

**STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY**

**IN THE MATTER OF ISSUANCE OF AIR EMISSIONS
PERMIT NO. 13700345-101 FOR POLYMET MINING, INC.,
CITY OF HOYT LAKES, ST. LOUIS COUNTY, MINNESOTA**

**FINDINGS OF FACT
CONCLUSIONS OF LAW
AND ORDER**

FINDINGS OF FACT

Based on Minnesota Pollution Control Agency (MPCA) staff review, public comments and information received during the comment period, and other information in the record of the Agency, the MPCA hereby makes the following Findings of Fact, Conclusions of Law, and Order:

Overview

1. Poly Met Mining, Inc. (PolyMet) proposes to develop a copper-nickel-platinum group elements mine and associated processing facilities (the “Project” or “NorthMet Project”). The Project consists of a mine site, a plant site, and the transportation and utility corridors that connect them. The mine site is a relatively undisturbed site that will be developed into an open pit mine and is located approximately six miles south of the city of Babbitt and two miles south of the Northshore Mining Company’s active, open pit taconite mine (known as Northshore Mining’s Peter Mitchell Mine). The plant site is located at the former LTV Steel Mining Company/Cliffs Erie, LLC taconite processing facility located approximately six miles north of the City of Hoyt Lakes and will include refurbished and new ore processing and waste disposal facilities. The mine site and the plant site are connected by approximately seven- to eight-mile-long transportation and utility corridors, which will include new and upgraded infrastructure to link activities at the Mine Site and Plant Site.

Environmental Review

2. The proposed NorthMet Project underwent environmental review between 2005 and 2015. A Final Environmental Impact Statement was prepared and public comments were addressed in 2015. The Final Environmental Impact Statement was deemed adequate by the Minnesota Department of Natural Resources on March 3, 2016. The Final Environmental Impact Statement was not challenged by any party.

Project Description and Permit Action

3. On August 25, 2016, the MPCA received an air permit application from the Permittee to construct and operate the NorthMet Project as a single stationary source.
4. On September 1, 2016, the MPCA notified PolyMet that its application was complete, and MPCA staff began processing the application.
5. On January 11, 2018, the MPCA received an updated application from the Permittee that included clarifications and additional information to support the development of the draft permit.
6. The air quality permit application included descriptions of equipment at the facility that will generate air pollutants, pollution control equipment that will be used to reduce emissions, type and quantity of air pollutants that will be emitted, and potential air quality impacts near the facility.
7. The air quality permit application also included studies, reports, data, and other documents referenced in the application and air dispersion modeling output files. The application included Class I and Class II air dispersion modeling, as well as an Air Emissions Risk Analysis (AERA).
8. The Permittee applied for an air quality permit for a synthetic minor source based on a Project design to mine and process 32,000 tons of ore per day (11,680,000 tons of ore per year).
9. Operations at the mine site include heaters, lime storage and handling, and portable crushing and screening equipment. Mine site operations also include waste rock, ore, and overburden loading/unloading, as well as truck traffic.
10. Plant site operations include crushing, grinding, and screening operations. Plant site operations also include mineral processing operations, such as an autoclave and hydrometallurgical process tanks.
11. Plant site operations also include a floatation process which produces separate copper-rich and nickel-rich floatation concentrate streams that can be sold or further refined in the hydrometallurgical plant.
12. The MPCA staff developed the draft permit based on its review of the application and other materials. Pursuant to Minn. R. 7007.0850, the MPCA staff prepared a Technical Support Document (TSD) setting forth the legal and factual basis for the draft permit conditions.
13. Point source air emissions at the facility include emissions from ore processing equipment such as crushers and conveyors, an autoclave, and hydrometallurgical process tanks. Air emissions from fugitive sources include emissions from vehicle traffic transporting ore on unpaved roads, and material handling operations, such as loading and unloading haul trucks with overburden, waste rock, and ore. Fugitive emissions will also occur from blasthole drilling.

14. The threshold for determining whether a NorthMet Project is a major stationary source for the purpose of federal New Source Review (NSR)/Prevention of Significant Deterioration (PSD) regulations, is 250 tons per year (tpy) of any regulated NSR pollutant. (40 C.F.R. § 52.21(b)(1).) The facility is not one of the source categories listed in 40 C.F.R. § 52.21(b)(1)(iii). Therefore, fugitive emissions are excluded in determining whether the facility is a major stationary source for the purpose of NSR.
15. The Permittee accepted limits on its emissions and operations in order to avoid major source classification under NSR. The facility's limited potential emissions of air pollutants regulated under NSR, excluding fugitive emissions, are less than major source thresholds for NSR. The facility's emissions are described in Table 2 of the TSD. The permit applies limits to keep this facility a non-major source under NSR. These limits include federally enforceable emission limits, as well as operational and production limits that restrict emission of regulated pollutants.
16. The permit is an Individual Part 70 Permit.
17. The permit limits the amount of ore the facility can process to ensure that applicable state and federal standards are met, and includes daily, weekly, and monthly monitoring and recordkeeping requirements.
18. Issuance of the Part 70 Permit will authorize the Permittee to construct and operate the facility for 5 years.

**Procedural History and Community Involvement in Permit Development
Public Meeting, Public Notice, and Comment Period for Air Quality Permit 13700345-101**

19. The MPCA provided for enhanced community and stakeholder involvement during the permit development process.
20. The MPCA, in cooperation with the DNR, developed a web portal for the PolyMet NorthMet Project. The portal was designed to allow interested parties to have one place to look for information regarding the proposed project as well as sign up for email updates. Links to the permit application, updated supplemental permit applications, supporting documentation and reports were provided via the portal.
21. MPCA notified interested parties via email when MPCA received PolyMet's air permit application. MPCA also emailed quarterly updates regarding progress on the permitting process.
22. On January 5, 2018, the MPCA issued a public notice in advance of two public meetings for the Project that were held on February 7 and February 8, 2018. The public notice for the public meeting was published in the Mesabi Daily News, the Duluth News Tribune, and the Babbitt Weekly newspapers. The public notice was also posted on the MPCA's website for public notices at <http://www.pca.state.mn.us/index.php/public-notices/list.html>, and the MPCA's

website for NorthMet Project, at <https://www.pca.state.mn.us/quick-links/air-quality-permit-northmet>. The notice was also sent via email to individual recipients.

23. MPCA provided the draft air permit package via email to a number of involved or interested Tribal entities on January 17, 2018, two weeks prior to the start of formal public notice, to provide additional time for their review of the draft permit and certified application materials. Tribal entities involved in this early review period included the Fond du Lac Band of Lake Superior Chippewa, the Grand Portage Band of Chippewa, the Bois Forte Band of Chippewa, the Leech Lake Band of Ojibwe, the Red Cliff Band of Lake Superior Chippewa Indians, the 1854 Treaty Authority, the Great Lakes Indian Fish and Wildlife Commission and the Minnesota Chippewa Tribe. At this time MPCA also provided the draft permit and certified application materials to the United State Environmental Protection Agency (USEPA), Region V.
24. On January 31, 2018 the MPCA issued a public notice for the MPCA Commissioner's preliminary determination and intent to issue the draft Air Permit Number 13700345-101. The public notice was published in Mesabi Daily News, the Duluth News Tribune, and the Babbitt Weekly newspapers. The public notice was also posted on the MPCA's website for public notices at <http://www.pca.state.mn.us/index.php/public-notices/list.html>, and on the MPCA's website for NorthMet Project, at <https://www.pca.state.mn.us/quick-links/air-quality-permit-northmet>. The notice was also sent via email to individual recipients.
25. The public notice issued on January 31, 2018, announced a 45-day comment period for the permit and included information required by Minnesota Rules 7007.0850. The public notice included information that the public comment period began on January 31, 2018 and ended at 4:30 p.m. on March 16, 2018. The public notice included information about the facility and the Permittee, a description of the activities being permitted, and MPCA contact information, as well as information about the comment and contested case hearing process, and details for the public meetings.
26. On January 31, 2018, the draft air permit and appendices, draft TSD and attachments, and public notice documents were made available for review on the MPCA website for public notices at <http://www.pca.state.mn.us/index.php/public-notices/list.html>. In addition, the public notice documents were made available for review via the MPCA website for the NorthMet Project at <https://www.pca.state.mn.us/quick-links/air-quality-permit-northmet>.
27. The public informational meetings were held on February 7, 2018, at Mesabi East High School, in Aurora, Minnesota, and on February 8, 2018, at the Duluth Entertainment Convention Center, in Duluth, Minnesota. Representatives of both the MPCA and DNR attended these meetings. The meetings included an open house component where interested parties could ask questions and interact directly with staff. The meetings also provided opportunities for verbal comments to be recorded and for submission of written comments.

28. The public comment period for the proposed air emissions permit ended on March 16, 2018. During the 45-day comment period, the MPCA did not receive any requests for a contested case hearings on the air emissions permit. The MPCA received 88 timely comment submittals from government agencies, Tribal Parties, environmental groups, and individuals related to the air permit.
29. The MPCA reviewed and considered the comments received during the 45-day comment period, and prepared responses. The comments and the MPCA's Response to Comments is in Attachment 14 to the TSD, and is hereby incorporated by reference to these Findings. The MPCA made changes to the draft permit based on MPCA's consideration of comments. These changes are described in more detail below, and are also summarized in Attachment 13 to the TSD.
30. On October 25, 2018, pursuant to Minnesota Rule 7007.0950, and as part of the federal oversight for the State's Title V air permitting program, the MPCA provided the administrator of the USEPA with a copy of the application, the proposed permit, and TSD, which included the MPCA's responses to comments.
31. On October 25, 2018, the MPCA posted the documents provided to the USEPA on its website for the NorthMet Project, at <https://www.pca.state.mn.us/quick-links/air-quality-permit-northmet>, and notified individual recipients via email. The MPCA notified commenters that these documents were available for review, and that the EPA review period would conclude on December 10, 2018. The MPCA provided information to commenters about the Title V public petition process, and that the 60-day petition period for the PolyMet air permit ends on February 11, 2019.
32. Based on conversations with the USEPA, the MPCA made additional clarifying and administrative edits to the permit, and clarified responses to comments.
33. The USEPA review period ended on December 10, 2018. The MPCA did not receive any written comments and the USEPA did not object to the proposed final permit.
34. The MPCA met all applicable public notice requirements for the issuance of an air emissions permit.

Public Comments Received, MPCA Consideration of Comments, and Changes to the Permit

35. During the 45-day public comment period for Permit 13700345-101 the MPCA received timely comments from 88 commenters.
36. Commenters provided extensive comments on technical and substantive issues.
37. The MPCA reviewed the comments and prepared written responses to the comments received during the public comment period. The comment letters and the MPCA's Response to Comments are in Attachment 14 to the TSD.

38. Based on comments received, the MPCA made changes to the draft permit.
39. To address concerns over the adequacy of synthetic minor limits for the facility, the MPCA refined emission calculations for the crushing plant, verified that the facility is below the NSR major source threshold, and added a throughput limit for material entering the SAG mill.
40. In addition to monitoring ore throughput in the crushing plant, the final permit now contains two belt scale measurements to demonstrate compliance with the synthetic minor limit. The final permit now also requires quarterly calibration of each belt scale.
41. To address concerns raised about the autoclave, the MPCA reviewed the emission rates for the autoclave and requested additional technical information from the Permittee about constructing a commercial-sized autoclave based on the short-term pilot test. As a result of that review, the final permit now contains a requirement for an engineering test for characterizing the autoclave scrubber stream.
42. To address concerns about the ambient air control boundary, the final permit contains clarified permit requirements identifying the condition under which the ambient air boundary may be changed.
43. To address concerns over the NAAQS compliance demonstration modeling, the Permittee must submit within 60-days after permit issuance, a pre-protocol informational submittal discussing nearby source emission rates, receptor grid placement, meteorological data set, and deposition assumptions. Within 180 days after permit issuance, the Permittee must submit an updated approvable modeling protocol for updated baseline NAAQS impacts. Within 60 days after the protocol is approved by the MPCA, the Permittee must submit final modeling results.
44. In addition, the Permittee may not operate the facility until the final modeling results are approved by the MPCA. If a major permit amendment is required as a result of remodeling for baseline impacts, commencement of operations continue to be prohibited until issuance of the major permit amendment authorizing construction and operation.

FINAL DETERMINATION ON ISSUANCE OF PERMIT 13700345-101

45. The MPCA's decision to issue Permit 13700345-101 to PolyMet Mining, Inc. is governed by its permit rule, Minn. R. 7007.1000, subp. 1, which specifies preconditions to permit issuance. The preconditions are:
 - A. The agency has received a complete application for a permit, permit amendment, or permit reissuance, except that a complete application need not be received before issuance of a general permit under part 7007.1100, subpart 4.
 - B. The agency has complied with the public participation procedures for permit issuance, if required by part 7007.0850.
 - C. The agency has complied with the procedures for notifying and responding to affected state, if required by part 7007.0900.

- D. If the administrator's review is required by part 7007.0950, the administrator has received a copy of the permit and any notices required and has not objected to issuance of the permit within the time period specified, or the administrator has objected but the objection has been resolved to the administrator's satisfaction.
 - E. The conditions of the permit provide for compliance with all applicable requirements and the requirements of parts 7007.0100 to 7007.1850, or include a schedule to achieve such compliance.
 - F. The permit does not reflect a variance from any federally enforceable applicable requirement or requirement of parts 7007.0100 to 7007.1850.
 - G. The agency anticipates that the applicant will, with respect to the stationary source and activity to be permitted, comply with all conditions of the permit.
 - H. All applicable provisions of Minnesota Statutes, chapter 116D, and the rules adopted under Minnesota Statutes, chapter 116D, have been fulfilled.
46. In addition, Minn. R. 7007.1000, subp 2, specifies the grounds on which the MPCA may deny permit issuance:
- A. The agency is unable to make any of the determinations required under subpart 1.
 - B. There exists at the stationary source to be permitted unresolved noncompliance with applicable state or federal pollution control statutes or rules administered by the agency, or conditions of a previous or existing air emission permit and the applicant will not undertake a schedule of compliance to resolve the noncompliance
 - C. An applicant has failed to disclose fully all facts relevant to the stationary source or activity to be permitted, or the applicant has knowingly submitted false or misleading information to the agency;
 - D. The permitted facility or activity endangers human health or the environment and the danger cannot be removed by an amendment to the permit;
 - E. With respect to the stationary source or activity to be permitted, the applicant has not complied with the requirement to pay fees under chapter 7002;
 - G. that with respect to the stationary source or activity to be permitted, the applicant has failed to pay a penalty owed under court order, consent decree, stipulation agreement, schedule of compliance, or an order issued under Minn. Stat. § 116.072.
47. The MPCA finds that the proposed issuance of Permit 13700345-101 for the facility as public-noticed on January 31, 2018 through March 16, 2018 meets the requirements of Minn. R. 7007.1000, subp. 1 and none of the justifications to deny permit issuance described in Minn. R. 7007.1000, subp. 2 exists.

CONCLUSIONS OF LAW

48. The MPCA has jurisdiction over the decision whether to issue Permit 13700345-101 for the facility.
49. The MPCA concludes that all procedural and public notice requirements applicable to the proposed permit action have been satisfied.

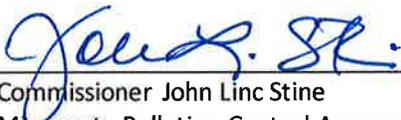
PolyMet Mining, Inc.
Air Emissions Permit No. 13700345-101
City of Hoyt Lakes, Minnesota

Findings of Fact
Conclusions of Law
And Order

50. The requirements set forth in Minn. R. 7007.1000 for issuance of Permit 13700345-101 are satisfied. Therefore, Permit 13700345-101 for the PolyMet Mining, Inc. facility should be issued.
51. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

The Minnesota Pollution Control Agency approves and authorizes the proposed issuance of Permit 13700345-101 for the PolyMet Mining, Inc. facility. **IT IS SO ORDERED**



Commissioner John Linc Stine
Minnesota Pollution Control Agency
12/20/2018

Date