

Poly Met Mining, Inc.

Comments Regarding Downstream Water Quality

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U.S. Environmental Protection Agency, Region 5
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INTRODUCTION

The water quality effects of PolyMet's NorthMet Project have been studied more thoroughly than those of any mine in Minnesota history. The Minnesota Department of Natural Resources, U.S. Army Corps of Engineers, and U.S. Forest Service studied them jointly for a decade in an environmental impact statement and separately under their permitting rules. The Minnesota Pollution Control Agency studied them as part of its NPDES/SDS permitting process and as part of its Clean Water Act section 401 certification process.

The Fond du Lac Band of Lake Superior Chippewa participated in all of those processes. As a result, the agencies that studied PolyMet's project worked to answer the Band's questions about the project's potential effects on its reservation's water quality. That led to a Cross-Media Analysis that went beyond what was required to consider the cumulative effect on downstream water quality of air depositions, water discharges, and other factors. Still, the Cross-Media Analysis found that PolyMet's project would not cause measurable changes to downstream water quality.

The same evidence that was before the state and federal permitting agencies is now before EPA. Because it shows no downstream water quality effect, it does not warrant a section 401(a)(2) notice to the Band.

BACKGROUND

PolyMet is working to build Minnesota's first copper-nickel mine. The project sits in the heart of the Iron Range, which has been producing taconite and iron ore for more than a century. Indeed, PolyMet plans to clean up and reuse facilities that were once part of a taconite mining operation.

Protecting water quality has always been one of PolyMet's first priorities. Thanks to its advanced membrane treatment, PolyMet's mine will be the only one in the state with a system designed to meet Minnesota's sulfate standard for wild rice, as well as all other applicable water quality standards. PolyMet will also collect and treat contaminated seepage from the existing taconite tailings basin, vastly improving current conditions.

PolyMet is confident about these environmental outcomes because it has been working with federal and state agencies to ensure them for more than 15 years. That work is documented in the 2015 Final Environmental Impact Statement and the numerous federal and state permitting decisions that relied on it.

For present purposes, the most relevant permitting decision is the Minnesota Pollution Control Agency’s December 2018 water quality certification under section 401 of the Clean Water Act. Even though section 401 requires agencies to make a water quality certification within one year, PolyMet worked with PCA to facilitate more than two years of review.¹ In that time, PCA asked PolyMet to conduct a Cross-Media Analysis—the most rigorous possible review of downstream water quality impacts, looking at the issue from every angle. That review was meant to answer questions raised by opponents of PolyMet’s project, including the Fond du Lac Band.

After reviewing the evidence, PCA concluded that the NorthMet Project “will not result in any measurable changes to water quality downstream of the Project in the St. Louis River,” including at a location far closer to the project than the Band’s reservation.² No one challenged that conclusion in court. Instead, the Band sued EPA under the Administrative Procedure Act, arguing that the project “may affect” water quality on its reservation under Clean Water Act section 401(a)(2).³ When EPA moved to dismiss, a federal district court held that the agency was required to make a decision about potential effects to the Band’s water quality.⁴

Because EPA had not decided whether the NorthMet Project “may affect” the Band’s water quality, it asked the court for a voluntary remand to consider that issue.⁵ As part of that remand, EPA asked PolyMet for “written comments.” These comments respond to EPA’s request.

¹ See [Letter from Brad Moore, PolyMet to John Linc Stine, Commissioner, Minnesota PCA](#) (July 21, 2017) and [Letter from Brad Moore, PolyMet to John Linc Stine, Commissioner, Minnesota PCA](#) (July 11, 2018) (withdrawing and resubmitting PolyMet’s application for section 401 certification to prevent the one-year time limit from expiring); see 33 U.S.C. § 1341(a)(1) (“If the State . . . fails or refuses to act on a request for certification within a reasonable period of time (which shall not exceed one year) . . . the certification requirements of this subsection shall be waived . . .”).

² Minnesota PCA, [Clean Water Act Section 401 Water Quality Certification Program Fact Sheet](#) at 14.

³ First Amended Complaint for Declaratory and Injunctive Relief ¶¶ 254-64.

⁴ *Fond du Lac Band of Lake Superior Chippewa v. Wheeler*, Case No. 19-cv-24892021 WL 603754, at *8 (Feb. 16, 2021).

⁵ This remand also satisfies a recommendation in the EPA Inspector General’s recent report. See EPA OIG, [Improved Review Processes Could Advance EPA Regions 3 and 5 Oversight of State-Issued National Pollutant Discharge Elimination System Permits](#) at 25 (April 21, 2021).

LEGAL AND FACTUAL DISCUSSION

Notice to downstream states under section 401(a)(2) is rare. One former EPA lawyer recalled “fewer than 10” such letters in the Clean Water Act’s 50-year existence.⁶ But the text of the statute, court decisions, available EPA guidance, and past section 401(a)(2) notice letters all indicate that EPA should make an evidence-based decision. In this case, the evidence does not warrant a “may affect” notice to the Fond du Lac Band.

I. Section 401(a)(2) requires an evidence-based “may affect” finding of a potential water quality violation.

A. Section 401(a)(2) requires a potential violation of the downstream state’s water quality standards.

Section 401(a)(2) authorizes EPA to notify a downstream state when a project discharge “may affect . . . the quality of the waters” in that state.⁷ After that, the downstream state has 60 days to decide whether the discharge “will affect the quality of its waters so as to violate any water quality requirements in such State”⁸ Because the ultimate issue for the downstream state is the violation of “water quality requirements,” EPA’s “may affect” notice determination should be aimed at the same target.

EPA’s Office of General Counsel recognized the centrality of water quality requirements shortly after section 401 was enacted. In a 1973 guidance document, EPA’s OGC said that “[u]nder section 401(a), the downstream State’s objections are limited to violations of water quality requirements.”⁹ Downstream states cannot “object to permit issuance on the basis of implementation plan requirements, or similar non-water quality requirements.”¹⁰

EPA’s guidance has not changed since. The agency recently published a “best practices” document that advises regional personnel to ask, when confronted with a section 401(a)(2) issue, whether “the discharge cause[s] or contribute[s] to water quality degradation or impact or impair[s] the

⁶ Ryan, Mark, [More Thoughts on Fond Du Lac](#) (Feb. 18, 2021).

⁷ 33 U.S.C. § 1341(a)(2). PolyMet assumes that for purposes of section 401(a)(2), the phrase “other State” includes federally recognized Indian tribes that have treatment-as-a-state status.

⁸ 33 U.S.C. § 1341(a)(2).

⁹ EPA, Office of the General Counsel, *Objections of a Downstream State under Section 401(a)*, 1973 WL 21941, at *1 (March 29, 1973).

¹⁰ *Objections of a Downstream State* at *1.

designated use(s) of another state's water(s)."¹¹ In other words, a "may affect" finding requires a potential violation of the downstream state's water quality standards.

The district court in this case adopted the same view. In its opinion resolving EPA's and PolyMet's motions to dismiss the Band's section 401(a)(2) claims, the court observed that the "may affect" standard "refer[s] to whether the discharge may violate the water-quality standards of another state."¹² That reading of section 401(a)(2) is binding in this remanded proceeding.

To the extent there have been questions about the propriety of discharges into waters already in violation of state standards, the U.S. Supreme Court answered them in *Arkansas v. Oklahoma*.¹³ The Court in that case rejected the idea that the Clean Water Act would "prohibit any discharge of effluent that would reach [downstream] waters already in violation of existing water quality standards."¹⁴ Instead, the Court endorsed issuance of a permit where EPA concluded that the discharges "would not lead to a detectable change in water quality."¹⁵ And while *Arkansas v. Oklahoma* involved section 402, not section 401(a)(2), it turned on an alleged violation of the downstream state's water quality standards. The same basic legal analysis should apply here.

B. Section 401(a)(2)'s "may affect" determination requires a contextual review of the available evidence.

Given that the substance of a section 401(a)(2) notice is a potential violation of downstream water quality standards, the key question becomes when EPA should find that such a violation "may" occur.¹⁶ PolyMet's position is that in circumstances like this, where the agency has access to extensive evidence and the downstream party has had plentiful opportunities to participate in the environmental and permitting review process, EPA should make an evidence-based decision.

¹¹ EPA, [Best Practices for EPA's Implementation of Clean Water Act Section 401\(a\)\(2\)](#) at 3.

¹² *Fond du Lac Band*, 2021 WL 603754, at *11.

¹³ 503 U.S. 91 (1992).

¹⁴ *Arkansas v. Oklahoma*, 503 U.S. at 107.

¹⁵ *Arkansas v. Oklahoma*, 503 U.S. at 111-12.

¹⁶ 33 U.S.C. § 1341(a)(2).

I. The statutory phrase “may affect” requires an evidence-based evaluation of likelihood.

In section 401(a)(2), “may” is being “[u]sed to express possibility or probability.”¹⁷ Significantly, Congress did not use the term “might,” a word that “expresses a stronger sense of doubt.”¹⁸ “May,” by contrast, “expresses *likelihood*.”¹⁹ So when section 401(a)(2) says that EPA must give notice when a discharge “may” violate a downstream state’s water quality standards, it is not sanctioning notice based on remote or hypothetical possibilities. If Congress had wanted to do that, it would have used the word “might” instead.²⁰

Deciding whether a discharge “may” cause a downstream water quality violation inherently requires a review of relevant evidence. To that end, EPA’s *Best Practices* guidance describes a “screening process” under which any decision to notify a downstream state under section 401(a)(2) “must be supported by data or documentation that demonstrates the certified discharge may, in fact, have an effect on the quality of the waters of a neighboring jurisdiction.”²¹ Such an evidence-based process would not be necessary if a “may affect” notice could be based on remote or hypothetical possibilities.

The term “affect” also calls for a review of relevant evidence that results in a concrete decision about potential water quality violations. As *Arkansas v. Oklahoma* puts it, a discharge does not affect a downstream state’s standards absent “a detectable change in water quality.”²² Minnesota law similarly requires a “measurable change” in water quality, defined as “the practical ability to detect a variation in water quality, taking into account

¹⁷ May¹, *American Heritage Dictionary of the English Language* 1086 (5th ed. 2018).

¹⁸ Garner, Brian A., *Garner’s Modern English Usage* 584 (4th ed. 2016).

¹⁹ *Garner’s Modern English Usage* 584 (emphasis added).

²⁰ *Cf., e.g.*, 6 U.S.C. § 233(a) (requiring the Department of Homeland Security to “consult with” the Federal Aviation Administration “before taking any action that *might affect* aviation safety, air carrier operations, aircraft worthiness, or the use of airspace” (emphasis added)).

²¹ [Best Practices for EPA’s Implementation of Clean Water Act Section 401\(a\)\(2\)](#) at 3. Older EPA guidance that did not directly address this screening process has now been withdrawn. See [Letter from Andrew Wheeler, EPA Administrator, to Kay Ivey, Governor of Alabama](#) (June 7, 2019).

²² 503 U.S. at 112.

limitations in analytical techniques and sampling variability.”²³ Section 401(a)(2) should carry a similar meaning. If EPA lacks evidence of a measurable change in downstream water quality, or if the evidence shows no measurable change will occur, the statute does not authorize a “may affect” notice. There is no point in triggering a hearing before the permitting agency when a careful environmental review has already considered a downstream state’s claims and concluded that the project will not cause a measurable change in downstream water quality.

2. EPA’s past “may affect” decisions have been evidence-based.

PolyMet is aware of four projects that have triggered section 401(a)(2) notice from EPA: the Spokane River Hydroelectric Project in 2008; a railroad loop supplying a North Dakota transload facility in 2014; the Singleton Quarry Project in 2015; and the Mountaineer liquid natural gas storage project in 2018. This dearth of examples is consistent with EPA guidance, which notes that “[b]ased on past experience,” most situations will not “involve discharges that may affect the quality of the waters of a neighboring jurisdiction.”²⁴ In the four known cases that did lead to section 401(a)(2) notice, EPA’s letters make clear that the agency examined the evidence available to it.

Each of the four EPA notices attaches the “relevant documents” on which EPA based its decision.²⁵ One letter describes how EPA’s “limited review of information in the record” gave the agency “reason to believe that the discharge” may affect downstream water quality.²⁶ Other letters are less

²³ Minn. R. 7050.0255, subp. 24. Other jurisdictions have used similar “measurable change” metrics. See Delaware River Basin Comm’n, [Water Code](#) § 3.10.3.A.2.a(4) (defining “measurable change to existing water quality”).

²⁴ [Best Practices for EPA’s Implementation of Clean Water Act Section 401\(a\)\(2\)](#) at 3; see Ryan, Mark, [More Thoughts on Fond Du Lac](#) (recalling “fewer than 10” section 401(a)(2) notice letters in EPA history).

²⁵ Powhatan Letter at 1; see Singleton Quarry Letter at 1 (same); North Dakota Letter at 1 (attaching “materials”); Spokane River Letter at 1 (describing enclosures).

²⁶ Spokane River Letter at 1. EPA’s pre-2020 regulations required notice to a downstream state “if the Regional Administrator determines that there is reason to believe that a discharge may affect” downstream water quality. 40 C.F.R. § 121.13 (2018). PolyMet does not concede that those rules apply in this case.

descriptive of EPA's process, but still indicate that EPA had reviewed the relevant materials before deciding to send a "may affect" notice.

Normally, section 401(a)(2) gives EPA just 30 days to digest the information it receives and make its "may affect" decision.²⁷ Depending on the circumstances, that could make it appropriate for the agency to use section 401(a)(2) notice as a way of making an otherwise uninformed downstream state aware of evidence showing a potential water quality violation. That does not mean EPA should give short shrift to the evidence, only that incomplete evidence could occasionally warrant notice to ensure all interested jurisdictions have an opportunity to comment.

The context here is completely different. The Band has been actively consulted throughout PolyMet's lengthy environmental review and permitting process, including as a cooperating agency during the EIS process. As a result, state and federal agencies have provided evidence-based answers to the Band's downstream water quality questions. EPA has already reviewed much of that information. This remand has now given EPA 90 more days to consider information and arguments. In these circumstances, EPA's review should lead to a more definitive conclusion.

II. The evidence in this case shows no effect on the Band's water quality.

The federal and state agencies that reviewed PolyMet's project published their findings on the Internet, including on PCA's section 401 website and the Corps of Engineers' section 404 website.²⁸ That information shows that the Band's allegations about downstream water quality violations are unfounded.

A. The Cross-Media Analysis proves that the project will not affect downstream water quality.

I. The Cross-Media Analysis is a "may affect" analysis.

PolyMet and PCA knew when they began the section 401(a)(1) certification process that the Band was claiming the project would cause violations of its water quality standards, especially its mercury standard. One of the Band's major objections to the EIS was the EIS's prediction that PolyMet's project, by cleaning up and treating discharges from the existing taconite tailings basin, would actually *decrease* mercury loading to the St.

²⁷ 33 U.S.C. § 1341(a)(2).

²⁸ Where possible, PolyMet has included hyperlinks to that material in the footnotes.

Louis River.²⁹ The federal and state co-lead agencies had considered this issue carefully and respectfully disagreed with the Band.³⁰ As they explained in their comment responses, “[m]ercury concentrations at the Mine Site are expected to decrease, and effects are expected to be undetectable in the St. Louis River at the Fond du Lac reservation boundary.”³¹

PolyMet and PCA went further. At PCA’s request and in close consultation with PCA’s scientists and regulators, PolyMet prepared a “Cross-Media Analysis” designed to definitively answer any doubts about downstream water quality violations.³² The Cross-Media Analysis evaluates the combined potential downstream impacts of PolyMet’s water discharges and air emissions, as well as watershed changes, water withdrawals, and other ways in which the project might affect water quality.³³ To ensure that these factors were not minimized, the Cross-Media Analysis incorporated more than two dozen different protective assumptions that resulted in systematic over-estimation of the project’s potential impacts.³⁴ By studying an extremely low-probability set of circumstances that overstates the NorthMet Project’s potential to violate downstream water quality standards, the Cross-Media Analysis is—and was meant to be—a “may affect” analysis.

²⁹ [NorthMet Mining Project and Land Exchange Final Environmental Impact Statement](#) (Nov. 2015) at [5-10](#), [A-413](#).

³⁰ See FEIS at [8-5-8-6](#). (describing results that predict “a net decrease in the overall mercury loadings to the St. Louis River”).

³¹ FEIS at [A-413](#).

³² [PCA Clean Water Act Section 401 Water Quality Certification Fact Sheet](#) at 14; see Appendix A at A1-A4.

³³ See Appendix A at A4-A9. Nothing in section 401(a)(2) suggests that air deposition is part of the “may affect” analysis, and PolyMet does not concede it is. The Cross-Media Analysis goes beyond the statutory requirements under federal and state law to prove that the NorthMet Project will not have measurable effects on downstream water quality. See Appendix A at A7-A9.

³⁴ See Appendix A at A7-A9. For example, the Cross-Media Analysis assumed that every particle of air pollution migrated to a wetland or stream, even though most of the particles that land in upland areas are likely to remain there. See Appendix A at A7-A8.

2. The Cross-Media Analysis shows no effect on downstream water quality.

The Cross-Media Analysis modeled the amount of sulfate, mercury, methylmercury, and metals that could be released to surface water when air emissions from the project settled to the surface.³⁵ It combined those air-deposition results with the anticipated effects from the discharge of treated wastewater and other water-related project actions to determine overall downstream water quality effects.³⁶ The Analysis then determined whether these modeled releases would cause measurable changes to water quality at various points in the Embarrass, Partridge, and St. Louis River watersheds.

Using these methods, the Cross-Media Analysis documents that the NorthMet Project would:

- decrease sulfate loading in the St. Louis River watershed;
- measurably decrease sulfate concentration in the Embarrass River;
- cause no measurable change to sulfate concentration in the St. Louis River;
- decrease mercury loading in the St. Louis River watershed;
- cause no measurable change to mercury or methylmercury concentrations in the Partridge, Embarrass, or St. Louis Rivers; and
- cause no measurable change in fish tissue mercury concentrations in the Partridge, Embarrass, or St. Louis Rivers.³⁷

These loading and concentration findings mean that the NorthMet Project will not cause or contribute to any violations of water quality standards in Minnesota or on the Fond du Lac Reservation.³⁸ Simply put, the Cross-Media Analysis's comprehensive "may affect" study proves that discharges from PolyMet's project will not violate the Band's water quality standards.

To demonstrate how conservative the Cross-Media Analysis was, PolyMet prepared a second study that adjusted just six of the study's two-dozen protective assumptions, bringing them closer to actual site

³⁵ See Appendix A at A4-A7.

³⁶ See Appendix A at A7.

³⁷ See Appendix A at A9-A11.

³⁸ See Appendix A at A9-A10.

conditions.³⁹ This second, more representative study showed *70% less sulfate* and *94% less metals* being deposited from air emissions.⁴⁰ Those results reiterate that the Cross-Media Analysis used an extreme, low-likelihood scenario to decide whether the NorthMet Project “may affect” the Band’s water quality. The Cross-Media Analysis’s results show that it will not.

B. After extensive public and tribal input, PCA concluded that the NorthMet Project would not affect downstream water quality.

PolyMet sent the Cross-Media Analysis—prepared in consultation with agency experts—to PCA as part of its request for section 401(a)(1) certification.⁴¹ As PCA recently explained in a different context, its permitting goal is to “ensure[]” that “water quality standards are met in the direct receiving water and in all downstream waters, including any waters under the jurisdiction of another state or tribe”⁴² To that end, the agency’s experts spent several months reviewing the report, ultimately documenting their work in a “Conclusions and Recommendations” memo.⁴³ PCA’s experts concluded that the Cross-Media Analysis was the “best estimate” of the NorthMet Project’s potential effects based on the “best available data” and their “best professional judgment.”⁴⁴ Most important for present purposes, PCA agreed that the NorthMet Project would cause no measurable changes in mercury or methylmercury concentrations downstream in the St. Louis River or in fish tissue.⁴⁵

³⁹ Exhibit 2, Technical Memo: Estimated Potential Concentrations of Arsenic, Cobalt, and Copper in a Wetland for a Representative Scenario for Sulfide Mineral Dissolution; see Appendix A at A15.

⁴⁰ See Appendix A at A15.

⁴¹ See Appendix A at A12-A13.

⁴² PCA, [Statement of Need and Reasonableness](#), *In the Matter of Proposed Revisions of Minn. R. ch. 7050 and 7053* (Dec. 14, 2020) at 22, 187.

⁴³ [PCA Conclusions and Recommendations](#) Related to PolyMet Mining, Inc.’s NorthMet Project “Cross-Media Analysis to Assess Potential Effects on Water Quality from Project-Related Deposition of Sulfur and Metal Air Emissions” (Jan. 5, 2018).

⁴⁴ [PCA Conclusions and Recommendations](#) at 2. While PCA’s experts did not agree with everything in the Cross-Media Analysis, they endorsed its “conceptual approach” and recognized that many of its “assumptions were protective and most likely overestimated the effects of sulfate from the project.” [PCA Conclusions and Recommendations](#) at 11; Appendix A at A14.

⁴⁵ [PCA Conclusions and Recommendations](#) at 3-4 (concluding that “potential changes in fish tissue mercury concentrations” are not “measurable” and that

Having assessed the Cross-Media Analysis, PCA provided its draft section 401 certification package—including the Cross-Media Analysis and the agency’s Conclusions and Recommendations—to various interested tribes, including the Fond du Lac Band, two weeks before the start of formal public notice.⁴⁶ EPA also received the draft certification package at that time.⁴⁷ The Band was among the nearly 700 commenters who addressed the section 401 certification during PCA’s 45-day public notice period.⁴⁸

PCA’s experts reviewed, categorized, and responded to the comments the agency received on the draft section 401 certification and the Cross-Media Analysis.⁴⁹ That process did not reveal any information that changed the agency’s views. PCA’s final section 401 certification fact sheet concluded that:

- the Cross-Media Analysis “developed a reasonable and protective scenario that showed no measurable changes of mercury in water or fish from Project-related deposition of sulfur”;
- “[t]here will be no exceedances of copper, cobalt, and arsenic 2D water quality standards or to any other numeric water quality criteria from . . . the cumulative impact of Project-related air emissions”; and
- “[t]he Project will not result in any measurable changes to water quality downstream of the Project in the St. Louis River, including downstream locations at Forbes (upper St. Louis River).”⁵⁰

The last point is crucial here. Forbes is 50 river miles south of the Project and over 60 river miles north of the Band’s reservation. If there are no measurable changes to water quality at Forbes, there can be no measurable changes at the reservation.

“all other evaluation points” outside the immediate vicinity of the project “showed a decrease or no change in mercury concentration”).

⁴⁶ PCA, [Findings of Fact, Conclusions of Law, and Order](#) (Dec. 20, 2018) ¶ 13.

⁴⁷ [Findings of Fact, Conclusions of Law, and Order](#) ¶ 13.

⁴⁸ [Findings of Fact, Conclusions of Law, and Order](#) ¶ 18. The Band’s comment letter is attached as Exhibit 4.

⁴⁹ See [Findings of Fact, Conclusions of Law, and Order, Attachment B, General 401 Certification comments received and MPCA thematic response](#); see Appendix B at B1-B8.

⁵⁰ [Section 401 Fact Sheet](#) at 14. The Cross-Media Analysis also found no measurable water quality effects at Cloquet, downstream of the Fond du Lac Reservation.

PCA’s section 401(a)(1) certification also included numerous monitoring requirements designed to verify the agency’s conclusions.⁵¹ As the agency explained with respect to downstream water quality, “there is sufficient uncertainty that additional monitoring is necessary to confirm the expected outcomes and ensure that actual water quality will conform with the water quality expected by the MPCA.”⁵² But such monitoring requirements are standard agency and scientific practice; they do not suggest that the project “may affect” the Band’s water quality. The Cross-Media Analysis remains “the best estimate of potential effects that we can reach using the best available data and MPCA’s best professional judgment.”⁵³ Absent affirmative evidence that the project may violate the Band’s water quality standards—and in the face of persuasive evidence that it will not—“may affect” notice is inappropriate.

C. The project opponents’ criticisms are unpersuasive.

The Band’s complaint in this case asserts its continued belief that PolyMet’s project threatens its water quality. PCA carefully considered and rightly rejected that claim. Indeed, because the Band participated at every stage of the 15-year environmental review and permitting process, its comments shaped the agencies’ work—they studied what the Band thought they should study and answered questions the Band wanted them to answer. The agencies simply did not find any scientific reason to believe that the NorthMet Project would violate the Band’s water quality standards.

1. The Band’s criticisms lack factual and scientific basis.

The Band commented in detail on PCA’s draft section 401 certification, which included the Cross-Media Analysis.⁵⁴ In its letter, the Band emphasized “longstanding concerns” that it had “repeatedly communicated” to state and federal agencies, specifically citing its comments relating to the Draft EIS and the Supplemental Draft EIS.⁵⁵ The Band noted that the state and the Corps of Engineers declined to take the actions the Band proposed, but failed to mention the agencies’ reasoning. In its section 401 comments,

⁵¹ See [PCA Section 401 Certification at 2-7](#). The Band had advocated for increased monitoring in its section 401 comments. See Exhibit 4, Letter from Nancy Schuldt, Fond du Lac Band to Minn. PCA (March 16, 2018) at 7, 13.

⁵² [Section 401 Fact Sheet](#) at 14-15.

⁵³ [PCA Conclusions and Recommendations](#) at 2.

⁵⁴ Exhibit 4, FdL 401 Comments.

⁵⁵ Exhibit 4, FdL 401 Comments at 2-6.

the Band was not offering new evidence. It was disagreeing—again—with the agencies’ reasoned responses and conclusions.

For example, the Band’s comment letter contended that seepage from PolyMet’s tailings basin would exceed the mercury concentrations established by the Great Lakes Initiative.⁵⁶ As PCA’s findings explain, however, past studies proved that both NorthMet tailings and taconite tailings would “adsorb mercury,” which would lower the concentrations in seepage from the tailings basin.⁵⁷ That seepage would then be captured and treated by PolyMet, leading to “further removal” of mercury.⁵⁸ The Band’s letter never mentioned those points, which were explained in the Final EIS.⁵⁹

The Band also contended that PCA failed to account for mercury releases caused by ground disturbance and seepage into groundwater.⁶⁰ Again, PCA addressed those concerns. First, PCA pointed out that complaints about groundwater seepage were “premised on an unfounded assumption” that PolyMet’s “engineering controls . . . will not work as designed or will fail in the future . . .”⁶¹ That issue, PCA explained, “was evaluated in the EIS, which found them adequately protective of surface water and groundwater.”⁶² The Band’s section 401 comments offered no counter-evidence; they simply declined to accept the agencies’ analysis.

In addition to revisiting their already-addressed comments on the EIS, the Band’s section 401 comments offered related criticisms of the Cross-Media Analysis. They claimed that the Cross-Media Analysis was “constrained from evaluating many obvious pathways for mercury release and methylation.”⁶³ But that is not true. As PCA pointed out, the Cross-Media Analysis assumed “that all runoff from uplands will contribute to the wetlands”—a conservative assumption that actually over-estimates mercury impacts.⁶⁴ The Cross-Media Analysis also “considered the effects from project emissions, including inorganic mercury”; addressed “the issue of seasonal fluctuations in wetland water levels”; and “evaluated contributions of

⁵⁶ Exhibit 4, FdL 401 Comments at 16.

⁵⁷ [Findings of Fact, Conclusions of Law, and Order](#) ¶ 104.

⁵⁸ [Findings of Fact, Conclusions of Law, and Order](#) ¶ 104.

⁵⁹ See, e.g., FEIS at [5-229](#) (explaining mercury adsorption testing).

⁶⁰ Exhibit 4, FdL 401 Comments at 13-15.

⁶¹ [Findings of Fact, Conclusions of Law, and Order](#) ¶ 83.

⁶² [Findings of Fact, Conclusions of Law, and Order](#) ¶ 83.

⁶³ Exhibit 4, FdL 401 Comments at 21-23.

⁶⁴ [Findings of Fact, Conclusions of Law, and Order](#) ¶¶ 96-97.

mercury . . . from the autoclave.”⁶⁵ These responses from PCA directly refuted the factual premises on which the Band’s criticism of the Cross-Media Analysis depended.

The Band continued to make these arguments in an October 2018 letter to EPA and the Corps of Engineers, claiming that it had “determined” that the downstream effects of the NorthMet Project “would result in a violation of the Band’s [water quality standards].”⁶⁶ In support of that claim, the Band pointed to “prior correspondence, comments, and objections submitted in the course of the environmental review and development of draft permits” for the project.⁶⁷ Once again, the Band asserted that “PolyMet has failed to provide a sufficient analysis of the Project’s mercury sources to nearby water resources and wetlands”⁶⁸ But that is precisely what the Cross-Media Analysis does. Based on its comprehensive study of mercury and sulfate water discharges, air deposition, and indirect effects from other project actions, PCA concluded that mercury concentrations in water and fish tissue would not change.⁶⁹ Because the Band cannot produce any contrary evidence of downstream water quality violations, section 401(a)(2)’s “may affect” criterion is not satisfied.

2. Branfireun’s most recent criticisms are unfounded.

Much of the Band’s (and other parties’) arguments for downstream water quality violations relied on the work of Dr. Brian A. Branfireun, a biology professor at the University of Western Ontario. The Band specifically referenced Branfireun’s comments on the Final EIS in its section 401 comments⁷⁰ and PCA accounted for those comments when it issued its section 401 certification.⁷¹ Some time later, Branfireun prepared another

⁶⁵ [Findings of Fact, Conclusions of Law, and Order ¶¶ 109, 147, 229.](#)

⁶⁶ Exhibit 5, Letter from Kevin R. Dupuis Sr., Fond du Lac to Chad Konickson, U.S. Army Corps of Eng’rs, et al. at 3 (Oct. 31, 2018) (FdL 401(a)(2) Letter).

⁶⁷ Exhibit 5, FdL 401(a)(2) Letter at 3; *see id.* at 4 (“The Band has repeatedly raised these issues with the MPCA and MDNR, as well as the Army Corps and EPA.”).

⁶⁸ Exhibit 5, FdL 401(a)(2) Letter at 5.

⁶⁹ [Section 401 Fact Sheet](#) at 14.

⁷⁰ Exhibit 5, FdL 401 Comments at 17, 19-22.

⁷¹ *See* Findings of Fact, Conclusions of Law, and Order, Attachment A, [401 Certification Response to Contested Case Hearing Requests](#) at 8-11. Branfireun’s report was submitted by another party that commented and requested a contested case hearing on the draft section 401 certification. As

“expert review” of these issues.⁷² It is unclear whether any agency has seen this new report, but the issues it raises have already been addressed by PCA and the Cross-Media Analysis.

Branfireun’s latest report concedes that the Cross-Media Analysis is “conceptually sound” insofar as it concerns “the relative loads of sulfur to wetlands in the proximity of the project.”⁷³ Branfireun similarly admits that he has “no criticism of the factors reflected in the analysis [of atmospheric dry deposition] as far as it went.”⁷⁴ He even says that the Cross-Media Analysis’s scope “allows for a scientifically defensible consideration of potential impacts on water quality,” acknowledging its “thorough . . . consideration of the literature highlighted in my previous opinions and other works”⁷⁵ His criticisms are focused on the Cross-Media Analysis’s selected scope, including his claim that it omits sources of mercury and methylmercury.⁷⁶ Those criticisms do not withstand scrutiny.

In several places, Branfireun’s report repeats claims that PCA has already evaluated and rejected. That includes his argument that sulfur and mercury loading from direct discharge and seepage to wetlands was miscalculated.⁷⁷ PCA addressed these issues in its findings, where it explained that the Cross-Media Analysis incorporated impacts on all relevant waterbodies, including wetlands across the entire 200,000-acre Embarrass and Partridge River watersheds that were included in air modeling.⁷⁸

Branfireun’s critique of the Cross-Media Analysis also makes a more fundamental mistake. According to him, the study had an “extraordinarily

noted above, no one challenged PCA’s decision to issue section 401 certification and deny a contested case hearing.

⁷² Exhibit 6, Branfireun, Brian A., Expert Review of the Minnesota Pollution Control Agency Clean Water Act Section 401 Certification for the NorthMet Project (Jan. 20, 2019).

⁷³ Exhibit 6, Branfireun 2019 Expert Review at 4.

⁷⁴ Exhibit 6, Branfireun 2019 Expert Review at 4.

⁷⁵ Exhibit 6, Branfireun 2019 Expert Review at 4.

⁷⁶ Cliff Twaroski, a lead author of the Cross-Media Analysis, has prepared a detailed declaration rebutting Branfireun’s criticisms. It explains, among other things, how Minnesota DNR studies show that mines are not a significant source of mercury in the water column. See Exhibit 1, Declaration of Cliff Twaroski ¶¶ 28-30.

⁷⁷ Exhibit 6, Branfireun 2019 Expert Review at 5.

⁷⁸ [Findings of Fact, Conclusions of Law, and Order](#) ¶¶ 82-87, 107-110, 149-150, 156-157, 167-168, 193-197.

restricted scope (focusing only on dust deposition).”⁷⁹ PolyMet is unsure how Branfireun could have been left with that impression after reading the Cross-Media Analysis or PCA’s findings. The Cross-Media Analysis was *not* limited to dust deposition. It “incorporate[d] mercury additions to the rivers by considering air deposition, point source discharges, and other project actions that will affect downstream water quality.”⁸⁰ That means that Branfireun’s entire critique—especially his conclusion that the NorthMet Project risks increased methylmercury concentrations⁸¹—rests on a false premise. The Cross-Media Analysis’s scope was comprehensive, not “restricted.”

Nothing that Branfireun says in his 2019 report undermines the Cross-Media Analysis’s key conclusion: The NorthMet Project will not measurably change the amount of sulfate, mercury, or methylmercury downstream in the St. Louis River, including at the Fond du Lac Reservation. That being so, the Band is not entitled to notice under section 401(a)(2).

CONCLUSION

PolyMet has spent years working through regulatory processes designed to decide whether its project would affect downstream water quality. When PCA certified PolyMet’s project under section 401(a)(1), it relied on the results of those processes to find that the project would cause no measurable change in downstream water quality.

During this 90-day remand, EPA is considering the same issue under section 401(a)(2). A fresh look at the evidence—which was collected and prepared partly in response to the Band’s comments and questions—confirms that PolyMet’s project will not affect water quality on the Band’s reservation. Indeed, by bringing new water treatment to a brownfield site, PolyMet’s project actually reduces mercury and sulfate loading to the St. Louis River. Opening the door to a hearing at which the same evidence would be reviewed again would accomplish nothing.

⁷⁹ Exhibit 6, Branfireun 2019 Expert Review at 2.

⁸⁰ [Findings of Fact, Conclusions of Law, and Order](#) ¶ 237; *see id.* ¶¶ 234-41 (explaining the cumulative scope of the Cross-Media Analysis).

⁸¹ Exhibit 6, Branfireun 2019 Expert Review at 14.