

ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:)	
TRIENNIAL REVIEW OF WATER)	R11-18
QUALITY STANDARDS FOR BORON)	(Rulemaking,
FLUORIDE AND MANGANESE:)	Water
AMENDMENTS TO 35 ILL. ADM. CODE)	
302 SUBPARTS B, C, E, F AND)	
303.312)	

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STATE OF ILLINOIS
Pollution Control Board

REPORT OF THE PROCEEDINGS held in the

above entitled cause before Hearing Officer
 Kathleen Crowley, called by the Illinois Pollution
 Control Board, taken by Steven Brickey, CSR, for
 the State of Illinois, 1021 North Grand Avenue,
 Springfield, Illinois, on the 21st day of June,
 2011, commencing at the hour of 9:00 a.m.

A P P E A R A N C E S

MR. KATHLEEN CROWLEY, Hearing Officer
MR. ANAND RAO,
MS. ANDREA MOORE
MS. CARRIE ZALEWSKI
MR. THOMAS JOHNSON
MR. GARY BLANKENSHIP

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ALSO PRESENT: MR. SANJAY SOFAT
MR. BRIAN T. KOCH
MS. CHRISTINE ZEMAN
MS. BETH STEINHOOR
MR. GREG SMITH

REPORTED BY:
Steven J. Brickey, CSR
CSR License No. 084-004675

1 MS. CROWLEY: Good morning. My name
2 is Kathleen Crowley and I'm the assigned Hearing
3 Officer in this proceeding. This is the first of
4 two presently scheduled hearings being conducted
5 by the Illinois Pollution Control Board in the
6 matter of Triennial Review of Water Quality
7 Standards for Boron, Fluoride and Manganese
8 Amendments to 35 Ill. Adm. Code Part 302, Subparts
9 B, C, E, F and Section 303.312. That is the
10 Pollution Control Board Docket R11-18.

11 At today's hearing, the Board
12 will begin its receipt of testimony on the merits
13 and economic affect of the Illinois Environmental
14 Protection Agency's December 2nd, 2010, regulatory
15 proposal.

16 A brief synopsis of the
17 rulemaking. In the statement of reasons
18 accompanying this proposal, the Agency stated that
19 this is the culmination of the triennial review,
20 quote, unquote, of standards required by the
21 Federal Water Pollution Control Act. The proposal
22 includes updated water quality standards for
23 boron, fluoride and manganese and a handful of
24 clean up amendments and updates to 35 Ill. Adm.

1 Code Part 302 and a repeal of Section 303.312.

2 As I see, we have a fairly
3 sparse crowd today and most people here are
4 affiliated with one or the other participants
5 here. We'll shorten up some of the usual opening
6 remarks. This hearing is being conducted
7 according to the requirements of the Environmental
8 Protection Act and the Board's procedural rules.
9 All hearings are transcribed by the court reporter
10 you see with us today at the second table.

11 We ask that persons speak one at
12 a time and that you speak loudly enough to be
13 heard. All witnesses will be sworn by the court
14 reporter prior to giving testimony, but anyone
15 here can give public comment without being sworn
16 later in the hearing and I have asked Steven, our
17 court reporter, to please interrupt if he can't
18 hear or we're speaking over one another so that we
19 have a good record here.

20 Any person may ask questions of
21 any witness giving testimony, but please wait
22 until you're called on before you speak.
23 Questions asked by the Board or its staff are not
24 intended to indicate any prejudgment of the merits

1 of testimony or of a proposal. They're asked
2 simply to make sure there's a full and complete
3 deliberation by the five member Board.

4 Seated to my immediate left is
5 Board Member Carrie Zalewski, the Board Member
6 coordinating this proceeding. Also present seated
7 to Member Zalewski's left is Member Andrea Moore
8 and to Member Moore's left is Member Thomas
9 Johnson. Seated to my immediate right is Board
10 Member Gary Blankenship and seated to his
11 immediate right is Environmental Scientific Board
12 Anand Rao. Acting Chairman Girard is not able to
13 be with us today, but he, of course, will be
14 reviewing the transcript and exhibits of this
15 proceeding.

16 Member Zalewski, is there
17 anything you'd like to say to the group here?

18 MS. ZALEWSKI: Just thank you to
19 everyone for traveling and thank you for your
20 pre-filed comments and questions. We appreciate
21 it. It makes for a more efficient hearing so we
22 thank you.

23 MS. CROWLEY: At this point, we'll
24 then ask for appearances from the Agency and any

1 other participants.

2 MS. WILLIAMS: Good morning. I'm
3 Deborah Williams on behalf of the Illinois EPA.
4 To my left --

5 MS. TERRANOVA: I'm Sara Terranova.

6 MS. MOORE: We didn't hear your
7 name.

8 MS. TERRANOVA: Sorry. I'm Sara
9 Terranova.

10 MS. ZEMAN: Good morning. Christine
11 Zeman on behalf of the City of Springfield City,
12 Water, Light and Power.

13 MS. BASSI: I'm Kathleen Bassi with
14 Schiff Hardin on behalf of Southern Illinois Power
15 Cooperative.

16 MS. CROWLEY: Does anyone else want
17 to make an appearance this morning? A
18 non-attorney.

19 MR. MACHEN: I'm not an attorney.

20 MS. CROWLEY: Right. Go ahead.

21 MR. MACHEN: I'm James Machen with
22 TRC. I'm an engineer representing Marathon
23 Petroleum.

24 MS. CROWLEY: That's just clarifying

1 that for the court reporter.

2 MR. MACHEN: Right.

3 MS. CROWLEY: Okay. Before we begin
4 with the Agency's testimony, just a couple more
5 housekeeping details. As Member Zalewski
6 indicated to streamline the hearing, I issued
7 Hearing Officer orders on May 3rd and June 14th.
8 These orders ask persons to pre-file testimony and
9 to answer questions developed by Board staff. The
10 only two entities that filed testimony in response
11 to these orders have been the Agency and Mr. James
12 Machen on behalf of Marathon Petroleum Company.

13 The Agency pre-filed the
14 testimony of Brian Koch on May 23rd, 2011, and
15 Mr. Machen pre-filed testimony on May 23rd as
16 corrected May 26th. The City of Springfield
17 pre-filed questions on June 13th, 2011, and
18 finally the Board's staff asked questions of both
19 the Agency and Mr. Machen as transmitted in a June
20 14th, 2011, Hearing Officer order.

21 We will first allow the Agency
22 to deliver testimony in support of its proposal
23 and respond to questions about it. The City of
24 Springfield may then ask its questions followed by

1 the Board. Next we will hear from Marathon. If
2 we're running out of time, we may take Marathon
3 out of order to accommodate Mr. Machen's schedule,
4 but we'll see how that goes and then finally to
5 the extent we have time left today we'll take the
6 testimony or oral public comments from anyone else
7 today concerning the merits of the proposed
8 rulemaking, it's expected economic effects and any
9 other matter.

10 Are there any questions for me
11 before we begin with the Agency? There don't seem
12 to be. Terrific.

13 MS. WILLIAMS: Good morning. My
14 name is Deborah Williams and I'm appearing on
15 behalf of the Illinois Environmental Protection
16 Agency and R11-18 in the matter of Triennial
17 Review of Water Quality Standards for Boron,
18 Fluoride and Manganese. Amendments to 35 Ill.
19 Adm. Code 302 Subparts B, C and F and Section
20 303.312.

21 With me also from the Division
22 of Legal Counsel is Sara Terranova and testifying
23 today on behalf of Illinois EPA is Brian Koch from
24 the --

1 MS. CROWLEY: Sorry for
2 mispronouncing your name. Go ahead.

3 MS. WILLIAMS: Brian Koch spelled
4 K-O-C-H from the Bureau of Water Standards Unit
5 and also here with us today, the Division Manager
6 of the Water Pollution Control who will help
7 answer questions where needed.

8 Before we enter Mr. Koch's
9 testimony into the record, I'd like to give a
10 brief opening statement --

11 MS. CROWLEY: Certainly.

12 MS. WILLIAMS: -- summarizing the
13 Agency's rulemaking proposal. The Agency filed
14 its proposal in this proceeding on December 2nd,
15 2010. That proposal was the culmination of the
16 Illinois EPA's obligation to conduct triennial
17 review of the State's water quality standards
18 under the Clean Water Act. As a part of this
19 process, the Agency engaged in development of
20 updated water quality standards for the protection
21 of aquatic life uses for the constituents boron,
22 fluoride and manganese.

23 Mr. Koch's testimony summarizes
24 the procedures used to derive these criteria for

1 general use in Lake Michigan basin waters as well
2 as how the Agency has attempted to assure and
3 maintain protection of Public and Food Processing
4 Water Supply and Open Waters of Lake Michigan uses
5 as well.

6 Mr. Koch's testimony also
7 addresses an update to the general use chronic
8 water quality standards for zinc that corrects an
9 error in an earlier Illinois EPA proposal to the
10 Board. That error has resulted in proposal by the
11 Agency to change the value in the chronic waters
12 quality standard for zinc formula from A equals
13 negative 0.8165 to A equals negative 0.4456.

14 In addition to these water
15 quality standard updates, the Agency is proposing
16 a handful of clean-up amendments to the Board's
17 water quality standard regulations, which I'll
18 briefly summarize.

19 Section 302.595 and 302.669 of
20 the Board's regulations require quarterly
21 publication and derive water quality criteria
22 listing in the Illinois Register. Since this
23 requirement was established in R88-21A and R97-25,
24 the Agency has complied with this publication

1 requirement.

2 However, the Agency also
3 developed a similar and more user friendly list of
4 derived water quality criteria that is available
5 on the Agency's website. The Agency is proposing
6 to eliminate the Illinois Register publication
7 requirement and rely on the website publication.
8 This will save resources and cost for the state
9 and will provide a superior method of public
10 notice to the audience that is interested in
11 obtaining the information.

12 The Agency is also proposing to
13 eliminate STORET, S-T-O-R-E-T, numbers which were
14 used to distinguish individual parameters within
15 the sections already proposed for other amendments
16 because this identification system had become out
17 of date.

18 The Agency's clean-up amendments
19 include corrections to a handful of errors and
20 cross references within the parts being amended.
21 These include updating a reference from Section
22 302.303 to Part 604 which has been repealed to
23 reference the current drinking water standards in
24 Part 611. Also, in Section 302.553, a reference

1 to Section 302.565(e) should be a reference
2 instead to Section 302.565(b) and in both Sections
3 302.648 and 302.657 there is a cross reference to
4 Section 302.201 that was transposed and should
5 have been 302.102.

6 The Agency is also proposing a
7 restructuring of the language in the introductory
8 paragraph of Section 302.208 in an effort to
9 clarify and make more readable to the
10 applicability of these provisions. The result is
11 that the current Subsection D of the Board's
12 regulations is split apart and pieces of that
13 subsection are placed in Subsections A, B and C to
14 clarify how the language is interpreted for each
15 type of acute, chronic and human health standards.
16 This clarification also involves moving new
17 language to Subsection D that clarifies how
18 attainment of the standards in Sections 302.208(g)
19 and (h) are determined.

20 Also in this section, the Agency
21 has changed the term metal to chemical constituent
22 because not all regulated chemicals in this
23 section are, in fact, metals. Within the water
24 quality standard tables throughout Part 302, the

1 Agency has proposed a handful of minor
2 clarifications to make certain there is no
3 confusion as to the form of the chemical being
4 regulated. Mercury is clarified in Section
5 302.208 as being in the total form while chloride
6 is also clarified as being in the total form in
7 Sections 302.304 and 302.504(c). The forms of
8 cyanide are specified as including either weak
9 acid dissociable or available cyanide in Sections
10 302.208 and 302.504(a).

11 An error in the units for
12 Toluene in Section 302.504(a) is clarified from
13 mg/L to mg's/L and also for Toluene the standard
14 in 302.504(d) is being deleted as unnecessary as
15 it is less stringent than the acute standard in
16 302.504(a). Since having a less stringent Open
17 Waters of Lake Michigan standard -- since having a
18 standard for the Open Waters of Lake Michigan less
19 stringent than that for the Lake Michigan basin
20 would be redundant, the Agency is proposing the
21 repeal of the Open Waters standard. Some other
22 very minor typographical errors in Section's
23 302.208 and 302.304 are also proposed.

24 Finally, the Agency has proposed

1 a repeal of Section 303.312 (waters receiving
2 fluorspar mine drainage) of the Board's site
3 specific water quality standards. In researching
4 it's proposal, the Agency has discovered its
5 sources to which this standard applies no longer
6 exists.

7 Thank you, and that concludes my
8 opening statement. If you want to turn to
9 Mr. Koch's testimony.

10 MS. CROWLEY: Mr. Koch, I'm handing
11 you a document entitled Testimony of Brian Koch.
12 Do you recognize it?

13 THE WITNESS: Yes, I do.

14 MS. WILLIAMS: Was this the
15 testimony that you prepared for today's hearing?

16 THE WITNESS: It is.

17 MS. CROWLEY: Excuse me. Could we
18 have the court reporter swear him in, please?

19 WHEREUPON:

20 BRIAN KOCH
21 called as a witness herein, having been first duly
22 sworn, deposeth and saith as follows:

23 MS. CROWLEY: Thank you. Please
24 proceed.

1 MS. WILLIAMS: I guess at this time
2 I'll move to have Mr. Koch's testimony entered as
3 an exhibit. Do you need copies?

4 MS. CROWLEY: We'll mark and enter
5 it as Exhibit 1. That's the May 23rd testimony.
6 Off the record for a moment, please.

7 (Document marked as Hearing
8 Exhibit No. 1 for
9 identification.)

10 (Whereupon, a discussion was had
11 off the record.)

12 MS. CROWLEY: Back on the record.
13 Thank you. I believe we all have copies with us.
14 Thank you.

15 MS. WILLIAMS: Mr. Koch, I'd just
16 like to ask you quickly whether subsequent to
17 filing your testimony with the Board did you
18 discover any typographical errors in your
19 testimony?

20 THE WITNESS: Yes, I did.

21 MS. WILLIAMS: And can you identify
22 was this on the next to last page?

23 THE WITNESS: Yeah. For the
24 proposed numeric standard for boron, I

1 inaccurately stated that the standard would be
2 located at 35 Ill. Adm. 302.2 08(g) where, in
3 fact, it should be at 302.208(e).

4 MS. CROWLEY: I'm sorry. B as in
5 boy?

6 THE WITNESS: The inaccurate
7 statement was at G. It should be located at
8 302.208(e).

9 MS. CROWLEY: E. I'm sorry.

10 (Document marked as Hearing
11 Exhibit No. 2 for
12 identification.)

13 MS. WILLIAMS: Before we move onto
14 pre-filed questions, I think I'd like to enter one
15 exhibit. Mr. Koch, I'm handing you a document
16 that I've marked as Exhibit 2 for identification
17 entitled Tables Identifying Existing and Proposed
18 Water Quality Standards for Boron, Fluoride and
19 Manganese. Do you recognize this document?

20 THE WITNESS: Yes, I do.

21 MS. WILLIAMS: Can you just briefly
22 tell the Board what the document is?

23 THE WITNESS: Yes. Table one is a
24 summary of the existing water quality standards

1 for boron, fluoride and manganese and they
2 currently are in the regulations. Table two shows
3 the proposed changes for boron, fluoride and
4 manganese in the general use and non-open Lake
5 Michigan basin waters as well as the Public and
6 Food Processing Water Supply waters.

7 MS. WILLIAMS: At this time, I'd
8 like to have this document entered as an exhibit.

9 MS. CROWLEY: We'll mark and admit
10 that as Exhibit 2 and thank you very much for
11 putting it in an easy to read table form. We
12 appreciate that.

13 MS. WILLIAMS: I have nothing
14 further at this time.

15 MS. CROWLEY: Are you ready for
16 questions?

17 MS. WILLIAMS: Yes.

18 MS. CROWLEY: As I indicated, the
19 first entity to pre-file questions was the City of
20 Springfield and so, Ms. Zemen, if you'd like to
21 proceed.

22 MS. ZEMAN: Thank you very much. As
23 I stated, I'm Christine Zemen here today
24 representing the City of Springfield Office of

1 Public Utilities, which is commonly known as City,
2 Water, Light and Power or CWLP. We appreciate the
3 opportunity to question the Agency's witness this
4 morning and particularly with respect to exploring
5 issues as they relate to the proposed chronic
6 water quality standard for boron.

7 I have pre-filed questions and I
8 will summarize some of those. Some of the words
9 will be more for foundation to enable the EPA to
10 know in advance where I was going rather than what
11 I would be speaking here today. So, Mr. Koch, I
12 hope you all bear with me as I kind of go through
13 this in a more summary format.

14 MS. CROWLEY: Excuse me, Ms. Zeman.
15 Why don't we just mark that as Exhibit 3 so the
16 more formal document will also be in the record
17 and we can put that on COOL if we need to.

18 (Document marked as Hearing
19 Exhibit No. 3 for
20 identification.)

21 MS. ZEMAN: Very good. Thank you.

22 BY MS. ZEMAN:

23 Q. First, with respect to some general
24 questions for you as the witness here today in

1 terms of the background. What role did you have
2 in developing the Agency's statement of reasons?

3 A. I was not the author of that
4 document, but I did provide technical assistance.

5 Q. Who was the primary author?

6 A. Deborah Williams.

7 Q. Thank you. The statement of reasons
8 references several site specific rulemakings and
9 adjusted standards and especially as to boron it's
10 at pages 28 to 32. Did you read each opinion and
11 order that's referenced as to boron?

12 A. No, I have not.

13 Q. Have you read any of the opinions or
14 orders with respect to the boron site specific
15 rulemakings or adjusted standards that are
16 referenced?

17 A. Yes.

18 Q. Do you want to tell us what those
19 are, if you know?

20 A. I believe I've reviewed the Galva
21 opinion and order as well as the CWLP.

22 Q. Would that be both the adjusted
23 standard in 1994 and the site specific ruling for
24 the Sanitary District?

1 A. I did not read the 1994 ruling.

2 Q. Thank you.

3 MS. CROWLEY: I believe we're
4 talking about our Docket Number R09-8 for the site
5 specific rule?

6 MS. ZEMAN: That's correct. Thank
7 you.

8 MS. CROWLEY: Do you happen to know
9 the number of the 1994?

10 MS. ZEMAN: Yes, I do. That is --

11 MS. CROWLEY: Just to keep things
12 tidy here.

13 MS. ZEMAN: The Pollution Control
14 Board number for the adjusted standard in 1994 is
15 AS94-9.

16 MS. CROWLEY: Thank you so much.
17 Yes?

18 MS. BASSI: Just to follow up. I'm
19 Kathleen Bassi on behalf of SIPC. You said you
20 looked at Galva's and CWLP's rulemaking, site
21 specific rulemaking, did not look at CWLP's
22 adjusted standard and, likewise, you did not look
23 at SIPC's adjusted standards, which is AS92-10, is
24 that correct?

1 THE WITNESS: That's correct.

2 MS. BASSI: Thank you.

3 MS. CROWLEY: Let's just go off the
4 record for a moment.

5 (Whereupon, a discussion was had
6 off the record.)

7 MS. CROWLEY: Back on the record,
8 please. Ms. Zeman?

9 MS. ZEMAN: Thank you.

10 BY MS. ZEMAN:

11 Q. What role did you have in developing
12 the Agency's attachment one to its statement of
13 reasons, facts in support of changing water
14 quality standards for boron, fluoride and
15 manganese?

16 A. I was the primary author of that
17 document.

18 Q. And we'll get to questions about
19 these as we proceed. Regarding the legal
20 framework for the proposal in the statement of
21 reasons the Illinois EPA references that its
22 proposal to revise the water quality standards,
23 including for boron, as already stated in the
24 record is a culmination of the Illinois EPA's

1 obligation to conduct a triennial review under the
2 Federal Water Pollution Control Act. Is it the
3 position of the Illinois EPA that it is only
4 obligated to conduct a triennial review for water
5 quality standards under federal law or also under
6 the Illinois Environmental Protection Act?

7 MS. WILLIAMS: I want to stop here
8 for a second. Are you reading directly from
9 question one or did you reword it because I was
10 going to object to the question as written as it
11 calls for a legal conclusion?

12 MS. ZEMAN: I basically read it as
13 it exists.

14 MS. WILLIAMS: Then I object. It
15 calls for a legal conclusion.

16 MS. CROWLEY: Thank you. But I will
17 ask the witness to answer if he knows.

18 MS. WILLIAMS: And we're going to
19 direct that question to Mr. Sofat.

20 MR. SOFAT: I can respond to that.

21 MS. CROWLEY: Thank you.

22 MR. SOFAT: The Agency's position is
23 that federal law requires the states to perform a
24 triennial review and Illinois' Environmental

1 Protection Act requires it to be consistent with
2 the federal law. Therefore, I would say the short
3 answer is both.

4 MS. ZEMAN: Thank you, Mr. Sofat.

5 BY MS. ZEMAN:

6 Q. Then, summarizing the next question
7 rather than reading the introductory area. Does
8 the Illinois EPA take the position that federal
9 law requires the Board to adopt a water quality
10 standard for boron?

11 MS. WILLIAMS: I will object again.
12 This question calls for a legal conclusion.

13 MS. CROWLEY: And, again, I will ask
14 that the representative from EPA answer. I
15 realize that we are not getting the opinions of
16 lawyers, but as the person implementing the rules
17 I would like, and the Board would like, to hear
18 what they have to say.

19 MS. ZEMAN: Thank you.

20 MR. SOFAT: I will proceed with what
21 you have under II(b). What federal law requires
22 is that in order for the water quality standards
23 to be effective they must be approved by the feds.
24 So, here, I'm kind of confused about your question

1 under B1. So in order for states to have
2 effective standards, they must be approved by the
3 federal agency. That's pretty much what the
4 federal requirement is. I'm not sure what the
5 question is asking under B1.

6 MS. ZEMAN: Is there actually a
7 federal requirement that a state adopt a water
8 quality standard for boron?

9 MR. SOFAT: Not specific to boron,
10 but --

11 MS. WILLIAMS: Can I ask a follow
12 up?

13 MS. CROWLEY: I'm sorry?

14 MS. WILLIAMS: Can I ask a follow up
15 as well?

16 MS. CROWLEY: Certainly.

17 MS. WILLIAMS: Mr. Sofat, are you
18 aware of a federal requirement to adopt any
19 particular water quality parameter?

20 MR. SOFAT: No. It is not specific
21 to any particular parameter, no.

22 BY MS. ZEMAN:

23 Q. On what basis then did the Illinois
24 EPA determine to develop both an acute and water

1 quality standard for boron as proposed here?

2 A. Given that boron exerts chronic
3 toxicity at concentrations far lower than the
4 standard, we determined a chronic standard was
5 also needed.

6 Q. Could you explain that a little
7 further or maybe repeat your answer?

8 A. The proposed acute standard for
9 boron is 40.1 mg/L. We also reviewed the
10 literature for chronic toxicity for boron. We
11 also contracted tests out to the Illinois Natural
12 History Survey and we determined from those tests
13 that boron exerts a chronic toxicity at
14 concentrations far lower than 40.1 mg/L and based
15 on our derivations we concluded that the chronic
16 standard should be 7.6 mg/L.

17 MS. BASSI: This is where I get a
18 little bit confused on this and I apologize if I'm
19 asking you to repeat here. So parsing out what
20 you said. You said that you guys hired -- that
21 Illinois EPA hired a contractor or another state
22 agency to test the chronic impact of boron on
23 various creatures in water quality -- in a water
24 body, is that correct?

1 THE WITNESS: They were conducted
2 under laboratory settings, but, yes, we contracted
3 the Illinois Natural History Survey. Also, EPA
4 provided assistance through the Great Lakes
5 Environmental Center -- or Environmental
6 Commission to do additional tests on mussels.

7 MS. BASSI: Okay. And when I read
8 the proposed rulemaking, I got the impression that
9 the chronic water standard for boron, the proposed
10 standard, was -- and you used the word derived was
11 a mathematical result, is that correct?

12 THE WITNESS: That is correct.

13 MS. BASSI: So how do you put
14 together test results and the math? I thought it
15 was like a statistical thing.

16 THE WITNESS: It is.

17 MS. BASSI: That's what derived
18 means to me.

19 THE WITNESS: It is.

20 MS. BASSI: So how do you put
21 together statistics to come up with 7.6?

22 THE WITNESS: All that information
23 was outlined in detail in attachment one on the
24 statement of reasons. To simplify it, basically

1 we ran chronic tests on at least three different
2 species I believe for boron and we looked at the
3 lowest observable effect concentration. Basically
4 the lowest concentration of boron that exerted
5 some sort of threshold effect whether it was
6 mortality or reproduction impairments or lack of
7 growth.

8 We took that concentration which
9 is the lowest observable effect concentration and
10 the note that no observable effect concentration
11 we took the mean of those two and that is the
12 maximum acceptable toxic concentration. That's
13 the toxic concentration that is the highest amount
14 that the organisms can withstand without exerting
15 any chronic effect.

16 MS. BASSI: And that's 7.6?

17 THE WITNESS: The tests that we
18 conducted on boron it was around 9.0 I believe for
19 fat head minnows and hyalella, but, again, we only
20 had three or four species that the tests was
21 conducted on. The 1985 Galva methodology outlines
22 the procedures used to determine what the chronic
23 value is and by following that methodology it was
24 concluded that 7.6 is what the chronic standard

1 should be. The 7.6 standard allows for protection
2 of species that have not been tested.

3 MS. BASSI: So it's a margin of
4 safety?

5 THE WITNESS: To some extent, yes.
6 The standards are developed to protect 95 percent
7 of the species.

8 MS. BASSI: Thank you.

9 MS. CROWLEY: To follow up on an
10 answer you gave to Ms. Bassi's question. You said
11 that you actually performed chronic tests on some
12 critters. Are the chronic tests different than
13 the acute tests?

14 THE WITNESS: The chronic tests are
15 conducted over a much longer period. For example,
16 for fat head minnow, which is a common test
17 organism, a chronic test is typically 32 days and
18 that test is conducted on early life stages of
19 that organism, but for the acute test we're
20 generally testing juveniles or adults and the test
21 is conducted over four days.

22 MS. CROWLEY: I don't mean to be
23 argumentative, but that suggests to me that the
24 chronic number you came up with is more than a

1 mathematical formula and maybe we're just getting
2 into semantics here.

3 MS. BASSI: I understood it -- from
4 what he said, I understood that it was based on a
5 test and then there was some statistics that were
6 applied to the test.

7 MS. ZEMAN: Very good. Thank you
8 for the clarification.

9 MS. BASSI: Is that fair?

10 THE WITNESS: Yes, that's correct.

11 BY MS. ZEMAN:

12 Q. Earlier, you had talked about the
13 literature review that helped to go into the
14 development of the water quality standard for
15 boron that's proposed here and I'm going to jump a
16 little to my Section 3 that does talk about the
17 literature search that was performed.

18 I'll go back to the other area
19 shortly here. In your testimony today and in the
20 pre-filed testimony, you did make reference to the
21 literature reviews that were conducted in the
22 development of the proposed standard. Did you
23 actually participate in those literature reviews
24 as to boron?

1 A. Yes.

2 Q. Okay. And are all -- is all of the
3 literature that was reviewed actually itemized on
4 the information that was filed by the Illinois EPA
5 in support of the petition?

6 A. Not necessarily every piece of
7 literature. Again, in order to develop a water
8 quality standard, you have to collect toxicity
9 data that is acceptable for use. So although
10 there may be some review papers that talk about
11 boron in general, they don't necessarily talk
12 about the toxicity effects of boron.

13 I have not included those in any
14 of the -- in any of my attachment one or the
15 exhibits, but, in general, any toxicity end point
16 that I retrieved through my literature searches I
17 included in my attachment one in Exhibit 4,
18 attachment one.

19 Q. Thank you. How did the Illinois EPA
20 utilize these literature reviews in the
21 development of the proposed standard for boron?

22 A. Again, I looked specifically for
23 toxicity endpoints. For example, for the keep
24 standards, you have to use -- toxicity

1 endpoints are based on 96 hour tests. Tests
2 that are conducted under appropriate laboratory
3 conditions. Tests that are done on appropriate
4 lab organisms. Species that are native to
5 Illinois. The same goes for chronic testing. You
6 have to look at the length of the test and make
7 sure the test methods were appropriate.

8 Q. And just for the record, would you
9 tell us what endpoints are, please?

10 A. Excuse me?

11 Q. What are endpoints?

12 A. End points -- basically for an acute
13 standard, the endpoints we primarily study is the
14 96 hour LC50 and the LC50 stands for lethal
15 concentration to 50 percent of the tested
16 organisms. For the chronic tests, we generally
17 look for an MATC, which is a maximum acceptable
18 toxic concentration.

19 Q. If you know as you're sitting here,
20 did any of the literature review suggest that a
21 chronic limit for boron could be higher, that is
22 less stringent, than the proposed chronic standard
23 that Illinois EPA proposes here?

24 A. I am not aware of any studies.

1 Q. Did the Illinois EPA consider any
2 water quality standards for boron of other states?

3 MS. WILLIAMS: Are we going back?
4 Can we just identify?

5 MS. ZEMAN: Yes. Thank you. I'm
6 going back now to the questions on page two
7 regarding the -- basically the legal framework for
8 the development of the proposed water quality
9 standard for boron and I'm now at number four.
10 BY MS. ZEMAN:

11 Q. Did the Illinois EPA consider any
12 other state's standards in its development --

13 A. I did not necessarily take into
14 consideration their standards, but I did contact
15 nearby states to see if they had a boron standard
16 so I could see the data that was used in
17 determining that standard, but, no, I did not
18 necessarily take into consideration what their
19 actual numbers were.

20 Q. If you know for the Midwest states,
21 are there any with a chronic standard at 7.4 mg/L
22 or lower as proposed by Illinois EPA?

23 MS. WILLIAMS: Can we ask for
24 clarification here, Christine, about which use

1 designation?

2 MS. ZEMAN: For aquatic life --

3 MS. WILLIAMS: For any use

4 designation or for aquatic life?

5 MS. ZEMAN: For aquatic life. Thank
6 you. And I should clarify 7.6.

7 BY THE WITNESS:

8 A. I'm not aware of any other Midwest
9 state that has a chronic standard of 7.6 and in
10 your question here you state 7.4 or lower. I
11 presume you mean higher?

12 BY MS. ZEMAN:

13 Q. I meant --

14 A. Less stringent.

15 Q. -- more stringent.

16 A. Other states have more stringent
17 boron standards.

18 Q. Do any other Midwest states have
19 more stringent standards?

20 A. Yes.

21 Q. And are those aquatic life based?

22 A. Yes.

23 Q. Do you know how stringent they go?

24 A. Yes. I don't know if I need to

1 mention the actual states, but on a chronic basis
2 the standard range from 0.95 mg/L to 5.0 mg/L and
3 those numbers are based on aquatic life use.

4 Q. Thank you. Would the Midwest state
5 chronic standards that are aquatic life based,
6 would that necessarily mean they're also based on
7 the US EPA guidelines for deriving numerical
8 national water quality criteria for the protection
9 of aquatic organism and their uses, that is the
10 1985 guidelines that the Illinois EPA claims it
11 uses?

12 A. The states I'm referring to the
13 numbers they have derived were done using the
14 Great Lakes Initiative Methodologies which is
15 nearly identical to the 1985 guidelines
16 methodology.

17 MR. RAO: Mr. Koch, would it be
18 possible for you to provide citations to the other
19 state regulations that you're talking about maybe
20 in your comments?

21 THE WITNESS: Yes. At a later time,
22 yes.

23 BY MS. ZEMAN:

24 Q. Moving on then. In the statement of

1 reasons, the Illinois EPA references the language
2 from Section 27(a) of the Illinois Environmental
3 Protection Act which identifies the criteria that
4 the Board is required to take into account in a
5 rulemaking.

6 Rather than quoting that one of
7 the items that it references is the character of
8 the area involved, for the proposed boron
9 standards, has the Illinois EPA reviewed the
10 character of the area involved? And, if so,
11 please provide the information that you used or
12 identified as the character of the area involved.

13 MR. SOFAT: I will respond to that.
14 Since the proposed rule is a rule of general
15 applicability the information that the Agency
16 considered pertains to the whole state, not to a
17 specific region in the state.

18 MS. BASSI: So then does that mean
19 that a specific area or region or stream segment
20 could have a different standard or a different
21 standard could be more appropriate?

22 MR. SOFAT: Do you want to answer
23 that?

24 MS. WILLIAMS: Yes, it's okay.

1 MR. SOFAT: Other states do have
2 cold water species and, therefore, the standards
3 that need to be developed to protect those species
4 could be different. So we in Illinois do not
5 recognize that we have different regions or
6 specific regions out there that we need to develop
7 standards for. So the information is gathered at
8 the state level rather than at the region level
9 and the standard is developed out of those species
10 rather than species based on a region. That's the
11 approach we take.

12 BY MS. ZEMAN:

13 Q. Again, not wanting to be
14 argumentative, but doesn't the dissolved oxygen
15 standard have a difference between the northern
16 part of the state and the southern part of the
17 state?

18 MR. SOFAT: I believe so. I think I
19 said something I shouldn't have.

20 MS. WILLIAMS: We'll have Brian --
21 Brian can probably -- here is the better answer.

22 THE WITNESS: We do have waters that
23 are listed as being enhanced for dissolved oxygen.
24 Those aren't necessarily based on a north to south

1 regime. It's more based on the specific habitats
2 of those waters and the organisms that they may
3 have.

4 BY MS. ZEMAN:

5 Q. Where were the critters studied for
6 the development of the chronic standard? I mean,
7 where did you collect?

8 MS. WILLIAMS: Can you clarify which
9 chronic? Are you we still talking about boron?

10 MS. ZEMAN: Boron, yes.

11 BY THE WITNESS:

12 A. Again, these tests are conducted
13 under laboratory conditions. For boron, I believe
14 we tested hyalella azteca which is a native
15 benzoic crustacean. I believe those were
16 collected in a stream and Dr. Klocek of the
17 Illinois Natural History Survey he has an ongoing
18 brew going on in his lab. For ceriodaphnia and
19 fat head minnow, the same can be said. He has
20 cultures of those organisms and, again, those
21 tests are conducted under laboratory conditions.
22 They're not necessarily conducted in the field.

23 MR. RAO: Do those species that were
24 selected for the study represent the state waters?

1 THE WITNESS: Yes, they do. I was
2 going to clarify that. For the boron standard,
3 the most sensitive species in the database are all
4 species that would reside in all waters throughout
5 Illinois. Fat head minnow is found throughout the
6 state. Hyalella azteca is as well. Well,
7 ceriodaphnia dubia is common throughout the state.
8 These aren't unique species that would apply only
9 to a specific region of the state.

10 MS. ZEMAN: Very good. Thank you.

11 BY MS. ZEMAN:

12 Q. Turning then to page three of the
13 pre-filed questions. In the statement of reasons,
14 the Illinois EPA states that in every site
15 specific water quality standard or adjusted
16 standard brought before the Board, Illinois EPA
17 concludes that no reasonable treatment exists to
18 reduce boron in effluents. And in the facts on
19 page two, it basically says that treatment to
20 remove boron is nonexistent. Is that still the
21 conclusion of the Illinois EPA here today in
22 support of the proposed water quality standards
23 for boron?

24 A. We're not stating that removal

1 technologies are nonexistent. In the attachment
2 one, we did state nonexistent, but we were
3 speaking in terms of common treatments used to
4 precipitate out metals such as lime precipitations
5 that's known to remove manganese, but more boron
6 it doesn't precipitate out.

7 So the nonexistence treatment
8 that was in terms of typical treatments that would
9 be done under perhaps an ash pond situation
10 whether -- where you can't utilize other
11 treatments.

12 Q. Does that then support your
13 statement that there is no reasonable treatment
14 that exists to reduce boron in effluents?

15 A. There may be reasonable treatment
16 under certain conditions, but based on past site
17 specific rulemaking, we have determined that there
18 were no reasonable treatment alternatives under
19 those specific cases.

20 Q. I think one of your examples was
21 reverse osmosis?

22 A. Correct.

23 Q. And you explained that is a very
24 costly and expensive process?

1 A. It's costly and it generates a high
2 volume of waste that needs to be disposed of.

3 Q. Besides the existing site specific
4 standards or adjusted standards, what additional
5 information did the Illinois EPA review in
6 determining the technical feasibility of reducing
7 boron?

8 MS. WILLIAMS: Which pre-file -- is
9 this one of them?

10 MS. ZEMAN: I'm on C on the top of
11 page three.

12 BY THE WITNESS:

13 A. We didn't necessarily research this
14 since the boron standard was becoming less
15 stringent.

16 MS. BASSI: But is the boron
17 standard that you're proposing less stringent even
18 then all of the adjusted standards or site
19 specific rules?

20 THE WITNESS: No, it is not.

21 MS. BASSI: Thank you.

22 BY MS. ZEMAN:

23 Q. Having already looked at the part of
24 my questions that address the literature review

1 I'm now on C on page three, basically, with
2 respect to how you determine the averaging period
3 for the proposed chronic standard for boron.
4 Would you agree that there is not now a chronic
5 standard for boron in the state regulations?

6 A. That is correct.

7 Q. And in the 1985 guidelines, it
8 references that the appropriate averaging period
9 is to take into consideration what they refer to
10 as the fluctuating concentrations that usually
11 exist in the world and then they talk about the
12 four day averaging period enabling the design of
13 waste water treatment plants because that's who
14 would normally be working to meet an effluent or
15 water quality standard and then it makes reference
16 to an averaging period being developed in relation
17 to what they call the criterion continuous
18 concentration. Do you know what the criterion
19 continuous concentration is or what it refers to?

20 A. The criterion continuous
21 concentration is actually the chronic standard
22 that we developed for boron in this case.

23 Q. Is that just another word for
24 chronic standard?

1 A. Correct.

2 Q. And given what I just explained
3 about the -- that averaging is actually developed
4 in the context or that the guidelines mention that
5 averaging is developed in the context of enabling
6 the design of a waste water treatment system and
7 yet we don't have waste water treatment for boron,
8 how did the Illinois EPA determine that a four day
9 averaging period was proper for boron?

10 A. We didn't make a specific
11 determination that the four day averaging period
12 was appropriate for boron, but I just want to
13 clarify that the four day averaging period is
14 simply to determine attainment or compliance with
15 the standard. It doesn't have anything to do with
16 actually determining what the chronic standard
17 should be, but basically a four day averaging
18 period is what was recommended in the 1985
19 guidelines because it's understood that over a
20 chronic exposure you can have instances where a
21 concentration can exceed the chronic standard, but
22 would not exert an effect on an organism.

23 Q. And is there any magic in a four day
24 period other than that's what the 1985 guideline

1 recommends?

2 A. I believe there's some additional
3 justification in that document, but the primary
4 point I took from that is that the four day
5 average protects the early life stages of
6 organisms that are tested during a chronic test.
7 So, for example, for a 32 day chronic fat head
8 minnow test, the early life stages or the
9 embryo-larval stages, days zero through four,
10 those are most likely the most sensitive stages of
11 that test. So the four day average is still
12 appropriate to protect that life cycle of that
13 organism.

14 MS. BASSI: Does that suggest then
15 that these four days have to be in a row?

16 THE WITNESS: They do have to be in
17 a row.

18 MS. BASSI: Is that stated in the
19 proposed rule?

20 THE WITNESS: No.

21 MS. BASSI: How do we know that
22 then?

23 MS. WILLIAMS: Maybe we should just
24 clarify. When you said they have to be in a row,

1 did you mean they have to be in a row for the
2 aquatic organisms or in the standard?

3 THE WITNESS: I was referring to
4 there has to be four samples in a row for an
5 effluent sample to determine compliance.

6 MS. BASSI: So on Monday, Tuesday,
7 Wednesday, Thursday you have to collect a sample
8 to show compliance with this standard?

9 THE WITNESS: Correct, but the
10 samples do not have to be taken on consecutive
11 days necessarily. You could take one sample every
12 week for a month and determine that off of those
13 four samples during that month the chronic
14 standard was or was not met.

15 MS. BASSI: Could you take a sample
16 one day in four months?

17 THE WITNESS: It's based on the
18 permit limits that are within your permit. We
19 would probably recommend at least one sample per
20 month for a permit limit.

21 MS. BASSI: For the chronic
22 standard, okay, if you're taking one sample per
23 month to comply then with the chronic sample, the
24 chronic standard, could you take one sample in

1 January, one in February, one in March, one in
2 April and then average those? Those would be four
3 days worth of samples.

4 THE WITNESS: In a surface water
5 quality standard setting such as when our field
6 staff goes out and survey --

7 MS. BASSI: I'm sorry. My
8 apologies. Lately, I've done only air.

9 THE WITNESS: That's fine.

10 MS. BASSI: I'm trying to understand
11 this.

12 THE WITNESS: Let me clarify this.
13 The four day average is primarily used for surface
14 water section when they go out and actually
15 monitor the streams. So, for example, we have
16 ambient stations that samples are collected once
17 every month on average. They average those four
18 months consecutively and determine whether or not
19 that chronic standard is met. Now, for an NPDES
20 permit for a chronic standard, we would enforce a
21 30 day average as being the chronic standard.

22 So, for example, if you have a
23 permit limit for boron, you would have a limit of
24 7.6 mg/L to be met on a 30-day average. I believe

1 we would only require a minimum of one sample and
2 if your sample was 7.5 you would be compliant with
3 that standard. If you had a sample above 7.6, you
4 would be noncompliant, but the discharger can
5 collect additional samples during that month to
6 show that they did reach compliance.

7 MS. BASSI: Does the rule or is
8 there some other rule that makes a reader or a
9 company know that this must be done on a 30 day --
10 that compliance is a 30-day compliance time period
11 as opposed to something shorter or longer?

12 THE WITNESS: I don't know if the
13 permits will specify that additional samples can
14 be taken, but I do know the permit will specify
15 the number of samples required for each parameter.

16 MS. BASSI: That's the permit.
17 Where does the -- where is the authority for that
18 in the permit?

19 MS. WILLIAMS: Object. That's going
20 to be a legal conclusion if you're asking for the
21 authority.

22 MS. BASSI: I'm asking for where it
23 says in the rule which is part of the permit.

24 MS. WILLIAMS: It's a different

1 question.

2 THE WITNESS: Repeat your question.

3 Can you repeat your question, please?

4 MS. BASSI: Where in the rule does
5 it say that compliance is based on a 30-day
6 timeframe?

7 MS. WILLIAMS: Where in what rule?

8 MS. BASSI: Any rule. Any rule that
9 pertains to this boron standard.

10 THE WITNESS: I'm not aware of where
11 that would be stated.

12 MS. BASSI: Thank you.

13 MR. RAO: Does Section 302.208(b)
14 provide the guidance for the Agency to set the
15 duration for compliance with the chronic
16 standards?

17 THE WITNESS: Yes, it does.

18 MS. CROWLEY: Ms. Bassi?

19 MS. BASSI: It says any period of at
20 least four days and this is where my confusion
21 derives from because to me any period of at least
22 four days could be four months, four years.

23 MS. WILLIAMS: Maybe I can ask. Can
24 I ask a couple clarifying questions? Maybe that

1 would help. I don't want to -- first of all,
2 Mr. Koch, do you write permits?

3 THE WITNESS: No, I do not.

4 MS. WILLIAMS: Just based on your
5 general knowledge, do you know in NPDES permits is
6 there a requirement to submit regular monitoring
7 reports to the Agency and how often those are
8 submitted? Do you know? If you don't know, you
9 don't know.

10 MS. CROWLEY: I don't know really is
11 an acceptable answer.

12 THE WITNESS: I'm not certain how to
13 answer that.

14 MS. WILLIAMS: Do you know how
15 permit limits are determined as 30-day single
16 sample permits?

17 THE WITNESS: Yes. A 30-day limit
18 is going to be equivalent to the chronic standard
19 for a substance.

20 MS. WILLIAMS: Why?

21 THE WITNESS: Because a chronic
22 standard is meant to protect organisms from a
23 chronic effect rather than a one sample effect.

24 MS. BASSI: Why is a chronic effect

1 30 days as opposed to 180?

2 THE WITNESS: Because the tests are
3 developed off of the lifecycles of organisms.

4 MS. BASSI: And they only live 30
5 days?

6 THE WITNESS: Some of these test
7 organisms, yes.

8 MS. CROWLEY: If I may. I'm not
9 expecting an answer right at this moment, but I
10 think the nature of Ms. Bassi's question is could
11 the rules establish the period with more
12 specificity than is in the rule at present and if
13 yes, please tell us how it could be amended. If
14 no, please tell us no. If you're not comfortable
15 answering it now, that's fine. If you can or if
16 you want to start, please do.

17 THE WITNESS: We have not determined
18 that any water quality standard should be applied
19 to anything more than a four day average. So, for
20 boron, we wouldn't suggest taking a yearly average
21 because if you're taking a sample once per month
22 for twelve month terms, the first four months
23 would be above 7.6 and that would be toxic. The
24 last eight months could be well below 7.6. That

1 would be nontoxic, but the toxicity would occur
2 within the first four months. So we would not
3 recommend a one-year average given that the
4 lifecycles and the reproduction of these organisms
5 occur over a shorter period of a year.

6 BY MS. ZEMAN:

7 Q. Just to follow up just a little bit
8 and hopefully clarify the record in some respects.
9 The proposed water quality standards are for the
10 streams themselves, they are not an effluent
11 limit, isn't that correct?

12 A. That is correct. They are surface
13 water quality standards, but these water quality
14 standards are used in NPDES permitting.

15 Q. And as proposed, there is no
16 requirement in the proposed regulation that any
17 discharger or anyone has to collect samples to
18 determine the chronic standard?

19 A. Can you please rephrase that?

20 Q. Yes. The rule itself separat and
21 apart from the NPDES permit in the proposed water
22 quality standard for boron, there is no
23 requirement that any entity has to collect samples
24 to determine the chronic -- whether they are in

1 compliance with the chronic standard?

2 A. I don't believe that is stated in
3 302.208 where the boron standard is located.

4 Q. Normally, that would come in the
5 NPDES permit in the dischargers effluent limits,
6 isn't that correct?

7 A. Correct.

8 MS. BASSI: Is it sometimes the case
9 that the water quality is -- I'm saying this
10 wrong. Is it sometimes the case where a stream is
11 so low flow that the only flow in it is the
12 effluent?

13 THE WITNESS: Correct.

14 MS. BASSI: So, in essence, the
15 water quality standard has to be met at the
16 effluent?

17 THE WITNESS: That is correct.

18 MS. CROWLEY: Thank you.

19 Ms. Steinhour?

20 MS. STEINHOURL: Beth Steinhour with
21 Weaver Boos Consultants. I have a question.
22 Isn't it correct as well that if you are taking
23 water from groundwater or from other -- some other
24 stream and discharging it to a different stream,

1 that you have to account for the boron
2 concentrations in that water as part of your NPDES
3 permitting?

4 THE WITNESS: That is correct in
5 some instances, yes.

6 BY MS. ZEMAN:

7 Q. I think we've pretty much exhausted
8 my questions one, two, three on page three.
9 Turning to the top of four and question number
10 four. It, again, has been referenced to the
11 development of the chronic standard for boron and
12 the guidelines discuss that some exceedances are I
13 believe the word is probable and kind of allowed
14 because of the notion that, quote, most aquatic
15 ecosystems can probably recover from most
16 exceedances in about three years. That guidance
17 then goes onto state that in some site specific --
18 and the way the guidelines use site specific,
19 correct me if I'm wrong, but they're talking about
20 a state standard, often a state standard because
21 the guidelines are for national standards
22 generally.

23 It then states that some then
24 are justified to include what they call

1 frequencies of allowed exceedances. Does the
2 standard that Illinois EPA proposed for chronic
3 include frequencies of allowed exceedances in the
4 standard that was developed?

5 A. No, we do not allow a frequency of
6 allowed exceedances.

7 Q. Is that actually a number that may
8 be plugged in or something like that if you know?

9 A. No, I'm not aware of what other
10 states do in regards to the frequency of allowed
11 exceedances. In Illinois, we don't allow that for
12 any standard.

13 MS. BASSI: Why is that?

14 THE WITNESS: Well, the guidelines
15 state it takes three years to recover, for a
16 stream to recover, but we don't -- we wouldn't
17 allow toxicity to occur in a stream every three
18 years and allow someone to adversely affect a
19 receding water just because we know it could
20 replenish itself in three years.

21 BY MS. ZEMAN:

22 Q. In other words, Illinois EPA is more
23 protective than what the guidelines are suggesting
24 in some respects?

1 A. Perhaps in some respects, but I'm
2 not aware of what other states do in regards to
3 this language in the '85 guidelines. I'm not sure
4 of how many states allow these frequencies to
5 occur.

6 Q. That's fine. Thank you. Moving
7 onto the question of technical feasibility and
8 economic justification for the proposed standard.
9 I believe that the Illinois EPA has stated that
10 the standards are in part based upon the site
11 specific rules and adjusted standards that exist
12 for boron?

13 MS. WILLIAMS: I'm going to object
14 to that. I don't believe we've said that. So if
15 you want to point to a cite where we've said that.
16 Maybe we should read more directly.

17 MS. ZEMAN: It would be in the
18 statement of reasons at pages 25 to 26 the
19 conclusion that Illinois EPA made regarding that
20 there is no reasonable treatment for boron and,
21 therefore, that the proposal is reasonable was
22 based on the Illinois EPA's review or position in
23 every site specific water standard or adjusted
24 standard brought before the Board.

1 MS. WILLIAMS: Okay. What
2 conclusion are you saying? I see the quote, in
3 every case besides specific water quality
4 standards that come before the Board --

5 MS. ZEMAN: That there is no
6 reasonable treatment exists to reduce boron --

7 MS. WILLIAMS: Right.

8 BY MS. ZEMAN:

9 Q. So is that part of the support for
10 the EPA's statement that the proposed standard for
11 boron is technically feasible and economically
12 justified?

13 MS. WILLIAMS: Is this one of the
14 pre-filed? I don't think it is. This is not
15 directly a pre-filed question, correct?

16 MS. ZEMAN: No, it's kind of a
17 combination.

18 MS. WILLIAMS: That's fine.

19 BY THE WITNESS:

20 A. Can you restate the question,
21 please?

22 MS. WILLIAMS: Do you want him to
23 read it back?

24 THE WITNESS: I'd appreciate it.

1 Thank you.

2 (Whereupon, the record was read
3 as requested.)

4 MS. WILLIAMS: And, by that, you
5 mean this statement at the bottom of page 24 going
6 onto 25?

7 MS. ZEMAN: Correct.

8 MR. SOFAT: Okay. Let me try. What
9 we did do is we look at the Board's opinions and
10 orders as part of our justification what we are
11 proposing is whether that's economically
12 reasonable or not, technically feasible. So since
13 we are -- the standard that we are proposing is
14 much higher than the existing standard so we are
15 concluding that in most of the cases it is going
16 to be economically reasonable and technically
17 feasible. Not in every case, but in general. In
18 most of the cases. So that's the conclusion we
19 are trying to draw there.

20 MS. ZEMAN: Maybe I can jump through
21 a lot of these questions then and just kind of get
22 to the bottom line of my question. You
23 specifically said that it would apply in most
24 cases it would be technically feasible and

1 economically justified because the standard you're
2 seeking is much higher than the existing standard
3 in most cases most entities could therefore
4 comply, but not all?

5 MR. SOFAT: True.

6 MS. ZEMAN: Wouldn't you agree that
7 CWLP may be in the position of not being able to
8 meet the proposed chronic standard?

9 MR. SOFAT: Yes.

10 MS. ZEMAN: And, therefore, is the
11 Illinois EPA actually in a position to testify
12 here that this chronic standard is not
13 technologically feasible or economically justified
14 as to our one entity?

15 MR. SOFAT: The real question is --
16 okay. Let's start with this. Technology does
17 exist. The question becomes in every given case
18 whether it is economically reasonable. So my
19 understanding is in R09-8 the economic analysis
20 that was done by CWLP was to show compliance with
21 one mg/L.

22 In this case, since we are
23 proposing the new standard to be 7.6 mg/L unless I
24 believe the Agency sees economic analysis that

1 shows that CWLP cannot -- is not economically
2 reasonable for CWLP to comply with 7.6 I believe
3 we can't make that conclusion today and as there
4 is no such analysis before the Agency, I don't
5 think we can make that conclusion today.

6 MS. ZEMAN: Let me just jump a
7 little bit to one of my questions that I did ask
8 and that is with respect to the pre-filed
9 testimony -- I'm sorry. The pre-filed questions
10 which is now Exhibit 3. Attached to the pre-filed
11 questions was an exhibit from R09-8 where relief
12 was requested which would enable the
13 Metropolitan -- excuse me -- the Springfield Metro
14 Sanitary District to accept part of CWLP's waste
15 stream to actually move it from our ash pond to
16 the water treatment system so that it's removed
17 from the ash pond to enable the ash pond to meet
18 the 11 mg/L that was originally approved by the
19 Board in the 1994 adjusted standard and attached
20 is an exhibit that specifies all of the
21 alternatives that CWLP considered, some that it
22 actually tried, their costs, which were effective
23 and which were not even effective to reduce boron
24 including for reasons like Mr. Koch stated that

1 the material that it developed, the bi-products
2 that it developed, was so voluminous or costly to
3 deal with. Mr. Koch, have you had a chance to
4 review this exhibit?

5 THE WITNESS: I haven't reviewed it
6 in detail. I was not involved in the previous
7 site specific rulemaking. So I hadn't been aware
8 of this until the pre-filed comments for this
9 hearing, but I have looked over it briefly.

10 MS. CROWLEY: We are looking at a
11 document that is headed Boron Mitigation Options
12 Table.

13 MS. ZEMAN: Yes.

14 BY MS. ZEMAN:

15 Q. Having looked at it briefly instead
16 of in great detail I note there's a lot of
17 information there. As you sit here now, is there
18 anything that you can -- that Illinois EPA may
19 have considered before testifying today that CWLP
20 could implement or attempt to meet the chronic
21 standard that is proposed by Illinois EPA here?

22 A. No, I'm not aware of any additional
23 treatment technology that would need to be studied
24 by Springfield.

1 MS. ZEMAN: Thank you very much,
2 Mr. Koch.

3 MS. CROWLEY: I'm sorry. Have you
4 concluded your questions?

5 MS. ZEMAN: Yes. Thank you.

6 MS. BASSI: I have nothing more.

7 MS. CROWLEY: Yes. Ms. Steinhour?

8 MS. STEINHOOR: I have a question.
9 If you have a facility that is actually meeting
10 the one mg/L boron standard, they are implementing
11 the technology as you said, an RO system that
12 results in a tremendous amount of waste water, a
13 considerable amount of water usage and this
14 standard is in place in order to obtain a new
15 limit within the permit, will they have to go
16 through an antidegradation demonstration or will
17 they be able to obtain relief through the new
18 standard?

19 MR. SOFAT: My understanding is the
20 standard is a separate part of water quality
21 standards. So as far as demonstration is
22 concerned, it stands because meeting the water
23 quality standards is not the objective of
24 antidegradation. Antidegradation is more than

1 meeting --

2 MS. STEINHOOR: So they could get
3 relief without having to make a demonstration as
4 to why it's no longer feasible or economically
5 reasonable or technically feasible to implement
6 the treatment methodology they're doing right now?

7 MR. SOFAT: I'm sorry. So the first
8 part of the question was more about the
9 application of antidegradation?

10 MS. STEINHOOR: Right.

11 MR. SOFAT: In this question, are we
12 moving away from that question and the focus is
13 more on --

14 MS. STEINHOOR: What type of --
15 since it's the Agency that made the determination
16 that the standards you're proposing are protective
17 of the watershed, can they come in and seek relief
18 under the new standard and what type of a
19 demonstration and showing would they have to make?

20 MR. SOFAT: What would be the basis
21 for that relief? Why would somebody want relief?
22 I guess that would be my first question.

23 MS. STEINHOOR: Because using an RO
24 system has a tremendous amount of expense

1 associated with it, a lot more chemical usage, a
2 lot more water usage. So from an overall water
3 treatment perspective to use a second RO for the
4 sole purpose of backing out the boron in the water
5 that is naturally occurring, it's not anything
6 that they're adding, it's just there?

7 MR. SOFAT: The Board has authority
8 to grant relief, not the Agency. So I would say
9 we will look at the facts of a given case and
10 provide our recommendations accordingly to meet
11 the requirement of the act.

12 MS. STEINHOOR: They have a permit
13 and if the standard is one mg/L and they want
14 coverage under the new standard, can they do that
15 through the permitting process?

16 MR. SOFAT: I think the Board has
17 asked a similar question and I can respond then or
18 I can proceed now. However you want to proceed.

19 MR. RAO: Just to keep it together
20 you might as well respond.

21 MR. SOFAT: Okay. Assuming that the
22 proposed rule has become effective, at that point,
23 what we will do is that during the permit process
24 we'll look at each and every case to make sure

1 that issues such as antibacksliding are not
2 effected. So even though the Board has, let's
3 say, approved and EPA has approved, the Board has
4 promulgated this rule, we still have to make sure
5 during the permit writing process that issues such
6 as antibacksliding are considered so that our
7 final action is consistent with the state and
8 federal regulations, is that your question?

9 MS. STEINHOOR: Yes. Do you have
10 any idea as far as how you would make that --
11 because the antibacksliding this is clearly a
12 situation where they have a one mg/L limit and
13 they want to get relief from that? I mean, from
14 an overall.

15 MS. WILLIAMS: I think we should be
16 careful. I think when you're using the word
17 "relief," a lot of people are getting very
18 confused to think that you mean relief from the
19 Board like some type of assistance.

20 MS. STEINHOOR: I'm sorry. Just
21 additional flexibility.

22 MS. WILLIAMS: Thank you.

23 MR. RAO: Sanjay, your response was
24 to our question number six?

1 MR. SOFAT: Yes. I'm not sure if I
2 can go into great detail to respond to that
3 question. What I can say is we will look at the
4 facts. Is there expansion? Look at the
5 compliance history. Things like that. And see if
6 you're easily complying with that. Most likely,
7 we're going to say you can meet this one existing
8 limit and, therefore, under antibacksliding, but,
9 again, these are very general responses I'm giving
10 you without looking at the facts.

11 Q. Is there a guidance document that
12 provides any more information concerning the -- is
13 there a guidance document that provides any
14 additional information that we can review
15 concerning the antibacksliding issue?

16 MR. SOFAT: I'm not aware of that,
17 but we can look into it and if we have, then we
18 can provide the Board information on that.

19 MS. CROWLEY: Thank you.

20 (Whereupon, a break was taken
21 after which the following
22 proceedings were had.)

23 MS. CROWLEY: Let's go back on the
24 record and I think when we left Mr. Rao was going

1 to ask the follow-up questions that are left.

2 MR. RAO: Yes. Are we ready to go?

3 (Whereupon, a discussion was had
4 off the record.)

5 MS. CROWLEY: Back on the record.

6 I'll mark as Exhibit 4 the June 14th, 2011,
7 Hearing Officer order that has the questions from
8 the Board's staff starting at page two just so
9 we've got that. Go ahead, Mr. Rao.

10 MR. RAO: We were on question number
11 six of the pre-filed questions. Has the Agency
12 already, or can it, easily identify any current
13 adjusted standards, variances or site specific
14 rules that would become moot as a result of the
15 proposed amendment? Would they become moot --

16 MS. WILLIAMS: We prepared an
17 exhibit in response to this question if that would
18 help.

19 MS. CROWLEY: Thank you. That's
20 delightful.

21 MS. WILLIAMS: We did it a little
22 quickly so --

23 MS. CROWLEY: We'll mark and admit
24 as Exhibit 5 the Illinois EPA's one-page document

1 that is titled Response to Pollution Control Board
2 Question 6. Let me just ask Ms. Williams.
3 Perhaps our Board question could have been
4 clearer, but the part that is talking about become
5 moot on its face, what did you mean?

6 MS. WILLIAMS: So I guess I'll give
7 the legal answer if I don't have to be sworn in
8 just to say by definition the actual number that
9 they've requested in the relief is higher than the
10 chronic standard.

11 MS. CROWLEY: That's what we meant,
12 but we just want to be sure we were talking the
13 same --

14 MS. WILLIAMS: Or lower. I'm sorry.
15 I should have said lower. I think I got that
16 backwards. So based on the relief that was
17 granted, it would no longer be necessary whereas
18 the next -- our list of standards that -- based on
19 mixing zones are analysis of actual data would not
20 be necessary, but not based on the wording.

21 MS. CROWLEY: Thank you.

22 MR. RAO: And the follow up to the
23 question was --

24 MS. CROWLEY: Yes.

1 MS. BASSI: I notice that Southern
2 Illinois Power Cooperative is not on the list
3 anywhere. Do you have -- does the Agency have a
4 position regarding SIPC?

5 MS. WILLIAMS: It was the Agency's
6 position in the statement of reasons that they
7 should be on the bottom list, but your client has
8 come to the Agency since and expressed that they
9 didn't think they -- in their opinion, they can't
10 comply. So that was our reason for leaving it off
11 the list.

12 MS. BASSI: Thank you.

13 MR. RAO: Okay. What, if any,
14 measures does the Agency typically take to notify
15 the effected parties of the impact of the rule
16 changes on the Board orders covering them? Will
17 you call in those permits or will it be done on a
18 regular, remedial cycle for those permits?

19 MR. SOFAT: We usually don't just
20 call and say there's a new standard and,
21 therefore, from now on you're going to meet that.
22 As I tried to explain before the break, we have to
23 take other factors into concentration before we
24 can actually say, yes, the new limit applies to

1 your discharge. So the process that we have used
2 in the past is whenever the permit comes up for
3 renewal modification that we will look at this
4 issue at that time and, you know, depending upon
5 the facts, whatever is the right answer in terms
6 of whether they still meet the existing number or
7 do they get a different number because of the
8 rulemaking, new adopted water quality standards,
9 we will at that point be in discussions with the
10 permitting.

11 MR. RAO: And if the Agency believes
12 that some of these subjective standards are no
13 longer necessary, will there be some time in the
14 future an opportunity to repeal these existing
15 standards maybe in the next triennial review?

16 MR. SOFAT: I believe so.

17 MR. RAO: This other related
18 question we have is expressed in seven. It was
19 regarding testimony filed by Marathon Petroleum
20 Company about the compliance schedule. Basically,
21 Marathon had -- or the Board proceed expeditiously
22 as possible stating they had a 15-month compliance
23 schedule in their NPDES permit. Would the Agency
24 please comment on whether the time provided in

1 Marathon's NPDES permit for compliance can be
2 extended by the Agency if this rule is not adopted
3 before Marathon's compliance requirement goes into
4 effect?

5 MR. SOFAT: Sure. The Agency does
6 not consider pending rulemaking as one of the
7 factors in determining whether or not the
8 extension of the compliance schedule is warranted.
9 The factors that we usually do take into
10 consideration are, but not limited to how much
11 time the discharger has already to meet the water
12 quality standard under prior permits, the extent
13 to which the discharger has made good faith
14 efforts to comply with the water quality standards
15 and other requirements in its prior permits. So
16 it really -- this is just not one of the factors
17 that we can consider to extend an existing
18 compliance schedule.

19 MR. RAO: Thank you.

20 MS. ZEMAN: Before moving on from
21 Exhibit No. 5, may I direct a question to the
22 Illinois EPA? Regarding the last list of matters,
23 you have site specific relief that should no
24 longer be necessary based on an initial analysis

1 with available information and under boron City of
2 Springfield Spring Creek SPP, may I suggest that
3 should actually be the Springfield Metro Sanitary
4 District Spring Creek Sanitary Treatment Plant?
5 City of Springfield does not have a waste water
6 treatment plant, per se. It's of a separate unit
7 of government which was the copetitioner in R09-8.
8 Thank you.

9 MS. WILLIAMS: That's the kind of
10 error I apologize ahead of time.

11 MS. CROWLEY: We were discussing
12 that in correction to Exhibit No. 5 and if there
13 is one that we want to formally make I'll ask that
14 we make it on the document and then initial it
15 later just as I'm going to ask Mr. Koch if you'll
16 initial the change he made in his exhibit, but
17 that we can do at the end. Thanks.

18 MS. WILLIAMS: No objection.

19 MS. CROWLEY: Go ahead, Mr. Rao.

20 MR. RAO: I'll continue starting
21 from our question number one. This relates to the
22 STORET numbers. The Agency proposes to delete the
23 STORET codes because they are no longer maintained
24 and updated by US EPA according to the statement

1 of reasons at page ten and eleven. Based on the
2 background information we provided you in our
3 pre-filed question, it appears that US EPA is
4 continuing to use a modernized STORET system.
5 Could you please comment on the appropriateness of
6 continuing to use the STORET numbers within the
7 new STORET system and the compatibility with the
8 existing STORET numbers and the existing in the
9 proposed rule at 35 Ill. Adm. Code 302?

10 THE WITNESS: Yes. US EPA is
11 continuing the use of a modernized STORET system.
12 However, this modernized system does not allow
13 upload or retrieve data using a STORET code. The
14 legacy STORET system which you still can access,
15 you can still access by using the STORET code, but
16 you can also use by entering the parameter name.
17 So since the legacy stored data can still be
18 retrieved without the STORET code, we determined
19 it's somewhat absolute.

20 MR. RAO: So you can use the name of
21 the constituent and get the information?

22 THE WITNESS: Exactly.

23 MR. RAO: Thank you for the
24 clarification. Our second question deals with the

1 numeric standards for chemical constituents.
2 Question 2(a), what is the typical hardness value
3 of Illinois streams?

4 THE WITNESS: The average hardness
5 concentration for Illinois streams is
6 approximately 298 mg/L and that number I'm giving
7 you is based off of ambient data that we
8 researched during the sulfate rulemaking. That
9 data was collected from 1999 to 2004.

10 MR. RAO: Okay. And question B, we
11 had requested the Agency to use the typical
12 hardness value to calculate the proposed acute and
13 chronic water quality standards for fluoride,
14 manganese and zinc.

15 THE WITNESS: Yes. The proposed
16 fluoride standard would be 18.1 mg/L on a chronic
17 basis and 4 mg/L -- excuse me. 18.1 mg/L on an
18 acute basis. 4.0 mg/L on a chronic basis. For
19 manganese, the standards would be 9.6 mg/L on an
20 acute basis. 4.1 mg/L on a chronic basis and for
21 zinc the acute standard would be 0.31 mg/L on an
22 acute basis and 0.08 mg/L on a chronic basis and,
23 again, these are based off of the 298 mg/L
24 hardness value.

1 MR. RAO: What is the highest
2 hardness value for the proposed fluoride chronic
3 standard in 35 Ill. Adm. Code 302.208(e), yielding
4 a result that does not exceed 4 mg/L?

5 THE WITNESS: That would be 64 mg/L
6 hardness.

7 MR. RAO: Following up on subsection
8 D. The Agency indicates critical hardness
9 concentrations in Illinois water are rarely less
10 than 90 mg/L and no ambient water quality
11 monitoring in that station are known to possess
12 typical hardness of less than 45 mg/L, statement
13 of reasons at 28.

14 Generally speaking, what number
15 or percentage of the monitoring stations exhibit a
16 hardness value yielding a result under Section
17 302.208(e) that does not exceed 4.0 mg/L fluoride?

18 THE WITNESS: Based on Exhibit S of
19 attachment one to the statement of reasons, 2 out
20 of 210 stream network stations that we have
21 critical hardness values for, two out of the 210
22 streams would have fluoride standards that are
23 lower than 4 mg/L on a chronic basis. So it's
24 roughly one percent of the ambient stations that

1 would have chronic standards of less than 4 mg/L.

2 MR. RAO: So looking at that, the
3 majority of the stations will be about 4 mg/L?

4 THE WITNESS: Yes. Again, these are
5 simply based on our ambient stations. If there
6 were a discharger in a stream segment that we did
7 not have an ambient station nearby, we would use
8 the hardness from that stream to determine the
9 fluoride standard. So there is a potential for
10 other streams out there to have low hardness that
11 would result in fluoride standards lower than 4
12 mg/L, but, again, based on our broad observation
13 of the state roughly one percent will have low
14 hardness.

15 MR. RAO: So will -- the majority of
16 the state waters will have levels about chronic
17 standard for typical hardness in the state?

18 THE WITNESS: Can you state that
19 again, please?

20 MR. RAO: Sorry. Will the majority
21 of the waters in the state, will they have chronic
22 standards for fluoride above the chronic standard
23 if you use typical hardness in the calculation?

24 THE WITNESS: Yes. Based on

1 reviewing all the ambient data, it seems that most
2 streams, approximately 99 percent of the streams,
3 would need to meet a 4 mg/L standard for fluoride.
4 Only roughly one percent would be subject to a
5 more stringent limit that is less than 4 mg/L.

6 MR. RAO: Thank you. Question 2(e),
7 by correcting the derivation of the zinc water
8 quality standard in Section 302.208(e), does the
9 Agency expect zinc standards to yield higher
10 values?

11 THE WITNESS: Yes. At the average
12 hardness concentration in Illinois, which is 298
13 mg/L, the current chronic standard is 0.055 mg/L
14 of zinc and the revised chronic standard would be
15 0.08 mg/L.

16 MS. CROWLEY: May I just ask one
17 follow up?

18 MR. RAO: Yes.

19 MS. CROWLEY: Will that involve
20 permit problems for one or more sources?

21 THE WITNESS: I believe so.

22 MS. CROWLEY: Thank you.

23 THE WITNESS: We discovered the
24 error due to discharge that couldn't meet limits.

1 They were looking into ways of maybe applying for
2 a site specific standard or submitting more data
3 to try and revise the standard and that's when we
4 determined there was an error in the existing
5 standard.

6 MR. RAO: Question 2(f), proposed
7 Section's 302.208(e) and 302.504(a) list acute and
8 chronic standards for cyanide as being the same
9 for either weak acid dissociable, or WAD, or the
10 available form. Analytically speaking, is there a
11 difference in the results for the WAD and
12 available forms for an identical sample?

13 MR. SOFAT: If I may say, this is a
14 pretty good question which means I don't have a
15 good answer. What I can do is I can try to shed
16 some light on the intent. What we are trying to
17 do is we're trying to provide clarity to the
18 regular community that there are two methods,
19 acceptable methods out there that provide pretty
20 accurate determination of the toxic component of
21 cyanide and use of any of those two metrics is
22 acceptable to the Agency. Also, I think this
23 clarification gives flexibility to the regular
24 community in terms of availability of a given

1 method as well as the cost associated with that.

2 If the Board would like, we can
3 provide a written response to the actual question.

4 MR. RAO: It would be appreciated
5 if you could. And also the last part of the
6 question where you say should there be different
7 compliance standards depending on the method used.

8 MR. SOFAT: Sure.

9 MR. RAO: Question three. This
10 relates to Public and Food Processing Water Supply
11 Standards. In the statement of reasons, the
12 Agency states because manganese often occurs in
13 Illinois concentrations above the existing water
14 quality standards, the Public and Food Processing
15 Water Supply Standards is exceeded in many surface
16 waters with public water supply intake and
17 Illinois EPA has been forced to list these waters
18 on the Clean Water Act Section 303(d) list in the
19 statement of reasons at five.

20 Would it be possible for the
21 Agency to provide a list of water segments with
22 public water supply intakes that exceed the
23 current manganese water quality standard?

24 MS. WILLIAMS: Mr. Koch, I've handed

1 you a document with the title List of Water
2 Segments Listed As Impaired On The Draft 303(b)
3 List Public and Food Processing Water Supply
4 Standards Use Due to Manganese Present in Excess
5 of 150 m/L, have you seen this before?

6 THE WITNESS: Yes, I have.

7 MS. WILLIAMS: Can you identify what
8 it is?

9 THE WITNESS: It is a document that
10 I compiled which outlines all the impaired public
11 water supplies on the draft 2010 303(d) list due
12 to manganese.

13 MS. CROWLEY: We will mark and admit
14 that as Exhibit 6 and I'm just going to add the
15 initials IEPA list before the typed material.

16 MR. RAO: Please comment on whether
17 the Agency believes that all of the effected
18 waterways could no longer be listed as impaired
19 for manganese with the option of proposed
20 manganese standard?

21 THE WITNESS: It takes some
22 considerable research to look at the data that was
23 used in the 2010 list, but based on the data I
24 researched back in 2009 when I initially

1 researched this manganese issue, it seemed like
2 every waterbody segment except for 0-20 of the
3 Kaskaskia River would be delisted. So based on
4 the subset of data I had looked at in 2009 only
5 that segment of the Kaskaskia River had a result
6 of greater than one mg/L manganese.

7 MR. RAO: So regarding this
8 particular segment Illinois 0-20, is the Agency
9 aware of whether the public water supply which
10 draws water from the segments -- segment treated
11 water to meet the drinking water MCL for
12 manganese?

13 THE WITNESS: I'm not certain of the
14 public water supply that actually utilizes this
15 actual segment, but when I looked at this back in
16 2009 I included a table that is included in
17 Exhibit E in attachment one to our table of
18 reasons and it shows all of the waters that were
19 located on the 2008 303(d) listed waters for
20 manganese. All of those public water supplies
21 were removing manganese down to the drinking water
22 MCL.

23 Now, whether they were actually
24 removing manganese specifically because it was

1 manganese present or if it was just a bi-product
2 of removing other things such as solids, I'm
3 uncertain, but just to --

4 MR. RAO: So -- sorry.

5 THE WITNESS: Go ahead.

6 MR. RAO: Do you believe that the
7 proposed changes to the manganese standard in any
8 way would effect the treatment operation?

9 THE WITNESS: I don't believe so.
10 Again, if you look at Exhibit E, all those
11 treatment water providers they utilize
12 conventional treatment. So they're not doing any
13 exceptional treatment. They're not using reverse
14 osmosis or lime softening. They're using basic
15 conventional treatment. I do remember contacting
16 one discharger and they weren't even aware that
17 they had manganese in absence of a drinking water
18 standard in their surface water.

19 So they weren't even aware that
20 they had a manganese problem to begin with, but
21 they were removing manganese.

22 MR. RAO: Thank you. Moving onto
23 question four, water quality standards for Open
24 Waters of Lake Michigan. In the statement of

1 reasons on page five, the Agency states relocating
2 the existing Lake Michigan basin standard of 1.0
3 mg/L of boron and 1.4 mg/L fluoride into the Open
4 Waters of Lake Michigan standards will provide a
5 measure of protection against harmful loading of
6 these substances within these waters and will
7 continue to allow the protection of these waters
8 for Public and Food Processing Water Supply users.

9 Is the Agency aware of whether
10 there's a need for any formal interstate or
11 federal cooperation in setting standards for Open
12 Waters of Lake Michigan?

13 MR. SOFAT: I will respond to that.
14 Currently, the Agency is not aware of any formal
15 process that might exist that the Agency needs to
16 follow. And, also, the Agency believes that it
17 need not follow any such process because the
18 proposed new standard for -- because it is not
19 really proposing a new standard for Open Waters of
20 Lake Michigan as the existing Lake Michigan basin
21 standards are applicable to Open Waters and that
22 is provided in Section 302.504(c) of the Board's
23 regulations.

24 However, the Agency is in touch

1 with Region 5 of the US EPA and if any such
2 informal process is identified by them, we will
3 take necessary steps to notify other states in the
4 GLI basin.

5 MR. RAO: Is the Agency aware of
6 whether there's a need for any -- okay. Is there
7 a need for any formal interstate or federal
8 cooperation on setting standards for Open Waters
9 of Lake Michigan? Did you answer this already?

10 MR. SOFAT: I just did.

11 MR. RAO: Sorry. Is the Agency
12 aware of whether boron and/or fluoride are
13 currently being discharged into Open Waters of
14 Lake Michigan?

15 THE WITNESS: I am not aware of any
16 such cases.

17 MR. RAO: Moving onto 4(c). The
18 Agency states that the Open Waters of Lake
19 Michigan standards are based on the background
20 conditions rather than protection of human health
21 or aquatic life. Is the Agency aware of the
22 background levels for boron and fluoride in the
23 Open Waters of Lake Michigan?

24 THE WITNESS: I'm not aware of

1 exactly what the background levels of boron and
2 fluoride are in the Open Waters. However, I can
3 state that, again, the standards that we're
4 proposing in the Open Waters aren't necessarily
5 new standards because the existing Lake Michigan
6 basin standards apply in those waters. So there
7 really isn't a change in protection in the Open
8 Waters in any way.

9 MR. RAO: Okay. Does the Agency
10 monitor the Open Waters of Lake Michigan?

11 THE WITNESS: I believe we do. I'm
12 not certain where the monitoring is actually taken
13 at. I'm not sure if it's in the break waters or
14 outside. We can definitely look into that.

15 MR. RAO: Great. If possible, if
16 you can take a look at those numbers and see how
17 they comply with the performance standards for
18 boron and fluoride?

19 THE WITNESS: Yes.

20 MR. RAO: Question five. This
21 relates to listing of bioaccumulative chemicals of
22 concerns derived criteria and values.

23 In Sections 302.595 and 302.669,
24 the Agency proposes to change the requirement from

1 publishing the list of bioaccumulative chemicals
2 of concerns in the Illinois Register to the
3 Agency's website. What does the Agency believe is
4 the proposed benefit to the Agency and maybe to
5 the regulated community for changing the
6 notification requirements.

7 MR. SOFAT: I'll respond to that.
8 The Agency believes that by simply requiring the
9 publishing on the Agency's website it will save
10 some resources. That's the goal of this proposal.
11 We also believe, however, that as soon as we have
12 a derived criterion we can post that on the
13 website and, therefore, it's immediately available
14 to the public and the regular community and also
15 we believe that since now when the public asks we
16 direct them to the website.

17 So this proposal pretty much
18 codifies our current practice and also it sort of
19 improves the ease of the use of this information.
20 We are sending them to the same place, over and
21 over. They're kind of aware of where to go. So
22 if we can say this is the only place where you
23 need to go, it takes out the duplication and all
24 that stuff, but, for the Agency, definitely it

1 saves some resources.

2 MR. RAO: If the change is adopted,
3 does the Agency plan to include some directions to
4 the public on how to find this list on the
5 Agency's website? Could the Agency's general
6 Internet address be included in the proposal?

7 THE WITNESS: Yeah, we could include
8 the general address in the proposed rule.

9 MR. RAO: What terms or phrase will
10 persons use to search the Agency's website for
11 this list or could that also be part of the rule
12 language where you say for bioaccumulative
13 chemicals you use this term on the Agency's
14 website?

15 THE WITNESS: We haven't considered
16 what terms someone should search for, but I did
17 access the main page of the Illinois EPA and I
18 entered derived water quality criteria and it did
19 take me directly to the derived water quality
20 criteria spreadsheet that we have on our water
21 quality standards page. Also, if you are just
22 browsing through the website and you click on
23 derived water and then go to water pollution
24 control and water quality standards, you'll see

1 where the derived water quality criteria is
2 listed. So it is relatively easy to find.

3 MR. RAO: If the rule is adopted as
4 proposed, does the Agency intend to give some sort
5 of a public notice when the Agency's website is
6 updated?

7 THE WITNESS: I don't know if we
8 were intending on giving a public notice. When we
9 would revise the derived water quality criteria
10 list, we would give a date of when it was last
11 updated and for every individual chemical that
12 there is a criterion for, we do have data listed
13 for when the criterion was initially derived, when
14 it was recalculated and my contact information is
15 on that website. If anyone has any specific
16 questions, they can contact me.

17 In the past whenever someone has
18 contacted me in regards to a criterion, they've
19 always done it by finding it on the website
20 itself. I don't believe anyone has ever said that
21 they've seen something on the Illinois Register
22 and they wanted to contact me with regards to it.

23 MR. RAO: So if someone is not
24 specifically looking for a derived criterion, they

1 will not know when you update a criterion, right?
2 Under the existing rule, Illinois Register doesn't
3 have a notice saying that the Agency has updated
4 this criteria so they can't look for what the new
5 number is, but the proposed change there's no
6 notification requirement. So instead of replacing
7 the publication in the Illinois Register, could
8 you amend the rules to allow the Agency to
9 continue by publishing it in the Illinois Register
10 in addition to updating your website?

11 MR. SOFAT: As I stated earlier, the
12 basic goal here was to save some resources and if
13 we keep both, then the purpose is defeated. I
14 believe, however, we can on our home page provide
15 some kind of notification, a way to go for newly
16 adopted water quality criteria. We can do
17 something like that if that's what the Board would
18 like.

19 MR. RAO: Something to consider or
20 maybe giving the Board information to where we
21 could publish it on our Illinois Register.

22 MR. SOFAT: We will consider those
23 options.

24 MS. CROWLEY: For whatever it's

1 worth, I'll point out that I was the Hearing
2 Officer on the R88-21 proceeding where that
3 particular publish in the Illinois Register
4 proceeding was initiated and at least part of the
5 concern there was to avoid a, quote, unquote,
6 unlawful delegation of rulemaking authority
7 challenge before JCAR and publishing in the
8 Illinois Register helped us greatly with that.
9 Removing requirements to publish in the Illinois
10 Register may raise a challenge because it appears
11 to, quote, unquote, go around the Illinois
12 Register.

13 So that's some of where our
14 questions are coming from. We appreciate what you
15 say about it being resource wise easier and
16 quicker for you to do it yourself, but looking for
17 a replacement for the Illinois Register archived
18 copies that say on such and such a date the Agency
19 changed the standard is something that it may not
20 be so easy to handle either on the website or even
21 by application of the Board's newsletter. So
22 that's where we're coming from in that regard just
23 so you know.

24 MR. SOFAT: Thank you.

1 MR. RAO: I think that's all I have.
2 Thank you very much.

3 MS. CROWLEY: Let's go off the
4 record for a minute.

5 (Whereupon, a discussion was had
6 off the record.)

7 MS. CROWLEY: We'll now proceed with
8 the pre-filed testimony of Mr. James Machen. I'll
9 ask our court reporter to swear this witness in,
10 please.

11 WHEREUPON:

12 JAMES MACHEN
13 called as a witness herein, having been first duly
14 sworn, deposeth and saith as follows:

15 MS. CROWLEY: Before we start, I
16 will mark as Exhibit No. 7 the May 26th version of
17 your prepared testimony, Mr. Machen, which is the
18 one with the revised tables if that's okay with
19 you.

20 MR. MACHEN: Yes, that's fine.

21 MS. CROWLEY: Thank you. That will
22 be Exhibit 7 and if you wish you can give us a
23 summary of your testimony or you can ask for
24 questions. Whichever you prefer, sir.

1 THE WITNESS: I will give a very
2 brief summary on this matter.

3 MS. CROWLEY: Great.

4 THE WITNESS: The existing standard,
5 that 1.4 mg/L of fluoride was adopted based on a
6 literature survey done by the California State
7 Water Quality Control Board back in 1963, some
8 staff members. It was never intended to be a
9 document for setting standards. It was merely
10 some kind of a survey that they did. Somehow it
11 got turned into a standard.

12 So clearly that is out of date
13 and what the IEPA has done, the research, the
14 studies, the laboratory studies and coming up with
15 a 4.0 standard, 4.0 maximum chronic standard, is
16 very appropriate. It looks like they've done an
17 excellent job documenting that and researching it
18 and it makes a whole lot of sense to be replacing
19 that standard of 1.4 that really is based on not
20 very much so we support that change.

21 We reviewed other jurisdictions,
22 not all 50 states, but the ones that are
23 contiguous with Illinois and some other Midwestern
24 states and a few other more distant states, nobody

1 is using a standard of 1.4. The most common
2 standard is indeed 4.0 and when we get down to
3 chronic aquatic life we've got 10.0 and there's
4 one at 2.7. Anyway, nothing lower than 1.4 or
5 equal to 1.4.

6 The question has already been
7 answered regarding the implementation schedule of
8 Marathon and we appreciate the questions and the
9 response. That's all I have to say. I will
10 answer any questions.

11 MS. CROWLEY: Does anyone have
12 additional questions? If I can just make sure
13 that I understood it, I believe the Agency stated
14 that the typical pending rulemaking is not
15 something that is considered in the context of the
16 NPDES permitting situation, but should Marathon
17 need more time, is that something that you would
18 or could address if it was brought up during their
19 specific permitting?

20 MR. SOFAT: This is something we
21 have not done in the past as far as I can tell.
22 We may have to research the issue to see whether
23 or not we have that kind of authority to consider
24 factors such as this. I understand it's time on

1 everybody's part, but we have to go over the facts
2 that we have to consider. So I'm not sure if we
3 can answer that question with a yes or no.

4 MS. CROWLEY: I was just trying to
5 make sure the question got asked in a way that
6 would be meaningful to Marathon. So I asked and
7 you answered. Thank you.

8 THE WITNESS: Thank you. Marathon
9 is taking steps and making process in reducing
10 their fluoride concentrations and wants to work
11 with IEPA with this every step of the way.

12 MS. CROWLEY: Thank you. Thank you
13 for the comments. We appreciate it. I have to go
14 back and bother Mr. Koch one more time because
15 you're on my list of things that I want to make
16 sure I understood the answer to the question. A
17 bit earlier we were talking in the context of
18 questions from CWLP and SIPC about Section
19 302.208(b), as in boy, and that is the question of
20 sampling the four consecutive samples for
21 determining the chronic standard.

22 Did I understand your answer to
23 the question to be that you would not be proposing
24 any additional changes to what you have here?

1 THE WITNESS: That is correct. We
2 are not proposing any changes to 302.208(b) as far
3 as the averaging that is required to determine
4 attainment of the standard.

5 MS. CROWLEY: Again, just to make
6 sure I understand. You would be addressing
7 questions about that for particular sources within
8 the context of the NPDES permitting system and
9 specifying sampling frequencies and so forth, but
10 in the context of, for instance, a citizen's
11 enforcement case if a citizen wanted to bring a
12 case to the Board they could pick any four
13 consecutive samples or --

14 THE WITNESS: Yes, that's correct.
15 The four day average of four consecutive samples
16 taken over any period. That is collected in order
17 to determine compliance with the surface water
18 quality standards. So, yes, a citizen could
19 collect surface water quality samples and analyze
20 those for specific parameters and determine
21 whether or not that waterbody is meeting the
22 limit. A citizen cannot collect an effluent
23 sample and provide that information. Again, the
24 effluent limits are done on a site by site basis.

1 There may be mixing involved and those
2 determinations are made by the water quality
3 standards unit in collaboration with the permit
4 Section.

5 MS. CROWLEY: Thank you. I just
6 wanted to make sure I understood it correctly.
7 Are there any additional questions?

8 MS. ZEMAN: No.

9 MS. CROWLEY: There don't appear to
10 be. Does anyone else have a public comment they
11 want to make or a question?

12 MR. SMITH: Hi. My name is Greg
13 Smith. I'm with Marathon Petroleum and I just
14 have a question about the process in terms of
15 duration of the Board's proceedings and when it
16 will be concluded.

17 MS. CROWLEY: Some of what I was
18 immediately going to go into is what happens next.
19 So let me give you what I've got and we'll see
20 what clarification I can give for you. As you
21 know, we have another hearing scheduled for July
22 26th in the Board's Chicago office. After we
23 conclude that hearing, I'll set a deadline for
24 receipt of the last written public comments.

1 According to the Board's rules, that's typically
2 14 days after receipt of the transcript. After
3 review of the hearing transcript, the public
4 comments and any other materials in the record,
5 the Board will then determine whether to adopt a
6 first notice proposal for publication in the
7 Illinois Register as required by the
8 Administrative Procedure Act.

9 At this point, I think many of
10 you know we've had a very heavy rulemaking
11 schedule between our air and water rules. I can't
12 give you an answer as to when this particular
13 rulemaking will be coming up on the list in the
14 fall, but the -- once the Board publishes a rule
15 in the Illinois Register, there's an opportunity
16 for people to ask for another hearing. If there
17 is no request for another hearing, then the
18 rulemaking can typically move along in fairly
19 quick fashion. So based on the fact that we've
20 got another month before the next hearing, another
21 14 day public comment period, the Board has to
22 have time to look at it. So that's another couple
23 of months. The time period set out by the
24 Illinois Administrative Procedure Act is another

1 shortest, 90 days. We're talking fastest, like,
2 five, six months.

3 MR. SMITH: I didn't quite
4 understand the 90 days. What is that?

5 MS. CROWLEY: The Illinois
6 Administrative Procedure Act once we publish it in
7 the Illinois Register we have to accept public
8 comments for another 45 days. Then, the Board
9 adopts what it calls its second notice of opinion
10 and order. If there have been additional public
11 comments, we consider those and discuss them in
12 the Board's opinion and order. Then, the Board
13 adopts a second notice, quote, unquote, opinion
14 and order that we send to -- we send the rule to
15 the Joint Committee on Administrative Rules for
16 them to look over it and see if we're within our
17 statutory authority and so forth. They get 45
18 days to analyze it, take it up at one of their
19 meetings. If they ask for an extension, we
20 typically give it to them, but then only after
21 JCAR looks at it can the Board go ahead to adopt
22 it and file it with the Secretary of State and
23 have it become effective.

24 So that's where that 90 day

1 figure came from, but that stretches a little,
2 too.

3 MR SMITH: So 45 days of public
4 comments --

5 MS. CROWLEY: Once the Board adopts
6 a second notice of opinion and notice, we can only
7 make changes in response to JCAR requests. So the
8 rules are pretty well firmed up by second notice.
9 Ms. Steinhour?

10 MS. STEINHOURL: How will that work?
11 I mean, with JCAR if they're finalized then will
12 the Illinois EPA have to wait for US EPA approval
13 before you'll be able to start implementing and
14 putting that in the permit?

15 MR. SOFAT: The standards do become
16 effective after the approval, yes.

17 MS STEINHOURL: Okay.

18 MS. BASSI: I'm sorry. After which
19 approval, the JCAR or US EPA?

20 MR. SOFAT: US EPA.

21 MS. BASSI: So they don't become
22 effective in Illinois until US EPA has opined?

23 MR. SOFAT: That is what the
24 40CFR130.7, I believe, states.

1 MS. BASSI: As I said, I'm air. Air
2 rules become effective in Illinois before they're
3 approved by EPA. So this is different for me.

4 MS. STEINHOOR: Do they have a
5 set -- may I ask another question? Does US EPA
6 have a set period of time when they have to
7 respond to you and if you don't hear anything it's
8 considered complete?

9 MR. SOFAT: I honestly do not know
10 that answer to that question. However, I would
11 add to my response that this standard was
12 developed in discussions with US EPA. So we do
13 anticipate when the package is sent up there,
14 there shouldn't be too many questions and the
15 process should proceed quickly.

16 MS. STEINHOOR: Okay.

17 MS. CROWLEY: For whatever it's
18 worth, I don't know if I personally agree that the
19 rules are not -- the rules adopted by the Board do
20 not become effective in Illinois upon the filing
21 with the Secretary of State, but that's -- my
22 opinion is they do. So we'll just leave that
23 there as is.

24 MR. SOFAT: Understood.

1 MS. WILLIAMS: Understood. Exactly.
2 For our purposes -- but for US EPA purposes, they
3 have to follow the federal court cases that have
4 interpreted that otherwise.

5 MS. BASSI: So does that mean
6 they're just not federally enforceable?

7 MR. SOFAT: It's more of in order
8 for standards to be effective in the state.
9 That's how that -- it's the Oil Alaska case, I
10 believe, back in 2000 and now it's part of their
11 regulation. So we understand both sides.

12 MS. CROWLEY: I just wanted to get
13 both sides on the record.

14 MR. SOFAT: We totally understand
15 that. We're just serving both sides.

16 MS. CROWLEY: Is there anything else
17 from anyone? There doesn't appear to be. Thank
18 you all very much for coming and we'll see some of
19 you in Chicago, but probably not all of you.
20 Thanks again.

21

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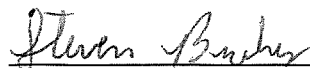
24

1 STATE OF ILLINOIS)
2) SS.
3 COUNTY OF COOK)
4

5 I, Steven Brickey, Certified Shorthand
6 Reporter, do hereby certify that I reported in
7 shorthand the proceedings had at the trial
8 aforesaid, and that the foregoing is a true,
9 complete and correct transcript of the proceedings
10 of said trial as appears from my stenographic
11 notes so taken and transcribed under my personal
12 direction.

13 Witness my official signature in and for
14 Cook County, Illinois, on this 1st day of
15 July, A.D., 2010.

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