Pollutant Discharges from Point Sources

EPA has consistently interpreted the Clean Water Act (CWA) to apply to discharges of pollutants from a point source to surface water, including those that occur via hydrologically connected ground water.[1] The CWA defines point sources as follows:

> The term 'point source' means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

The need for an NPDES permit is highly dependent on the facts surrounding each situation. 66 *Fed. Reg.* at 3015; 63 *Fed. Reg.* at 7881. As EPA has explained:

> The determination of whether a particular discharge to surface waters via ground water which has a direct hydrologic connection is a discharge which is prohibited without an NPDES permit is a factual inquiry, like all point source determinations. The time and distance by which a point source discharge is connected to surface waters via hydrologically connected [ground] waters will be affected by many site specific factors, such as geology, flow, and slope. . . 66 *Fed. Reg.* at 3017.

Mine Site

MPCA does not anticipate that NPDES permit coverage would be required prior to mine construction and commencement of operations for proposed pollutant discharges to surface waters that will occur via subsurface flow or hydrologically connected groundwater. MPCA has indicated that it would initiate NPDES permit coverage for the mine site when "a point source water discharge adds pollutants to waters of the U.S."[2]. It is unclear what MPCA would use to determine this criteria is met, which is why we are providing the definition of point source here, as well as the clarification on discharges that occur via subsurface flow or hydrologically connected groundwater that EPA provided in the aforementioned federal register notice.

The MPCA cites as rationale for its approach modeled projections of flow and magnitude of the potential pollutant load as represented in the SDEIS and which suggest that it could take up to 17 years after the commencement of mining for pollutants to reach the Partridge River. See SDEIS Table 5.2.2-26. The EPA's comments on the SDEIS dated March 13, 2014, describe our concerns regarding both the reliance on the modeling approach and that the Partridge River is not the first receiving water of mine site discharges. We understand that the model expressly assumes no discharge to wetlands located between the mine site and the Partridge River. We note that as a result of this assumption, the travel times predicted in the SDEIS and in recently

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[1] See, Proposed National Pollutant Discharge Elimination System Regulations for Concentrated Animal Feeding Operations, 66 *Fed. Reg.* 2960, 3015 (Jan. 12, 2001); NPDES General Permits for Storm Water Discharges from Construction Activities, 63 *Fed. Reg.* 7,858, 7,881 (Feb. 17. 1998).

[2] Draft PFEIS language, Section 5.2.2.3.6 Monitoring

updated reference documents (updated in support of preparation of the Final EIS)[3] estimate that pollutants will begin to arrive at the Partridge River 17-34 years from the beginning of the project. Since the model predictions are based on the pollutants traveling the entire distance between the mine site and the Partridge River via a subsurface flow path, we note that pollutants may reach surface waters sooner than predicted in either or both of two ways. First, pollutants may be discharged to wetlands in close proximity to the mine site, a potential that is not considered by the modeling work that supported EIS development. Second, pollutants from discharges may reach the Partridge River evaluation locations sooner than predicted because the path pollutants travel to those locations may not be entirely in the subsurface. During our discussions MPCA confirmed their understanding that the wetlands associated with the Partridge River and the tributaries to the Partridge River are waters of the U.S. and may be the first waters receiving pollutants from mine site features.

We understand that MPCA is expecting to apply State Disposal System (SDS) permit coverage for the mine site that may include monitoring requirements. The MPCA plans to evaluate monitoring results and then expects to apply NPDES permitting authorities to the mine site if and when a discharge of pollutants to surface waters is either detected or determined to be imminent. A complete NPDES permit application must include information detailing when and where pollutants originating from mine site activities and features will enter surface waters (40 CFR §§ 122.21 and 124.3). We understand that MPCA plans to use monitoring required under the SDS program to track the progress of pollutants toward surface waters, and then would modify the existing permit to include NPDES requirements to pollutant discharges that will soon reach or have already reached surface waters. MPCA has not made clear how it intends to structure the SDS permit to assure sufficiently timely detection of potential to discharge and initiation of the NPDES process. As MPCA moves forward in development and issuance of the SDS permit we would encourage you to consider these concerns in order to provide time to take the necessary steps that may avoid noncompliance by the permittee.

An NPDES permit for discharges of pollutants will need to include numeric and/or narrative effluent limitations necessary to protect water quality standards of the receiving waters, as well as any limitations necessary to ensure that downstream water quality standards are protected. 40 CFR § 122.44(d). The facility must be able to meet standards at the time of permit issuance, as no time to comply with standards can be granted to Northmet through an NPDES permit. As a "new source" as that term is defined in 40 CFR § 122.2, the mine site is subject to New Source Performance Standards (40 CFR 440) which pertain to quantity and quality of water that can be discharged. New sources generally are not eligible for schedules of compliance or variances from water quality standards. 40 CFR § 122.47, and 40 CFR 132 Appendix F.

Under federal regulations at 40 CFR § 122.21(a)(1), "Duty to apply," "any person who discharges or proposes to discharge pollutants … and who does not have an effective permit … must submit a complete application to the Director in accordance with this section and part 124 of this chapter." The time to apply (40 CFR § 122.21(c)) is no less than 180 days prior to the commencement of discharge. However, it can take longer than 180 days to draft and issue a

[3] Water Modeling Data Package Volume 1 – Mine Site. Version 13. December 29, 2014. Prepared for PolyMet Mining Inc. by Barr Engineering Co.

permit and simply applying for a permit does not provide the coverage needed to authorize discharges of pollutants to surface waters under the CWA.

If permit coverage for identified pollutant discharges is not received prior to pollutants reaching surface waters, then the company will be discharging without a permit in violation of the CWA. Note that there is no minimum threshold of predicted pollutant load needed to trigger the requirement to submit a permit application.[4]

Plant Site (Tailings Basin)

In a June 20, 2011 Memo ("Memo"), MPCA outlined criteria it would review in assessing "permittability" of the tailings basin, which included that the groundwater seepage from the tailings basin would not exceed 500 gallons/acre/day, which MPCA notes is "equivalent to an engineered lined system with respect to release of seepage to groundwater."[5] For a source as large as the tailings basin for the proposed Northmet facility, this would translate into seepage potentially in excess of about 2 million gallons/day.

The MPCA Memo appears to identify 500 gallons/acre/day as a threshold flow below which a facility would not be subject to NPDES requirements. Although the Memo did not address the hydrologic connection between groundwater and surface water flow at the site, the Memo states that "'excess' wastewater from the tailings basin [that discharges to the Embarrass River] during facility operations must meet effluent limitations based on the 10 mg/L wild rice sulfate surface water quality standard." Memo at page 2. The Memo further explains that to evaluate permit coverage for the facility, MPCA will "seek evidence the facility will not have a statistically significant impact on sulfate in receiving waters. . . groundwater quality standards can be met at the facility property boundary, [and] all applicable surface water quality standards can be met in surface waters at the facility," among other factors.

The CWA does not include exemptions that would limit NPDES permit coverage to only "excess" wastewater discharges that are deemed to have a "statistically significant" impact on receiving waters at property boundaries. There is no exclusion or exemption for discharges from facilities based on technology or engineering controls. See 40 CFR 122.44(d). Failure to obtain NPDES coverage for discharges of pollutants to waters of the United States would place the discharger at risk of violating the CWA. We had many discussion with MPCA and the permittee on this point and believed this was understood and agreed to by the parties some time ago.

Transfer of tailings basin permits

On July 1, 2013, EPA received a "Draft Outline for Additional Information on Permitting in SDEIS," from MPCA, which indicated that the tailings basin permit(s) would be revised and transferred should Polymet take over operation of the tailings basin. Federal regulations

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4 The contents of a complete permit application are described in 40 CFR § 124.3 and for new industrial sources at §§ 122.21(f), and (k). Included in the permit application requirements are requirements to identify the location of the outfall, the receiving water, and the flows and sources of the discharges, a line drawing that includes a water balance, and effluent characteristics. Effluent characteristics includes a listing of the pollutants expected to be present in the discharge, and their projected amounts, and provide the source of the information (basis for why the applicant believes the projected amounts to be representative).

5 Memo from Ann Foss, MPCA, to Bill Johnson, MDNR, "Minnesota Pollution Control Agency Staff Recommendations on Impact Criteria Related to the Permittability of the Proposed PolyMet Tailings Basin," June 20, 2011.

regarding permit transfers are found at 40 CFR § 122.61. The Plant site currently includes the non-operational iron ore processing facility and the tailings basin which does not currently accept tailings. Polymet's reuse of this site would result in significant changes including types of ore processed, changes in discharge water quantity and quality, additional discharge locations, a reconfiguration of how water is managed, and additional waste management areas such as the proposed hydrometallurgical disposal facility. Substantial modifications such as these are not "minor modifications," as that term is defined in the federal regulations (see 40 CFR § 122.63), rather these are modifications that would require a major modification or revocation and reissuance of the permit(s), as provided in 40 CFR § 122.62.