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December 19, 2014

Erik Smith, Industrial Water Quality Permits (Erik.Smith@state.mn.us)
Minnesota Pollution Control Agency
520 Lafayette Road North
St Paul, MN 55155-4194

Re: Minntac Tailings Basin NPDES/SDS Permit MN0057207

Dear Mr. Smith:

I represent WaterLegacy, a non-profit organization formed to protect Minnesota's water resources and the communities that rely on them. We have conducted a preliminary review of the pre-publication Minntac Tailings Basin Draft NPDES/SDS Permit (MN0057207) and Fact Sheet provided by your office, along with various background documents obtained through a Data Practices Act request.

WaterLegacy has some basic questions about the structure and policy of the documents we've seen thus far. We would appreciate a response to these questions in writing or an opportunity to meet with Minnesota Pollution Control Agency (MPCA) staff to obtain some clarification. WaterLegacy expressly does not waive the right to raise additional issues at any future stage of the permitting process.

Basis for "Compliance Schedule"

We don't understand on what legal authority the MPCA is proposing to provide U.S. Steel with a compliance schedule for any of the following pollutants: alkalinity, bicarbonates, hardness, specific conductance, sulfate and total dissolved salts (TDS). According to the attached Water Quality Limits spreadsheet prepared by MPCA, the Agency has concluded that there is a "Documented Exceedance of WQ Standard" for each of these pollutants. (See MPCA Spreadsheet, attached as Exhibit 1). Minnesota's water quality standards for these pollutants were all enacted in the early 1970s.

The U.S. Environmental Protection Agency has consistently advised that no schedule of compliance is appropriate for pre-1977 pollutants. (U.S. EPA Memorandum: Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits, May 10, 2007, attached as Exhibit 2). Moreover, the MPCA has provided notice for nearly 15 years that Minntac Tailings Basin compliance with these pre-1977 water quality standards would be required. In February 2000, the MPCA communicated to U.S. Steel's predecessor that the draft permit for the existing facility would include discharge limits for the pre-1977 pollutants:

The MPCA would like to make USX aware that the draft reissued permit for the existing facility is likely to include discharge limits at least for the following pollutants: bicarbonates (305 mg/L), hardness (250 mg/L as calcium carbonate) specific conductance (1000 umhos/cm) and sulfate (10 mg/L April through September for the Sand River drainage, 1000 mg/L for all other situations). (MPCA Letter to USX: NPDES/SDS Permit MN0057207 Variance Issues, Feb. 16, 2000, attached as Exhibit 3).

Interestingly, it seems that 15 years ago the MPCA advised that a reissued permit would apply discharge limits to meet Minnesota water quality standards and that a variance would be needed to consider a departure from these limits.

The Application for an NPDES/SDS permit filed by U.S. Steel in December 2011 provides no basis to allow discharge of pollutants in excess of water quality standards. The Application states, “The applicant is not requesting a variance from applicable effluent limitation guidelines.” (U.S. Steel Application for NPDES/SDS permit MN0057207, p. 15) WaterLegacy would be interested in understanding where MPCA derives its authority to provide effluent limits that do not protect beneficial uses.

Nature of “Compliance Schedule”

Even if one allowed for the sake of argument that the MPCA could develop one, WaterLegacy is baffled that the Agency has characterized the provisions of the pre-publication draft permit as a “compliance schedule.” This document neither requires compliance nor schedules events that will predictably lead to compliance with water quality standards. There is no date in this document – ever – by which compliance with water quality based effluent limits is required.

In addition, the types of activities for which the Minntac Tailings Basin draft permit provides a schedule are not actionable steps that will result in reduction of pollutants to protect beneficial uses. The schedule requires multiple reports for MPCA review that may, eventually, develop a plan for compliance with standards. (Minntac Tailings Basin Draft NPDES/SDS Permit, pp. 24-28). Rather than directing dischargers to use their engineering expertise to comply with water quality-based standards, it seems that the MPCA has developed a practice of managing reports. This practice has not resulted in, and predictably will not result in private sector solutions to control pollution within the shortest reasonable period of time.

Groundwater Connected to Surface Water

It appears from the Fact Sheet that the Minntac Tailings Basin NPDES/SDS permit is designed on the premise that tailings basin seepage cannot be regulated under the Clean Water Act, whether or not the seepage is hydrologically connected to and contaminates surface water. (MPCA Fact Sheet for Minntac Tailings Basin Draft NPDES/SDS Permit, pp. 6-8). As a result, the monitoring locations are not designed to ensure identification and control of pollutants at the nearest points where Minntac Tailings Basin discharge daylight to surface waters and effects beneficial uses.

The MPCA has years of evidence from its own discharge monitoring reports and from 1854 Treaty Authority sampling showing that the Minntac Tailings Basin discharges to surface water and impairs beneficial uses. A recent sulfate isotope report prepared under the auspices of the Minnesota Department of Natural Resources (MDNR) makes the connection between the Minntac Tailings Basin and surface waters unequivocal. This MDNR Minntac sulfate isotopes report¹ found,

Sulfate concentration at many of the downgradient locations were higher than expected based on the applied dilution effect . . . We calculate that up to 600 mg/L of “extra” sulfate is present in waters surrounding the basin, demonstrating that the oxidation of sulfide minerals in tailings does impact the sulfate concentration of seepage into both the Sand and Dark River watersheds.

The MDNR report explained,

Most of the water stored in the Cell 1 and Cell 2 pools is cycled back to the plant for use in processing. A portion, however, seeps from the bottom of the basin and through the perimeter dike into the surrounding watersheds, namely the Sand River watershed to the east of the basin and the Dark River watershed to the west. The concentration of dissolved sulfate is elevated in the Tailings Basin pool waters, and thus the seepage water that discharges into the Sand and Dark River watersheds is elevated as well. (Minntac Sulfate Isotopes Report, p. 9)

In the face of clear evidence of the hydrological connection between Minntac Tailings Basin pollutants and surface waters, regulation under the Clean Water Act NPDES program is required to protect beneficial uses in connected surface waters under applicable law. *See Hawaii Wildlife Fund v. County of Maui*, 2014 U.S. Dist. LEXIS 74256; 44 ELR 20128 (D. Haw. 2014).

MPCA’s plan for the Minntac Tailings Basin seems to disregard scientific information in order to allow a discharger to avoid pollution controls that would protect downstream natural wild rice and aquatic uses. Is the Agency really proposing that a discharger could circumvent surface water protections by diverting surface tailings basin seepage to seep from another part of the impoundment, irrespective of impacts on adjacent and hydrologically connected wetlands and watersheds? No science, law or policy would justify this result.

WaterLegacy appreciates the challenges in regulating a tailings facility that has operated outside the law not merely for years, but for a generation. However, the NPDES permit process was intended to protect beneficial uses by requiring compliance with water

¹ M. Kelly, M. Berndt, and T. Bavin, *Use of sulfate and water isotopes to improve water and chemical balance estimates for water seeping from tailings basins (focus on US Steel’s Minntac Basin)*, August 28, 2014, (Minntac Sulfate Isotopes Report) p. 3, available at http://files.dnr.state.mn.us/lands_minerals/reclamation/kelly_et_al_2014.pdf.

quality-based effluent limitations, not to serve as a license for environmental degradation in disregard of water quality standards.

We look forward to a productive discussion of these issues and ways to protect Minnesota's water resources from pollution and destruction.

Sincerely yours,



Paula Goodman Maccabee
Advocacy Director/Counsel for WaterLegacy

cc: Krista McKim, U.S. EPA Region 5 (McKim.Krista@epa.gov)
Tinka Hyde, U.S. EPA Region 5 (Hyde.Tinka@epa.gov)

Enclosed Exhibits

- Exhibit 1 MPCA, Water Quality Limits Spreadsheet for Minntac Tailings Basin NPDES/SDS Permit.
- Exhibit 2 U.S EPA, Memorandum: Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits, May 10, 2007.
- Exhibit 3 MPCA Letter to USX: NPDES/SDS Permit MN0057207 Variance Issues, Feb. 16, 2000.



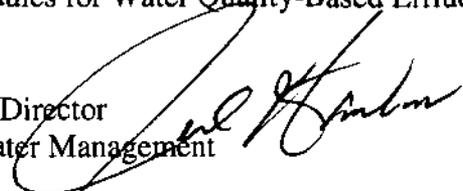
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAY 10 2007

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits

FROM: James A. Hanlon, Director
Office of Wastewater Management 

TO: Alexis Strauss, Director
Water Division
EPA Region 9

Recently, in discussions with Region 9, questions have been raised concerning the use of compliance schedules in National Pollutant Discharge Elimination System (NPDES) permits consistent with the Clean Water Act (CWA) and its implementing regulations at 40 C.F.R. § 122.47. The use of compliance schedules in NPDES permits is also the subject of ongoing litigation in California. The purpose of this memo is to provide a framework for the review of permits consistent with the CWA and its implementing regulations.

When may a permitting authority include a compliance schedule in a permit for the purpose of achieving a water quality-based effluent limitation?

In *In The Matter of Star-Kist Caribe, Inc.*, 3 E.A.D. 172, 175, 177 (1990), the EPA Administrator interpreted section 301(b)(1)(C) of the CWA to mean that 1) after July 1, 1977, permits must require immediate compliance with (*i.e.*, may not contain compliance schedules for) effluent limitations based on water quality standards adopted before July 1, 1977, and 2) compliance schedules are allowed for effluent limitations based on standards adopted after that date only if the State has clearly indicated in its water quality standards or implementing regulations that it intends to allow them.

What principles are applicable to assessing whether a compliance schedule for achieving a water quality-based effluent limitation is consistent with the CWA and its implementing regulations?

1. "When appropriate," NPDES permits may include "a schedule of compliance leading to compliance with CWA and regulations . . . as soon as possible, but not later than the applicable statutory deadline under the CWA." 40 C.F.R. § 122.47(a)(1). Compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. 40 c.F.R. § 122.47(a)(3).

2. Any compliance schedule contained in an NPDES permit must be an "enforceable sequence of actions or operations leading to compliance with a [water quality-based] effluent limitation ["WQBEL"]" as required by the definition of "schedule of compliance" in section 502(17) of the CWA. *See also* 40 c.F.R. § 122.2 (definition of schedule of compliance).

3. Any compliance schedule contained in an NPDES pennit must include an enforceable final effluent limitation and a date for its achievement that is within the timeframe allowed by the applicable state or federal law provision authorizing compliance schedules as required by CWA sections 301(b)(1)(C); 502(17); the Administrator's decision in *Star-Kist Caribe, Inc.* 3 E.A.D. 172, 175, 177-178 (1990); and EPA regulations at 40 C.F.R. §§ 122.2, 122.44(d) and 122.44(d)(I)(vii)(A).

4. Any compliance schedule that extends past the expiration date of a pennit must include the final effluent limitations in the pennit in order to ensure enforceability of the compliance schedule as required by CWA section 502(17) and 40 C.F.R. § 122.2 (definition of schedule of compliance).

5. In order to grant a compliance schedule in an NPDES pennit, the pennitting authority has to make a reasonable finding, adequately supported by the administrative record, that the compliance schedule "willlead[] to compliance with an effluent limitation . . . " "to meet water quality standards" by the end of the compliance schedule as required by sections 301(b)(I)(C) and 502(17) of the CWA. *See also* 40 C.F.R. §§ 122.2, 122.44(d)(1)(vii)(A).

6. In order to grant a compliance schedule in an NPDES pennit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet (40 C.F.R. § 124.8), that a compliance schedule is "appropriate" and that compliance with the final WQBEL is required "as soon as possible." *See* 40 C.F.R. §§ 122.47(a), 122.47(a)(I).

7. In order to grant a compliance schedule in an NPDES pennit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record, that the discharger cannot immediately comply with the WQBEL upon the effective date of the pennit. 40 C.F.R. §§ 122.47, 122.47(a)(1).

8. Factors relevant to whether a compliance schedule in a specific permit is "appropriate" under 40 C.F.R. § 122.47(a) include: how much time the discharger has already had to meet the WQBEL(s) under prior pennits; the extent to which the discharger has made good faith efforts to comply with the WQBELs and other requirements in its prior pennit(s); whether there is any need for modifications to treatment facilities, operations or measures to meet the WQBELs and if so, how long would it take to implement the modifications to treatment, operations or other measures; or whether the discharger would be expected to use the same treatment facilities, operations or other measures to meet the WQBEL as it would have used to meet the WQBEL in its prior permit.

9. Factors relevant to a conclusion that a particular compliance schedule requires compliance with the WQBEL "as soon as possible," as required by 40 C.F.R. § 122.47(a)(I) include: consideration of the steps needed to modify or install treatment facilities, operations or other measures and the time those steps would take. The pennitting authority should not simply presume that a compliance schedule be based on the maximum time period allowed by a State's authorizing provision.

10. A compliance schedule based solely on time needed to develop a Total Maximum Daily Load is not appropriate, consistent with EPA's letter of October 23, 2006, to Celeste Cantu, Executive Director of the California State Water Resources Control Board, in which EPA disapproved a provision of the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries for California.

11. A compliance schedule based solely on time needed to develop a Use Attainability Analysis is also not appropriate, consistent with EPA's letter of February 20, 2007, to Doyle Childers, Director Missouri Department of Natural Resources, nor is a compliance schedule based solely on time needed to develop a site specific criterion, for the same reasons as set forth in the October 23, 2006, (referenced in Paragraph 10) and February 20, 2007 letters.

If you have any questions, please contact me at (202) 564-0748 or have your staff contact Linda Boornazian at (202) 564-0221.



Minnesota Pollution Control Agency

February 16, 2000

Mr. David P. Johnson
Senior Environmental Engineer
USX-Minnesota Ore Operations
P.O. Box 417
Mountain Iron, MN 55768

File Number	
Date	
Time	

RE: NPDES/SDS Permit MN0057207 Variance Issues

Dear Mr. Johnson:

Thank you and other USX staff for meeting with Minnesota Pollution Control Agency (MPCA) staff on January 11, 2000, to update us on the company's progress on your tailings basin discharge studies. This and previous meetings have been helpful in our discussions with USX and the Minnesota Department of Natural Resources (DNR) to review the environmental issues related to a potential expanded discharge.

While USX, DNR, and the MPCA have continued to work together on the company's proposal for a new or expanded wastewater discharge from the Minntac tailings basin, the MPCA also has been giving priority to the reissuance of the existing National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) permit for the tailings basin. As you know, NPDES/SDS permit MN0057207 expired in 1992, although its provisions remain applicable. In our June 22, 1998, letter, the MPCA stated that it does not plan to delay the reissuance of this permit pending the resolution of the new discharge issues. The MPCA however, recognizes that some of the work being done by USX in relation to the new discharge may be important in dealing with the existing tailings basin facility. In particular, some potential variance issues can relate both to the existing facility, which is presently violating water quality standards for sulfate, as well as to the proposed new discharge.

The MPCA would like to make USX aware that the draft reissued permit for the existing facility is likely to include discharge limits at least for the following pollutants: bicarbonates (305 mg/L), hardness (250 mg/L as calcium carbonate), specific conductance (1000 μ mho/cm) and sulfate (10 mg/L April through September ~~1999~~, for the Sand River drainage, 1000 mg/L for all other situations). The permit also likely will require some monitoring of chloride, fluoride, salinity, sodium and total dissolved solids levels. Sulfate has been identified as a pollutant of concern at the tailings basin since at least 1987. During those 13 years, USX has done considerable and commendable work in characterizing the sources and pathways of the sulfate contamination.

Mr. David P. Johnson
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USX also has chosen not to burn petroleum coke at the facility, resulting in a reduced loading of sulfur to the Agglomerator wastewaters. At the same time however, sulfate concentrations at the facility have increased substantially, while no major wastewater sulfate mitigation efforts have been undertaken at Minntac other than that related to coke use.

Consequently, the MPCA is drafting schedule of compliance language for the reissued permit related to sulfate mitigation. This compliance language presently does not acknowledge a potential variance for sulfate at the facility, since USX is still in the process of collecting the information needed to complete a sulfate variance application. This draft schedule of compliance in the reissued permit would require mitigation efforts to be undertaken concerning sulfate levels at the Agglomerator, whose wastewaters seem to be the principal source of sulfate loading to the tailings basin. The reissued NPDES/SDS requirements would put USX on an aggressive schedule to reduce sulfate concentrations to less than 10 mg/L in the wastewaters leaving the Agglomerator. While this represents a very substantial effort, it is also important to recognize that concentrator wastewaters are contributing to the high sulfate levels, and that improvements at the Agglomerator alone at best will lead to a gradual long-term reduction in the sulfate loading to the Sand River and its associated wetlands.

Since our January 11, 2000, meeting, the MPCA has discussed the proposals that USX suggested at that time concerning alternative approaches to a permit 10 mg/L sulfate limit other than a variance. USX mentioned the following options to deal with the sulfate:

- 1) The language in the class 4A standards (Minn. R. 7050.0224, subp. 2), states the following standards shall be used as a guide in determining the suitability of waters for irrigation uses. USX asked to have some leeway in the standards under this class. The MPCA has always used these standards just as any other standards (i.e., Class 3, 5, and 6) to protect the beneficial uses and the MPCA is responsible for establishing permit limits based on the standards. The MPCA has no plans to modify these standards because to do so would jeopardize the beneficial uses that they are designed to protect.
- 2) USX and the MPCA have discussed a potential site-specific criterion for sulfate to protect wild rice. Although MPCA staff discussed last year the possibility of a class 4 site-specific criterion, we with apologies to USX, must clarify that site-specific criteria can only be developed for class 2 standards. Under Minn. R. 7050.0217 and 7050.0218, the MPCA has the authority to develop a class 2 site-specific criterion for sulfate. If a class 2 site-specific sulfate criterion was developed, however, and that criterion was higher numerically than the 10 mg/L class 4A standard, that criterion would not negate the current class 4 standard.
- 3) USX suggested that the MPCA develop a policy that modifies the class 3, 4, and 5 standards. We cannot do this because it would constitute rulemaking without going through the rulemaking process.

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- 4) USX also asked if the sulfate standard could be changed through rulemaking. The MPCA has just completed the rulemaking process for Minn. R. ch. 7050, and is not scheduled to go back into rulemaking for another three years. The MPCA will have the information developed by USX in relation to a sulfate variance available along with other information available for potential future rulemaking. If USX is interested in pursuing a proposed change to the class 4 sulfate standard, please continue to discuss this with Dann White of the MPCA staff as the principal contact at (651) 296-7237.

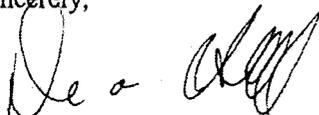
We believe that if USX seeks immediate relief from strict compliance with the class 4 sulfate standard, a request for a variance would be the best route for USX to pursue.

We would like to encourage USX, if it is interested in applying for a sulfate variance for the current flows to the Sand River, to place a high priority on the work needed to complete this variance application. In particular, we would urge the company to provide these materials to the MPCA before an NPDES/SDS permit application for a new or expanded discharge is completed. Our interest in expediting decisions on this potential variance is two-fold: a) we would like to proceed soon with the reissuance for the current permit, and provide USX the opportunity to apply for a sulfate variance before the reissued permit goes on public notice; and b) decisions on a proposed sulfate variance for the existing facility may be very important in subsequently determining the flow route, timing and volume in the permit application for a proposed new discharge, and in any additional variance requests which USX may want to include with that permit application.

We would appreciate if you would inform us of the company's thoughts on the timing of a complete variance application for sulfate for the existing facility, so that the MPCA can determine how to best proceed on the NPDES/SDS permit reissuance process for the existing facility.

If you have any questions, please contact Jim Strudell at (651) 296-7238.

Sincerely,


Douglas A. Hall
Major Facilities 1
North District

DAH:ais

cc: Loren Larson, Woodward-Clyde
Bob Leibfried, DNR, Grand Rapids