

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF: )  
)  
TRIENNIAL REVIEW OF SULFATE AND )  
TOTAL DISSOLVED SOLIDS WATER )  
QUALITY STANDARDS: PROPOSED )  
AMENDMENTS TO 35 ILL. ADM. CODE )  
302.102(b)(6), 302.102(b)(8), 302.102(b)(10), )  
302.208(g), 309.103(c)(3), 405.109(b)(2)(A), )  
405.109(b)(2)(B), 406.100(d); REPEALER OF )  
35 ILL. ADM. CODE 406.203 and PART 407; )  
and PROPOSED NEW 35 ILL. ADM. CODE )  
302.208(h) )

R07-9  
(Rulemaking-Water)

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DEC 05 2007  
STATE OF ILLINOIS  
Pollution Control Board

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100 West Randolph Street  
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Illinois Pollution Control Board  
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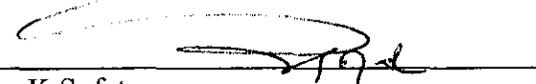
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Environmental Control Division  
James R. Thompson Center  
100 West Randolph Street  
Chicago, Illinois 60601

Jonathan Furr  
Illinois Department of Natural Resources  
One Natural Resources Way  
Springfield, Illinois 62702-1271

Attached Service List

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the **COMMENTS OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY**, copies of which are herewith served upon you.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By:   
Sanjay K. Sofat  
Assistant Counsel

Dated: December 3, 2007  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
Springfield, Illinois 62794-9276  
(217) 782-5544

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**Illinois Environmental Protection Agency's First Notice Comments**

Now comes the Illinois Environmental Protection Agency (the "Agency" or "Illinois EPA"), by and through one of its attorney, Sanjay K. Sofat, and hereby respectfully submits to the Illinois Pollution Control Board ( the "Board") its First Notice Comments in the above-captioned regulatory proceeding. In support thereof, the Agency states as follows:

**COMMENTS**

**I. Water Quality Standard for Sulfate**

Standard when Chloride is Greater than 500 mg/L

To address the Prairie Rivers Network, Sierra Club, and Environmental Law & Policy Center's ("Environmental Groups") concern that the Agency's proposal is silent on determining a sulfate standard when chlorides are above 500 mg/L and hardness is less than or equal to 500 mg/L, the Board proposed paragraph C to Section 302.203(h)(3) of the Agency's proposal. The Board's proposed language in Section 302.203(h)(3)(C) provides that for chloride and hardness ranges not

specified in the rule, the sulfate standard be “determined based on a case-by-case basis in conjunction with an NPDES permitting process.” *See* Board Order and Opinion, First Notice, R 07-9, September 20, 2007 at 25 (Hereinafter “Board Opinion”). By proposing this language, the Board is specifying a sulfate standard for all conditions of chloride concentrations, including those exceeding the water quality standard of 500 mg/L.

At the hearing, the Agency testified that the rule should not imply that chloride concentrations greater than 500 mg/L are acceptable in general use waters. *See* Board Opinion at 24. Further, the Agency indicated that in cases where chloride concentrations are greater than 500 mg/L, it “would address these waterways on a case-by-case basis, perhaps through permitting.” *See* Board Opinion at 24. Essentially, the Agency’s intended message was that it is very difficult to account for concentrations of one parameter when toxic conditions exist because of another parameter. Therefore, in cases where chloride concentrations exceed the general use water quality standard, one cannot compensate for a toxic chloride condition by reducing sulfate from an otherwise acceptable condition.

The Agency consulted United States Environmental Protection Agency (“USEPA”) Region 5 on the Board’s proposed language for Section 302.203(h)(3)(C). The USEPA’s position is stated in a letter from Linda Holst, Chief of the Water Quality Branch, dated November 29, 2007. *See* Attachment I. Based on its review, the USEPA concluded that the proposed Section 302.203(h)(3)(C) is “not consistent with the Clean Water Act (CWA) and Federal regulations.” The USEPA recommends that the proposed rule be revised because the language in paragraph C “effectively changes the Federally approved water quality criterion for chlorides without EPA review and approval.” In support of this position, the USEPA cites Section 303(c) of the CWA and federal regulations at 40 CFR 131.10(j)(2).

The Agency agrees with USEPA’s rationale that a sulfate criterion determined for a

waterbody in which chloride concentration are above the general use standard of 500 mg/L must either show that the calculated sulfate standard is protective of the designated general use, or that the designated use is not an attainable use consistent with 40 CFR 131.10(g). Further, for such sulfate criterion to be effective, it must be approved by the USEPA. Thus, the Agency proposes that the Board delete the language proposed in Section 302.208(h)(3)(C).

Also, the Agency has never seen the practical need for a provision provided under paragraph C. In fact, the Agency is not aware of an instance where a permit limit for sulfate was necessary and the in-stream chloride concentration was greater than 500 mg/L. Based on the review of the monitoring data, the Agency has found that waters with chloride concentrations above 500 mg/L are relatively rare. Most of the instances of chloride standard exceedences occur in urban watersheds where streets are salted for traffic safety. However, the sulfate concentrations have been found to be low in these watersheds. Generally, the main sources of sulfate are from coal mines and certain large industrial discharges. There are no coal mines and only few industries are discharging into these urban watersheds that are affected by winter time chloride exceedences. Instead of calculating a sulfate criterion for a waterbody in which chloride concentrations are above the general use standard of 500 mg/L, the protective approach is to bring the waterbody back into compliance with the chloride water quality standard.

In this regard, the Agency identifies waterbodies impaired due to high chloride concentrations through its monitoring programs. These impaired waters are listed in the biennial 303(d) report. The listing of impaired waters in the 303(d) report starts the TMDL process, the goal of which is to find the sources causing the problem. The TMDL for the impaired water to various sources would then allocate the chloride loadings such that the waterbody is brought back into the compliance with the water quality standard. The academic debate to calculate sulfate criterion where chloride concentrations are exceeding the general use standard is appropriately superseded by

the mandate to never let this condition exist in the first place. The correct response is to rectify the condition.

If a situation requires the Agency to issue a permit with sulfate limit for a discharge to a waterbody with high chloride concentrations, the Agency would follow the site-specific procedures outlined by the USEPA in its letter. The Agency respectfully requests that, in the interest of propriety and eventual federal approval of the proposed standards, the Board delete the language provided in paragraph C of Section 302.208(h)(3).

## **II. Mixing Zones**

### **Dilution Ratio Less Than 3:1**

The Board's proposed language amends Section 302.102(b)(8) to provide that in a stream where the dilution ratio is less than 3:1, the volume used for mixing purposes must not be more than 50% of the stream flow. This restriction does not apply to streams that have a zero flow for at least seven consecutive days occurring on average in nine years out of ten. The Board amended Section 302.102(b)(8) in response to the Environmental Groups' request to codify a practice by the Agency in drafting NPDES permits. The Agency testified that in streams where the dilution ratio is less than 3:1, the Agency uses 50% or less of the stream flow. *See* Board Opinion at 27. However, the Agency also testified that, in some cases, it uses more than 50% of the stream flow, but does so on a case-by-case basis. Neither the Agency nor any stakeholder testified that the designated uses are not fully protected when more than 50% of the stream flow is used for mixing purposes. Under the Illinois Environmental Protection Act, the Agency always has the obligation to ensure that the designated uses are fully protected.

Despite the Board comments that the Agency's practice must be codified, the Board's proposed language does not allow the use more than 50% of the stream flow in any case. *See* Board

Opinion at 27. The Agency believes that this prohibition will likely result in unnecessary compliance issues, even though there may not be environmental issues at stake. In the past, the Agency has found that there are cases where more than 50% of the stream flow may be necessary to ensure compliance with applicable water quality standards, and yet still be able to ensure that designated uses are fully protected. Thus, the Agency contends that restricting the use of stream flow above 50% is arbitrary and unnecessary. There is nothing in the record to reflect that the use of stream flow above 50% would not ensure that the designated uses are fully protected. Therefore, the Agency recommends that no modification be made to the existing Section 302.208(b)(8) language. To address the concern raised by the Environmental Groups, the Agency will determine the adequate zone of passage pursuant to Section 302.208(b)(6) on a case-by-case basis. This approach eliminates the need to arbitrarily define the maximum volume that can be used for mixing purposes.

In case the Board still feels that there is a need to specify a limit on the use of stream flow, the Agency believes that such limit should be based on the relevant scientific information, and not based on the Agency's past practice. As the Agency has not performed any scientific literature review, it is not in a position to propose language to address this issue. In fact, because the Agency did not have the required information, it did not propose any changes to this section of the Board rules in the original filing. The Agency, however, strongly believes that any changes to the Board rules should be based on a well-developed record. Therefore, if the Board believes that this is a deficiency that needs to be addressed, then the Agency recommends that the Board either address this issue in another rulemaking or split the docket for further consideration on this issue.

### **III. Conclusion**

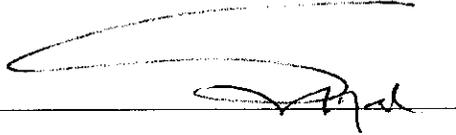
Illinois EPA appreciates the resources the Board has dedicated to this regulatory proceeding and the opportunity granted to all parties to participate and present documents and testimony for the Board's consideration.

WHEREFORE, for the reasons stated above, the Agency respectfully requests the Board to take further action in this proceeding consistent with the Agency's First Notice Comments.

Respectfully Submitted

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By: \_\_\_\_\_



Sanjay K Sofat  
Assistant Counsel  
Division of Legal Counsel

DATED: December 3, 2007  
Illinois Environmental Protection Agency  
1021 North Grand Avenue East  
P.O. Box 19276  
Springfield, Illinois 62794-9276  
(217) 782-5544

## Service List

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Chicago, IL 60606-6404

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Beth Steinhorn  
2021 Timberbrook  
Springfield, IL 62702

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# ATTACHMENT I



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

NOV 29 2007

REPLY TO THE ATTENTION OF:

WQ-16J

Mr. Toby Frevert  
Bureau of Water  
Illinois Environmental Protection Agency  
P.O. Box 19276  
Springfield, Illinois 62794-9276

Dear Mr. Frevert:

The United States Environmental Protection Agency has reviewed the Illinois Pollution Control Board's (the Board) proposed revisions to the sulfate water quality criterion proposed by the Illinois Environmental Protection Agency (Illinois EPA). The Board recommended the following changes to the rule proposed by Illinois EPA:

"(C) If the combination of hardness and chloride concentrations of existing waters are not reflected above, the sulfate standard will be determined on a case-by-case basis in conjunction with an applicable NPDES permitting process."

The revision proposed by the Board concerning sulfate criteria when chloride concentrations are greater than 500 mg/L is not consistent with the Clean Water Act (CWA) and Federal regulations as proposed and should be revised because it would effectively change the Federally-approved water quality criterion for chlorides without EPA review and approval. Illinois' approved water quality standards specify that the concentration of chlorides in general use waters must be equal to or less than 500 mg/L in order to protect the uses of general use waters. To comply with Section 303(c) of the CWA and Federal regulations at 40 CFR 131.10(j)(2), any action to derive a sulfate criterion calculated based on an ambient chloride concentration of greater than 500 mg/L must be preceded by submittal by Illinois EPA and approval by EPA of either a site-specific chloride criterion demonstrating that a chloride concentration greater than 500 mg/L will protect the designated general use, or a use attainability analysis showing that the designated general use is not an attainable use for the affected surface water based on one or more of the six factors identified in the Federal regulations at 40 CFR 131.10(g).

Thank you for the opportunity to review these proposed changes to the sulfate rule proposed by Illinois EPA. If you have any questions about these comments, please contact me at 312-886-6758, or your staff may contact David Pfeifer of my staff at 312-353-9024.

Very truly yours,

Linda Holst, Chief  
Water Quality Branch

STATE OF ILLINOIS )  
 )  
 ) SS  
COUNTY OF SANGAMON )  
 )

**PROOF OF SERVICE**

I, the undersigned, on oath state that I have served the attached **COMMENTS OF THE ILLINIOS ENVIRONMENTAL PROTECTION AGENCY** upon the person to whom it is directed, by placing a copy in an envelope addressed to:

John Therriault, Assistant Clerk  
Pollution Control Board  
100 West Randolph Street  
Suite 11-500  
Chicago, Illinois 60601

**(OVERNIGHT MAIL)**

Mathew Dunn  
Illinois Attorney General's Office  
Environmental Control Division  
James R. Thompson Center  
100 West Randolph Street  
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Attached Service List  
**(FIRST CLASS MAIL)**

Marie E. Tipsord  
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Chicago, Illinois 60601

**(OVERNIGHT MAIL)**

Jonathan Furr  
Illinois Department of Natural Resources  
One Natural Resources Way  
Springfield, Illinois 62702-1271

**(FIRST CLASS MAIL)**

and mailing it from Springfield, Illinois on December 3, 2007, with sufficient postage affixed as indicated above.

*Jara Yilmoro*

**SUBSCRIBED AND SWORN TO BEFORE ME**

this day of December 3, 2007.

*Brenda Boehner*

Notary Public

