

ILLINOIS POLLUTION CONTROL BOARD

October 4, 2018

IN THE MATTER OF:)	
)	
PROPOSED SITE-SPECIFIC RULE FOR)	R14-24
SANITARY DISTRICT OF DECATUR)	(Site-Specific Rule - Water)
FROM 35 ILL. ADM. CODE 302.208(e))	

Proposed Rule. Second Notice.

OPINION AND ORDER OF THE BOARD (by C.M. Santos):

The Sanitary District of Decatur (District) treats wastewater for the City of Decatur and other municipalities, as well as for industrial and commercial users. The District’s discharge to the Sangamon River exceeds the Board’s chronic water quality standard for dissolved nickel, and the District attributes this chiefly to Archer Daniels Midland Company (ADM). According to the District, no technically feasible and economically reasonable treatment method would allow it to meet the standard. The District proposed that the Board adopt a new Section 303.410 of the water pollution regulations, establishing a site-specific standard based on bioavailability of nickel to aquatic life in the Sangamon River near its discharge.

The Board’s first-notice opinion and order reviews the background, including the District’s facility and discharge and nickel mitigation efforts to date, at pages 3-11. The opinion then summarizes the generally-applicable rule and the District’s proposal at pages 11-14 and discusses the issues presented at pages 14-25. The Board does not repeat these sections and refers readers to the first-notice opinion, which is posted in the Board’s Clerk’s Office On-Line (pcb.illinois.gov/ClerksOffice) under this docket number R14-24.

In the following sections, the Board provides an abbreviated procedural history and summarizes the first-notice comments. The Board then consider the issues of technical feasibility and economic reasonableness. Finally, the Board concludes to direct the Clerk to submit the proposed site-specific rule to second-notice review by the Joint Committee on Administrative Rules (JCAR).

ABBREVIATED PROCEDURAL HISTORY

On November 30, 2017, the District filed an amended petition for a site-specific rule (Pet.) accompanied by 44 exhibits (Exhs. 1-44). On December 21, 2017, the Board accepted the petition.

In a letter dated January 11, 2018, the Board requested that DCEO conduct an economic impact study of the District’s amended proposal by February 26, 2018. The Board did not receive a response.

On February 28, 2018, the Board scheduled a hearing in Decatur on May 16, 2018, and set a deadline of April 25, 2018, to pre-file testimony. The Board published notice of the hearing in the Decatur *Herald & Review* on March 2, 2018.

On April 2, 2018, the District filed a motion requesting that the Board accept the following exhibits: a revised Exhibit 14; a revised Exhibit 28; and Exhibits 45 and 46. The District's motion also requested that the Board accept a revised Exhibit List and a revised proposal for 35 Ill. Adm. Code 303.410. On April 26, 2018, the Board granted the District's motion and accepted the documents without commenting on their substance.

On April 25, 2018, the District pre-filed testimony by six witnesses: Kent D. Newton, Executive Director and Chief Financial Officer of the District; Timothy R. Kluge, former Technical Director of the District; Allison S. Cardwell of the Aquatic Toxicology Laboratory in the Department of Environmental and Molecular Toxicology at Oregon State University; Robert C. Santore of Windward Environmental LLC; Paul D. Bloom, Ph.D., Vice-President for Process and Chemical Research at ADM; and Robert E. Colombo II, Ph.D., Associate Professor of Biology at Eastern Illinois University.

The hearing took place as scheduled on May 16, 2018 (Tr.). During the hearing, the Board received a single public comment from Mr. Ryan McCrady, President of the Economic Development Corporation of Decatur-Macon County, who requested that the Board adopt the District's proposal.

On May 23, 2018, the Illinois Environmental Protection Agency (IEPA) filed its post-hearing comments (PC 1). On May 31, 2018, the District filed additional responses to questions posed by the Board at hearing. On June 5, 2018, the Board requested a clarification from the District, and the District responded on June 19, 2018.

On July 26, 2018, the Board adopted a first-notice opinion and order (First Notice). *See* 42 Ill. Reg. 14468-73 (Aug. 10, 2018). The Board set a 45-day deadline of September 24, 2018, to file public comments. On September 6, 2018, the Board received IEPA's first-notice comment (PC 2), which responded to a question in the first-notice opinion and order. *See* First Notice at 25. On September 13, 2018, the District filed a motion requesting that the Board accept attached information from ADM as the response to a question in the first-notice opinion (Dist. Mot.). *See id.*

PUBLIC COMMENTS

IEPA (PC2)

In its post-hearing comments, IEPA responded to a Board question by stating that it “may review site-specific water quality standards during its triennial review process as required by Section 303(c)(1) of the Clean Water Act and the United States Environmental Protection Agency's implementing regulations at 40 CFR 131.20.” PC 1 at 1; *see* Tr. at 44, 87. In the first-notice opinion, the Board stated that it understands “may review” to mean that IEPA has authority to review these standards. First Notice at 25. The Board asked IEPA to “clarify

whether it reviews or will review site-specific water quality standards during triennial review.” *Id.* IEPA “affirms that it will review site-specific water quality standards during triennial review.” PC 2 at 1. IPEA’s first-notice comment did not address any other issue or question. *See id.*

District’s Motion and ADM Attachment

In the first-notice opinion, the Board noted ADM’s estimate of \$4.25 million in annual operating costs to implement the site-specific rule. First Notice at 25; *see* Pet. at 59-60. The Board requested that the District and ADM itemize these projected costs. First Notice at 25. ADM attributes \$2.4 million of annual operating costs to soy molasses removal at its east soybean processing plant, \$500,000 to the ion exchange resin system at its sorbitol plant, \$600,000 to its wastewater treatment plant dewatering and sludge application, and \$750,000 to personnel and laboratory testing costs. Dist. Resp., Att. 1.

When it submitted these estimated costs, ADM stated that it “previously implemented these projects in efforts to lower the nickel discharge.” Dist. Resp., Att. 1. ADM “committed to continue the operations as part of the plan to achieve the SSR [site-specific rule], if approved.” *Id.* ADM clarified that it “has already incurred these costs and will continue to incur them if the SSR is approved.” *Id.*

TECHNICAL FEASIBILITY AND ECONOMIC REASONABLENESS

In its first-notice opinion, the Board found that there is “no process or treatment that is both technically feasible and economically reasonable to make the District’s discharge meet the generally applicable standard.” First Notice at 25. The Board also found that the District’s proposal “appropriately considers the effect of both hardness and natural organic matter on the bioavailability and toxicity of nickel.” *Id.* The Board concluded that “the proposed standard is calculated to protect aquatic life and the uses of” the Sangamon River near the District’s discharge. *Id.*

When reaching this conclusion, the Board specifically considered ADM’s projected capital costs of \$4.35 million and annual operating costs of \$4.25 million to comply with the District’s proposal. First Notice at 25. At the Board’s request, ADM itemized those projected operating costs. ADM has already incurred the costs of these nickel mitigation efforts and commits to continue operating those efforts in order to meet the proposed site-specific rule. Dist. Resp., Att. 1.

No other first-notice comment addressed the issues of feasibility and reasonableness. As it did at first notice, the Board finds that the District’s proposed site-specific rule “limits the discharge of nickel and avoids an adverse impact on the environment in a manner that is both technically feasible and economically reasonable.” First Notice at 25.

CONCLUSION

The Board proposes for second-notice review by JCAR the following amendments to Part 303 of its water pollution regulations, a site-specific chronic water quality standard for dissolved nickel based on bioavailability of nickel to aquatic life in the Sangamon River near the Sanitary District of Decatur's discharge.

ORDER

The Board directs the Clerk to submit to JCAR for second-notice review the following proposed amendments to Part 303 of its water pollution regulations. Proposed additions are underlined, and proposed deletions are struck through.

TITLE 35: ENVIRONMENTAL PROTECTION SUBTITLE C: WATER POLLUTION CHAPTER I: POLLUTION CONTROL BOARD

PART 303 WATER USE DESIGNATIONS AND SITE-SPECIFIC WATER QUALITY STANDARDS

SUBPART A: GENERAL PROVISIONS

Section	
303.100	Scope and Applicability
303.101	Multiple Designations
303.102	Rulemaking Required (Repealed)

SUBPART B: NONSPECIFIC WATER USE DESIGNATIONS

Section	
303.200	Scope and Applicability
303.201	General Use Waters
303.202	Public and Food Processing Water Supplies
303.203	Underground Waters
303.204	Chicago Area Waterway System and Lower Des Plaines River
303.205	Outstanding Resource Waters
303.206	List of Outstanding Resource Waters
303.220	Primary Contact Recreation Waters
303.225	Incidental Contact Recreation Waters
303.227	Non-Contact Recreation Waters and Non-Recreational Waters
303.230	Upper Dresden Island Pool Aquatic Life Use Waters
303.235	Chicago Area Waterway System Aquatic Life Use A Waters
303.240	Chicago Area Waterway System and Brandon Pool Aquatic Life Use B Waters

SUBPART C: SPECIFIC USE DESIGNATIONS AND SITE SPECIFIC WATER QUALITY STANDARDS

Section	
303.300	Scope and Applicability
303.301	Organization
303.311	Ohio River Temperature
303.312	Waters Receiving Fluorspar Mine Drainage (Repealed)
303.321	Wabash River Temperature
303.322	Unnamed Tributary of the Vermilion River
303.323	Sugar Creek and Its Unnamed Tributary
303.326	Unnamed Tributary of Salt Creek, Salt Creek, and Little Wabash River
303.331	Mississippi River North Temperature
303.341	Mississippi River North Central Temperature
303.351	Mississippi River South Central Temperature
303.352	Unnamed Tributary of Wood River Creek
303.353	Schoenberger Creek; Unnamed Tributary of Cahokia Canal
303.361	Mississippi River South Temperature
303.400	Bankline Disposal Along the Illinois Waterway/River
<u>303.410</u>	<u>Chronic Nickel Water Quality Standard for Segment of the Sangamon River</u>
303.430	Unnamed Tributary to Dutch Creek
303.431	Long Point Slough and Its Unnamed Tributary
303.441	Secondary Contact Waters (Repealed)
303.442	Waters Not Designated for Public Water Supply
303.443	Lake Michigan Basin
303.444	Salt Creek, Higgins Creek, West Branch of the DuPage River, Des Plaines River
303.445	Total Dissolved Solids Water Quality Standard for the Lower Des Plaines River
303.446	Boron Water Quality Standard for Segments of the Sangamon River and the Illinois River
303.447	Unnamed Tributary of the South Branch Edwards River and South Branch Edwards River
303.448	Mud Run Creek
303.449	Chicago Sanitary and Ship Canal

SUBPART D: THERMAL DISCHARGES

Section	
303.500	Scope and Applicability
303.502	Lake Sangchris Thermal Discharges

303.APPENDIX A	References to Previous Rules
303.APPENDIX B	Sources of Codified Sections

AUTHORITY: Implementing Section 13 and authorized by Sections 11(b), 27, and 28 of the Environmental Protection Act [415 ILCS 5/11(b), 13, 27, and 28].

SOURCE: Filed with the Secretary of State January 1, 1978; amended at 2 Ill. Reg. 27, p. 221, effective July 5, 1978; amended at 3 Ill. Reg. 20, p. 95, effective May 17, 1979; amended at 5 Ill. Reg. 11592, effective October 19, 1981; codified at 6 Ill. Reg. 7818; amended at 6 Ill. Reg.

11161, effective September 7, 1982; amended at 7 Ill. Reg. 8111, effective June 23, 1983; amended in R87-27 at 12 Ill. Reg. 9917, effective May 27, 1988; amended in R87-2 at 13 Ill. Reg. 15649, effective September 22, 1989; amended in R87-36 at 14 Ill. Reg. 9460, effective May 31, 1990; amended in R86-14 at 14 Ill. Reg. 20724, effective December 18, 1990; amended in R89-14(C) at 16 Ill. Reg. 14684, effective September 10, 1992; amended in R92-17 at 18 Ill. Reg. 2981, effective February 14, 1994; amended in R91-23 at 18 Ill. Reg. 13457, effective August 19, 1994; amended in R93-13 at 19 Ill. Reg. 1310, effective January 30, 1995; amended in R95-14 at 20 Ill. Reg. 3534, effective February 8, 1996; amended in R97-25 at 22 Ill. Reg. 1403, effective December 24, 1997; amended in R01-13 at 26 Ill. Reg. 3517, effective February 22, 2002; amended in R03-11 at 28 Ill. Reg. 3071, effective February 4, 2004; amended in R06-24 at 31 Ill. Reg. 4440, effective February 27, 2007; amended in R09-8 at 33 Ill. Reg. 7903, effective May 29, 2009; amended in R09-11 at 33 Ill. Reg. 12258, effective August 11, 2009; amended in R08-9(A) at 35 Ill. Reg. 15078, effective August 23, 2011; amended in R11-18 at 36 Ill. Reg. 18898, effective December 12, 2012; amended in R08-9(C) at 38 Ill. Reg. 5517, effective February 13, 2014; amended at in R08-09(D) at 39 Ill. Reg. 9423, effective July 1, 2015; amended in R14-24 at 42 Ill. Reg. _____, effective _____.

Section 303.410 Chronic Nickel Water Quality Standard for Segment of the Sangamon River

The general use chronic water quality standard for dissolved nickel contained in Section 302.208(e) shall not apply to the segment of the Sangamon River that receives discharges from the Sanitary District of Decatur's Main Sewage Treatment Plant, from that facility's Outfall 001 located at 39° 49' 56" North Latitude, 89° 0' 7" West Longitude, to the point of the confluence of the Sangamon River with the South Fork of the Sangamon River near Riverton. Instead, waters in this segment of the Sangamon River must meet a chronic water quality standard for dissolved nickel as follows:

$$\text{Chronic Dissolved Nickel Standard } (\mu\text{g/L}) = \exp[A+B\ln(H)] \times 0.997^* \times \text{WER}$$

where:

$$A = -2.286,$$

$$B = 0.8460,$$

$\ln(H)$ = natural logarithm of Hardness, and


$$\text{WER (Water Effect Ratio)} = 2.50.$$

* conversion factor multiplier for dissolved metals.

(Source: Added at 42 Ill. Reg. _____, effective _____)

IT IS SO ORDERED.

I, Don A. Brown, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on October 4, 2018, by a vote of 5-0.

A handwritten signature in black ink that reads "Don A. Brown". The signature is written in a cursive style with a large, circular initial "D".

Don A. Brown, Clerk
Illinois Pollution Control Board