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 LDSP 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

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[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

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[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

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[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 LaPointe[16] (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

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[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.

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[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]

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[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 supb. 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

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[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 limits[44]**	**Approx. exceedences *during* LSDP Ops. (Jan.-May 2010)[45]**	**2012 Variance Interim limits[46]**	**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]

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[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

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[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

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[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]

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[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]

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[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 Cmts. 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 Cmts. (Dec. 22, 2011), Ex. 15; Fond du Lac Cmts. (Dec. 22, 2011), Ex.16.

[77] Grand Portage Cmts. (Dec. 22, 2011) at 1, Ex. 15.

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

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

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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]

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[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

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"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

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[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

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[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

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[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]

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[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.

Specifically, the MPCA findings noted that the company's "Toxicity Reduction Evaluation (TRE)/Toxicity Identification Evaluation (TIE)" reports showed "intermittent chronic toxicity has resulted in a reduction in the number of young per bearing female, but not complete reproduction failure (i.e. zero young per bearing female)."[118]

But instead of recognizing this as *already* showing an impact to Class 2B aquatic use and requiring further analysis, MPCA simply required Mesabi Nugget to continue the TRE/TIE process, "in order to identify and eliminate the source of intermittent toxicity observed."[119] It also failed to acknowledge the evidence that already showed a rise in chronic toxicity that corresponds with Mesabi Nugget's own operations (to say nothing of the company's responsibility to remediate background pollution anyway).[120] MPCA solely prohibited discharges from Area Pit 1 to Second Creek during September of each year, based upon spawning data, "unless Mesabi Nugget can demonstrate through WET testing that toxicity exceeding one chronic toxicity unit is not present."[121]

3. Because the EPA in the 2012 Variance and Permit mistakenly concluded that there was no impact on Class 2B designated uses, it also did not require a UAA.

Because Region 5 concluded that no "Tier 1" designated use (like Class 2B) as specified under Section 101(a)(2) of the CWA was claimed to be nonattainable, it did not require a UAA.[122] This was premised on Region 5's acceptance of Mesabi Nugget's statement that it "did not seek to modify" any Tier I use, not on the EPA's own evaluation of whether there actually *was* a Tier I use affected. Region 5 stated summarily that no UAA was required "since the only

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[118] *Id.* at ¶ 81.
[119] *Id.* at ¶ 45.
[120] *See* § II.C, *supra.*
[121] MPCA Order at ¶¶ 81-86, ¶ 84 (conclusions requiring WET and specific methods for testing), Ex. 1.
[122] EPA Rev. at 12, 19, Ex. 2.

uses proposed to be removed by the State were industrial and agricultural uses, for which a UAA was discretionary under 40 C.F.R. § 131.10(k)."[123]

4. Additional impacts on Class 4A wild rice waters that the Permit and Variance inadequately addressed; insufficient support for "seasonal discharge" permit conditions.

Similarly, the MPCA (and Region 5) concluded that there would be "no impact" on Class 4A wild rice waters, relying on the "seasonal impact" language in Minnesota Rule 7050.0224 subpart 2 to impose a permit condition providing for seasonal discharges only (discussed further below).[124] In other words, the MPCA concluded that the standard: (1) only needs to be met "seasonally," and only as to the Partridge River; and (2) that merely restricting discharges to Second Creek to September 1 through March 31 would be sufficient to allow Mesabi Nugget to meet to 10 mg/L sulfate standard during the late spring through late summer wild rice growing season from April 1 through August 31. The MPCA made no mention of the other Class 4A numerical and narrative limits that apply to wild rice waters.

The MPCA specifically relied on MPCA's August 27 plan:

> The evaluation of the Partridge River with regard to the sulfate standard is summarized in the August 27, 2012…MPCA draft staff recommendation, "Seasonal Application of the Wild rice Sulfate Standard—Partridge River," (Attachment 2). In that memo, the MPCA concluded that the 10 mg/L sulfate standard is applicable to portions of the Partridge River used for wild rice production April 1 through August 31. Based on this conclusion, the permit prohibits the discharge from Area 1 Pit from April 1 through August 31. As outline in the draft staff recommendation, these dates take into account the general variability associated with annual climatic variations, geographic locations and individual stand variability within the Partridge River watershed.[125]

The MPCA also claimed that the seasonal application of the 10 mg/L standard

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[123] *Id.* at 12.
[124] *Id.* at 5 (same).
[125] MPCA Order at ¶ 76; *see also* at ¶ 21, Ex. 1.

> considers the travel and residence time of the river system form the discharge point to the location of wild rice. It also recognizes that hydrogen sulfide toxicity is less likely in flowing water conditions, such as those found in the Partridge River, than in stagnant water conditions—due to oxygenated sediment conditions preventing the formation of hydrogen sulfide and the moving water preventing accumulation of any hydrogen sulfide that may form.[126]

The MPCA did not make any mention of the demonstrated issues related to sulfate accumulation *over time* in sediment or anaerobic conditions, problems the Bands had raised.

The 2012 Permit and Variance also included a requirement to complete a "Wild Rice Impact Study" within four years after approval of the work plan and a "Sulfate Transport Study" within 12 months of the work plan to inform future permit decisions.[127]

Region 5 likewise agreed that the MPCA had imposed conditions that meant that that the wild rice sulfate standard "would not be affected," citing both an August 13 draft (purportedly reflecting "Tribal Staff Feedback," a claim the Bands dispute) and the later August 27 MPCA draft.[128] Region 5 specifically cited certain studies John Moyle performed in 1944, 1969, and 1975 (the "Moyle Studies"), some of which the August 27 plan also cites, to conclude that there was "no indication that the parameters for which Mesabi is requesting a variance would be expected to adversely affect wild rice if the sulfate criterion is met."[129] Like the MPCA, however, Region 5's decision document cites no data confirming that the seasonal discharge approach will actually result in *meeting* the 10 mg/L sulfate standard.

The Moyle Studies actually include *no basis* to conclude that levels of specific conductance and TDS in excess of the 10 mg/L sulfate standard would *not* be detrimental to downstream wild rice—in fact, they suggest the *opposite* conclusion. First, Moyle stated in his

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[126] *Id.* at ¶ 77.
[127] *Id.* at ¶¶ 79-80.
[128] EPA Rev. at 4-5, 14-15, Ex. 2.
[129] *Id.* at 5.

1975 report that "[i]n Minnesota wild rice is not found in waters high in alkali or sulfate salts," and further defended the 10 mg/L sulfate standard.[130] For this reason, Moyle recommended a more stringent sulfate limit than for other salts (although they, too, are plainly implicated). In part, this was based upon the mechanism by which sulfates become reduced to hydrogen sulfide by bacteria *in anaerobic soils*—a key issue the Bands raised regarding the lack of study of low-flow conditions.[131] He stated: "[s]ulfate salts, however, differ from carbonates and chlorides in that the sulfate ion can be reduced by bacteria to hydrogen sulfide. This occurs under anaerobic conditions, either in water or in bottom soils. Hydrogen sulfide is a toxic gas and in water has long been known to be toxic to fish at low concentrations (under 1 ppm)….hydrogen sulfide has recently been found to be toxic for domestic rice…"[132]

In other words, Moyle's research suggested *sediments* are a primary mechanism for sulfate toxicity in wild rice. So there is no factual basis in the Moyle Studies, nor in any other source the MPCA or EPA relied upon, to conclude that sulfates that accumulate over time in sediments would be addressed merely by seasonally restricting sulfate-heavy discharge. Nor does Moyle ever suggest that a "seasonal discharge plan" would result in satisfying the 10 mg/L sulfate limit.

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[130] J.Moyle, "Review of Relationship of Wild Rice to Sulfate Concentration of Waters," (Mar. 16, 1975), Ex. 24.
[131] *Id.*
[132] *Id.* at 3. *See also* J.Moyle, "Wild Rice—Some Notes, Comments and Problems," Special Publ. No. 47 (MNDNR, Sept. 2, 1975) at 2 (same), Ex. 25; Excerpt of J.Moyle testimony on behalf of MPCA in *In the Matter of the Appls. for NPDES Permits to Discharge from Three Steam Elec. Generating Plants of Minn. Power & Light Co.* (MPCA Mar. 19, 1975) at 53-54, 68 (same), Ex. 26.

5. Rejection of RO/NF Wastewater Treatment System.

The MPCA (and Region 5) concluded that Mesabi Nugget should not be required to implement an RO system, despite its technical feasibility, primarily because the system could be affected by its future air emissions system components. The agencies acknowledged that air permitting was "driving" wastewater treatment in their analysis, although all the claimed impacts remained mere possibilities:

> Mesabi Nugget is in the process of conducting various studies on its air emission control/scrubber systems as required by the facility's Air Emissions Permit, which may result in significant changes in the nature of the influent to an [RO] treatment system. In particular, Mesabi Nugget is required by the permit to complete a Wet Scrubber Optimization Study, a NOX Control Study. Changes in liquid flow rate as a result of the Scrubber Optimization Study *could result* in the presence of additional dissolved solids and particulate matter in the influent. A requirements to install a selective noncatalytic reduction system (SNCR) or alternate technology for NOX control would result in significant quantities of nitrogen compounds reporting to the wastewater treatment system. These nitrogen compounds *can be detrimental* to the performance of RO membranes and may require the installation of additional pretreatment. *If* additional control equipment is required to remove mercury in the air emissions, the most likely candidate *would be* the injection of activated powdered halogenated carbon. This *would likely* change the composition of the influent by adding monovalent ions, thereby affecting the selection of an effective membrane, as well as the selection of pretreatment technology due to the addition of the very finely divided activated carbon.[133]

The two agencies were still forced to conclude that RO with evaporation and crystallization of the reject water was at least "potentially technically capable of reducing the levels of the variance parameters to meet water quality standards."[134] Region 5 couched this conclusion by claiming there was some "technical uncertainty":

> Even with RO, however, *technological uncertainty* remains for the Mesabi Nugget discharge, particularly with respect to pretreatment requirements, selection of an effective membrane(s) for variable influent quality, likely fouling and scaling of the heat transfer surfaces, disposition of the reject brine and general

[133] EPA Rev. at 8, Ex. 2. (emphasis added).
[134] *Id.*

> design/scale-up considerations for a system capable of treating up to 3,000 gallons per minute. At a minimum, Mesabi Nugget has indicated that in order to make an informed decision on the potential installation of addition[al] wastewater treatment, a reasonable amount of time would be needed to fully characterize future wastewater characteristics resulting from potential changes or enhancements to the air quality control systems—and to conduct the bench and/or pilot testing necessary for engineering design and detailed economic evaluation.[135]

So Region 5 accepted Mesabi Nugget's assertion that "it would be unreasonable to require construction and operation of a complex treatment facility that is not technically feasible at this time and would require extensive pilot testing and engineering to determine whether the technology could achieve the results."[136] Region 5 incorporated nearly all of the MPCA's reasoning in rejecting RO, except that it deleted the MPCA's discussion of "economic consequences." The MPCA had relied on this as a key basis to justify the variance.[137]

6. No five-year limit for 2012 Variance.

Region 5 concluded that there was no need to limit the 2012 Variance to five years (despite having done so in the 2005 Variance) because compliance with procedures in 40 C.F.R. Section 132 is discretionary for "Great Lakes States" like Minnesota based upon the particular pollutants.[138] The EPA stated summarily that all four pollutants here were listed exceptions, and

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[135] *Id.* at 9 (emphasis added).
[136] *Id.*
[137] *See generally*, *id.* at 8-10; MPCA Order at ¶ 22 (citing Minn. R. 7050.0190, subp. 1), Ex. 1. Specifically, the MPCA concluded there was an "exceptional circumstance" in the "technical infeasibility" related to the additional site-specific testing supposedly needed to install any RO system, which should be done only once the company had finished developing and installing its air filtration system at some point in the next eight years. *Id.* at ¶ 24; *see also id.* at ¶ 25 ("The options for wastewater treatment are driven by the decisions made for air pollution control equipment.") It also relied on the preexisting conditions at the pit and the risks if it were shut down. *Id.* MPCA never acknowledged the contradiction inherent in its own Order in insisting that if Mesabi Nugget shut down, the overflow would discharge untreated and year-round, with the acknowledgement that there was already funding that would remain available to continue treatment if Mesabi Nugget closed. *Compare id.* at ¶ 41 *with* ¶ 86.
[138] EPA Rev. at 20, Ex. 20.

so Minnesota was not required to comply.[139] But it offered no legal or factual basis for that conclusion.

7. EPA's "human caused conditions" analysis.

As noted, EPA accepted the conclusion of RO's technical infeasibility (at least without further, site-specific air emissions studies), but EPA shoehorned it into a different analysis than expected. Region 5's ultimate reason for granting the Variance was because it concluded that there were "human caused conditions" that justified it under 40 C.F.R. Section 131.10(g)(3), not "substantial and widespread economic and social impact" under Section 131.10(g)(6).

As noted, this was a departure from Region 5's long-stated intent of the standard under which it would review this permit—even the MPCA in its October 2012 Order still expected the EPA to do the "economic and social impact" analysis.[140]

Presumably, this was because the EPA cannot find infeasibility where a permittee provides no real economic-impact analysis as required under federal rules. And as discussed below, even the MPCA should not have accepted the company's reasoning without further financial data required by Minnesota rules.

The EPA's conclusion that "human caused conditions" justified the Variance appears to be based on three main factors:

(1) there was "no known historic, present, or foreseeable actual use of the waters" for those uses that would be affected by the four parameters addressed in this Variance;[141]

(2) the company could not determine water quality impacts from its operation (and build an adequate wastewater system) until after additional development and testing of its as-yet-undeveloped air control system, and performed additional testing on an RO

[139] *Id.*
[140] *See, e.g.*, EPA Ltr. (Feb. 29, 2012) at 2, Ex. 20; *see also* MPCA Order at ¶ 50 (stating that MPCA understood EPA's intent was to approve Variance under "widespread social and economic factors" analysis, Ex. 1.
[141] EPA Rev. at 17, Ex. 2.

system compatible with the air control system, which would take at least until August 2021; and also

(3) the Area 1 Pit was "already overflowing" when the company acquired the former mining property in 2005 and began to use the pit for process water.[142]

As for the third factor, the EPA did not address the fact that Mesabi Nugget had already expressly *accepted responsibility* for remediating any background pollution. Nor did it acknowledge the 2005 Permit condition of required remediation of any background pollution and meeting state water quality standards *by 2010* and *before starting production*. In other words, the EPA now cited Mesabi Nugget's *own unmet obligations* as a reason to extend the Variance another eight years.

Additionally, the EPA ignored the company's own data showing that TDS and specific conductance levels have unquestionably been rising since the company started operations in 2010. They are expected to continue to rise as operations continue to ramp up,[143] confirming Mesabi Nugget's operations, *not* any prior operations, are and will continue to be the primary cause of the pollution.

In any case, after stating these factors, the EPA summarily concluded that they constituted "human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied" under Section 131.10(g)(3).[144] But it provided no analysis of *why* these factors constitute "human caused conditions" within the meaning of the federal rule, nor why, given the availability of an RO system that could remediate all *current* wastewater impacts (and

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[142] *Id.* MPCA had concluded that Area Pit 1 would continue to discharge whether the LSDP was in operation or not, "albeit without the wastewater treatment of pit waters that the nugget facility is currently providing." MPCA Order at 9 ¶ 41. It further found that, without the LSDP plant, "discharges form the Area 1 Pit to Second Creek would continue at levels exceeding water quality standards and, if the permit associated with the requested variance is not approved and issued, the discharge would occur year-round rather than be seasonally controlled thereby potentially adversely affecting downstream wild rice resources." *Id.*

[143] *See* Ltr. of T.Hyde (EPA) to A.Foss (MPCA) (Dec. 27, 2012), Ex. 8., EPA Rev. at 6, Ex. 2.

[144] EPA Rev. at 17-18, Ex. 2.

the potential to re-engineer it as time goes on to meet air emissions needs), it still concluded that those effects "cannot be remedied." Nor did it ever acknowledge that its own February 2012 comments were largely ignored—instead, Region 5 blithely stated that "MPCA adequately addressed EPA-specific comments…."[145]

E. EPA tribal consultation in early December 2012.

The Bands yet again raised all the same concerns with the MPCA's now-final Permit and Variance in tribal consultation with the EPA,[146] as well as in a series of email communications with the EPA after the MPCA's final Order.[147] But the EPA still never addressed these defects. Even the EPA consultation "record," as reflected in its December 27 letters to Band leaders, contains little that the Bands actually raised on that call and in prior communications. Therefore, the Bands also submit the EPA's own notes from their December 3 teleconference as a more accurate portrayal of the discussion.[148]

The EPA offered no substantive rebuttals either in consultation or in its subsequent decision. At no point did the EPA tell the Bands of its new intent to review under the "human-

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[145] *Id.* at 6.

[146] *See, e.g.*, EPA tribal consult. request to Grand Portage (incl. email and letter to Chairman Norm Deschampe) (Nov. 15, 2012), Ex. 27; T.Hyde (EPA to Chairwoman K.Diver (FDL) (Nov. 16, 2012) (offering formal tribal consultation), Ex. 28; Bands' Cmts. (Dec. 12, 2012), Ex. 29; EPA Record of Consult with Fond du Lac Band (Dec. 27, 2012) at Cmt. and Resp. 2, 6 (generally discussing allowance of additional discharge without specifying how Mesabi Nugget will attain compliance with WQS), Ex. 30.

[147] *See* Email of K.Mayo (EPA) to GP and FDL reps. (Dec. 6, 2012) (attaching EPA draft notes of Dec. 3 consultation call); M.Watkins (GP) to EPA reps. (Dec. 6, 2012) (attaching Mesabi Nugget financials); M.Watkins (GP) to EPA reps. (Dec. 4, 2012) (attaching EPA 2010 Econ. Guidelines); M.Watkins (GP) to EPA reps. (Dec. 4, 2012) (listing Great Lakes Water Quality Standards and five-year variance limit); M.Watkins (GP) to EPA reps. (Nov. 28, 2012) (discussing Mesabi Nugget's clean-up liability); C.Wagener (EPA) to GP and FDL reps. (Nov. 27, 2012) (attaching summary of tribal comments from Dec. 2011 to date) and attach., collected in Ex. 31.

[148] *See* EPA Consultation Notes (Dec. 3, 2012), Ex. 32.

caused conditions" analysis.[149] And there was no public comment period associated with the EPA's review of the MPCA's Order or its own December 27 decision. Additionally, at no point did the EPA initiate Section 106 historic-properties consultation with the Bands.[150]

IV. New Kuipers report on feasibility of RO/NF technology.

The EPA made unaddressed, post-public-comment and post-tribal-consultation adjustments to its basis for reviewing and approving this Variance in its "human-caused conditions" analysis. In fact, the EPA's December 27 decision directly contradicts some of its statements about RO in its February 2012 comments. Therefore, the Bands have now retained an expert to rebut the EPA's position and to expand upon the Bands' comments regarding the feasibility of RO technology, and the EAB is entitled to accept it for review in determining whether to remand.[151]

After review of the administrative record and other material, Kuipers and Associates offers the following opinions in support of this Petition:

1. Pilot testing in this case is only necessary for final design purposes as implementation of RO treatment systems are commonly used for treatment of wastewater from large-scale industrial applications such as Mesabi Nugget….

2. Mesabi Nugget's claims that implementation of an RO treatment system are technically infeasible given uncertainties with future water treatment needs (e.g. air pollution controls) is not valid. Changes to required wastewater treatment constituents and flow rates over time at an industrial facility are commonly observed, in particular with mining and mine related facilities….

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[149] *Id.*

[150] Protection of wild rice waters as TCPs, too, has long been part of the discussion of protection of wild rice waters in Minnesota. *See, e.g.*, M.Watkins (Grand Portage) to J. Thornton (MPCA) (Dec. 23, 2009) re. MPCA Request for Historical Info. on Wild Rice (noting applicability of Section 106 review for all relevant NPDES mining permits and impacts on all wild rice sites), Ex. 33. This comment is not in the administrative record and is offered as background only.

[151] *See, e.g.*, *Adams v. U.S. E.P.A.*, 38 F.3d 43, 52 (1st Cir. 1994) (purpose of public participation rules is to ensure that "'[t]he public must have a genuine opportunity to speak on the issue of protection of its waters' on federal, state and local levels.' … The legislative history of the CWA also echoes the desire "'that its provisions be administered and enforced in a fishbowl-like atmosphere.'") (internal citations omitted).

3. In addition to successful treatment of the known constituents…required for treatment at Mesabi Nugget, RO/NA is an available, applicable and proven technology for the treatment of nitrogen in various forms including that associated with air scrubbing and other air pollution control technologies….

4. Based on the Mesabi Nugget documents reviewed, comparison to other industrial facilities with similar treatment needs, experience and professional judgment, Kuipers & Associates concludes that the RO water treatment alternatives evaluated and described in the Area 1 Pit Water Treatment Evaluation are technically feasible….

5. Mesabi Nugget's claim of economic infeasibility is not based on presentation of overall costs relative to the project's economic infeasibility, but rather on the stand-alone cost (e.g. $100M) in water treatment over the project life. Unless an economic feasibility analysis is performed the economic infeasibility of the process is not proven….Given that the cost of water treatment to meet effluent requirements has not been an economically prohibitive issue to other mining operations then the overall economic viability of the Mesabi Nugget operations should be questioned as being marginal rather than provided with a variance.[152]

V. Standard of review.

Pursuant to 40 C.F.R. Section 124.19(a), the EAB grants review of a petition where it appears from the petition that the permit condition (or variance) at issue is based on either: (1) a clearly erroneous finding of fact or conclusion of law; or (2) involves an important policy consideration which the Board, in its discretion, should review. Both factors are satisfied here.

THRESHOLD PROCEDURAL REQUIREMENTS

The Bands satisfy the threshold requirements for filing a petition for review under 40 C.F.R. Part 124 as follows:

1. EPA variance decisions are appealable under the procedure in Part 124.[153]

2. The Bands have standing to petition for review of the permit decision because they participated in the public comment (and federal tribal consultation) on the 2012 Permit and Variance as required by Section 124.19(a).

[152] Kuipers & Assocs. Water Treatment Evaluation—Technical Feasibility of Reverse Osmosis Treatment for the Mesabi Nugget Facility (Jan. 24, 2013), with attachments, Ex. 34.
[153] *See* 40 C.F.R. § 124.64(b).

3. The Bands raised the same issues they raise in this Petition during the public comment period (and federal tribal consultation) and therefore preserved all issues for review as required by Section 124.13.

ARGUMENT

I. CWA and federal regulatory requirements for NPDES permit variances.

Section 101(a) of the CWA lays out the basis purpose of the Act and subsection (2) lays out the "fishable/swimmable," or Class 2, standard:

> The objective of this Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. In order to achieve this objective it is hereby declared that, consistent with the provisions of this Act—
> …
>> (2) it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;…

The CWA prohibits point sources like the Mesabi Nugget plant from discharging any pollutant to waters of the United States unless the discharge is authorized.[154] Section 303(c)(2)(A) of the CWA requires the EPA to review and either approve or disapprove any new or revised state water quality standards before they can become effective, which equally applies to consideration of variances for a specific permit:

> Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act. Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes, and also taking into consideration their use and value for navigation.[155]

The specific requirements for designating uses for surface waters are found at 40 C.F.R. Section 131.10, and include the following, among others:

[154] 33 U.S.C. §§ 1311(a), 1342(a)(1).
[155] *See also* 40 C.F.R. § 131.21.

(a) Each State must specify appropriate water uses to be achieved and protected. The classification of the waters of the State must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. In no case shall a State adopt waste transport or waste assimilation as a designated use for any waters of the United States.

A state must consider downstream water quality standards as well:

(b) In designating uses of a water body and the appropriate criteria for those uses, the State shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.[156]

Federal regulations provide a series of steps to determine whether a variance from any designated uses can be granted. A UAA is required in some circumstances.[157] A UAA is "a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in § 131.10(g)." Section 131.10(k) confirms that "[a] State is not required to conduct a use attainability analysis under this Regulation whenever designating uses which include those specified in Section 101(a)(2) of the Act." [158] So whenever a state designates *only* other uses that are not protective of the aquatic-life use (or, arguably, takes any action that would have that effect, as here), it must perform a UAA.

Next, 40 C.F.R. Section 131.5(a) lays out the procedural and administrative factors from the State's review process that the EPA must evaluate, including "[w]hether the State has

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[156] *Id.*
[157] 40 C.F.R. § 131.3(g).
[158] EPA, Water Quality Handbook - Chapter 2: Designation of Uses (40 CFR 131.10), § 2.7, available on-line at http://water.epa.gov/scitech/swguidance/standards/handbook/chapter02.cfm#section7 (last visited Jan. 25, 2013). This includes guidance relating to Removal of Designated Uses under 40 C.F.R. 131.10(g) and (h).

adopted water uses which are consistent with the requirements of the Clean Water Act;…." A state must:

- meet the criteria to protect designated uses as required under Section 131.5(a)(2);
- generally follow its own legal procedures for their revisions as required under Section 131.5(a)(3);
- base its conclusions as to non-Section 101(a)(2) uses upon "appropriate technical and scientific data and analyses," as required by Section 131.5(a)(4); and
- meet the requirements of Section 131.5(a)(5), which include specific goals for Great Lakes States.

Ultimately, a state may only remove a designated use if it is not an "existing use,"[159] *and* if the State can show one of at least one of six, specific, limited "infeasibility" reasons.[160] The relevant reason here is Section 131.10(g)(3): "Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place…."

Finally, the EPA must not only adopt decisions that are "rational and supportable," but must duly consider all comments received.[161]

II. The EPA committed clear error under Section 101(a)(2) of the CWA in accepting the permittee's assertion that no "Tier 1" use would be affected, ignoring already-significant, chronic toxic effects on downstream aquatic life.[162]

The affected waters, including Second Creek and the Partridge and St. Louis Rivers, all have a Class 2B aquatic-life designation and analysis of this use has been entirely inadequate. Aquatic toxicity analyses in the record are unreasonably restrictive. Even so, the record

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[159] Section 131.3 states: "(e) *Existing uses* are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards. (f) *Designated uses* are those uses specified in water quality standards for each water body or segment whether or not they are being attained."
[160] *See* Section 131.10(g).
[161] *In re. District of Columbia Water and Sewer Auth.*, 13 E.A.D. 714, 22 (2008).
[162] *See* EPA Rev. at 12 (citing 40 C.F.R. §131.10(k) as permitting omission of a UAA in certain circumstances); 19.

demonstrates ongoing, unaddressed, chronic toxicity effects on *C.dubia*, which means the Variance *will* allow effects on aquatic life. The agencies *themselves* conceded "[t]he potential exists for impact on sensitive macroinvertebrates as a result of the discharge."[163] But they still accepted the permittee's unsupported assertion that there would be no such effects. So the Variance, in effect, removes a Class 2B use without any justification or analysis, in direct violation of the CWA,[164] and so constitutes clear error.

A. There has been insufficient toxicity testing.

The toxicity testing to date is not up to the EPA's own standards and must be more extensive before *any* effective determination of impacts on aquatic life can be assessed: "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."[165] The WET tests to date have not followed EPA requirements because, although they included the *C.dubia* (an invertebrate) and a fathead minnow (a vertebrate), they do not include any plant species.

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[163] MPCA Order at ¶ 44 (emphasis added), Ex. 1.

[164] Note also 40 C.F.R. Section 10(h) also expressly prohibits states from removing designated uses if they are "existing uses," meaning "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards."[164] No such evaluation has taken place as to Class 2B uses here. Ironically, EPA itself pointed this lack of aquatic life evaluation in its February 2012 letter to MPCA: "[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…To be consistent with Minnesota's antidegradation policy, the final variance must ensure protection of existing aquatic life uses." *See* EPA Ltr. (Feb. 29, 2012), Ex. 20.

[165] *See* EPA WET Requirements, available on-line at http://cfpub.epa.gov/npdes/wqbasedpermitting/wet.cfm (last visited Jan. 24, 2013); *see also* EPA Guide, "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms," available on-line at http://water.epa.gov/scitech/methods/cwa/wet/disk3_index.cfm (last visited Jan. 24, 2013).

Additionally, there has been insufficient evaluation of the effects on aquatic life for low flow (7Q10) conditions, especially winter, a matter that is especially of concern at Second Creek. Region 5 already concluded that during most of the year, "flow in Second Creek consists solely or primarily of the Area 1 pit discharge,"[166] and could be up to 5.8 million gallons per day. Yet there has been little analysis of the impact of such high levels of Mesabi Nugget discharge that it, in essence, *becomes* "Second Creek," and what that means for downstream water bodies.

In light of the chronic toxicity findings that are in the record, it is extraordinary that there has been no further attempt even to evaluate the effects on Class 2B uses. Minnesota Rule 7050.0222 subpart 7(C) imposes expressly additional Class 2 standards even as they relate to chronic toxicity:

> To prevent chronically toxic conditions, concentrations of toxic pollutants must not exceed the applicable CS [chronic standard] or MS [maximum standard] in surface waters outside allowable mixing zones as described in part 7050.0210, subpart 5. The CS and MS will be averaged over the following durations: the MS will be a one-day average; the CS, based on toxicity to aquatic life, will be a four-day average; and the CS, based on human health or wildlife toxicity, will be a 30-day average.

Neither the MPCA nor the EPA made the required findings.

B. Likewise, there has been no UAA as required under 40 C.F.R. § 131.10(j).

EPA's failure to recognize impacts to Class 2B aquatic use meant that it also failed to require a UAA, as required under Section 131.3(g) before it could remove the Class 2B use. Federal courts have recognized that "[e]ssentially, there is a rebuttable presumption that water quality standards should be protective of the fishable/swimmable use the statute seeks to achieve."[167] EPA's rules requiring a UAA embody the "rebuttable presumption" that the

[166] EPA Rev. at 8, Ex. 2.
[167] *Kansas Natural Res. Council, Inc. v. Whitman*, 255 F.Supp.2d 1208, 1209 (D. Kan. 2003)

"fishable/swimmable" uses "cannot be removed except under narrowly circumscribed conditions."[168] A full UAA must be performed on remand.

C. Despite the lack of proper analysis, the record and other guidance already show that these discharges have had and will continue to have negative impacts on aquatic life.

The record and independent EPA guidance already indicate that Mesabi Nugget's discharges by nature have negative effects on aquatic life. EPA *itself*, in setting limitations on conductivity (and salts) for other mining operations, states:

> The conductivity of rivers in the United States generally ranges from 50 to 1500 µmhos/cm. Studies of inland fresh waters indicate that streams supporting good mixed fisheries have a range *between 150 and 500 µhos/cm*. Conductivity outside this range could indicate that the water is not suitable for certain species of fish or macroinvertebrates.[169]

But this Variance would allow Mesabi Nugget to discharge at *1965 µhos/cm per day for eight more years*, a level many times above that which is safe for Class 2B waters, above the top of the general range of conductivity even for rivers in the U.S., and almost twice as high as Minnesota's Class 4A agricultural standard of 1000 µhos/cm.

Furthermore, there are indications from other Regions that have studied field data on mining discharges in order to "develop a protective benchmark for a mixture of salts in freshwater" that a lower level of 300 µhos/cm is appropriate:[170]

(citing *Idaho Mining Ass'n v. Browner*, 90 F.Supp.2d 1078, 1097–98 (D. Idaho 2000)).

[168] *Northwest Env't'l. Advocates v. U.S. E.P.A.*, 855 F.Supp.2d 1199, 1218 (D. Ore. 2012) (citing 63 Fed.Reg. 36, 742, 36, 749 (July 7, 1998), *Idaho Mining Ass'n, Inc.*, 90 F.Supp.2d at 1092, and other authority).

[169] EPA, "Volunteer Stream Monitoring: A Methods Manual", 5.9 Conductivity (emphasis added), available on-line at http://water.epa.gov/type/rsl/monitoring/vms59.cfm (last visited Jan. 24, 2013).

[170] EPA, "A Field-Based Aquatic Life Benchmark for Conductivity in Central Appalachian Streams" (May 2011), available on-line at http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=233809 (last visited Jan. 24, 2013).

> Rather than use toxicity test results, the adaptation uses field data to determine the exposure level at which 5% of macroinvertebrate genera are extirpated from streams. The method is applied to derive a benchmark for dissolved salts (measured by conductivity) of *300 µS/cm*. ... The mixture of salts is dominated by calcium and magnesium salts of sulfate and bicarbonate at circum neutral to mildly alkaline pH. The report demonstrates that elevated salinity causes the loss of macroinvertebrates and that the relationship between conductivity and macroinvertebrates apparently is not appreciably influenced by other potential causes.

A variance that does not (and cannot) demonstrate that it will not interfere with "attainment or maintenance of water quality that assures the protection and propagation of a balanced, indigenous population of fish, shellfish, and wildlife" must be denied. Because the analysis has not even been performed, and because Mesabi Nugget's discharges unquestionably *will* interfere with aquatic life, the EAB should grant this Petition and deny the Variance, remanding for sufficient Class 2B analysis.

III. The EPA committed clear error under 40 C.F.R. § 131.10(a) in failing to treat waters used for wild rice as Class 4A "agricultural use" waters 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.

A. The EPA failed to properly analyze these "waters used for the production of wild rice" as Class 4A agricultural-use waters.

Second Creek and the Partridge and St. Louis Rivers are all Class 4A wild rice agricultural waters. Sulfate discharges from the LDSP have reached 16 times the 10 mg/L limit in Second Creek. So Mesabi Nugget is unquestionably in violation of the standard and has been since it began operations. And Mesabi Nugget admits that projected sulfate discharge levels are expected to continue increasing with the ramp-up of LSDP operations. But this is not the only problem. The other water quality limits in Class 4A are equally applicable to and protective of wild rice waters. The fact that sulfate is specifically set out does not mean that the other standards do not apply. Yet MPCA and EPA did not perform a full Class 4A analysis for the

wild rice agricultural waters, instead segregating this review and solely addressing other agricultural uses.

But Minnesota's classifications of waters "should not be construed to be in order of priority, nor considered to be exclusive or prohibitory of other beneficial uses,"[171] and numeric and narrative water quality standards protect surface waters for *all* designated beneficial uses.[172] Exceedences are "considered indicative of a polluted condition which is actually or potentially deleterious, harmful, detrimental, or injurious with respect to designated uses or established classes of waters of the state."[173] There is no basis to omit a full review as to the wild-rice agricultural use.

In fact, the Moyle Studies, which discuss more than just sulfate impacts on wild rice, suggest it is essential. This violates Section 131.5(a)(4)'s requirement that the variance consider "appropriate technical and scientific data and analyses." Remand is justified so a full Class 4A wild-rice agricultural use analysis is can be performed.

B. The "seasonal discharge" plan cannot assure attainment of the 10 mg/L sulfate standard, and so the EPA had no proper basis to adopt it.

Compounding an already-inadequate analysis, the seasonal-discharge plan offers no basis to conclude that it will allow attainment the 10 mg/L sulfate standard. In fact, the data the EPA itself purports to rely upon suggests it will *not*. As discussed above, the seasonal-discharge plan fails to account for cumulative impacts to water quality, sedimentation, and other factors—factors that the Moyle Studies also identified as important. But federal law prohibits a speculative, "wait-and-see" approach to meeting water quality standards. No variance can be

[171] Minn. R. 7050.0140 subp. 1.
[172] Minn. R. 7050.0220 subp. 1.
[173] *Id.*

had if beneficial uses will not be protected. Therefore, for this reason, too, the EAB should accept the Petition and remand for further analysis.

IV. EPA committed clear error under 40 C.F.R. Section 131.5(a)(3) in concluding that Minnesota had followed its own legal procedures.

The state did not follow its own rules when it determined that Mesabi Nugget had shown "exceptional circumstances," as required under Minnesota rule 7050.0190 subpart 1. Pre-existing impairment of a mining site in northern Minnesota is commonplace, as is subsequent owners assuming responsibility for clean-up in exchange for the right to continue to use a mining site. And business delays like those Mesabi Nugget cites relating starting up the LSDP are not the responsibility of permitting agencies. Nor is it accurate that wastewater treatment is not "technically feasible"—RO/NF is both feasible and would allow for attainment of all the relevant standards.

Furthermore, there has been no showing that compliance with Minnesota's standards would cause Mesabi Nugget "undue hardship"—the company never provided the certified financial statements as required by Minnesota Rule 7000.7000 subpart 2(E):

> [I]f the applicant seeks a variance primarily on grounds of economic burden, financial statements prepared or approved by a certified public accountant, or other person acceptable to the agency, which shall fairly set forth the status of the business, plant, system, or facility for each of the three financial years immediately preceding the year of the application, and an analysis of the effect of such financial status if the variance is not granted (if the business, plant, system, or facility has not been in operation for this period, then the financial statements and analysis must be based on the most complete data available);…

But the primary support appears to be the company's own claims, as embodied in an obviously self-interested memorandum by Barr, Mesabi Nugget's *engineering* consultant, entitled "Economic Consequences of Meeting 10 mg/L Sulfate Standard," not a CPA's report, no

analysis of Mesabi Nugget's parent corporation Steel Dynamics' financials, and no required financial analysis.[174] It did not meet even the minimum standards of the rule. The presumed reason for Mesabi Nugget sidestepping this requirement is that it could *never* demonstrate "economic burden" in connection with the costs of RO/NF technology, given its connection to Steel Dynamics, a company with more than six billion dollars in annual sales.[175]

This is the type of blatant violation of state law that on its face violates the requirements of Section 131.5(a)(3). This, too, is sufficient to justify denial of the 2012 Variance and remand.

V. EPA committed clear error in granting a variance in excess of five years, a direct violation of federal rules for Great Lakes waters.

In rubber-stamping Minnesota's eight-year Variance for Mesabi Nugget (on top of the 2005 Variance, for a grand total of 16 years), EPA misinterpreted federal rules. Minnesota is Great Lakes State[176] and so is not entitled to grant a variance in excess of the five-year limit, regardless of the nature of the pollutants at issue.

Under 40 C.F.R. Section 131.5(a)(5), EPA was required to evaluate whether Minnesota had met all the requirements for Great Lakes States as laid out in 40 C.F.R. Section 132.4. That section states only that Great Lakes States "may, but are not required to" apply certain procedures and additional controls for pollutants listed in Table 5—and if a pollutant is listed there, a state may have flexibility in following *methodologies and procedures* as to those pollutants.[177] But neither the EPA (in the regulatory history) nor the text of the rule state that, if

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[174] Dated May 31, 2011, Ex. 35. *See also* MPCA Order at ¶ 33 (citing only projected construction costs for facility), Ex. 1.

[175] *See, e.g.*¸ M.Watkins (GP) to EPA reps. (Dec. 6, 2012) (attaching Mesabi Nugget and Steel Dynamics financials including $12.8 million in 3Q12 earnings); M.Watkins (GP) to EPA reps. (Dec. 4, 2012) (attaching EPA 2010 Econ. Guidelines), in Ex. 31.

[176] *See* 40 C.F.R. § 132.2 (listing Minnesota as a "Great Lakes State").

[177] *See* EPA, "Final Water Quality Guidance for the Great Lakes System: Final Rule, 40 CFR Parts …132," 60 Fed. Reg. 15366, 15380 (Mar. 23, 1995) ("States and Tribes do not have to

the pollutants *are* involved, this means the *five-year permit limit* on variances does not apply.[178]

To the contrary, Procedure 2 of Appendix F to Part 132(B) unequivocally states that:

> The Great Lakes States or Tribes may adopt water quality standards (WQS) variance procedures and may grant WQS variances for point sources pursuant to such procedures. Variance procedures shall be consistent with (as protective as) the provisions in this procedure.

Procedure 2 goes on to state:

> *Maximum Timeframe for Variances.* A WQS variance shall not exceed five years or the term of the NPDES permit, *whichever is less*. A State or Tribe shall review, and modify as necessary, WQS variances as part of each water quality standards review pursuant to section 303(c) of the CWA.[179]

Procedure 2(C) then lists the same six bases under for granting a variance as appear in 40 C.F.R. § 131.10(g)[180]—making plain that the five-year limit applies to each and every Great Lakes State variance and is not dependent upon whether the pollutants at issue appear in Table 5.

But even if the five-year limit were not intended to apply to variances involving pollutants listed in Table 5, the EPA's analysis is still wrong. The EPA premised its acceptance of the more-than-five-year variance term on its conclusion, without analysis, that all four pollutants here were included in Table 5.[181] In fact, three of four do *not* appear to be included. Table Five to Part 132 lists: Alkalinity, Ammonia, Bacteria, Biochemical oxygen demand, Chlorine, Color, Dissolved oxygen, Dissolved solids, pH, Phosphorus, Salinity, Temperature, Total and suspended solids, Turbidity." Missing from the list are: (1) bicarbonates (*part of* but

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adopt and apply the final Guidance methodologies and procedures for the 14 pollutants listed in Table 5 of part 132. EPA believes that some or all of the methodologies and procedures are not scientifically appropriate for these pollutants.")

[178] *Id.* at 15376 ("The final Guidance allows Great Lakes States and Tribes to adopt variances from water quality standards, applicable to individual existing Great Lakes dischargers for up to five years, where specified conditions exist.")

[179] Emphasis added.

[180] *Id.*

[181] EPA Rev. at 20, Ex. 2.

not *equal to* "alkalinity");[182] (2) hardness (a measurement of calcium and magnesium concentrations, neither of which are listed);[183] and (3) specific conductance, or the ability to carry an electrical current, includes consideration of many constituents not listed in Table 5 (including "chloride, nitrate, sulfate, and phosphate anions (ions that carry a negative charge) or sodium, magnesium, calcium, iron, and aluminum cations (ions that carry a positive charge).").[184]

In any case, even if the EAB agrees with the EPA's reasoning that the pollutants are not listed in Table 5, 40 C.F.R. Section 132.4(h) and cases construing it require that a Great Lakes State's regulatory scheme must still be at least as protective as the Guidance.[185] Any variance longer than the five-year limit are, by nature, less protective, and therefore impermissible. Because it allowed exceedence of the Guidance's variance time limits, the EPA committed clear error in approving a variance with a duration longer than five years. The EAB should grant this Petition and reverse the EPA's mistake.

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[182] *See, e.g.*, EPA, "Volunteer Stream Monitoring: A Methods Manual" at 5.10, Total Alkalinity (includes "[a]lkaline compounds in the water such as bicarbonates (baking soda is one type), carbonates, and hydroxides remove H+ ions and lower the acidity of the water (which means increased pH).")

[183] *See, e.g.*, EPA, Great Lakes Monitoring, S.O.P. for Total Hardness LG502 at 3.1, avail. on-line at http://www.epa.gov/greatlakes/monitoring/sop/chapter_5/LG502.pdf (last visited Jan. 27, 2013).

[184] EPA, "Volunteer Stream Monitoring: A Methods Manual" at 5.9, Conductivity: (discussing "chloride, nitrate, sulfate, and phosphate anions (ions that carry a negative charge) or sodium, magnesium, calcium, iron, and aluminum cations (ions that carry a positive charge)."), available on-line at http://water.epa.gov/type/rsl/monitoring/vms59.cfm (last visited Jan. 27, 2013).

[185] *See, e.g.*, *Northeast Ohio Reg'l Sewer Dist. v. EPA*, 411 F.3d 726, 735 (6th Cir. 2005) (to be consistent with the Great Lakes Water Quality Guidance, state's regulatory scheme must be at least as protective as Guidance); *American Iron Steel Inst. v. EPA*, 115F.3d 979, 987 (D.C. Cir. Ct. App. 1997) ("[EPA] could reasonably construe this language to suggest that Congress was attempting to create a uniform set of requirements for water pollution in the Great Lakes. This goal would be defeated if the agency approved plans that were not 'as protective as' the 'minimum ... standards' given in the Guidance. The agency's interpretation of 'consistent with' is therefore 'reasonable and consistent with the statutory purpose.'") (internal citations omitted).

VI. No provision of the CWA allows the EPA to approve a variance where a wastewater treatment system, namely, reverse osmosis, is technically feasible and would permit attainment of all water quality standards.

As explained throughout the record and as further explained by the Bands' expert, Kuipers & Associates, reverse osmosis is a technically (and financially) viable technology for purposes of use at the LSDP that would ensure attainment of all water quality standards—which means no variance is available. The EPA's conclusion to the contrary is another violation of Section 131.5(a)'s requirement of basing variance decisions on "appropriate technical and scientific data and analyses." It is a fundamental violation of the CWA. The EPA must do more than swallow whole a company's claims regarding technological infeasibility—it must do a full analysis both of accepted science (and comments). Federal courts have concluded that Section 131.5(a) means what it says, and where EPA fails to conduct the required analysis, remand is justified.[186]

VII. The EPA committed clear errors of fact and law under 40 C.F.R. § 131.10(g)(3), in concluding that "human caused conditions" were present and justified the 2012 Variance.

The EPA should never even have reached the Section 131.10(g) analysis of a specific basis to justify this variance.[187] Because the 2012 Variance inherently degrades existing, Class 2B aquatic life and Class 4A wild-rice agricultural uses, 40 C.F.R. Section 10(h) expressly prohibits it. But even if the EPA could have reached Section 131.10(g), its analysis thereunder

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[186] *See, e.g.*, *Pennaco Energy, Inc. v. United States Envtl. Prot. Agency*, 692 F. Supp. 2d 1297, 1312-13 (D. Wyo. 2009) ("The Court agrees that the EPA's 2003 approval did not evidence that it considered the Industry's legitimate concerns as to the lack of scientific basis for the numerical standards Montana has adopted. The Court therefore finds that this matter should also be remanded to the EPA to conduct the analysis required by 40 C.F.R. § 131.5(a)(4) and to determine whether the 2003 numeric standards are based upon appropriate technical and scientific data and analyses.")

[187] EPA Rev. at 17, Ex. 2.

was erroneous. The EPA's approach allows nonattainment of water quality standards based upon little more than Mesabi Nugget's request.

As discussed above, it appears that the EPA based its decision on three factors, but it never explained how these conditions were "human caused," nor how they would "prevent attainment of the use" as required under Section 131.10(g)(3). It is incumbent upon the EPA to explain the bases for its decisions in order to allow for review, and its failure to do so in itself justifies remand.

To the best of the Bands' ability to discern, the EPA's reasoning was as follows. First, the EPA stated that there was "no known historic, present, or foreseeable actual use of the waters" for those uses that would be affected by the four parameters addressed in this Variance.[188] But this plainly isn't a "human caused condition"; rather, it is just a reiteration of the waters' supposed uses (or lack thereof).

Second, EPA pointed to the fact that there would be additional water quality impacts from Mesabi Nugget's as-yet-undesigned air control system, and it might not know all of those until August 2021.[189] But a possible change in future water treatment needs to meet the requirements of an air permit (and ultimately, a discharger's business objectives) is not a pre-existing "condition."

Third, the EPA said that "the Area 1 Pit was "already overflowing" when the company acquired the former mining property in 2005 and began to use the pit for process water.[190] But

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[188] *Id.*
[189] *Id.*
[190] *Id.* MPCA had concluded that Area Pit 1 would continue to discharge whether the LSDP was in operation or not, "albeit without the wastewater treatment of pit waters that the nugget facility is currently providing." MPCA Order at ¶ 41, Ex. 1. It further found that, without the LSDP plant, "discharges form the Area 1 Pit to Second Creek would continue at levels exceeding water quality standards and, if the permit associated with the requested variance is not approved and

in 2005, Mesabi Nugget *assumed liability* for the clean-up of Area Pit 1 (which it has yet to do). And as a matter of law, Mesabi Nugget is the responsible party even without an affirmative permit condition.[191] For the EPA to now cite background pollution as a justification for yet another Mesabi Nugget variance runs against everything the CWA stands for.

Furthermore, spotlighting any Area Pit 1 background pollution is unreasonable where it is secondary to Mesabi Nugget's *own* discharge. The company's own data shows that in-stream TDS and specific conductance levels have been rising since the company started operations in 2010. These levels are expected to continue to rise as operations continue to ramp up. So Mesabi Nugget's operations, *not* any prior operations, are a primary cause of the current pollution. These do not constitute pre-existing "human caused conditions," but rather, "discharger caused conditions."

Furthermore, the "human caused conditions" exception was never intended to apply to a large discharger like Mesabi Nugget. In 1993, discussing proposed changes to Part 131 and in specific reference for the six conditions under Section 131.10(g), the EPA specifically called out the potential for abuse of the "human caused conditions" factor, asking for comments on whether procedure should be "clarified to prevent any bootstrapping by parties who have contributed to the human-caused conditions or sources of pollution":

> That is, should parties that have contributed to conditions that prevent water quality standards from being attained be explicitly prohibited from being granted a water quality standards variance based on that non-attainment? *An example of such bootstrapping might be a discharger, whose past or present activities (including, but not limited to, discharges, spills, or leaching of pollutants) have contaminated sediments which currently cause non-attainment of water quality*

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issued, the discharge would occur year-round rather than be seasonally controlled thereby potentially adversely affecting downstream wild rice resources." *Id. See* discussion of contradiction at note 137, *supra.*

[191] *See, e.g.*, *United States v. Law*, 979 F.2d 977, 979 (4th Cir. 1992) (stating rule that preexisting pollution does not excuse failure of new owner of point source to address *all* discharges).

> *standards, requesting a water quality standards variance based on that previous and/or continuing, pollution.*[192]

To the contrary, the EPA articulated the purpose of this section as being to allow small dischargers who were impacted by multiple pollutant sources to avoid having to show "widespread social and economic harm."[193] Mesabi Nugget is hardly a small discharger, and the discharges from Area Pit 1 are entirely its own responsibility. A discharger's own pollution cannot be used as a justification under the "human caused conditions" analysis. No case law, nor any EAB decision, supports such a conclusion. Section 131.10(g)(3) simply is not intended to unfairly benefit a self-interested permittee who is itself responsible for the very pollution from which they seek a variance. There is no reason Mesabi Nugget should not be required to make the higher showing of widespread harm.

Even assuming Mesabi Nugget should be considered under this factor, and that one of these factors constitutes a "human-caused condition," there is still no showing that these conditions "prevent attainment" of any of the uses for which the Variance was ultimately granted. The EAB should accept this Petition and remand.

VIII. Despite conducting limited tribal consultation with the Bands (and demonstrated effects on Ceded Territory treaty resources), there has been no Section 106 consultation or other historic-properties review.

The 2012 Permit and Variance do not even comply with the basic requirement that the review process must take into account all other federal laws that apply: there has been no Section 106 review under the NHPA. This failure is separate from the CWA defects in the Variance and Permit and justifies both remand and immediate suspension of any discharges until review is complete.

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[192] EPA Proposed Water Quality Guidance for the Great Lakes System, 40 C.F.R. Parts 122, 123, 131, and 132, 58 FR 20802-01, 20922 (Apr. 16, 1993) (emphasis added).
[193] *Id*.

This permit decision is undoubtedly a "federal undertaking" within the meaning of the NHPA. 16 U.S.C. Section 470w states:

> (7) ''Undertaking'' means a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including—
> …
>
> (C) those *requiring a Federal permit license, or approval*; and
> (D) *those subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency*.[194]

And there is unquestionably the potential to affect historic properties whenever there is a federal undertaking in the Ceded Territory. The Bands have lived there for hundreds of years. The region is covered not just with wild rice stands, but also maple sugaring areas, medicine gathering sites, hunting grounds, trails, archaeological sites, and sacred sites. These are all TCPs within the meaning of Section 106.[195] For years in other northern Minnesota environmental reviews, the EPA and other federal agencies have recognized the need for Section 106 consultation, especially where northern Minnesota ricing areas are involved. For example, the October 2009 PolyMet Draft Environmental Impact Statement for the NorthMet project, also located on the Iron Range and in the Ceded Territory, in its NHPA analysis recognized that natural resources are cultural resources for the Bands:

> As a result of consultation with the Ojibwa Bands, it has become apparent that there is a high potential to affect properties of religious and cultural significance to the Bands. Therefore, the APE has now been expanded to include audible and visual effects as well as potential effects from impacts to water and air quality. *The potential impacts to water and air quality are the subject of ongoing analysis*; however, the Corps believes that it is appropriate to expand the APE to include portions of the Embarrass River, Partridge River, and Dunka River watersheds

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[194] Emphasis added.

[195] A TCP is a site "that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history and (b) are important in maintaining the continuing cultural identity of the community." National Register Bulletin #38, "Guidelines for Evaluating and Documenting Traditional Cultural Properties," (1998) at 1, available at the National Park Service website, http://www.nps.gov/nr/publications/bulletins/nrb38/ (last visited Jan. 25, 2013).

> adjacent to and downstream from the Project as well as the downstream portion of the St. Louis River to Lake Superior.[196]

The PolyMet summary went on to explain the need for ongoing TCP analysis in an expanded area:

> In summary, cultural resource studies to date have been of a limited nature and have only involved the identification of archaeological resources and historic structures in the Project area. Consultation with the Ojibwa Bands has largely focused on the concept of natural resources as cultural resources, the logistics of how the identification of historic properties of importance to the Bands could be accomplished, and the appropriate definition of the APE. The identification of historic properties of religious and cultural significance to the Ojibwa Bands has yet to be completed, but a plan to accomplish this work is being implemented.[197]

And even those culturally-important properties that did not qualify as TCPs might still merit protection under the trust responsibility and 1854 Treaty:

> During the interviews to be conducted for the identification of historic properties of cultural and religious significance to the Ojibwa Bands, information about the Project area as well as the entire APE will be gathered and evaluated. Cultural resources that do not qualify as historic properties, but are important to the Ojibwa Bands will be considered by the USACE under the Federal trust responsibilities and the 1854 Treaty rights.[198]

So it should be considered a rule of thumb by now that *any* "federal undertaking" in the Ceded Territory triggers Section 106 review. It is astonishing, then, that the EPA *entirely omitted* Section 106 tribal consultation from this NPDES review, only initiating and conducting tribal consultation on technical and permitting matters.[199]

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[196] PolyMet NorthMet DEIS (Oct. 2009) at Vol. I, Summary, Ch. 4.8, Cultural Resources at 4.8-8, available on-line at http://www.dnr.state.mn.us/input/environmentalreview/polymet/eis_toc.html (last visited Jan. 28, 2013).
[197] *Id.* at 4.8-10.
[198] *Id.* at 4.8-12.
[199] Although the Bands did not expressly raise the lack of a Section 106 review under the NHPA in comments, they consistently argued that impacts to Ceded Territory resources like wild rice stands needed to be reviewed through the proper lens of the federal trust responsibility. But a commentor cannot "waive" the EPA's lack of compliance with the NHPA by failing to raise it in

That discharges have been allowed in the past and may have already degraded some TCPs in no way excuses the requirement that the EPA conduct Section 106 review now (in fact, the same circumstances apply to PolyMet, which also involved a former mining site). In fact, there may *never* have been any type of Section 106 review in connection with operations at this site, making the need for evaluation and proper mitigation all the more urgent to arrest any degradation of sites downstream from the LSDP.

Section 106 requires lead agencies to consult with any tribes that attach "religious or cultural significance to historic properties that may be affected by an undertaking," regardless of the location of the historic property.[200] Agencies must give a tribe "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects."[201] The regulations go on to inform agencies that they "should be aware that frequently historic properties of religious and cultural significance are located on *ancestral, aboriginal, or ceded lands of Indian tribes . . . ,*" as in the Ceded Territory.[202] One aspect of the identification of such historic properties is through gathering information from consulting tribes, through a variety of methods.[203] These typically include close coordination with Tribal Historic Preservation Officers, tribal elder interviews, mapping sites with tribal GIS and Section 106 consultants, etc. None of this has happened.

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consultation any more than it can waive EPA's lack of compliance with the CWA. It is incumbent upon the EPA to ensure compliance with all federal laws.

[200] 36 C.F.R § 800.2(c)(2)(i)(B)(ii).

[201] *Id.* at § 800.2(c)(2)(ii)(A) (emphasis added).

[202] *Id.* at § 800.2(c)(2)(ii)(D) (emphasis added). *See also* § 800.3(f)(2) *Involving Indian tribes and Native Hawaiian organizations.*

[203] *Id.* at § 800.4(a)-(b).

The EAB should remand to EPA to conduct proper Section 106 consultation. Until the EPA conducts the required Section 106 consultation and mitigation of impacts to any identified TCPs, the operation of the Variance and Permit should be suspended.

CONCLUSION

Region 5 should never have approved Mesabi Nugget's 2012 Variance and Permit, given the multitude of defects underlying its approval. For all the foregoing reasons, the Bands ask the EAB to accept this Petition, reverse the 2012 Permit and Variance, and remand to Region 5, with specific instructions to:

1. require Mesabi Nugget to suspend all discharges from Area Pit 1 until they can meet all downstream water quality standards;
2. remediate existing pollution in Area Pit 1;
3. regardless of its decision on the CWA factors, suspend all discharges until EPA conducts proper tribal consultation and Section 106 historic-properties review; and
4. such other relief as the Board may deem appropriate.

Respectfully submitted,

Date: January 28, 2013

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