

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

CITY OF GALVA SITE SPECIFIC)	
WATER QUALITY STANDARD FOR)	PCB No. 2009-0011
BORON DISCHARGES TO EDWARDS)	(Rulemaking-Water)
RIVER AND MUD CREEK)	
35 Ill. ADM. Code 303.447 and 303.448)	
)	

NOTICE OF FILING

John Theirrault, Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 W. Randolph, Suite 11-500
Chicago, Illinois 60601

Kathleen M. Crowley
Hearing Officer
James R. Thompson Center
100 W. Randolph, Suite 11-500
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Matt Dunn, Chief
Environmental Bureau
Office of the Attorney General
100 W. Randolph, 12th Floor
Chicago, Illinois 60601

PLEASE TAKE NOTICE that I have filed today with the Illinois Pollution Control Board the PREFILED TESTIMONY OF BRIAN KOCH, a copy of which is herewith served upon you.

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: Vera Herst
Vera Herst
Assistant Counsel
Division of Legal Counsel

Dated: February 25, 2009
1021 North Grand Ave. East
P.O. Box 19276
Springfield, Illinois 62794-9276
(217) 782-5544

THIS FILING PRINTED ON RECYCLED PAPER

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

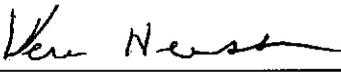
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)	

APPEARANCE

The undersigned, as one of its attorneys, hereby files her **APPEARANCE** in this proceeding, on behalf of the Illinois Environmental Protection Agency.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By: 

Vera Herst
Assistant Counsel
Division of Legal Counsel

Dated: February 25, 2009

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PREFILED TESTIMONY OF BRIAN KOCH

INTRODUCTION

My name is Brian Koch and I have been employed by the Illinois Environmental Protection Agency (herein referred to as "Illinois EPA" for three years. I work as a toxicologist in the Water Quality Standards section of the Division of Water Pollution Control. I have a B.A. and M.S. in Zoology from Southern Illinois University Carbondale, with specialization in fisheries ecology and aquatic toxicology, respectively. My primary responsibility is to derive new or updated water quality standards in support of the Permits and Surface Water sections of the Agency.

My testimony will discuss the petition for a site-specific rule filed by the City of Galva (herein referred to as "Petitioner") and the Illinois EPA's basis for agreement with the proposal.

Before filing its petition with the Illinois Pollution Control Board ("Board"), the Petitioner submitted draft proposals to the Illinois EPA for review and comment, and met with Illinois EPA staff to discuss boron treatment and removal options.

DISCUSSION

On October 17, 2008, the Petitioner filed a proposal for a Site-Specific Rule pursuant to Sections 27 and 28 of the Illinois Environmental Protection Act , 415 ILCS 5/27 and 5/28 (2006), and 35 Ill. Admin. Code 102.202, 102.208 and 102.210.

Specifically, the Petitioner is seeking relief from 35 Ill. Adm. Code 304.105 as it applies to the general use water quality standard for boron of 1 mg/L, as stated in 35 Ill. Adm. Code 302.208(g). The Petitioner proposes to establish an alternative water quality standard for boron of 3.0 mg/L, which would apply to the receiving waters associated with discharge from the Galva Northeast Sewage Treatment Plant and Southwest Sewage Treatment Plant, as specified in the proposal.

The Petitioner has investigated alternatives for removing boron from its source water as well as its effluent, and has determined that the alternatives are not technically feasible or economically reasonable. Treatment alternatives such as ion exchange of wastewater (\$2,016,410), potable water ion exchange (\$2,099,784), and potable water reverse osmosis (\$6,905,955) have substantial upfront costs, and would also require significant maintenance and operational costs. Using an alternative water source is not technically feasible or economically reasonable either, as the nearest water source without elevated boron concentrations is between 20 to 25 miles from Galva, and the costs and environmental impacts of a pipeline outweigh the benefits of decreasing boron effluent concentrations. Finally, the Petitioner has explored the possibility of obtaining water from adjacent cities, but water from the City of Galesburg is too costly (\$13,600,000), and the City of Kewanee does not have adequate reserves to supply the Petitioner.

The Illinois EPA agrees with the Petitioner that the expenses and technical infeasibilities of the assessed alternatives are unreasonable, especially when considering the unanticipated risks associated with the proposed site-specific boron standard of 3.0 mg/L.

The existing boron standard of 1 mg/L was initially adopted in order to protect crops from excess boron in irrigation water. Illinois EPA is not aware of any irrigation being provided through the use of the waters associated with this rulemaking.

Illinois EPA has recently conducted a literature review of boron toxicity to aquatic life and has concluded that the proposed standard would be protective of aquatic life within the associated receiving waters. Based on currently available acute and chronic data, and by using Illinois EPA water quality criteria derivation procedures, Illinois EPA believes that a chronic boron standard of 3.0 mg/L and possibly significantly higher is appropriate. The draft chronic standard is based off Tier II procedures which uses an acute-chronic ratio of 19.1. Based on the existing database, Illinois EPA believes that the current boron standard may be amended in the Petitioner's receiving streams to reflect these new findings.

Illinois EPA is working with the Illinois Natural History Survey in generating additional boron toxicity studies in order to supplement the database to assure that future acute and chronic boron General Use standards would be protective of aquatic life. In the meantime, Illinois EPA believes that the existing boron toxicity database is sufficient to justify the site-specific standards proposed in this matter.

CONCLUSION

Based on the expenses and technical infeasibilities of the alternatives assessed by the Petitioner, as well as the unanticipated risks associated with adopting a site-specific boron standard of 3.0 mg/L, the Agency recommends that the Board grants relief from the water quality standard for boron as requested by the Petitioner.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By:  _____

Brian Koch, Toxicologist
Water Quality Standards Section
Bureau of Water

STATE OF ILLINOIS)
) SS
COUNTY OF SANGAMON)
)

CERTIFICATE OF SERVICE

I, the undersigned, an attorney, state that I have served electronically the attached
PREFILED TESTIMONY OF BRIAN KOCH, upon the following person:

John Therriault
Assistant Clerk
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph St., Suite 11-500
Chicago, IL 60601

and mailing it by first-class mail from Springfield, Illinois, with sufficient postage affixed
to the following persons:

Bill Richardson, Chief Legal Counsel
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, Illinois 62702-1271

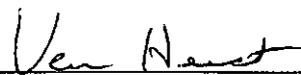
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