

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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OCT. 29 2008

STATE OF ILLINOIS
Pollution Control Board

IN THE MATTER OF:

PROPOSED SITE SPECIFIC)	
RULE FOR CITY OF SPRINGFIELD,)	
ILLINOIS, OFFICE OF PUBLIC)	
UTILITIES, CITY WATER, LIGHT)	
AND POWER AND SPRINGFIELD)	PCB No. 2009-0008
METRO SANITARY DISTRICT)	(Rulemaking-Water)
FROM 35 ILL. ADM. CODE)	
SECTION 302.208(g))	

NOTICE OF FILING

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Illinois Pollution Control Board
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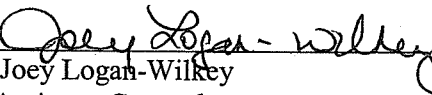
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Matt Dunn, Chief
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Chicago, Illinois 60601

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

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: 
Joey Logan-Wilkey
Assistant Counsel
Division of Legal Counsel

Dated: October 27, 2008
1021 North Grand Ave. East
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THIS FILING PRINTED ON RECYCLED PAPER

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)	

PREFILED TESTIMONY OF ROBERT MOSHER

INTRODUCTION

My name is Robert Mosher and I have been employed by the Illinois Environmental Protection Agency ("Illinois EPA") for 23 years. For the past 20 years, I have been the manager of the Water Quality Standards Unit. My duties in this capacity are to oversee the development of new and updated water quality standards and, together with others in the Division of Water Pollution Control, to apply those standards in NPDES permits and Section 401 Water Quality Certifications. I have a B.S. in zoology and environmental biology and an M.S. in zoology from Eastern Illinois University.

In my testimony, I will discuss the petition for a site-specific rule filed by the City of Springfield, Illinois, City Water, Light and Power, and Springfield Metro Sanitary District (referred to collectively as "CWLP" or "Petitioners"), and the Illinois EPA's basis for agreement with the proposal.

Prior to filing its petition with the Board, CWLP submitted draft proposals to the Illinois EPA for review and comment. CWLP met with Illinois EPA staff on

several occasions to discuss boron treatment and removal options. The Illinois EPA is in agreement with the Petitioners that the site-specific rulemaking is necessary, will cause no adverse impact to the environment, and meets the requirements of Sections 27 and 28 of the Act.

DISCUSSION

On August 29, 2008, the Petitioners filed a proposal for a Site-Specific Rule pursuant to Sections 27 and 28 of the Illinois Environmental Protection Act (“Act”) (415 ILCS 5/27 and 5/28 (2006)), and 35 Ill. Adm. Code 102.202 and 102.210.

Specifically, Petitioners are seeking relief from 35 Ill. Adm. Code 304.105 as it applies to the water quality standard for boron at 35 Ill. Adm. Code 302.208(g) (“Section 302.208(g)”). The general use water quality standard for boron set forth in Section 302.208(g) is 1.0 mg/L. CWLP’s proposal would establish an alternative water quality standard for boron of 11.0 mg/L from Outfall 007 at the Spring Creek Sanitary Treatment Plant to 182 yards downstream of the confluence of Spring Creek with the Sangamon River; 4.5 mg/L from 182 yards downstream of the confluence of Spring Creek with the Sangamon River to the confluence of Salt Creek with the Sangamon River; 1.6 mg/L from the confluence of Salt Creek with the Sangamon River to its confluence with the Illinois River; and 1.3 mg/L in the Illinois River 100 yards downstream of its confluence with the Sangamon River.

In 1994, the Board granted CWLP an adjusted water quality standard from 35 Ill. Adm. Code 304.105 for boron for discharges into Sugar Creek. The current adjusted standard allows boron concentrations of up to 11.0 mg/L in Sugar Creek from the CWLP discharge to the confluence of the Springfield Sanitary District Sugar Creek Plant Outfall,

of up to 5.5 mg/L from the Springfield Sanitary District Sugar Creek Plant Outfall on Sugar Creek to the confluence with the South Fork of the Sangamon River, and up to 2.0 mg/L from the confluence of Sugar Creek and the South Fork of the Sangamon River to 100 yards downstream of the confluence of the Sangamon River and Spring Creek. In the petition, CWLP states that these levels do not provide adequate relief due to the increased boron levels resulting from the operation of the air pollution control systems required for its Dallman Units. CWLP is engaged in retrofitting the existing air pollution control system and is building a new air emissions system at the facility in order to meet air quality regulations. CWLP has discovered that boron concentrations in the water used in the air pollution control systems have increased substantially over concentrations common in previous wastewater streams. During meetings with the Petitioners between 2003 and 2007, the Illinois EPA encouraged the investigation of treatment alternatives for the removal of boron from the effluents.

The Petitioners have investigated alternatives for removing boron from their effluent, and have determined that the alternatives are not technically feasible or economically reasonable. In the Petition, CWLP discusses the technical feasibility and economic reasonableness of the boron removal options considered: a Brine Concentrator treatment system, reverse osmosis, electrocoagulation, the use of non-Illinois coal, and the pretreatment of water for transfer to the Springfield Metro Sanitary District (“SMSD”). The investigation of the different treatment and removal options resulted in a final determination by CWLP that the preferred option is the pretreatment of water for transfer to the SMSD.

After reviewing the findings of CWLP, the Illinois EPA agrees that boron cannot be removed without significant monetary and energy expenditures that are not technically feasible or economically reasonable. The Illinois EPA's conclusion that alternatives to the discharge of the boron contained in the CWLP effluents are not reasonable stems in part from the fact that boron is not toxic to aquatic life at these concentrations.

Petitioners' August 2008 *Technical Support Document for Petition for Site-Specific Boron Standard for the Springfield Metro Sanitary District Spring Creek Plant, Sangamon County, Illinois* ("TSD"), prepared by Hanson Professional Services, Inc., cites several studies supporting the safety of boron at these concentrations to aquatic life. The TSD also cites the *Technical Support Document for Petition for Adjusted Boron Standards for Sugar Creek and the Sangamon River* ("1994 TSD"), prepared by Hanson in 1994 for the proceeding wherein the Board set the current boron standard for the waters that are subject of this rulemaking. According to Petitioners, the 1994 TSD demonstrated that the samples taken from the South Fork, Sangamon River, and Sugar Creek did not show a pattern of degradation from the boron discharges, supporting the conclusion that there would be no adverse impact to aquatic life from boron concentrations at or below 11.0 mg/L.

The Illinois EPA agrees that the boron concentrations discharged will not cause aquatic life toxicity in the Sangamon River. Moreover, human health will not be endangered because the boron in the river will be diluted below any estimation of drinking water concern before it reaches the nearest public water supply intake, which is located approximately 185 miles downstream of the SMSD discharge. The existing general use water quality standard for boron was initially adopted in order to protect

crops from excess boron in irrigation water, and the Illinois EPA is aware of no significant use of the Sangamon River for this purpose.


The Board has previously granted relief from the boron water quality standard to CWLP and other permit-holders on the basis that discharges of boron at higher concentrations are not toxic to aquatic life, and that treatment is not technically feasible or economically reasonable. The Illinois EPA anticipates the filing of petitions for relief from the boron water quality standard. Because there is a need for relief from the standard, and studies have shown that discharges of higher boron concentrations are not toxic to aquatic life, the Illinois EPA believes that the general water quality standard for boron should be amended. During recent discussions regarding the need for relief from the boron standard, USEPA has indicated that the Illinois EPA should generate new aquatic life toxicity data for the derivation of a State-wide water quality standard. The Illinois EPA intends to work with the Illinois Natural History Survey to generate the necessary supplemental aquatic life toxicity data to derive a general standard that is protective of aquatic life under both acute and chronic exposure, and to determine what value will be protective of human health and domestic water uses at public water supply intakes. These standards derivations will be structured to assure federal Clean Water Act approval. Some of the data will likely be available during the course of the CWLP Site-Specific Rulemaking. In the meantime, the existing toxicity database summarized by CWLP is adequate for the site-specific demonstration in this matter.

CONCLUSION

The Illinois EPA agrees that the alternatives for the treatment of boron are not technically feasible or economically reasonable, and that the standards proposed in

CWLP's Petition will cause no adverse impact to the environment or human health. The Illinois EPA recommends that the Board grant relief from the water quality standard for boron as requested by CWLP.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

By: 
Robert Mosher

Dated: October 23, 2008

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THIS FILING PRINTED ON RECYCLED PAPER

CERTIFICATE OF SERVICE

I, Joey Logan-Wilkey, certify that I have served the attached **Prefiled Testimony of Robert Mosher**, by first class mail, upon the following persons:

John Theirrault, Clerk
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Chicago, Illinois 60601

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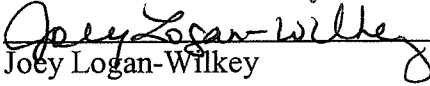
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Dated: October 27, 2008


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