

BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:

Mesabi Nugget Delaware, LLC
—Hoyt Lakes, Minnesota

Approval of a variance from water quality
standards, Permit No. MN0067687

EAB No. _____

ORAL ARGUMENT REQUESTED

**JOINT PETITION FOR REVIEW
OF FOND DU LAC BAND OF LAKE SUPERIOR CHIPPEWA
AND GRAND PORTAGE BAND OF LAKE SUPERIOR CHIPPEWA**

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INTRODUCTION

Pursuant to 40 C.F.R. § 124.19(a), the Fond du Lac Band of Lake Superior Chippewa and the Grand Portage Band of Lake Superior Chippewa, both federally recognized Indian tribes (collectively, the “Bands”), petition for review of EPA Region 5’s December 27, 2012 approval of the Minnesota Pollution Control Agency’s (“MPCA’s”) requested variance and reissuance of a National Pollutant Discharge and Elimination System (“NPDES”) permit to Mesabi Nugget Delaware, LLC—Hoyt Lakes, Minnesota (the “Variance” or “2012 Variance”) on Permit No. MN0067687 (the “Permit” or “2012 Permit”), which the MPCA had issued on October 26, 2012.¹ This Petition is timely filed within 30 days of the date of Region 5’s approval of the 2012 Permit and Variance.²

Mesabi Nugget operates a Large Scale Demonstration Plant (“LSDP”), a commercial-scale iron nugget production facility, in Hoyt Lakes, a small town in northeastern Minnesota.³ The LSDP is situated on part of a former mine site that Mesabi Nugget acquired in 2005.⁴ The LSDP discharges treated wastewater into a mine pit known as “Area Pit 1.”⁵ In turn, Area Pit 1 discharges from Outfall SD001 into the adjacent, navigable waterway, the Second Creek of the Partridge River Basin of the St. Louis River Watershed complex, which is hydrologically

¹ The MPCA is the state agency that handles all NPDES permitting in the state of Minnesota under delegated authority from the EPA. EPA incorporated and relied on MPCA’s notice and comment period, along with MPCA’s official submittal documents, findings and conclusions, and basic analysis, in addition to conducting limited, additional tribal consultation with the Bands. *See generally* MPCA’s Mesabi Nugget Delaware, LLC’s Notice and Request for Approval of Findings of Fact, Concl. of Law and Order and Auth. to Grant a Variance and to Reissue NPDES/SDS Permit MN 0067687 and Attach. 1, Findings of Fact, Conclusions of Law, and Order (“MPCA Order”) (Oct. 24, 2012), Ex. 1; EPA Review of same (“EPA Review”) (Dec. 27, 2012), Ex. 2.

² *See* 40 C.F.R. § 124.19(a).

³ *See* MPCA Order at ¶ 1, Ex. 1.

⁴ The company made this acquisition through its predecessor company, Mesabi Nugget, LLC. *See* MPCA Order at ¶ 1, Ex. 1.

⁵ *See* MPCA Order at ¶¶ 11-12, Ex. 1.

connected to the Fond du Lac Reservation, and ultimately Lake Superior (which borders the eastern side of the Grand Portage Reservation).⁶

The Bands have a sharp interest in maintaining the water quality in this region of Minnesota. Each is a sovereign entity that enjoys a government-to-government relationship with the federal government.⁷ Moreover, as the U.S. Supreme Court has recognized, each Band retains off-reservation hunting, fishing, and gathering (“usufructuary”) rights throughout millions of acres of northeastern Minnesota (the “Arrowhead”), as established under the 1854 Treaty of LaPointe (the “Ceded Territory”).⁸ The Project is entirely located in the Ceded Territory.⁹

These rights are not just historical remnants, although traditional use areas and wild rice waters qualify also as tribal traditional cultural properties (“TCPs”) under Section 106 of the National Historic Preservation Act (“NHPA”).¹⁰ Bandmembers exercise these rights every day, and they depend upon fish, wild rice, and other wild products for their subsistence. Therefore, the Bands have dedicated significant tribal resources to developing rigorous water-quality programs and to protecting habitat through robust natural resource departments. Each has also achieved Treatment-in-the-Same-Manner-As-a-State for their respective water quality standards

⁶ See Map of Hydrologic Flow from Mesabi Nugget to Lake Superior, Ex. 3. This map, prepared by the Grand Portage GIS Department, is not in the record and is offered for demonstrative purposes only.

⁷ See, e.g., Exec. Order 13175—Consultation and Coordination With Indian Tribal Governments (Nov. 6, 2000) (discussing government-to-government relationship).

⁸ See, e.g., *Minnesota v. Mille Lacs Band of Chippewa Indians*, 526 U.S. 172, 184 (1999) (noting “the 1854 Treaty established new hunting and fishing rights in the territory ceded by the Treaty”).

⁹ Map of 1854 Ceded Territory showing Mesabi Nugget and Fond du Lac and Grand Portage Reservations, Ex. 4. This Grand Portage GIS Department map, too, is not in the record and is offered for demonstrative purposes only.

¹⁰ See 16 U.S.C. §§ 470 *et seq.*; NHPA regulations, 36 C.F.R. §§ 800 *et seq.*

programs under the Clean Water Act (“CWA” or “Act”),¹¹ and so each Band is a “downstream regulator” from the state of Minnesota.¹²

Also in recognition of the importance of preserving wild-rice habitat both for tribal members and other Minnesotans, the state of Minnesota has long had a water quality standard that classifies “waters used for the production of wild rice” in the category of Class 4A agricultural-use waters.¹³ In addition to the protections that are extended to all this and other agricultural-use waters, there is a 10mg/L sulfate standard for discharges into wild rice waters.¹⁴ Both Bands also impose this standard on waters within their reservations.¹⁵

In granting the 2012 Variance, Region 5 made at least seven clear errors of fact and law under the CWA, any one of which is sufficient to justify granting this Petition and remanding to the Region. In so doing, Region 5 (and the MPCA) ignored federal water quality protections that serve as the primary means to protect northern Minnesota waters. Mesabi Nugget’s operations at Area Pit 1 have exceeded water quality standards since it received its first NPDES permit in 2005. The MPCA and Region 5 have accepted the same excuses time and again for these exceedences, even though all of them boil down to Mesabi Nugget’s desire to meet its own business objectives. Now, under the 2012 Permit and Variance, Mesabi Nugget has until 2021 to install an effective wastewater treatment system to treat *conventional pollutants*. The sole

¹¹ 33 U.S.C. § 1251 *et seq.*; *see also* 40 C.F.R. Part 131.

¹² *See, e.g.*, Approved Tribal Water Quality Standards Programs in Region 5 (listing both Bands), available on-line at <http://www.epa.gov/region5/water/wqs5/wqstribes.htm#approvedapplication> (last visited Jan. 17, 2013).

¹³ *See* Minn. R. 7050.0224 subp. 1.

¹⁴ Minn. R. 7050.0220 subp. 3.A(30) (listing sulfate limits for wild rice waters).

¹⁵ *See generally, e.g.*, Fond du Lac Water Quality Standards at § 302(e), available on-line at <http://www.fdlrez.com/fdlordinances.htm> (last visited Jan. 23, 2013).

purpose for this delay is so that Mesabi Nugget can first design and install an air quality system that will, in essence, simply transfer its future, increased air discharges to the water.

It did not matter to MPCA and Region 5 that technologically-feasible water treatment, namely, reverse osmosis with nanofiltration (“RO/NF”), is now available and is capable of allowing Mesabi Nugget to meet *all* water quality standards. Even the company conceded the technological feasibility of RO/NF technology to treat its current discharges—its arguments were based upon speculation regarding its future needs based upon its air permit’s requirements. The 2012 Variance stands for the proposition that, until a Minnesota point source reaches its *maximum* levels of wastewater discharge, the discharger need not address *any* exceedences. This reasoning reverses the burdens, allowing a discharger to drive water quality variance decisions based upon another permit, rather than requiring a discharger to show why it can’t meet existing water quality standards after careful review. This approach is neither factually nor legally sound.

The Bands raised the technical (and economic) feasibility of an RO/NF system throughout the permitting process, along with all other issues it argues in this Petition. The Bands here also submit an additional, expert opinion from Kuipers & Associates, LLC, consulting engineers with extensive experience in the mining sector. The Bands ask the Board to accept the Petition, along with the Kuipers opinion, and deny the 2012 Permit and Variance. The Bands further ask that the Board remand to the Region with specific instructions.

STATEMENT OF ISSUES FOR REVIEW

The Bands challenge the following seven aspects of the Variance as clear errors and as important policy matters the Board should review:

1. Region 5 committed clear error under Section 101(a)(2) of the CWA in accepting Mesabi Nugget’s assertion that no “Tier 1” use would be affected, ignoring already-significant toxic effects on aquatic life, which by nature shows an impact on the Class 2B aquatic-life use. Region 5 likewise committed clear errors of fact and law under

- 40 C.F.R. § 131.10(j) in concluding that a Use Attainability Analysis (“UAA”) was not required.
2. Region 5 committed clear error under 40 C.F.R. § 131.10(a) in failing to treat wild rice waters as a designated (and actual) 4A “agricultural use,” and also in concluding that the 10 mg/L wild rice sulfate standard would not be affected based upon an untested and flawed “seasonal discharge” plan.
 3. Region 5 committed clear error under 40 C.F.R. Section 131.5(a)(3) in concluding that Minnesota followed its own legal procedures in granting the 2012 Variance.
 4. Region 5 committed clear error in granting a variance in excess of five years, a direct violation of federal rules for Great Lakes waters.
 5. No provision of the CWA allows the EPA to approve a variance where a wastewater treatment system, RO/NF, is technically feasible and would permit attainment of all water quality standards.
 6. Region 5 committed clear errors under 40 C.F.R. § 131.10(g)(3), in concluding that “human caused conditions” justified the variance.
 7. Despite Region 5 conducting limited tribal consultation with the Bands (and demonstrated impacts on Ceded Territory trust resources, which are covered by the NHPA), there has been no Section 106 review, which requires immediate suspension of discharges until historical review can be completed and any impacts on TCPs mitigated.

FACTUAL AND STATUTORY BACKGROUND

I. The Bands

As noted, the Bands are federally recognized Indian tribes, as two of the member bands of the Minnesota Chippewa Tribe (“MCT”). The Fond du Lac Band has its offices on its reservation just outside of Duluth, Minnesota, directly downstream from Mesabi Nugget’s facility on the St. Louis River, at 1720 Big Lake Road, Cloquet, Minnesota 55720. The Grand Portage Band has its offices on its reservation at the far northeast tip of the state, just south of the Canadian border on the shores of Lake Superior, with a mailing address of P.O. Box 428, Grand Portage, MN 55605. Many Bandmembers reside on or near their respective reservations.

As also noted, along with another MCT member band, the Bois Forte Band of Chippewa, the two Bands retain hunting, fishing, and other usufructuary rights that extend off their reservations and throughout the entire northeast portion of the state of Minnesota under the 1854 Treaty of LaPointe¹⁶ (the Ceded Territory).

In the 1854 Treaty, the various Lake Superior Chippewa bands were forced to cede huge portions of their land in northern Minnesota. Article 1 stated that “[t]he Chippewas of Lake Superior hereby cede to the United States all the lands heretofore owned by them in common with the Chippewas of the Mississippi,” which included the entire Arrowhead region.¹⁷ In exchange, the Lake Superior Chippewa “reserved” much smaller, permanent reservations within their northern homeland.¹⁸ In this way, they were able to avert the threat that the federal government would remove them to areas west of the Mississippi, as happened with many tribes placed on reservations in Oklahoma and elsewhere.

But in Article 11, the resident Chippewas of Lake Superior also retained “the right to hunt and fish therein,” meaning in the entire area ceded.¹⁹ Today, the Bands retain and protect

¹⁶ Treaty with the Chippewa, 1854, 10 Stat. 1109.

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ *Id.* Federal courts have repeatedly confirmed these rights. See *Mille Lacs Band of Chippewa Indians*, 526 U.S. at 184; see also *Fond du Lac v. Carlson*, Civ. No. 5-92-159 (D.Minn. Mar. 18, 1996) (unpubl. op.) (holding that Fond du Lac retains usufructuary rights in the 1854 Ceded Territory); *Grand Portage Band of Chippewas, et al. v. State of Minnesota, et al.*, Civ. No. 4-85-1090 (settling suit to enforce 1854 Treaty as to Grand Portage and Bois Forte Bands against state as reflected in Minn. Stat. § 97A.157); *United States v. Bresette*, 761 F. Supp. 658, 661 (D. Minn. 1991) (citing *Lac Courte Oreilles Band of Lake Superior Chippewa Indians v. Voigt*, 700 F.2d 341, 348 (7th Cir. 1983)) (noting “Seventh Circuit has interpreted the 1837, 1842, and the 1854 treaties as reserving full usufructuary rights for the Chippewa on the ceded territories.”).

that legal interest by protecting natural resources. Moreover, all federal agencies share in the federal government's trust responsibility to the Bands to protect those treaty resources.²⁰

Today, this means that Band members are subject to expanded seasons and higher bag limits than non-Band members, in addition to having expanded access to wild ricing areas.²¹ The Bands also have a specific role as stewards of natural resources within the Ceded Territory. They promulgate and enforce conservation and gathering codes, regulate Bandmember activities, Band and state conservation officers are cross-deputized for enforcement, and the Bands hear cases relating to the exercise of treaty rights, as reflected in cooperative agreements with the state.²²

So the Ceded Territory is not merely a place where there are protections for tribal natural resources. Hunting, fishing, and gathering for subsistence in their historic homeland, and preserving that right for future generations, are key ways in which the Bands have maintained their cultural identity over their centuries in northern Minnesota. Band members' ability to harvest *within their homeland*, the Ceded Territory, is part of their cultural identity as Lake Superior Chippewa. Band members cannot simply harvest the same products elsewhere or purchase these items at a store and still maintain that identity.

²⁰ See, e.g., Exec. Order 13175 (stating "the United States has recognized Indian tribes as domestic dependent nations under its protection . . . ,," there is a "trust relationship with Indian tribes," and "[a]gencies shall respect Indian tribal self-government and sovereignty, honor tribal treaty and other rights, and strive to meet the responsibilities that arise from the unique legal relationship between the Federal Government and Indian tribal governments."). See also EPA Policy on Consultation and Coordination with Indian Tribes, (May 2011) at Sec. V.(A)(4), available at <http://www.epa.gov/tp/consultation/consult-policy.htm> (last visited Jan. 14, 2013).

²¹ See, e.g., 1854 Treaty Authority Current Hunting/Fishing/Netting/Trapping Seasons, <http://1854treatyauthority.org/about/codesmap.htm> (last visited Jan. 17, 2012).

²² See, e.g., *id.*, 1854 Treaty Authority History; Minn. Stat. §§ 97A.157 (recognizing treaty area agreement); 626.94 (recognizing Indian conservation enforcement authority).

II. General facts regarding the LDSP operations and waters impacted.

A. LDSP operations.

Mesabi Nugget uses the Area 1 Pit water as follows:

Mesabi Nugget appropriates water from the inactive and water-filled Area 1 Pit for water supply for process temperature control (noncontact and contact cooling) and for process water, including for the wet scrubber air emissions control system at approximate average and maximum rates of 2.9 million gallons per day (MGD) (2000 gallons per minute—gpm) and 7.2 MGD (5000 gpm), respectively. The makeup water is sequentially cycled and cascaded from the noncontact cooling system to the wet scrubber system. Blowdown from the scrubber system is routed to a multi-stage wastewater treatment system for treatment prior to discharge into the Area 1 Pit. The primary pollutants in the wastewater are suspended solids, dissolved solids (sulfate, hardness, bicarbonates), metals, and mercury.²³

Mesabi Nugget has used (and will continue to use under the 2012 Permit and Variance)

the following wastewater treatment system:

The wastewater treatment system consists of conventional chemical (lime) precipitation followed by filtration through a Mesabi Nugget-developed mercury filtration system that utilized taconite tailings as the filtration media. Wastewater from the scrubbers is routed through the chemical precipitation unit for sulfate, fluoride, solids and metal removal, then to the first of two available mercury filtration units for enhanced mercury and solids removal, and from there into the west end of the Area 1 Pit. Water from the east end of the Area 1 Pit is then pumped to Outfall SD001 (with the option for additional treatment in the second mercury filtration unit, if needed) for ultimate discharge into Second Creek.²⁴

B. Waters affected by the 2012 Permit and Variance.

As noted, Area Pit 1 discharges through SD001 into Second Creek, which flows approximately three to four miles before it joins the Partridge River, which in turn flows into the St. Louis River.²⁵ Second Creek is an “unlisted water” under Minnesota’s water quality

²³ MPCA Order at ¶ 10, Ex. 1.

²⁴ *Id.* at ¶ 11.

²⁵ *Id.*

standards.²⁶ Downstream portions of Second Creek are also wild rice waters.²⁷ In addition, it is an “Outstanding International Resource Water.”²⁸ Therefore, it is considered to have all the following classes:

- Class 2B (aquatic use; “fishable/swimmable”): “propagation and maintenance of a healthy community of cool or warm water sport or commercial fish and associated aquatic life, and their habitats. These waters shall be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable”;²⁹
- Class 3C (industrial use): “industrial cooling and materials transport without a high degree of treatment being necessary to avoid severe fouling, corrosion, scaling, or other unsatisfactory conditions”;³⁰
- Class 4A (agricultural use-wild rice): “Wild rice is an aquatic plant resource found in certain waters within the state. The harvest and use of grains from this plant serve as a food source for wildlife and humans. In recognition of the ecological importance of this resource, and in conjunction with Minnesota Indian tribes, selected wild rice waters have been specifically identified [WR] and listed in part 7050.0470, subpart 1. The quality of these waters and the aquatic habitat necessary to support the propagation and maintenance of wild rice plant species must not be materially impaired or degraded. If the standards in this part are exceeded in waters of the state that have the Class 4 designation, it is considered indicative of a polluted condition which is actually or potentially deleterious, harmful, detrimental, or injurious with respect to the designated uses.”³¹
- Class 4A (other agricultural use): “irrigation without significant damage or adverse effects upon any crops or vegetation usually grown in the waters or area, including truck garden crops”;³²
- Class 4B (livestock use): “by livestock and wildlife without inhibition or injurious effects”;³³

²⁶ Minn. R. 7050.0430 states “[a]ll surface waters of the state that are not listed in part 7050.0470 and that are not wetlands as defined in part 7050.0186 subpart 1a, are hereby classified as Class 2B, 3C, 4A, 4B, 5, and 6 waters.”

²⁷ *Id.* at ¶ 13.

²⁸ *Id.* (citing Minn. R. ch. 7052).

²⁹ Minn. R. 7050.0222 subp. 4.

³⁰ Minn. R. 7050.0223 subp. 3.

³¹ Minn. R. 7050.0224 subp. 1. *See also, id.* at subp. 2.

³² *Id.* at subp. 2.

³³ *Id.* at subp. 3.

- Class 5: aesthetic enjoyment and navigation;³⁴ and
- Class 6: other uses and protection of border waters.³⁵

The Partridge River has all the same classifications as Second Creek.³⁶ It, too, is a water used for the production of wild rice.³⁷ The St. Louis River is a listed water, with all the same use designations, in addition to 3B (general industrial purposes),³⁸ and it appears on the statutory list of wild rice waters.³⁹ The St. Louis River is also on the state's 303(d) list for impaired waters.⁴⁰

Minnesota Rule 7050.0224 subpart 2 contains the specific 10 mg/L wild-rice sulfate standard:

The quality of Class 4A waters of the state shall be such as to permit their use for irrigation without significant damage or adverse effects upon any crops or vegetation usually grown in the waters or area, including truck garden crops. The following standards shall be used as a guide in determining the suitability of the waters for such uses, together with the recommendations contained in Handbook 60 published by the Salinity Laboratory of the United States Department of Agriculture, and any revisions, amendments, or supplements to it: *...Sulfates (SO4): 10 mg/L, applicable to water used for production of wild rice during periods when the rice may be susceptible to damage by high sulfate levels.*⁴¹

C. Specific rates of discharge.

As it did under its 2005 Permit, Mesabi Nugget in the 2012 Permit and Variance sought and received specific variances only to Class 3C and 4A uses as they relate to discharges from

³⁴ Minn. R. 7050.0225 subp. 1.

³⁵ MPCA Order at ¶ 13 (citing Minn. R. 7050.0430), Ex 2.

³⁶ *Id.*

³⁷ *Id.* See also Draft MPCA Staff Recommendation: Seasonal Appl. of the Wild Rice Sulfate Std.—Partridge River (“MPCA Seasonal Discharge Plan”) (Aug. 27, 2012), Ex. 5.

³⁸ Minn. R. 7050.0223 subp. 3.

³⁹ Minn. R. 7050.0470 subp. 1(A)(192) (listing St. Louis River under Lake Superior Basin streams). Under Minn. R. 7050.0410, Listed Waters, “[t]hose waters of the state, except wetlands, that are specifically listed in part 7050.0470 are, in addition to any classifications listed in part 7050.0470, also classified as Class 3C, 4A, 4B, 5, and 6 waters.”

⁴⁰ MPCA Order at ¶ 13, Ex 1. MPCA concluded this was “solely for mercury-related (fish consumption) and other impairments (for pollutants not anticipated to be present in the Mesabi Nugget discharge).” *Id.*

⁴¹ Emphasis added.

Area Pit 1. The 2012 Permit and Variance also considered these uses solely to Second Creek and the Partridge River. The specific impacts from Mesabi Nugget’s sulfate discharges on the wild rice use even of the St. Louis River is not discussed in any detail in the decision documents, despite reports showing impacts from the LSDP discharge.⁴²

Listed below are Mesabi Nugget’s actual exceedences to date and rates of pollution prior to beginning operations at Area Pit 1, along with rates under the 2012 Permit and Variance:⁴³

Class	Pollutant	Stds.	Ave./Max. Conc. prior to LDSP (Aug. 2008-Dec. 2009)	2005 Variance limits⁴⁴	Approx. exceedences during LDSP Ops. (Jan.-May 2010)⁴⁵	2012 Variance Interim limits⁴⁶	2012 Variance Final limits (after Aug. 1, 2021)⁴⁷
3C ⁴⁸	Hardness	500 mg/L	728/806 ⁴⁹	740/831	770/800	863/831	532/512
4A ⁵⁰	Bicarbonates	250 mg/L	328/362	396/445	344/347	378/363	267/257
	TDS	700 mg/L	806/932	1619/1818	843/871	1228/1160	768/726
	Specific conductivity	1,000 μhos/cm	1152/1331	2159/2425	1204/1244	1965/1889	1066/1025

TDS and specific conductivity are really classes of pollutants that themselves include significant amounts of sulfates.⁵¹ It is undisputed that the discharges from Area Pit 1 include

⁴² Compare MPCA Order at ¶¶ 75-80 (solely discussing wild rice uses of Partridge River, including requiring performance of a sulfate transport study only “in the waters between the SD001 discharge and the confluence of the Partridge River...”), Ex. 1, with Barr Tech. Memo., Downstream Impacts of Discharges at low flow (7Q10) under Permit MN 0067687 (May 19, 2011) (showing 7Q10 sulfate discharges to *St. Louis River* from Area Pit 1 just under 200 mg/L), Ex. 6.

⁴³ See MPCA Order at ¶ 15, Ex 1.

⁴⁴ See 2012 Variance Appl. (June 2010) at 6, Ex. 7.

⁴⁵ MPCA Order at ¶ 16, Ex 1; see also Variance Appl. at 6, Ex 7.

⁴⁶ See Ltr. of T.Hyde (EPA) to A.Foss (MPCA) (Dec. 27, 2012), Ex 8; EPA Rev. at 6, Ex. 2.

⁴⁷ *Id.*

⁴⁸ Minn. R. 7050.0223 subp. 4.

⁴⁹ Daily/monthly maximums.

⁵⁰ Minn. R. 7050.0224 subp. 2.

sulfate levels are already far in excess of Minnesota’s 10 mg/L standard and that these levels have been trending upward since the LDSP went into production in 2010.⁵² The record confirms sulfate discharge rates to Second Creek at approximately 16 times the Minnesota limit:

Class	Pollutant	Standard	Current Ave. Concentrations in Area Pit 1 (as of 2011)	Current Ave. Concentrations in Second Creek (as of 2011)
4A Wild Rice ⁵³	Sulfate	10 mg/L	386	166 ⁵⁴

III. History of the 2012 Permit and Variance.

A. 2005 Permit and Variance.

Mesabi Nugget (through its predecessor entity and a former partner, now parent, Steel Dynamics, Inc.) acquired the LDSP site in 2005 and obtained NPDES/SDS Permit MN 0067687 (“2005 Permit”).⁵⁵ While this and surrounding property had long been used for a mining operation, no mining had occurred, and Area Pit 1 had not been in use for any operations, since the prior owner went bankrupt in 2001. Since 2010, however, the LDSP has produced iron nuggets from iron ore, with a total operating capacity of 600,000 metric tons of iron nuggets per year.⁵⁶

⁵¹ See, e.g., EPA, “Volunteer Stream Monitoring: A Methods Manual” at 5.8, Total solids: “Total solids are dissolved solids plus suspended and settleable solids in water,” and sulfate is a solid; 5.9, Conductivity: “Conductivity in water is affected by the presence of inorganic dissolved solids such as chloride, nitrate, *sulfate*, and phosphate anions (ions that carry a negative charge). . . .” (emphasis added), available on-line at <http://water.epa.gov/type/rsl/monitoring/vms59.cfm> (last visited Jan. 27, 2013).

⁵² Barr Tech. Memo.: Interim Limits for TDS and Specific Conductance (Aug. 29, 2012), Ex. 10.

⁵³ Minn. R. 7050.0224 subp. 1.

⁵⁴ Barr Tech. Memo.: Area 1 Pit Water Treat. Eval. in Support of the Nondeg. Analysis (June 2011), Table 2-1, Ex. 10.

⁵⁵ See generally, MPCA Order ¶¶ 1-13, Ex. 1.

⁵⁶ *Id.* at ¶¶ 1-2.

Like the 2012 Permit and Variance, the 2005 Permit included a variance from Class 3C industrial-consumption and Class 4A agricultural-use standards water quality standards for hardness, bicarbonates, TDS, and specific conductance.⁵⁷ The MPCA, and Region 5, approved the variance on essentially the same grounds as presented in support of the 2012 Permit and Variance, and included the same water-quality and aquatic-life monitoring requirements.⁵⁸

One difference from the 2012 Permit and Variance, however, is that in 2005, the MPCA and Region 5 notably concluded that there were no “existing” agricultural uses, but never even mentioned the Class 4A wild rice agricultural use.⁵⁹ Another difference in the 2005 Permit was that it was based on reasoning Region 5 *rejected* this time around: in 2005, Region 5 concluded that Mesabi Nugget *had* made a showing of “widespread economic and social impact” under 40 C.F.R. Section 131.10(g) to justify the variance.⁶⁰

But in 2005, the underlying findings include the same technical infeasibility claims as Mesabi Nugget makes now: that RO with brine concentration and crystallization represented the “needed level of treatment,” but that this was

technically infeasible due to likely fouling and scaling of RO membranes and heat input surfaces of the concentrator/crystallizer leading to excessive downtimes for membrane replacement, and that such operational liabilities are not conducive to the treatment of a constant or continuous, large volume, wastewater flow.⁶¹

Then, the company also claimed (and MPCA and Region 5 accepted) that the combination of “new mercury filtration treatment technology not tried elsewhere with [RO] that has been applied successfully, albeit on a smaller scale and under different circumstances, overall it is not

⁵⁷ 2005 Permit, Ex. 11; Barr Eng’g, Area 1 Pit Water Treat. Eval. in Support of the Non-Deg Analysis, Mesabi Nugget Phase II (Nov. 2009) at 1, Ex. 12.

⁵⁸ EPA approval ltr., attaching UAA/Variance Checklist (“Checklist”) and MPCA Findings, Conclusions, and Order (Aug. 30, 2005) (“2005 MPCA Order”), Ex. 13.

⁵⁹ *Id.* at Checklist at 1.

⁶⁰ *Id.*

⁶¹ *Id.* at 2005 MPCA Order at ¶ 14, Ex. 13.

a demonstrated feasible technology capable of producing and effluent that can comply with the Class 3 and Class 4 water quality standards.”⁶²

In 2005, the MPCA also required financial assurance and a commitment from Mesabi Nugget to remediate existing pollution in Area Pit 1

based on the cost of operating the treatment facility, based on the design information available at the time of permit drafting, for the amount of time necessary to return Area 1 Pit water quality to its natural background levels. The estimated time for additional treatment needed to achieve natural background levels was determined to be approximately *three to five years*.⁶³

The 2005 Permit further stated:

The Permittee shall provide for treatment until such time that the water quality of the Area 1 Pit is returned to natural conditions as defined by the water quality monitoring data collected from the Area 1 Pit, including data from monitoring station SW003, in the period prior to commencement of iron nugget production.⁶⁴

In short, an express condition of the 2005 Permit was that Mesabi Nugget remediate background pollution by 2010, at the latest.

Commentors on the 2005 Permit objected strenuously to various portions of the MPCA’s (and Region 5’s) analysis.⁶⁵ They cited concerns about impending toxicity to aquatic life based on the levels of salinity in the four pollutants.⁶⁶ But the MPCA still concluded that “[t]he variances do not apply to Class 2 aquatic life uses because the discharge concentrations of the four parameters will not be at levels anticipated to cause toxicity.”⁶⁷ Likewise, MPCA dismissed commentors’ concerns about the rejection of RO technology and justified its conclusions of

⁶² *Id.* at ¶ 15.

⁶³ *See* 2005 MPCA Order at ¶ 48 (emphasis added), Ex.13.

⁶⁴ *See* Bands’ Cmts. to MPCA (Oct. 17, 2012) at 2 (citing 2005 permit), Ex 14.

⁶⁵ 2005 MPCA Order at ¶¶ 67-95, Ex. 13.

⁶⁶ *Id.* at ¶ 68.

⁶⁷ *Id.* at ¶ 71.

technical infeasibility based upon “projected wastewater flow rates and wastewater makeup,” among other reasons.⁶⁸

B. June 2010 re-application.

In a June 2010 re-application, Mesabi Nugget (again, jointly with Steel Dynamics) sought a 5-year extension of the 2005 Variance for the same purposes as before. It also sought to continue use of the same wastewater treatment systems, despite not meeting the benchmarks in the 2005 Permit and Variance.⁶⁹ By then, Mesabi Nugget was forced to acknowledge chronic aquatic-life toxicity findings from Area 1 Pit discharge, and stated it was “mindful of the need to protect the aquatic life uses in Second Creek and the Partridge River.”⁷⁰ But it again opposed any requirement of RO/NF treatment, still relying on many of the same technical-infeasibility arguments.⁷¹

But the 2005 variance expired on June 30, 2010. Because Mesabi Nugget could not meet water quality standards and MPCA had not yet extended the variance, the company had to cease discharges from Area Pit 1 into Second Creek.⁷² Thereafter, the company also had to answer for violations of its 2005 Permit for exceedences before it ceased discharges.⁷³ On February 24, 2011, however, MPCA issued a modification, again setting limits for four constituents, bicarbonates, hardness, TDS, and specific conductance.⁷⁴

⁶⁸ *Id.* at ¶ 71. As demonstrated in the Kuipers report, to the extent this was even accurate in 2005, none of these technical feasibility arguments remain valid today.

⁶⁹ MPCA Order at ¶¶ 6-8, Ex. 1. *See also* Var. Appl. (June 2010) at 1, Ex. 7.

⁷⁰ 2012 Var. Appl. (June 2010) at 1, Ex.7.

⁷¹ *Id.* at 11-15.

⁷² MPCA Order at ¶¶ 3-6, Ex. 1.

⁷³ *See, e.g., id.* at ¶ 9.

⁷⁴ *See, e.g., id.* at ¶ 6. There was no public comment period associated with this modification.

C. Drafts and comments leading up to Current Permit and Variance.

1. Bands' comments on pre-public release draft permit and variance on December 22, 2011.

In the next round of permitting, the current one, the state engaged in required government-to-government consultation with the Bands on technical and scientific aspects of the proposed variance and permit.⁷⁵ On December 22, 2011, the two Bands separately provided comments on the pre-public release draft of MPCA's proposed permit reissuance to Mesabi Nugget.⁷⁶ They noted the Project was located within the Ceded Territory and could implicate tribal usufructuary rights.⁷⁷ They reminded the MPCA that, under the terms of the 2005 Permit, Mesabi Nugget was responsible for clean-up of the site relating to previous mining activities, including specifically as related to "polluted water from overflowing pits."⁷⁸ The Bands also noted that "[t]he cause of intermittent toxicity in Area Pit 1 has not been identified or resolved," and that Second Creek and Partridge River are wild rice waters.⁷⁹

⁷⁵ See also Minnesota Executive Order 03-05, Affirming the Government-to-Government Relationship Between the State of Minnesota and Indian Tribal Governments Located Within the State of Minnesota. This requires the state to recognize the government-to-government relationship with tribes "[w]hen undertaking to formulate and implement policies or programs that directly affect Indian tribes and their members" and to, "whenever feasible, consult with the governments of the affected Indian tribe or tribes regarding a State action or proposed action that is anticipated to directly affect an Indian tribe." Furthermore, "[i]n instances where the State assumes control over formerly federal programs that directly affect Indian tribes, state agencies shall consider the unique tribal needs and, to the extent feasible, endeavor to ensure that tribal interests are taken into account by the state agency administering the formerly federal program." *Id.* Some state and federal consultations with the Bands regarding Area Pit 1 took place even earlier, however, in the context of larger, "Phase II" plan for an upcoming Mesabi Nugget expansion, on which the U.S. Army Corps of Engineers is the lead agency. See, e.g., Fond du Lac Cmtes. on Mesabi Nugget Phase II Project Descr. (Feb. 25, 2011) (discussing chronic toxicity from Area Pit 1 discharges). This comment does not appear in the administrative record and is provided as background only.

⁷⁶ Grand Portage Cmtes. (Dec. 22, 2011), Ex. 15; Fond du Lac Cmtes. (Dec. 22, 2011), Ex.16.

⁷⁷ Grand Portage Cmtes. (Dec. 22, 2011) at 1, Ex. 15.

⁷⁸ *Id.* at 2; Fond du Lac Cmtes. (Dec. 22, 2011) at 1, Ex.16.

⁷⁹ Grand Portage Cmtes. (Dec. 22, 2011) at 1, Ex.15; Fond du Lac Cmtes. (Dec. 22, 2011) at 1,

The MPCA had by then proposed to apply a seasonal-discharge plan to this specific project to purportedly protect downstream wild rice. In fact, MPCA had been proposing this for some time, also with tribal opposition, as an actual rule change. Among other concerns regarding the untested nature of the plan, the Bands stated that “[s]easonal discharges from Area Pit 1 that exceed WQS will likely contribute to sediment loadings of sulfate and other pollutants that may result in toxic sediment in slow moving water where wild rice beds are located.”⁸⁰

Both also cited Mesabi Nugget’s own analysis of RO/NF as the least expensive option for effective water treatment.⁸¹ The company consultant, Barr Engineering, since at least November 2009 had agreed that RO with zero liquid discharge (“ZLD”) was the best choice, as an “established technology” with “multiple commercial installations,” and that it had potential for implementation within just 2 years.”⁸² Barr later confirmed this again in a second water treatment evaluation in June 2011.⁸³ And the MPCA included similar findings in its November 2011 draft Variance Issue Statement (“VIS”).⁸⁴

In addition, other northern Minnesota mining entities PolyMet and U.S. Steel already had the go-ahead to install the technology, not to mention many other mining companies throughout the U.S. who are already using it.⁸⁵ By this time, an adjacent Minnesota Power operation,

Ex. 16. *See also* MPCA Order at ¶ 13, Ex.1.

⁸⁰ Grand Portage Cmts. (Dec. 22, 2011) at 1, Ex.15; Fond du Lac Cmts. (Dec. 22, 2011) at 2, Ex. 16. This issue was never addressed in what became the “seasonal discharge” plan for the purported protection of wild rice waters.

⁸¹ Grand Portage Cmts. (Dec. 22, 2011) at 1, Ex. 15 (citing Barr Eng’g, Area 1 Pit Water Treat. Eval. in Support of the Non-Deg Analysis, Mesabi Nugget Phase II (Nov. 2009), Ex. 12 hereto); *see also* Fond du Lac Cmts. (Dec. 22, 2011) at 1, Ex.16.

⁸² Barr Eng’g, Area 1 Pit Water Treat. Eval. in Support of the Non-Deg Analysis, Mesabi Nugget Phase II (Nov. 2009) at 19, 24, 28, Ex. 12.

⁸³ Barr Eng’g, Area 1 Pit Water Treat. Eval. in Support of the Non-Deg Analysis, Mesabi Nugget Phase II (June 2011), Ex. 10.

⁸⁴ VIS (Nov. 2011) at 12-13, Ex. 17.

⁸⁵ Grand Portage Cmts. (Dec. 22, 2011) at 3 (citing USGS Publications), Ex. 15.

Laskin Energy, actually had (and has) RO up and running.⁸⁶ Furthermore, the Bands noted that U.S. Steel had likewise tested it and it demonstrated “minimal scaling or fouling,” a key claim the company had continually raised to justify *not* using the technology.⁸⁷

2. Draft permit publicly released on January 30, 2012.

Nevertheless, on January 30, 2012, MPCA provided public notice of its intent to reissue the variance, attaching the draft, in which it addressed none of the Bands’ December 2011 comments. Nor did it require of RO/NF technology, just the same wastewater treatment approach as before, and the MPCA proposed the same, ongoing monitoring requirements without acknowledgement of the troubling monitoring results the company had already provided.⁸⁸

3. EPA’s comments on February 29, 2012.

On February 29, 2012, Region 5 itself echoed many of the Bands’ concerns regarding the draft permit.⁸⁹ It stated a Whole Effluent Testing, or “WET,” limit would be required under 40 C.F.R. Section 122.44(d) to address chronic toxicity in the receiving waters, as shown in impacts to *Ceriodaphnia dubia*, or *C.dubia*, a type of freshwater flea that is regularly used as a measure of the toxicity of wastewater discharges.⁹⁰

C.dubia and other species are “indicators or surrogates for the aquatic community to be protected, and a measure of the real biological impact from exposure to the toxic pollutants.”⁹¹

⁸⁶ See, e.g., Email from M.Watkins to EPA (Dec. 31, 2012) (attaching Laskin Spill Rep. and discussing use of RO (Dec. 24, 2012)), Ex. 18.

⁸⁷ *Id.*

⁸⁸ Draft Permit (Jan. 2012), at 18-20, Ex. 19.

⁸⁹ EPA Ltr. (Feb. 29, 2012), Ex. 20.

⁹⁰ *Id.* at 1-3. See also EPA WET Manual: Short Term Methods for Estimating the Chronic Toxicity to Freshwater and Marine Organisms, http://water.epa.gov/scitech/methods/cwa/wet/disk3_index.cfm (last visited Jan. 21, 2013), cited at MPCA Order at 16 ¶ 84, Ex. 1.

⁹¹ EPA WET Requirements, available on-line at <http://cfpub.epa.gov/npdes/wqbasedpermitting/wet.cfm> (last visited Jan. 21, 2013). Furthermore,

The purpose of WET testing is as follows, per EPA rules:

WET tests are designed to predict the impact and toxicity of effluents discharges from point sources into waters of the U.S. WET limits developed by permitting authorities are included in NPDES permits to ensure that the state or tribal water quality criteria for aquatic life protection (WET) are met. WET monitoring requirements that are representative of the discharge effluent (40 CFR Part 122.44(d)(1)(ii)) are included in NPDES permits to generate WET data used to determine whether reasonable potential for WET has been demonstrated. If reasonable potential has been demonstrated then a WET limit must be included in the permit (40 CFR Part 122.44(d)(1)(iv) and (v)). WET test results are also used in determining compliance with NPDES WET permit limits.⁹²

Therefore, in its February 2012 comments, Region 5 also concluded that, based upon the intermittent, low-level toxicity to *C.dubia*:

[I]t appears that the interim limits proposed to complement the variance would not protect existing aquatic life uses. If true, this would be inconsistent with Minnesota's water quality standards at Minn. R. 7050.0185, Subpart 1:

Existing beneficial uses and the water quality necessary to protect the existing uses must be maintained and protected from point and nonpoint sources of pollution.

To be consistent with Minnesota's antidegradation policy, *the final variance must ensure protection of existing aquatic life uses*. In addition, the permit must be clear that despite the variance, Mesabi Nugget must comply with the WET limit in the permit.⁹³

Region 5 also stated that a sulfate fate and transport study would be required, and confirmed that this was Minnesota's "first seasonal application of its Class 4A (wild rice) water quality standard."⁹⁴ While it did not join the Bands' position that scientific analysis for this

"EPA recommends running tests using an invertebrate, vertebrate and a plant to identify the most sensitive species for developing NPDES WET permit limits or testing requirements." *Id.* The EPA never required any plant WET permit limits or testing requirements here.

⁹² *Id.*

⁹³ EPA Ltr. (Feb. 29, 2012) at 3 (emphasis added), Ex. 20. Yet the Permit and Variance EPA approved included neither assurance of protection for existing aquatic life uses.

⁹⁴ *Id.* at 2. The seasonal discharge approach has also been raised as part of a larger review process of the wild rice sulfate standard, including ongoing consultation between the state and Minnesota tribes. *See, e.g.*, D.Thornton (MPCA) to M.Watkins (Grand Portage) (Dec. 10, 2010)

seasonal discharge approach was lacking, it did request tracking of any changes due to that seasonal discharge, while the state continued work on a larger, more comprehensive wild rice study (which is still underway).⁹⁵

In February 2012, the EPA framed its anticipated review of the new variance as being under the “widespread social and economic impacts” factor, as it had done in 2005.⁹⁶ But Region 5 noted that “[d]ocumentation submitted to date by the state of Minnesota for Mesabi Nugget is not sufficient” to justify that conclusion.⁹⁷ Region 5 also expressly required further analysis of RO/NF and stated that “Mesabi Nugget has not demonstrated that existing technologies are not available to meet water quality-based effluent limits for the parameters for which Mesabi Nugget is seeking a variance.”⁹⁸ It also noted that the company was overdue to provide the economic analysis required and pointed to the EPA’s *Guidelines for Economic Analyses*.⁹⁹

Furthermore, Region 5 noted that it was not apparent why additional studies, which already included “extensive discussion of the Area 1 Pit,” were needed “to identify and implement actions to improve effluent quality.”¹⁰⁰ Region 5 further stated:

An explanation must be provided for why existing data are not sufficient and why additional studies are needed to make wastewater treatment technology decisions.

(requesting tribal consultation under Minnesota Executive Order 03-05 Affirming the Government-to-Government Relationship Between the State of Minnesota and Indian Tribal Governments Located Within the State of Minnesota), Ex. 21; Joint Letter of Bands, along with Bois Forte Band (Oct. 16, 2012) (protesting proposed “watch list” approach for wild rice waters), Ex. 22. The Bands have also protested the proposed seasonal discharge approach as an unpromulgated interpretive rule that cannot be imposed in the context of any individual permit.

⁹⁵ *Id.* at 2.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.* Emphasis added

⁹⁹ *Id.* at 2-3. In fact, the company *never* provided the economic analysis required to justify the variance under the widespread economic and social impacts factor.

¹⁰⁰ *Id.* at 3.

If additional studies are still warranted, it is incumbent upon Mesabi Nugget to do that which is possible now to reduce existing contaminants in the pit discharge, concurrent with the studies, during the life of the permit.¹⁰¹

4. MPCA Staff Draft Seasonal Discharge Plan of August 27, 2012.

Over the course of the year, the company, agencies, and Bands continued review. This included discussions between Band and MPCA staff, including regarding MPCA's "seasonal discharge" plan. On August 27, MPCA issued a draft of the plan that purported to shore up the idea of allowing only seasonal discharges as a means to achieve the 10 mg/L sulfate standard and to protect downstream wild rice waters.¹⁰² But the draft plan failed to address many of the issues the Bands had raised, going to the fundamental lack of scientific support for the plan. The portions of this August 27 plan that the MPCA and Region 5 ultimately relied on to support their conclusion of no impact on wild rice waters are discussed further below.

5. MPCA Proposed Final Findings and Conclusions in October 2012.

In advance of the public meeting of the MPCA Citizens' Board on October 23, 2012, the MPCA issued a revised draft permit and VIS.¹⁰³ These contained all of the same problems that appeared in earlier drafts and on which the Bands had commented.

6. Band Comments of October 17, 2012 on MPCA Draft Findings and Conclusions.

In its October 17 comments on the MPCA's draft findings, the Bands again explained that not only is use for wild rice a designated and "actual" use, but challenged the claimed, specific justifications for the seasonal discharge limitation:

The agency assumes, without site-specific data, that the Partridge River is well-oxygenated throughout the year, when in fact its headwaters characteristics

¹⁰¹ *Id.* Yet the EPA ultimately did *not* require such an explanation from Mesabi Nugget, nor require Mesabi Nugget to do "that which is possible now" to reduce existing contaminants.

¹⁰² MPCA Seasonal Discharge Plan (Aug. 27, 2012), Ex. 5.

¹⁰³ VIS (Sept. 2012), Ex. 23.

suggest that low oxygen conditions are probable on a seasonal or diurnal basis, and in fact, wild rice requires a period of anaerobic conditions through the winter for successful germination.¹⁰⁴

The Bands went on to discuss the MPCA's statements regarding existing conditions in this and another pit, including that MPCA had erroneously alleged that:

Both of the pits are currently holding treated wastewater without discharging, regardless of whether the permit is reissued. Currently Mesabi Nugget has estimated that the Area 1 Pit may overflow prior to or during the next period when downstream wild rice resources are most sensitive," suggesting that Mesabi Nugget will not be held responsible for remediation of existing surface and groundwater contamination of a site that they own, and an existing beneficial use could be eliminated unless the variance is approved. This is not consistent with the MN WQS or the [CWA].¹⁰⁵

The Band also raised the lack of a UAA.¹⁰⁶ Furthermore, the Bands stated that Mesabi Nugget had not shown that wastewater treatment was *economically* infeasible, and had focused instead on claimed technical infeasibility.¹⁰⁷ The Bands again pointed to U.S. Steel Minntac's and PolyMet's operations to refute technological infeasibility claims, which include successful pilot testing showing efficacy in allowing compliance with *all* water quality standards for sulfate and other pollutants.¹⁰⁸

The Band also identified a suite of issues with intermittent toxicity to aquatic life, including serious increases in the concentrations of pollutants since the 2008-09 baselines were established.¹⁰⁹ The Band asked for biological monitoring, not just WET testing.¹¹⁰ Finally, the

¹⁰⁴ Bands Cmts. (Oct. 17, 2012) at 4 (citing MPCA Draft findings at Attach. 2), Ex. 14.

¹⁰⁵ *Id.* at 4-5 (citing MPCA Draft findings).

¹⁰⁶ *Id.* at 5.

¹⁰⁷ *Id.* at 5-6.

¹⁰⁸ *Id.* Neither EPA nor MPCA ever offered a full response to this critique, accepting Mesabi Nugget's argument regarding the differences between the facilities, nor did they weigh the fact that the RO system would be effective to ameliorate all *current* discharges, which may continue unabated for the next eight years.

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 3-4.

Bands pointed out that there still was no consideration of impacts to off-reservation, Ceded Territory treaty resources.¹¹¹

D. MPCA Final Findings and Conclusions of October 27, 2012 (and Region 5 concurrence in its December 27, 2012 Review).

After a hearing on October 23, the MPCA Citizens' Board approved the proposed findings, permit, and variance as submitted, addressing nearly none of the Bands' comments.¹¹² Region 5 followed suit on December 27, despite an intervening tribal consultation where the Bands yet again raised these issues, and despite the fact that Region 5 never offered substantive responses to the Bands' concerns either, as discussed below. Relevant to this Petition are the following portions of the MPCA's October 23 materials, with cites to Region 5's December 27 Review, where appropriate:

1. Claimed impacts solely on Class 3C and 4A uses.

As it did in 2005, the MPCA (and later Region 5) accepted that the sole impacts of the Variance would be to Class 3C and 4A designated uses of Second Creek (and excluding Class 4A wild rice agricultural use, which continued to be treated separately from other Class 4A analysis). It concluded that neither were actual uses within the meaning of the CWA, and that they were not "known historic, existing or foreseeable future uses."¹¹³

The 2012 Permit and Variance also merely continued the requirement that Mesabi Nugget do monitoring it had been doing since 2005. It acknowledged none of the data already accumulated under those studies, nor the 2005 Variance's deadline for action based upon that

¹¹¹ *Id.* at 4.

¹¹² *See generally*, MPCA Order, Ex. 1.

¹¹³ *Id.* at ¶ 15.

data.¹¹⁴ But now, final effluent limitations compliance was pushed well beyond the original 2005 Variance date of 2010, to “no later than August 1, 2021,”¹¹⁵ over eight years away.

2. Impacts on Class 2B that the 2012 Permit and Variance ignored.

MPCA again accepted (and Region 5 concurred) that Mesabi Nugget was “NOT requesting a variance from any Class 2B water quality standards in place for the existing designated use of protection of aquatic life and recreation.”¹¹⁶ But the agencies failed to square this conclusion with their acknowledgement that there *was* a potential for impacts on aquatic life as a result of the Variance, but minimized these impacts without reference to any scientific basis to do so:

*The potential exists for impact on sensitive macroinvertebrates as a result of the discharge. Chronic toxicity testing conducted on the existing discharge and on the Area 1 Pit indicates no effect on fathead minnows but the potential for effect on Ceriodaphnia dubia. Testing results seem to suggest that this potential for impact to C. dubia is of greater concern in late summer and is intermittent in nature (i.e., toxicity is not observed in each testing event). Given these observations, the potential for impact within the receiving water itself, if it were to occur at all, would be intermittent and temporary in nature and would be localized to the immediate area of discharge given the larger flows of downstream waters such as the Partridge and St. Louis Rivers relative to the discharge.*¹¹⁷

¹¹⁴ The requirements again included: (1) a Short Term Water Quality Improvement Study “to identify improvements that could be made to the existing processing and wastewater treatment facilities to reduce TDS-related pollutants, including potentially sulfate, in the discharge...;” (2) a Water Balance Study to “identify and quantify water flows into and out of the Area 1 Pit”; (3) a Chemical Balance Study to “identify the source and fate of pollutant loadings into the Area 1 Pit including those from operation of the plant and from watershed sources such as from leaching of adjacent stockpiles”; and (4) a Pollutant Reduction Study, based upon the other three studies, to evaluate “source control technologies, treatment technologies and process optimizations” and “a detailed plan and schedule that will result in compliance with effluent limitations as soon as possible,” but no later than three and half years from the date of the Permit. *Id.* at ¶¶ 9-10.

¹¹⁵ EPA Rev. at 6, Ex. 2.

¹¹⁶ *Id.*; at 5.

¹¹⁷ MPCA Order at ¶ 44 (emphasis added), Ex. 1.