

**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**

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

The Minnesota Pollution Control Agency (MPCA) is issuing these supplemental Findings of Fact and Conclusions of Law in response to the Minnesota Court of Appeals' remand decision issued July 19, 2021 and judgment entered on November 4, 2021 in the case *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

Based on Minnesota Pollution Control Agency (MPCA) staff review, public comments, Environmental Protection Agency (EPA) review, 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.

Project Description

2. 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.

3. 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.
4. 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.
5. 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.

Environmental Review

6. 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 (“DNR”) on March 3, 2016. The Final Environmental Impact Statement was not challenged by any party.

Air Emissions Permit Application and Permit Action for Air Quality Permit 13700345-101

MPCA’s Permitting Process

7. All permitting actions initiated by a permittee begin with the development and submittal of a permit application, which includes providing specific information on forms developed and required by MPCA based on state and federal permitting requirements and guidance.
8. Permit applicants also have access to MPCA guidance on applying for an air permit.¹
9. MPCA air permit application forms include questions specifically designed for those seeking a synthetic minor permit. For example, Form GI-09C requires applicants to indicate whether they are proposing and will accept limits such that no major source thresholds are exceeded, and Form CD-01 requires applicants to list their proposed limits and their proposed compliance demonstration for each limit.

¹ Available online at <https://www.pca.state.mn.us/air/synthetic-minor-permit-limits> and <https://www.pca.state.mn.us/air/air-permits>

10. MPCA issues permits for the project as described in the permit application, including proposed operating plans.
11. After a final permit is issued, any change to a synthetic minor permit condition requires a major amendment before the applicant can begin construction activities or deviate from permitted operating parameters. Minn. R. 7007.1500(1)(C).
12. MPCA's permitting forms, regulations, and guidance for air permits do not require applicants to demonstrate, or the MPCA to consider, economic feasibility, profitability, or the "business case" for the project as proposed to be permitted, and the MPCA may not grant or deny permits under Minn. R. 7007.1000 based on those considerations.
13. MPCA's permitting forms include a "submittal certification," which states: "I certify under penalty of law that the enclosed documents and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete."
14. Such certification of accuracy is consistent with MPCA's regulations for air emissions permit applications, which mandate that all applications include a certification by the Responsible Official² that "based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." Minn. R. 7007.0500, subp. 3.
15. MPCA's regulations also establish a duty upon a permit applicant to supplement or correct its application: "Any applicant who fails to submit any relevant facts or who has submitted incorrect information in an application for a permit or permit amendment shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. In addition, an applicant must provide additional information as necessary to address any requirements that become applicable to the stationary source after the date it filed a complete application but prior to release of a draft permit." Minn. R. 7007.0600, subp. 2.

MPCA's Authority to Issue Synthetic Minor Permits

² A Responsible Official is defined in relevant part as "a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation," or a delegated representative under defined circumstances. Minn. R. 7007.0100, subp. 21.

16. Air permitting authorities, including the MPCA, regularly issue permits to applicants seeking to avoid major source permitting. These synthetic minor permits allow a source to elect to restrict operations—despite possessing the physical design capacity to emit more, process more, or operate during a greater number of hours—in order to avoid major source permitting.
17. These restrictions are made enforceable through permit conditions and may include physical or operational limitations which cap a facility’s potential to emit a particular pollutant, and generally include restrictions on hours of operation or limitations on the amount of material processed.
18. MPCA has authority to issue permit conditions (referred to as Title I conditions) that are specifically designed to limit a source’s potential to emit to below major source prevention of significant deterioration (PSD) thresholds. Rule 7007.0100, subp. 25(C).
19. If a source begins operation under a synthetic minor permit, and over time develops a pattern of “willfully and regularly” violating its permit conditions—including any operational limitations—those permit limitations would not be considered in calculating potential to emit and the source would be subject to enforcement action for failure to obtain a PSD permit. *See United States v. Louisiana-Pacific Corp.*, 682 F. Supp. 1141, 1161-63 (D. Colo. 1988).
20. Federal guidance instructs MPCA to seek enforcement action when a source accepts a synthetic minor permit but does not intend to operate as a synthetic minor and seeks a major source permit soon after commencing operation. For example, if a permit does not reflect a source’s “planned mode of operation” and the source is “committing to permit conditions which restrict production to a level at which the source does not intend to operate for any extensive time,” the permit is deemed a sham and is void. EPA PTE Memorandum, at 11-12.
21. MPCA is not required to investigate the intent of a synthetic minor permittee prior to issuing the original synthetic minor permit. The Minnesota Supreme Court held in 2020 that neither federal regulations nor guidance “dictate that a permitting agency must investigate sham permitting at the synthetic minor source permit application stage,” and therefore, MPCA is “under no federal obligation to investigate sham permitting during the synthetic minor source permit process.” *In re Issuance of Air Emissions Permit No. 13700345-101 for PolyMet Mining, Inc.*, 955 N.W.2d 258, 268 (Minn. 2021).
22. Federal law does not prohibit MPCA from approving of a source’s later expansion, such as when a source applies for a synthetic minor permit in good faith but later decides to apply for a major PSD source permit. Federal law acknowledges that there is a need for state agencies to accommodate those sources that have legitimate business reasons for expansion after obtaining a

synthetic minor permit. Such a scenario would not trigger or support a sham permitting determination. See 54 Fed. Reg. 27274, 27281 (June 28, 1989).

23. Under this circumstance of legitimate business expansion, the source would be subject to major source PSD requirements “as though construction had not yet commenced on the source.” *Id.* at 272380; 40 C.F.R. § 52.21(r)(4).
24. MPCA guidance also reminds permittees seeking synthetic minor source permits of these requirements: “Important. Make sure you can live with your proposed synthetic minor limits. If, in the future, you want to modify your permit to increase your limits, a major permit amendment would be required . . . For example, if at any time in the future you want to raise a limit that was taken to avoid a PSD major modification, PSD may be triggered including requirements such as the installation of control equipment or computer modeling of the emissions.” *Supra* fn. 1.
25. During the new permitting process, interested parties would again be given the opportunity to participate through the notice and comment process. See *e.g.*, Minn. R. 7007.1500.
26. In addition, MPCA provides enhanced community and stakeholder involvement during the permit development process for facilities and projects with heightened community interest—as was provided here during the initial permit development.

MPCA’s Development of PolyMet’s Air Emissions Permit

27. MPCA followed its established process, along with state and federal rules and guidance, in reviewing PolyMet’s permit application and developing a synthetic minor permit for the NorthMet Project.
28. 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. PolyMet requested a synthetic minor permit limiting its potential to emit to below major source thresholds. The Permittee’s 2,000-page permit application conformed to the initial application process set forth in MPCA’s own forms and MPCA regulations. See *generally* PolyMet Application.
29. The Permittee’s application included a signed “submittal certification,” wherein the Permittee’s Executive Vice President of Environmental and Governmental Affairs Brad Moore, under penalty of law, certified the truthfulness and accuracy of information contained in the application. *Id.* at 9.
30. The Permittee’s application cover letter, signed by its Manager of Environmental Permitting and Compliance, Kevin Pylka, also stated that “Based on [the Permittee’s] review of the applicable laws and content of this Application, [the

Permittee] believes that this Application is complete and satisfies all federal and state requirements relating to the content of an air emissions permit application.” *Id.* at 2.

31. The Permittee’s application cover letter additionally recognized an understanding that MPCA could seek other information from the Permittee in order to develop its permit. *Id.*
32. On September 1, 2016, after MPCA staff reviewed the initial application, the MPCA notified the Permittee that its application was complete (“completeness determination”) and contained adequate information to begin a more detailed technical review. MPCA email, *re: Individual Operating Permit Application Completeness (09/01/2016)*; TFP Application Review Completeness Checklist (09/01/2016).
33. In its completeness determination, MPCA notified the Permittee of its obligation to continue to provide relevant information as needed during the permitting process: “The completeness review does not determine whether or not your application is technically complete for the purpose of taking final action on your permit application; therefore, you may need to submit other require information as identified during the process of preparing your permit.” MPCA email, *re: Individual Operating Permit Application Completeness (09/01/2016)*.
34. 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.
35. 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.
36. 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 I I air dispersion modeling, as well as an Air Emissions Risk Analysis (AERA).
37. For this Project, the Permittee certified in its application and throughout the permitting process its intention to mine and process an average of 32,000 tons of ore per day (tpd) based on an annual limit of 11,680,000 tons of ore per 12 month rolling sum, and that it planned to restart certain (but not all) equipment at the former LTV Steel Mining Company facility, which the Permittee had purchased. *See e.g.*, Permit Application, at 16, 26-27.
38. MPCA staff spent more than two years developing the Permittee’s permit.

39. MPCA staff have a depth of experience with Minnesota's air permitting regulations, as well as EPA's PTE Memorandum on limiting a source's potential to emit—which explains what is needed to ensure that a synthetic minor source permit's limits are both federally enforceable and enforceable as a practical matter.
40. While developing the Permittee's permit, MPCA and the Permittee engaged in an iterative process that involved detailed review by MPCA staff of technical information provided by the Permittee, follow-up questions and information requests, responses including supplemental information by the Permittee, coordination with other agencies, and numerous meetings to discuss MPCA's development of the permit.
41. For example, MPCA sought clarification from the Permittee on information underlying the Permittee's proposed fugitive source limits (MPCA email, *re: NorthMet Proposed Fugitive Source Limits* (01/10/2018)); MPCA prepared questions for the Permittee about overburden movement management (MPCA email, *re: NorthMet Overburden Movement* (01/19/2018)); MPCA asked questions about data entry for various pollutants and emission units (MPCA email, *re: PolyMet Data Entry Questions* (01/11/2017)); MPCA sought autoclave emission calculations supporting information and sent follow-up questions; (MPCA email, *re: NorthMet Autoclave Emission Calculation Supporting Information* (01/19/2018)); and MPCA consulted with the Minnesota Department of Health to verify air emissions risks for nickel (MPCA email, *re: FW: Copy of AERA_Supplemental_Work_Plan* (06/14/2016)).
42. During this iterative process, PolyMet cooperated with the agency and provided all requested information in a timely fashion. *See e.g.*, PolyMet email, *re: EQUI 196 - Generator to Move Electrical Equipment* (01/02/2018) (responding to MPCA question in approximately 5 minutes); Comments/Feedback on Special Monitoring Plan (PolyMet responding to comments raised, explaining proposed monitoring conditions, and making corrections).
43. Based on its review of the application and supplemented materials, MPCA staff developed a draft permit, and 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.
44. The threshold for determining whether the NorthMet Project is a major stationary source for the purpose of federal New Source Review (NSR)/Prevention of Significant Deterioration (PSD) regulations, is 250 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/PSD.

45. The Permittee accepted limits on its emissions and operations in order to avoid major source classification under PSD. The facility's limited potential emissions of air pollutants regulated under PSD, excluding fugitive emissions, are less than major source thresholds for PSD. 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 PSD--or a synthetic minor source. These limits include federally enforceable emission limits, as well as operational and production limits that restrict emission of regulated pollutants.
46. The permit limits the amount of ore the facility can process to 32,000 tpd of ore based on an 11,680,000 tons per 12 month rolling sum to ensure that applicable state and federal standards are met and to support the permit's synthetic minor status.
47. To ensure compliance with the throughput limitations at the facility level, MPCA developed and included in the permit 1,020 Title I conditions designed specifically to "effectively and enforceably limit emissions capacity"³ below the 250 tpy PSD construction permit threshold. See Air Permit, at 55-774. The Technical Support Document highlights approximately 130 emission sources at the NorthMet Project with limits designed "to avoid PSD" in the issued permit. See TSD, at 135-185.
48. These Title I conditions include monitoring and recordkeeping requirements to ensure compliance with the throughput limit. For example, the Permittee must monitor and record the tons of ore exiting the coarse crushing building on a monthly basis (Air Permit, at 62); the Permittee must measure the ore throughput by belt scales or similar devices and these belt scales must be calibrated quarterly (Air Permit, at 62-63); and the Permittee must calculate and record by the 15th of each month the total ore throughput for the previous month as the 12-month rolling sum of combined ore throughput (Air Permit, at 63). See also Air Permit, at 108.
49. As reflected in the TSD, "[i]n evaluating the monitoring included in the permit, the MPCA considered . . . the likelihood of the facility violating the applicable requirements. TSD, at 135.
50. MPCA carefully assessed permit conditions and their design to ensure that monitoring would be effective. For example, MPCA provided thorough and detailed comments on the Permittee's proposed Special Monitoring Plan (Comments/Feedback on Special Purpose Monitoring Plan (May 2017)); and rejected the Permittee's suggestion to lower frequency of monitoring from quarterly to semi-annual (MPCA email, re: *Updates to proposed permit*

³ *In re Peabody Western Coal Company*, 12 E.A.D. 22, 31 (2005) ("In sum, therefore, [potential to emit] reflects a source's maximum emissions capacity considering the application of any emission control equipment, or other capacity-limiting restrictions, that effectively and enforceably limit emissions capacity").

(10/24/2018) (“Anything less than quarterly is too infrequent since we don’t have a manufacturer’s recommendation and it’s used to determine compliance for a synthetic minor limit.”)).

51. MPCA’s enforcement team was aware of the development of these synthetic minor conditions and did not raise concerns regarding enforceability of the permit. *See e.g.*, MPCA Email, *re: Public Notice (01/31/2018)*; MPCA Email, *re: PolyMet Draft Permit Review (NOTE) (12/26/2017)*.
52. MPCA has concluded that these permit conditions, including throughput monitoring and recordkeeping obligations, are “sufficient to have a reasonable assurance of compliance.” *See e.g.*, TSD, at 135-225.
53. The permit is an Individual Part 70 Permit that 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

54. The MPCA provided for enhanced community and stakeholder involvement during the permit development process.
55. The MPCA, in cooperation with the DNR, developed a web portal⁴ 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.
56. 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.
57. 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-permitnorthmet>. The notice was also sent via email to individual recipients.

⁴ Available online at <http://polymet.mn.gov/>

58. 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 and the public meeting, 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 Region V of the EPA.
59. 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.
60. 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.
61. In addition, 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>.
62. 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.

63. 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 EPA with a copy of the application, the proposed permit, and TSD, which included the MPCA's responses to comments.
64. On October 25, 2018, the MPCA posted the documents provided to the EPA 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.
65. Based on conversations with the EPA, the MPCA made additional clarifying and administrative edits to the permit and clarified responses to comments.
66. For example, MPCA specifically engaged in conversations with EPA regarding comment letters received, specific synthetic minor limits, and what constitutes adequate synthetic minor permit conditions. *See e.g.*, MPCA email, *re: Comment Letters* (09/18/2018); MPCA email, *re: Limiting Potential to Emit Support documents* (03/09/2018). MPCA also coordinated with EPA to discuss comments and concerns raised by a concerned Tribal member. MPCA email, *re: Potential Conf. Call on PolyMet* (11/21/2018).
67. The EPA review period ended on December 10, 2018. At that time, MPCA did not receive any written comments from EPA and the EPA did not object to the proposed final permit.
68. The MPCA met all applicable public notice and EPA review requirements for the issuance of an air emissions permit.

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

69. 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.
70. 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.

71. To address concerns over the adequacy of synthetic minor limits designed to limit facility throughput, the MPCA refined emission calculations for the crushing plant, verified that the facility is below the PSD major source threshold, and added a throughput limit for material entering the SAG mill. *See Attachment 13 to the TSD.*
72. Based on comments received, the MPCA also made changes to the draft permit. For example, 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. Further, 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. *Id.*
73. To address concerns over the National Ambient Air Quality Standards (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. *Id.*
74. 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. *Id.*

Receipt and Review of Materials Related to Potential Expansion Scenarios

75. On December 13, 2018, the MPCA received correspondence from MCEA expressing concerns about mining scenarios included in the Permittee's March 2018 Technical Report ("Technical Report"). Specifically, the letter raised concerns regarding Technical Report's discussion of two potential expansion scenarios at the NorthMet Project: (1) one with a throughput of 59,000 short tons per day; and (2) one with a throughput of 118,000 short tons per day. MCEA Letter, at 1.

76. In the letter, MCEA asserted that the Technical Report's inclusion of potential expansion scenarios suggests that the Permittee "sought a permit as a synthetic minor source, but in actuality intends to operate as a major source in the near future. EPA has a term for such a deception: sham permitting." *Id.* at 2.
77. The letter noted that if the Permittee later seeks to expand under these scenarios, "in determining whether a subsequent relaxation of an operational limitation is in good faith or not" MPCA should look at "exactly the type of financial document as the Technical Report" because "[i]f the project would not be funded or if it would not be economically viable if operated on an extended basis (at least a year) at the permitted level of production, this should be considered as evidence of circumvention [of PSD review]." *Id.* at 3.
78. The letter ultimately suggested that MPCA withhold issuance of the final Air Permit until it fully evaluated whether "whether PolyMet has agreed to an operational limitation in bad faith." *Id.*
79. MPCA reviewed the Technical Report and MCEA letter and considered the potential for future expansion of mining and processing capacity on the air permit. On December 18, 2018, MPCA issued a letter to MCEA discussing the bases for its conclusion that that the "Technical Report does not support [the] assertion that PolyMet intends to operate the mine at levels higher than the synthetic minor throughput limits." MPCA Response Letter, at 1.
80. Based on its review of the Technical Report, MPCA determined that the expansion scenarios are "speculative at best," and referred to statements in the Technical Report providing that "There is no certainty that the results for these two cases will be realized. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability and there is no certainty that Mineral Resources will become Mineral Reserves." *Id.*, quoting Technical Report, at 19.
81. The Technical Report also is referenced in MCEA correspondence served on MPCA on June 8, 2018, in which MCEA petitioned Minnesota DNR to supplement its EIS under Minn. R. 4410.3000 ("SEIS Petition"). In that petition to DNR, MCEA noted that the FEIS should be supplemented to consider the effects of possible expansion on a variety of Project impacts, including air quality impacts. At that time, however, MCEA did not suggest that the permit, if issued, would be a sham permit or would otherwise violate Minn R. 7007.1000.
82. MCEA also asked MPCA to stay issuance of PolyMet's permits, including the air permit, on November 8, 2018 in light of its pending challenge to DNR's denial of MCEA's SEIS Petition ("Stay Request"). The Stay Request also is based primarily on the expansion scenarios set forth in the Technical Report, but makes no mention of sham permitting, nor does it provide any other basis for withholding the Permittee's air permit.

Issuance of the Permit

83. 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.
84. 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; and
 - f) 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. 5 116.072.
85. The Court of Appeals' remand decision directs MPCA to make supplemental findings associated with Rule 7007.1000, sub. 1(g) and sub. 2(c). *In re Issuance of Air Emissions Permit No. 13700345-101 for Polymet Mining, Inc.*, 965 N.W.2d 1, 12 (Minn. Ct. App. 2021).

Anticipation of Compliance

86. MPCA finds under Rule 7007.1000, subp. 1(g) that it anticipates that the Permittee will, with respect to the stationary source and activity to be permitted, comply with all conditions of the permit for the reasons set forth below.
87. The Permittee sought a synthetic minor permit, including limitations on throughput and associated processes in order to restrict emissions to below major source levels.
88. A synthetic minor permit is specifically designed to allow a source to accept limitations to reduce its emissions. In this case, PolyMet's permit reflects its election to limit operations and throughput, despite the higher overall processing capabilities at the site and the higher throughput levels it could have chosen to operate at, such that emissions from the NorthMet Project would remain below major source levels. *Supra* ¶¶ 18, 37.
89. The Permittee agreed to 1,020 Title I conditions designed specifically to effectively and enforceably limit emissions capacity, including various process-specific limits to ensure that it cannot increase production at any point in the process in a manner that would result in an exceedance of the throughput limits.

90. Monitoring and recordkeeping provisions provide MPCA and the public with a “reasonable assurance of compliance” and as is the case here, are developed to address the “the likelihood of the facility violating the applicable requirements.” *Supra* ¶¶ 49, 52.
91. To that end, MPCA applied robust monitoring provisions throughout the process to ensure compliance with throughput limits. For example, MPCA undertook an independent review of data to determine which monitoring would be most effective, included additional belt scale measurements to ensure that PolyMet could not sidestep overall throughput levels by increasing throughput at certain areas of the process, and required quarterly, as opposed to the semi-annual monitoring proposed by PolyMet. *Supra* ¶¶ 49, 50, 72. Additionally, MPCA consulted with EPA on issues related to monitoring as raised during the public comment period. *Supra* ¶ 66.
92. Based on the foregoing, MPCA finds that the robust permit limits developed for the NorthMet Project support MPCA’s conclusion that, with respect to the stationary source and activity to be permitted, MPCA anticipates that the Permittee will comply with all conditions of the permit.
93. MPCA has considered and carefully evaluated documents in the record that support the potential for future expansion of the NorthMet Mine, including MCEA’s Letter, SEIS Petition, Stay Request, and attached documents. The potential that PolyMet will decide to expand its operations, however, does not change MPCA’s conclusion that the Permittee will operate the NorthMet Project and its associated processing activities in compliance with the permit as issued, as set forth at Minn. R. 7007.1000, subp. 1(G).
94. The MCEA Letter and Technical Report do not suggest that PolyMet intended to increase throughput under the existing permit in a manner that would exceed the throughput and operations limitations. The Technical Report acknowledges that even if PolyMet decided to expand, “any future proposal would be subject to environmental review and permits, public notice and comment, and approval by appropriate Federal and State Agencies.” Technical Report, at 3. *See also* MCEA Letter, at 3 (recognizing expansion in the context of a later permitting process, stating “In determining whether a *subsequent* relaxation of an operational limitation . . .”) (emphasis added).
95. Rather, the MCEA Letter specifically addresses the issue of sham permitting—which is distinguishable from MPCA’s consideration of whether it anticipates a permittee will comply with the conditions of its permit as written. MCEA Letter, at 2.
96. None of the materials submitted by MCEA presume that expansion is a foregone conclusion or that the Permittee would be forced to operate at rates higher than

the existing 32,000 tpd (average) design values in violation of Permit 13700345-101.

97. The attachments to the SEIS Petition and Stay Request may raise questions regarding the return on investment and internal rate of return, but analyses developed for DNR noted that “if the demands for copper and nickel increase as some projections indicate, the project would become more economical” and acknowledged that “[o]ur financial analysis shows that PolyMet’s NorthMet mine will generate a positive cash flow if the debt is reduced.” *See* Stay Request.
98. Articles attached to MCEA’s submittals also acknowledged that the NorthMet Mine may be profitable as permitted. In “New numbers show PolyMet’s Minnesota mine holds smaller potential, except to backer Glencore,” by Lee Schafer, the author described the estimated rate of return as “awfully skinny if trying to attract investors.” However, the article hedged such a statement by explaining “it’s premature to call this a deal that can’t get financed,”—citing the Permittee’s involvement with Glencore, a commodity and mining company.
99. The article also highlighted the expansion scenarios from the Technical Report. The article cited Jim Kuipers, a “mining consultant who advises Minnesota environmental advocacy groups.” Kuipers asserted that the higher-capacity projects will make sense to Glencore; however, the article stated that despite these expansion scenarios, “the company remains focused on its 32,000 tons per day plan,” and quoted directly from the Permittee’s CEO Jon Cherry as saying, “That’s what we are going to finance.”
100. The capability of PolyMet to process greater throughput at the mine than the design value in a synthetic minor permit—and even the potential that PolyMet may seek to expand operations in the future—does not raise questions regarding compliance with the permit terms as written.
101. For these reasons, MPCA can reasonably anticipate compliance with operational and production limits, which are the hallmarks of a synthetic minor permit, where (as here) there are adequate monitoring and reporting provisions in place and the permittee has certified its intention to comply with permit conditions. *See e.g., Supra* ¶¶ 29, 50; PolyMet Project Description Draft (05/19/2017).
102. Furthermore, if the Permittee were to violate its permit conditions—including its operational limitations, such as the throughput limitation—the MPCA retains robust enforcement authority which serves as a deterrent for Permittee’s violation of the conditions of its permit.
103. In such a case, synthetic minor limitations that are violated would not be considered in calculating potential to emit and the Permittee would be subject to enforcement action for failure to obtain a PSD permit. *Supra* ¶ 19.

104. Finally, if PolyMet decides to expand, it would require a wholly new permitting process, including public notice and comment. *Supra* ¶¶ 24, 25. If major source PSD permitting is required, the entire source will be reviewed for proper controls “as though construction had not yet commenced on the source.” *Supra* ¶ 23.
105. Any new permitting process also would require PolyMet to demonstrate that increased emissions will not cause or contribute to an exceedance of the NAAQS. *Id.*
106. For these reasons, MPCA concludes under Rule 7007.1000, subp. 1(g) that it anticipates that the Permittee will, with respect to the stationary source and activity to be permitted under Permit 13700345-101, comply with all conditions of the permit.

Applicant Truthfulness

107. As set forth below, MPCA finds no grounds for permit denial based on Minn. R. 7007.1000, subp. 2(C), which would require an affirmative finding of the Permittee’s failure to disclose fully all facts relevant to the stationary source or activity to be permitted, or the knowing submittal of false or misleading information.
108. MPCA’s rules create a presumption of transparency and fair dealing. This presumption is codified in Minn. Rule 7007.0500, subp. 3, and on MPCA’s own application forms, which require certification of accuracy for permit submittals by a Responsible Official. This presumption is also codified in Minn. Rule 7007.0600, which imposes on permit applicants an ongoing obligation to correct facts or incorrect information.
109. The Permittee certified the accuracy of its permit submittals and acknowledged its understanding that it would need to provide information to MPCA as needed in order for its permit application to be processed. *Supra* ¶¶ 29, 30, 31.
110. At no point in the permitting process did the Permittee submit materials or make statements that would indicate PolyMet was not submitting relevant facts or was intentionally submitting false or misleading information, and MPCA received no comments at any period prior to permit issuance alleging such failures under Rule 7007.0500, subp. 3.
111. Throughout the permitting process, the Permittee and MPCA engaged in open communications. These communications included the Permittee responding to questions from MPCA, clarifying inputs, and providing supplemental information. *Supra* ¶¶ 41, 42.

112. MPCA's permitting rules do not require a permittee to disclose the potential for expansion. MPCA does not consider such information "relevant" to the source or activity to be permitted.
113. MPCA was aware of the additional capacity at the Permittee's facility and the Permittee stated in permitting documents that it was not planning on reactivating all of the equipment at the facility. *See e.g.*, Permit Application, at 26-27. The existence of excess capacity does not raise questions regarding disclosure of relevant information because potential to process more (and therefore to emit more) is consistent with the overall premise of the synthetic permitting program. *Supra* ¶ 16.
114. MPCA analyzed information submitted by the Permittee to ensure that the source to be permitted would not exceed PSD thresholds—not whether the Permittee might return to the agency to permit expanded capacity as part of a new permit process. For this reason, the existence of potential expansion scenarios to not trigger findings that a permittee has failed to disclose fully all facts relevant to the stationary source or activity to be permitted.
115. The MCEA Letter suggested that the discussions of potential expansion and questions regarding Project economics over time are evidence of the Permittee's "bad faith."
116. The MPCA reviewed the potential expansion scenarios and the economic outlook for the NorthMet Project based on materials submitted by MCEA and concluded that they do not support a finding that the Permittee knowingly submitted false or misleading information.
117. The Technical Report clearly states the project is economically viable at 32,000 tpd. As MPCA stated in its December 2018 correspondence: "the Technical Report does not constitute evidence that the project is not economically viable with the proposed synthetic minor throughput limits. The Technical Report discusses the economic viability of the existing Phase 1 and Phase 2 projects (Technical Report at 19-21), while recognizing that the economic viability of the higher throughput levels [i.e. the expansion scenarios] 'has not been demonstrated to date' and future studies would be required to assess 'potential production scenarios which may have the opportunity to create additional value.'" MPCA Response Letter, at 2, *quoting* Technical Report, at 19.
118. Likewise, the articles addressing the Technical Report cited in the SEIS Petition do not make such assertions. For example, one article notes that even though anticipated profits and rates of return have decreased since 2012, "it is premature to call this a deal that can't get financed," highlighting the Permittee's backing and funding from Glencore the same week the Technical Report was issued. *Supra* ¶ 98.

119. None of these documents indicate with certainty that the Project to be permitted could not operate profitably. For example, in one report the author explained that the Technical Report's internal rate of return (IRR) "should be higher," although "there is no standard, other than the higher the IRR the better." Kuipers' Report, at 4. The author further provided, without additional support, "that it is common for major mining firms to require a 30% or even 40% IRR before giving approval to a new mining project . . ." *Id.* Kuipers' Report, however, failed to mention PolyMet's successful funding from Glencore against the backdrop of the decreased profit estimates and lower rate of return.
120. Additionally, Kuipers' speculation that the results of the Technical Report "could be viewed as suggesting" the project is "no longer economic" when "taken to the extreme," is not credible evidence that the project is in fact not economically viable as permitted. Further, Kuipers' opinion that the project is no longer economic is undercut and compounded by the Permittee's sustained desire to operate at 32,000 tons per day, the additional investment from Glencore, and the language and analysis in the Technical Report which "recommends that PolyMet proceed with final design, construction and operation of the 32,000 [tpd]."
121. Kuipers also suggested that eventually the Permittee will expand in order to increase the profitability of the project, because "if it was not their intention to do so it is unlikely the 2018 TR would have included the expanded options."
122. The Technical Report plainly stated why the expansion scenarios were considered. "The purpose of the additional investigations is to quantify the potential viability of identified resources at higher throughputs that are not currently permitted for development. Development of those additional resources would require additional engineering, environmental review and permitting and would require changes in infrastructure that would require significant capital investment. The economic viability of these additional resources has not been demonstrated to date . . . **In no way do these scenarios demonstrate economic viability.**" (emphasis in the original).
123. Moreover, even if Kuipers' assessment were correct—and the Permittee will eventually expand the NorthMet Project—this is not evidence that PolyMet knowingly submitted false or misleading information when it permitted the Project based on a design value of 32,000 tpd.
124. Ultimately, there is not adequate evidence in the record to support an affirmative finding that the Permittee is pursuing a synthetic minor permit in bad faith. The existence of potential expansion scenarios and disagreements around Project economics do not demonstrate that PolyMet knowingly submitted false and misleading information, particularly in light of the Permittee's certifications and consistent statements of its intention to operate consistent with the 32,000

tpd design value, and the absence of any other evidence in the record supporting such a finding.

125. For these reasons, MPCA finds that the record before it does not provide a basis to deny PolyMet's permit under Minn. Rule 7007. 1000, subp. 2.

FINAL DETERMINATION ON ISSUANCE OF PERMIT 13700345-101

126. 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, subp. 1.
127. MPCA also find that none of the justifications to deny permit issuance described in Minn. R. 7007.1000, subp.2 exists.

CONCLUSIONS OF LAW

128. The MPCA has jurisdiction over the decision whether to issue Permit 13700345-101.
129. The MPCA concludes that all procedural and public notice requirements applicable to the proposed permit action have been satisfied.
130. The requirements set forth in Minn. R. 7007.1000 for issuance of Permit 13700345-101 are satisfied. MPCA has considered documents discussing the economics of the project as permitted and concludes that the potential for future expansion does not support a conclusion to withhold issuance of the permit under Minn. R. 7007.1000, subp. 1(G) or subp. 2(C). Therefore, Permit 13700345-101 for the PolyMet Mining, Inc. facility should be issued.
131. 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



Katrina Kessler
Commissioner
Minnesota Pollution Control Agency