quality permit for PolyMet available for public comment. For information about all permits available for public comment, check the state's PolyMet web portal (<http://polymet.mn.gov/>) and MPCA's project website (www.pca.state.mn.us/northmet). The web portal provides basic permitting information and directs users to agency websites with more detail. On the portal you can sign up for the state's PolyMet email distribution list to receive updates including a notification if there is a weather-related cancellation of the public meetings.