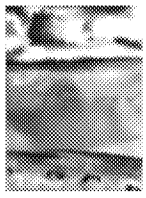

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June 29, 2017

Chad Konickson, Chief of the St. Paul District Regulatory Branch
Kenton Spading, PolyMet Project Manager
US Army Corps of Engineers
Sibley Square at Mears Park
190 5th Street East, Suite 401
St. Paul, MN 55101-1638

RE: PolyMet Mining Corp. NorthMet Project Clean Water Act Section 404 Permit MVP-1999-5528-JKA
Request for Public Notice, Hearing, and Supplemental Environmental Impact Statement

Dear Mr. Konickson and Mr. Spading:

This letter is submitted on behalf of WaterLegacy. We request that the U.S. Army Corps of Engineers ("USACE") issue a new public notice and schedule a public hearing for the Clean Water Act ("CWA") Section 404 permit for the proposed PolyMet NorthMet copper-nickel mining project ("PolyMet Project"). This request is made pursuant to the Clean Water Act, 33 U.S.C. §1344(a) and implementing federal regulations in Part 327 of Title 33 of the Code of Federal Regulations. There are substantial issues and valid interests supporting a hearing, and requests were made within the applicable notice and comment period.

Based on significant project changes recently proposed and significant new information disclosed by PolyMet in the course of applying for a Minnesota Permit to Mine, Dam Safety Permit and Water Appropriations Permits, WaterLegacy also requests that a supplemental environmental impact statement ("EIS") be required under the National Environmental Policy Act ("NEPA"), 42 U.S.C. §4332(2)(C) and its implementing regulations, 33 C.F.R. § 230.13(b) and 40 C.F.R. §1502.9(c)(1)(ii). Information in the Minnesota state permitting process demonstrates that there are significant new circumstances and new information relevant to environmental concerns and bearing on the proposed action and its impact that requires a supplemental EIS be prepared.

A. Public Notice and Hearing

1. Prior Requests for Public Notice and Hearing

Anticipating the release of the PolyMet NorthMet final environmental impact statement ("FEIS), WaterLegacy requested in June 2014 that the USACE issue a supplemental public notice and hold a public hearing when the environmental review process was completed and the FEIS prepared.[1] The U.S. Environmental Protection Agency ("EPA") in its comments on the supplemental draft EIS for the NorthMet project had stated that PolyMet's August 19, 2013 Section 404 application was not a standalone document and that it relied on environmental review documents to meet requirements for compliance with the Clean Water Act.[2]

[1] WaterLegacy letter to USACE, June 16, 2014 (Attachment A).
[2] U.S. EPA Comments on PolyMet NorthMet supplemental draft EIS, Mar. 13, 2014 (Attachment B).

The USACE issued a public notice for the PolyMet Project on November 13, 2015, which stated that it was based on PolyMet's August 19, 2013 Section 404 application and PolyMet's request to modify the application to include the discharge of fill material into an additional 1.37 acres of wetlands. The USACE and other agencies provided a comment period through December 14, 2015 on the Section 404 permit application and the FEIS for the PolyMet Project.[3]

On November 19, 2015, within the applicable comment period, WaterLegacy joined with other Minnesota Environmental Partnership groups in requesting a public hearing based not only on the small addition in wetlands impacts, but on new information pertinent to the PolyMet Project Section 404 permit contained in the FEIS, upon which the PolyMet application depended.[4]

In response to follow up regarding the USACE's decision whether or not to conduct a public hearing, WaterLegacy received the following email from the USACE on December 18, 2015:

> We did have a public hearing for the purposes of the Clean Water Act Section 404 permit evaluation process on January 16, 2014. At this time, we have not made a determination regarding another public hearing. We have not completed our review of the responses to our public notice of November 13 inviting comments on changes to wetland impacts associated with the proposed project. We will make a decision regarding the need to hold another public hearing once we have assessed the issues raised by the comments.[5]

2. Grounds for Public Notice and Public Hearing

Since December 18, 2015, WaterLegacy has received no written determination from the USACE as to any decision regarding the need to hold a public hearing on the PolyMet Project. Federal regulations require that "Requests for a public hearing under this paragraph shall be granted, unless the district engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing," and that "The district engineer will make such a determination in writing, and communicate his reasons therefor to all requesting parties." 33 C.F.R. §327.4(b).

The issues raised by Minnesota Environmental Partnership ("MEP") groups, including WaterLegacy, in requesting a public hearing were substantial, pertained to valid and compelling public interests, and addressed matters that had arisen since the time of the hearing on the supplemental draft EIS or for which new factual information had become available since that time. These issues included new concerns regarding water modeling, seepage and containment of contaminated wastewater, cumulative northward flow of pollutants to the Boundary Waters watershed, and the potential application of best available technology to avoid catastrophic tailings dam failure - taking into consideration the Mount Polley tailings dam collapse in Canada and the resulting independent scientific report on best available technology for tailings disposal.

A hearing was also requested on the grounds that neither the August 19, 2013 PolyMet permit application, the FEIS, nor any document in the environmental review record prior to December 14, 2015 provided information needed to determine compliance with Section 404 requirements,

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[3] USACE Public Notice for the PolyMet NorthMet Project, Nov. 13, 2015 (Attachment C).
[4] MEP letter to USACE requesting PolyMet NorthMet hearing, Nov. 19, 2015 (Attachment D).
[5] USACE email to WaterLegacy on PolyMet NorthMet hearing, Dec. 18, 2015 (Attachment E).

including but not limited to a quantitative assessment of the PolyMet Project's indirect impacts on wetlands, a commensurate proposal for compensatory wetlands mitigation, and financial assurance for such secondary wetlands impacts, 33 C.F.R. §§ 332.3(k)(1), 332.3(m), 332.4 (b). Similarly, MEP groups requested a hearing on the grounds that neither the FEIS nor supporting documents identified the least environmentally damaging practicable alternative ("LEDPA") for the Project, as required under 40 C.F.R. §230.10(a).

These grounds are still valid today. A public hearing is required under the Clean Water Act, 33 U.S.C. §1344(a) and under 33 C.F.R., Part 327.

B. Supplemental Environmental Impact Statement

In addition to requesting a hearing based on outstanding concerns since the PolyMet NorthMet FEIS, WaterLegacy requests that the USACE require a supplemental EIS to respond to significant new circumstances and new information that has been disclosed as a result of PolyMet's application for various Minnesota state permits. These new circumstances and new information bear directly upon the jurisdiction of the USACE to require compliance with requirements in Part 230 of Title 40 and Part 332 of Title 33 of the Federal Code of Regulations before approving any permit for discharge of dredge and fill materials under Section 404 of the Clean Water Act.

Federal regulations implementing NEPA require that an agency prepare a supplemental EIS when "There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. §1502.9(c)(1)(ii). This requirement to prepare a supplemental EIS when there are significant new circumstances or information has been specifically adopted by USACE regulations, which state "A supplement to the draft or final EIS should be prepared whenever required as discussed in 40 CFR 1502.09(c)." 33 C.F.R. § 230.13(b).

The PolyMet Project has changed substantially since the August 2013 PolyMet Section 404 permit application and the November 2015 PolyMet NorthMet FEIS, and significant new information pertinent to the Section 404 permit application has recently come to light.

1. Project Alteration to Remove of Tailings Basin Cement Deep Soil Mixing (CDSM)

The FEIS proposed that cement deep soil mixing ("CDSM") would be used to reduce slope instability and reduce the risk of dam failure, particularly in Cell 2E North Dam of the tailings basin.[6] The current PolyMet proposal proposes to use additional buttresses rather than CDSM, since CDSM, unlike buttresses, would need to be constructed at the start of the project, incurring up front costs to PolyMet.[7] PolyMet's consultants have estimated that this change will result in additional wetlands impacts of approximately 2.97 acres at the tailings basin.[8]

This reliance on buttressing instead of CDSM to provide slope stability may reduce the safety factor for certain liquefaction triggering scenarios. For example, under the liquefaction triggering

[6] FEIS, available online at http://www.dnr.state.mn.us/input/environmentalreview/polymet/feis-toc.html, 3-4, 3-13, 3-93, 3-105, 3-150, 3-154, 4-437.
[7] Barr, Technical Memorandum, "Tailings Basin Cell 2E North Dam – Modified Buttress as Alternative to Cement Deep Soil Mix Zone," Dec. 30, 2016, p. 1. (Attachment F). The May 2017 NorthMet Dam Safety Permit Application Flotation Tailings Basin eliminates CDSM.
[8] *Id.*, p. 2.

scenario resulting from erosion in cross-section F, the slope stability drops from 1.99 reported in the FEIS, to 1.07 reported in the May 2017 PolyMet Dam Safety Permit Application, a slope stability that is *below* the required factor of safety.[9]

The risk of liquefaction and slope instability as a result of proposed PolyMet wet slurry tailings disposal potentially impacts wetlands and downstream water quality. In addition, the change in proposed engineering to address tailings basin instability affects the assessment of the least environmentally damaging practicable alternative ("LEDPA") for tailings disposal. *See* 40 C.F.R. §230.10(a). WaterLegacy, among other stakeholders, has requested that dry stack tailings best available technology identified in the independent scientific report after Canada's 2014 Mount Polley catastrophic tailings dam collapse be analyzed in environmental review of the PolyMet Project.

PolyMet's slope stability engineering change to reduce its up front capital costs is the type of new circumstance that requires a hard look through a supplemental EIS.

2. Removal of Mine Site Waste Water Treatment Facility (WWTF)

The PolyMet NorthMet FEIS proposed construction of a wastewater treatment facility (WWTF) at the mine site in the first year of mine operation to reduce the level of sulfates, metals and other pollutants before wastewater was piped nine miles to the processing plant. The FEIS proposed that the mine site WWTF would be upgraded to include reverse osmosis or equivalent technology at closure.[10] In addition, the WWTF would assure compliance with water quality standards, since "should water monitoring undertaken during or following operations indicate a need to do so, the WWTF could be expanded or treatment capabilities modified to meet water quality standards."[11]

The WWTF has been integral to the PolyMet NorthMet plan to treat polluted water at the mine site and reject concentrate from the plant site, to treat water from mine site stockpiles, mine pits, the Ore Surge Pile, ancillary mine features and, if necessary, to treat process water from the Overburden Storage and Laydown Area.[12] Starting in year 11, some water from the WWTF would be used to cover East Pit backfill and, then, the combined East Central Pit backfill.[13] Analysis of mine site pollution in the FEIS was calculated assuming treatment at the WWTF and management of mine pit water levels through pumping to and from the WWTF.[14]

The FEIS explained that when the West Pit filled, the WWTF would be upgraded to include reverse osmosis or equivalent technology, and treated effluent from the mine site would be discharged to a wetland flowing toward Dunka Road and eventually into the Partridge River.[15] Treated effluent from the WWTF would be used during closure and post-closure to ensure that

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[9] Compare PolyMet NorthMet FEIS, 5-658, Table 5.2.14-1 with NorthMet Dam Safety Permit Application Flotation Tailings Basin (May 2017), p. 17, Table 3-3. (Attachment G). Complete Dam Safety Application available on line at http://files.dnr.state.mn.us/lands_minerals/northmet/dam-safety/v2/dam_safety_permit_application_flotation_tailings_basin_v2_may2017.pdf

[10] FEIS, 3-52, 3-53.

[11] *Id.*, 3-52, 3-72, 3-75 (Fig. 3.2-17), 3-77 (Fig. 3.2-18), 3-79 (Fig. 3.2-19).

[12] *Id.*, 3-52 to 3-53. There are hundreds of references to the WWTF in the FEIS.

[13] *Id.*, 3-53, 3-64.

[14] *Id.*, 5-117 to 5-118.

[15] *Id.*, 3-65, 3-72, *see* Fig. 5.2.2-10 (Attachment H) for FEIS diagram of WWTF functions.

water levels in the East Pit were sufficient to maintain subaqueous disposal conditions.[16] The water level in the West Pit during closure and post-closure would also be controlled by pumping to the WWTF to prevent untreated surface overflow: "By pumping pit lake water to the WWTF, the pit water level would be managed to always provide sufficient freeboard to absorb extreme precipitation events without overflowing."[17] The FEIS stated the following commitment from PolyMet: "The WWTF would remain operational until water quality monitoring results demonstrate that a non-mechanical system could produce an effluent water quality, which is shown by pilot-testing and modeling, to satisfy water quality-based effluent limits at compliance points without the need for mechanical treatment."[18]

In the process of application to the State of Minnesota for a Permit to Mine and Water Appropriations Permits, PolyMet has recently proposed to eliminate any water treatment at the mine site and build three pipelines to transport high concentration mine pollution as well as less polluted contact water to the plant site.[19] Mine site water equalization basins with untreated contaminated wastewater would be located at a new location south of the Dunka Road, closer to the Partridge River than those proposed in the FEIS, and the construction mine water basin would also be smaller than proposed in the FEIS.[20] Pipelines carrying construction mine water would be routed to the tailings basin.

PolyMet's consultants have stated that the change would reduce direct wetlands impacts by 7.5 acres and that "the Section 404 permit application. . . would be affected by this Project change."[21]

Although PolyMet's consultants may argue otherwise,[22] the removal of the WWTF facility from the PolyMet NorthMet project is a significant new circumstance relevant to environmental concerns and bearing on the proposed action and its impacts. PolyMet's proposal to eliminate the WWTF blandly states that "water quality and rate of the treated discharge to the environment would be the same as were evaluated for the FEIS."[23] However, PolyMet has provided no data and has made no commitments regarding limits on the quantity or concentration of chemical parameters in wastewater (whether treated or untreated) that would be discharged to the Tailings Basin and the East Pit and, thus, to groundwater and to directly connected surface water.[24]

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[16] *Id.*, 5-104.
[17] *Id.*, 5-105.
[18] *Id.*, 3-81.
[19] Barr, Technical Memorandum, "Proposed Waste Water Treatment System (WWTS) Relocations (Version 3)," April 11, 2017, p. 1. (Attachment I).
[20] *Id.*, Large Figure 2.
[21] *Id.*, p. 15.
[22] *Id.*, pp. 6-7.
[23] *Id.*, pp. 1, 8. PolyMet also claims that "the quantity, quality, and location" of treated effluent would not change with removal of the WWTF. However, PolyMet's permit applications only identify discharge sites in the vicinity of the tailings basin (Second, Trimble and Unnamed Creek). PolyMet NorthMet Water Appropriations Permit Applications (Apr. 2017) ("Water Approp. Permit App."), pdf pagination ("autop.") 4-59. Complete revised Applications are available online at files.dnr.state.mn.us/lands_minerals/northmet/water-approp/water-appropriation-permit-app-v3.pdf
[24] *Id.* (see entire document).

Although eliminating the mine site WWTF would reduce up front capital costs and might reduce costs during operations,[25] it is highly likely to increase inefficiencies during closure and post-closure, increasing pipeline rupture risks and making adequate long-term water quality treatment less likely. The unavailability of mine site water treatment and the fact that no pipeline would be available until Mine Year 12 to transport treated water back to the East Pit[26] could also interfere with adaptive management options either to cyclically treat East Pit water and reduce contaminant levels or to treat and restore groundwater to the mine site aquifer if needed to mitigate wetlands drawdown impacts.

PolyMet's most recent Water Appropriations Permit Applications claim that the appropriation for Category 1 groundwater containment would only extend through Mine Year 21 and do not illustrate any treatment of this contaminated groundwater during closure or over the long term.[27] The FEIS clearly required that Category 1 containment system contact water be treated during reclamation (years 21-30 and years 31-52) as well as during a period of post-closure "long-term mechanical treatment."[28]

A supplemental EIS is needed to provide missing information and evaluate environmental issues, including but not limited to providing information and analysis regarding: 1) impacts on the Partridge River resulting from the shorter distance for seepage of highly polluted wastewater from equalization basins; 2) increased risk of mine site construction contact wastewater overflow; 3) increased risk of pipeline rupture and contamination of wetlands with concentrated pollutants; 4) potential increases in water volumes at the Tailings Basin; 5) potential increases in chemical contamination at the Tailings Basin, West Pit and East Pit; and 6) reduced capacity to respond to higher-than-predicted groundwater and surface water contamination or secondary wetlands impacts during operations, reclamation and long-term closure through adaptive management of water quality and quantity at the mine site.

A supplemental EIS is also needed to take a hard look at whether PolyMet's current project plan submitted in its most recent water appropriations permits alters the fundamental requirement in the FEIS that containment system water from the Category 1 waste rock pile be treated and retained in the mine site watershed during reclamation and long-term closure after mining operations cease.

3. New Information Regarding Water Appropriation from Mine Site

Neither the August 2013 PolyMet Section 404 Application nor the November 2015 PolyMet NorthMet FEIS disclosed the total volume of water that would be appropriated from the mine site to the plant site watershed nine miles away. Neither the PolyMet NorthMet SDEIS nor the FEIS disclosed the nature and extent of appropriations from mine site infrastructure or provided a water balance for all NorthMet Project facilities.[29]

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[25] *Id.*, pp. 1, 8.
[26] *Id.*, p. 3.
[27] *Id*, Table 3-1 and Table 5-1 (Attachment J). PolyMet's most recent Water Approp. Permit App. illustrates water appropriations during construction and operations (Large Figures 2, 3 and 4 on autop. 187-189), but provides no illustrations for reclamation and closure timeframes.
[28] FEIS, Figures 3.2-17, 3.2-18, 3.2-19 (Attachment K).
[29] Although this deficiency was pointed out in expert comments on the PolyMet NorthMet SDEIS, Lee (2014), pp. 5, 9, (Attachment L), it was not rectified in the FEIS.

To the extent that the FEIS discussed capture and retention of contact water at the mine site, the FEIS represented that "During mine operations and reclamation, surface water runoff from much of the Mine Site would be retained within the site until the West Pit floods."[30] The FEIS asserted that average annual flows in the Partridge River just downstream of the mine site would be reduced no more than 4% and mine site tributaries would remain within the range of natural variation.[31] The FEIS explicitly claimed that by approximately year 50, once the West Pit was filled, groundwater levels would be returned to near pre-mining conditions.[32]

No analysis of PolyMet NorthMet mine wetlands drawdown was calculated using a hydrologic model that considered the impacts of all water appropriations from the mine site watershed. More specifically, actual water appropriations from the mine site were neither quantified nor considered in evaluating mine site wetlands drawdown and impairment, since the only predictions made by PolyMet and adopted in the FEIS were based on an "analog" from another mine pit.[33]

According to PolyMet's most recent Water Appropriation Permit Applications for the project, the maximum annual volume of water pumped from the Partridge River headwaters and transferred to the PolyMet NorthMet plant site nine miles away would total 3,700,000,000 gallons (3,700 MG).[34] In addition to the East Pit (1,000 MG), the Central Pit (700 MG) and the West Pit (800 MG), each of which, according to the FEIS would be dewatered between mine years 0 through 20,[35] the most recent PolyMet Water Appropriations Permit Applications propose appropriations of 1,200,000,000 gallons per year (1,200 MG) due to mine site infrastructure.[36]

PolyMet's updated Water Appropriation Permit Application Permitting and Reporting System forms detail the nature of mine site infrastructure water usage.[37] The maximum water appropriation for the Category 1 stockpile groundwater containment system pumping alone is 14,400 gallons per minute.[38] This is equivalent to 756,864,000 gallons per year (757 MG), which is comparable in scale to the dewatering appropriation for either the Central Pit or the West Pit at the proposed NorthMet mine. Unlike mine pit dewatering, which is described in the FEIS as finite in duration, collection and pumping from the Category 1 stockpile groundwater containment system was described in the FEIS to continue indefinitely and for the foreseeable long-term future.[39]

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[30] FEIS, 5-132.
[31] *Id.*, 5-453 maximum of 4% reduction at SW-004a and reduction in mine site tributary streams to Partridge by no more than 20%, thus within "the range of natural variability."
[32] *Id.*, 5-110, "During years 20 to 52, water from the Plant Site would be pumped to the West Pit to accelerate flooding and help return groundwater levels to near pre-mining conditions."
[33] *Id.*, *see e.g.* 5-112 to 5-113.
[34] Water Approp. Permits App., Table 5-3 and Table 6-1 (Attachment M). See also *Id.*, MDNR Permitting and Reporting System forms, autop. 1-107.
[35] FEIS, *see e.g.* 5-110. See also Water Approp. Permits App., Table 3-1 and Table 5-1 (Attachment J).
[36] Water Approp. Permits App., Table 5-3 (Attachment M).
[37] Water Approp. Permits App., MDNR Permitting and Reporting System forms, autop. 44-59.
[38] *Id.*, autop. 52, 141
[39] FEIS, 3-81, 3-141, 5-8.

None of the FEIS analyses of impacts to the Partridge River or its mine site tributaries reflect the new information on the volume and points of discharge for total water appropriations contained in the updated PolyMet NorthMet water appropriations permit applications.[40]

In addition, none of the "analog" mine pits used by PolyMet or regulatory agencies in place of water modeling to estimate secondary wetlands impacts for the PolyMet NorthMet mine included the feature of substantial and potentially indefinite long-term mine site water appropriations for containment and pumping of contaminated water nine miles away from the mine site. This important discrepancy requires a supplemental EIS analysis of secondary wetlands impacts, which analysis must be based on modeling of all water appropriations for mine site infrastructure as well as modeling of mine pit dewatering, based on appropriate testing and calibration.

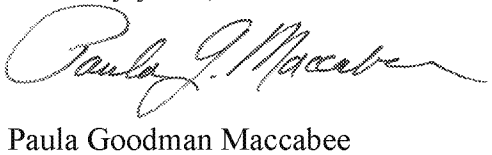
Conclusion

The request by WaterLegacy, among other stakeholders, during the PolyMet NorthMet FEIS comment period for a hearing should be granted pursuant to the Clean Water Act, 33 U.S.C. §1344(a) and Part 327 of Title 33 of the Code of Federal Regulations. The request was properly and timely made, the issues raised are substantial and there are valid interests to be served by a hearing.

In addition, based on information brought to light in the Minnesota state permitting process of significant new circumstances and information relevant to environmental concerns and bearing on the proposed PolyMet NorthMet action and its impacts, a supplemental EIS is necessary under NEPA and its implementing federal regulations. 42 U.S.C. §4332(2)(C); 40 C.F.R. §1502.9(c)(1)(ii); 33 C.F.R. § 230.13(b).

We look forward to your prompt response on these important issues. Thank you for your consideration.

Sincerely yours,



Paula Goodman Maccabee
Advocacy Director/Counsel for WaterLegacy

Attachments

cc: U.S.D.A. Forest Service
Minnesota Department of Natural Resources
U.S. EPA Region 5
Fond du Lac Band of Lake Superior Chippewa
Grand Portage Band of Lake Superior Chippewa
Bois Forte Band of Lake Superior Chippewa

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[40] *See* footnote 31, *supra*.