

STATE OF ILLINOIS.)
) SS.
COUNTY OF C O O K)

RECEIVED
CLERK'S OFFICE

APR 08 2009

ILLINOIS POLLUTION CONTROL BOARD
March 31, 2009

STATE OF ILLINOIS
Pollution Control Board

IN THE MATTER OF:)
)
PROPOSED SITE SPECIFIC RULE)
FOR CITY OF GALVA SITE) R09-11
SPECIFIC WATER QUALITY)
STANDARD FOR BORON) (Site-Specific
DISCHARGES TO EDWARDS RIVER) Rulemaking-Water)
AND MUD CREEK:)
)
(35 ILL. ADM. CODE 303.347))

TRANSCRIPT OF PROCEEDINGS held in the
above-entitled cause before Hearing Officer Marie
Tipsord, called by the Illinois Pollution Control
Board, pursuant to notice, taken before Rebecca
Graziano, CSR, within and for the County of Henry
and State of Illinois, at the City Administration
Building, 210 Front Street, Galva, Illinois, on the
31st Day of March, A.D., 2009, commencing at 11:00
a.m.

A P P E A R A N C E S

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

ILLINOIS POLLUTION CONTROL BOARD:

Ms. Marie Tipsord
Dr. G. Tanner Girard
Ms. Alisa Liu

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY:

Ms. Vera Hurst
Mr. Brian Cook

THE CITY OF GALVA:

Ms. Claire Manning
Mr. Stephen M. Bruner
Mr. Brian Koch
Mr. David Dyer
Dr. Brian Anderson
Mr. Larry Lawson

1 MS. TIPSORD: Good morning. My name
2 is Marie Tipsord, and I've been appointed by the
3 Board to serve as hearing officer in this proceeding
4 entitled, in the matter of proposed site specific
5 rule for city of Galva, site specific water quality
6 standard for boron discharges to Edwards River and
7 Mud Creek, 35 Ill. Adm. Code 303.347. This
8 rulemaking is docketed R09-11.

9 With me today to my immediate left
10 is the presiding board member acting chairman,
11 G. Tanner Girard, and to my immediate right from our
12 technical unit we have Alisa Liu. This rulemaking
13 was sent to first notice by the Board on February
14 5th, 2009, and was published for first notice on
15 March 6th, 2009, at 33 Ill. Reg 3898.

16 The purpose of today's hearing is
17 twofold. First, this rulemaking is subject to
18 Section 27 B of the Environmental Protection Act.
19 Section 27 B of the act requires the Board to
20 request the Department of Commerce and Economic
21 Opportunity to conduct an economic impact study on
22 certain proposed rules prior to the adoption of
23 those rules. If DCEO chooses to conduct the economic
24 impact study, DCEO has 30 to 45 days after such a

1 request to produce a study of the economic impact to
2 the proposed rules. The Board must then make the
3 economic impact study, or DCEO's explanation for not
4 conducting the study available to the public at
5 least 20 days for a public hearing on the economic
6 impact of the proposed rules.

7 In accordance with Section 27 B of
8 the act, the Board requested by a letter dated
9 February 19th, 2009, that DCEO conduct an economic
10 impact study for this rulemaking. The Board
11 received a response to that letter on March 4th,
12 2009, indicating that no economic impact study would
13 be conducted. That was docketed with the Board on
14 the same day. A copy of the Board's letter to DCEO
15 and DCEO's letter are available at the back of the
16 room. We will accept any comments concerning the
17 economic impact study on the record before the close
18 of the hearing today.

19 The second reason for today's
20 hearing is to hear the pre-filed proponent, the city
21 of Galva, and the Illinois Environmental Protection
22 Agency. All testimony will be taken as if read, and
23 we will proceed with questions immediately. I ask
24 that you raise your hand, wait for me to acknowledge

1 you. After I have acknowledged you, please state
2 your name and who you represent before you begin
3 your questions. Please speak one at a time. If
4 you're speaking over each other, the court reporter
5 will not be able to get your questions on the
6 record.

7 Please note that any questions
8 asked by a board member or staff are intended to
9 help build a complete record for the Board's
10 decision, and not to express any preconceived notion
11 or bias. If there is time at the end of the day, we
12 will also hear testimony from anyone who did not
13 pre-file who wishes to testify.

14 With that, Dr. Girard?

15 DR. GIRARD: Good morning. On behalf
16 of the Board, I welcome everyone to this hearing to
17 consider a site-specific boron water quality
18 standard proposed by the city of Galva. Thank you
19 for the time and effort the participants have
20 invested in building the record in this rulemaking
21 process at this point in time. We look forward to
22 the testimony and questioning today. Thank you.

23 MS. TIPSORD: Thank you. And with
24 that, we will go to the proponent, Ms. Manning.

1 MS. MANNING: Thank you, Madam Hearing
2 Officer, Chairman Girard, Ms. Liu. On behalf of the
3 city of Galva, my name is Claire Manning, and I'm
4 very happy to be here and appreciate the time the
5 Board has taken to have this hearing in the city of
6 Galva to hear the testimony or to put into evidence
7 the testimony and to answer any questions you may
8 have about the petition that we filed on behalf of
9 the city of Galva regarding this particular
10 site-specific rule.

11 The city's request is necessitated
12 by the Board's general use water quality standard,
13 which, as we all know, is one milligram per liter,
14 and it was established by the Board at one of the
15 Board's earliest acts in 1972. What the city of
16 Galva seeks today is a minor adjustment to that
17 standard, an adjustment of three milligrams per
18 liter. They believe that with an adjustment of
19 three milligrams per liter, they will be able to
20 work fine within the -- that regulation, and they
21 propose to change the regulations, as you can tell
22 in the petition at Sections 30334 and 30340.

23 Obviously, if the Board finds
24 different numbers appropriate, that's not a problem

1 from the petitioner's point of view. But that's --
2 in dealing with the Environmental Protection Agency,
3 of course we've had many conversations before
4 getting to this point. Those were the sections that
5 they had recommended.

6 If I may, just as a matter of
7 background, explain why this particular petition is
8 necessitated. As I said, the Board established the
9 one milligram per liter standard way back when in
10 one of its original acts in 1972. As a matter of
11 fact, it was prior to the establishment of the
12 Federal Clean Water Act. In 1972, when the Board
13 established the one milligram per liter, it
14 established lots of water quality and effluent
15 standards at that very time in 1972.

16 And while I know the Board has had
17 a lot of exceptions and adjusted standards and
18 site-specific rules and exceptions that have been
19 requested to that particular boron standard, the
20 Board has never really had the opportunity or taken
21 the opportunity or been requested to actually look
22 at the promulgated one milligram per liter general
23 use standard. And it's my understanding, and I
24 think the Agency explained in its testimony, that

1 you will be getting a rulemaking at some point in
2 the very near future where the one milligram per
3 liter standard will be reevaluated and is being now
4 studied from a scientific perspective.

5 When it was established in 1972 --
6 and I actually went back to the 1972 rulemaking and
7 we went to the microfiche at the Board's offices and
8 looked at all of the evidence that lead to that
9 particular creation of the boron standard, as well
10 as the Board's promulgation and the Board's order in
11 that. And interestingly, as I said, it preceded the
12 Clean Water Act.

13 But what the Board said when it
14 created the standard in its order on March 7th of
15 1972, it said particularly that the adopted level of
16 one milligram per liter is based on evidence that
17 higher levels can harm irrigated crops. While 100
18 percent irrigation is unlikely in Illinois, the
19 uncontrolled discharge of large quantities of boron
20 is clearly undesirable. We have proposed -- and
21 importantly -- we have proposed no effluent standard
22 because of the lack of evidence as to treatment
23 methods.

24 And then earlier, in another order

1 in January 6th of that same year, they also
2 indicated that there is very little information as
3 to the technology for controlling boron, for it has
4 seldom presented problems. And then Patterson, who
5 was the consultant at the time, said small scale
6 data indicated can be distilled. The distillation
7 is costly. The sole basis for boron water quality
8 limits of the low parts per million range is to
9 product irrigated plants.

10 We omit boron from today's
11 regulation, because any instances of interference
12 with agriculture may be handled individually on the
13 basis of water quality standards in the absence of
14 information as to available and inexpensive
15 treatment methods.

16 Now, I raise that not because I'm
17 asking the Board to do anything with it. We're here
18 before you just simply seeking a site-specific
19 regulation that gets to three milligrams per liter.
20 But I do raise this because after that 1972 Board
21 order where the Board clearly said, "We're concerned
22 about irrigation, but we don't have any science
23 behind anything in terms of treatment technologies
24 or any information as to treatment technologies, and

1 we're not promulgating as an effluent standard,"
2 what has happened with the confluence, if you will,
3 of the Clean Water Act for the last 35 years is it
4 has become promulgated as -- or applied as an
5 effluent standard as well by the Environmental
6 Protection Agency where the effluent is not capable
7 of being mixed, as here in a receiving body of
8 water.

9 So what's happened here and what
10 brought the city of Galva to this point is that they
11 have an MPDS permit condition that requires them to
12 discharge at one milligram per liter out of their
13 discharge effluent pipe, and they cannot simply meet
14 that standard without doing all kinds of treatment
15 that's costly, and certainly without any
16 environmental benefit at all at a very high cost.
17 And that's why we're here today, because they cannot
18 meet the one milligram per liter standard as an
19 effluent standard, and it's applied as the Agency
20 now as an effluent standard.

21 So that's why we're here today.
22 We have presented, I think, much evidence in terms
23 of the reasonableness of this proposed rule, its
24 economic justification. I commend the city of Galva

1 for all of the work that they did, even before
2 seeing me in terms of trying to find a treatment
3 solution. Obviously, they determined that all of
4 them were much too costly for this size of town, and
5 we have testimony as well that we can present, and
6 that's been presented as pre-filed testimony, as to
7 the environmental significance of the request that
8 we're making as well today.

9 So I was a little longer than I
10 wanted to be, but I just wanted to, kind of, give
11 the Board that context, and I have with me today the
12 three people that have filed the pre-filed
13 testimony. To my right is David Dyer. To my left
14 is Steve Bruner, and to my immediate left is
15 Dr. Brian Anderson. I have the pre-filed testimony
16 from all of them, and whatever the hearing officer's
17 pressure is in terms of swearing them in, and we ask
18 to present these into evidence.

19 THE COURT: That's great. Let's swear
20 in the witnesses.

21 MS. MANNING: Raise your right hand,
22 all of you.

23 (Witness sworn.)

24 MS. MANNING: Okay. Then I turn,

1 first, to Mr. Dyer. Mr. Dyer, are you the city
2 administrator of the city of Galva?

3 MR. DYER: I am.

4 MS. MANNING: And is this -- what I
5 handed you as Petitioner's Exhibit 1, is this your
6 testimony that we caused to be pre-filed with the
7 Board on March 16th, 2009?

8 MR. DYER: It is.

9 MS. MANNING: And it bears my
10 signature. Although it bears my signature for
11 purposes of filing, is it, in fact, a document that
12 you prepared and presented to me for purposes of
13 filing?

14 MR. DYER: It is my document.

15 MS. MANNING: Okay. Thank you.

16 MS. TIPSORD: All right. If there's
17 no objection, we'll enter the pre-filed testimony of
18 David L. Dyer as Exhibit No. 1. Seeing none, it's
19 Exhibit No. 1.

20 MS. MANNING: Thank you, Madam Hearing
21 Officer. Turning next to Mr. Steven Bruner.
22 Mr. Bruner, are you the licensed professional
23 engineer and licensed land surveyor employed by the
24 firm of Bruner, Cooper and Zuck?

1 MR. BRUNER: Yes, I am.

2 MS. MANNING: And is this the -- I
3 hand you what has been marked as Petitioner's
4 Exhibit No. 2, which is labeled the pre-filed
5 testimony of Steven M. Bruner. Would you examine
6 that, please, and ensure that that is, in fact, the
7 document that you created and sent to my office for
8 purposes of filing?

9 MR. BRUNER: It is my document that I
10 prepared, yes.

11 MS. MANNING: Okay. Thank you. And
12 although it bears my signature, it is, in fact, your
13 document. It bears my signature for purposes of
14 filing. Is that correct?

15 MR. BRUNER: That is correct.

16 MS. MANNING: Okay. Madam Hearing
17 Officer, I tender to you Petitioner's Exhibit No. 2.

18 MS. TIPSORD: If there's no objection,
19 we will mark the pre-filed testimony of Stephen M.
20 Bruner as Exhibit No. 2. Seeing none, it's Exhibit
21 No. 2.

22 MS. MANNING: And thirdly, I turn to
23 Dr. Brian Anderson. And Dr. Anderson, are you the
24 director of the Illinois Natural History Survey, who

1 has helped with this petition and presented
2 testimony in a pre-filed manner, similar to the two
3 other witnesses?

4 DR. ANDERSON: I am.

5 MS. MANNING: And I tender to you
6 Petitioner's Exhibit No. 3, and if you'll review
7 that, please, and insure that it is, in fact, your
8 testimony that you created. And although it also
9 bears my signature for purpose of pre-filing, it is,
10 in fact, a document that you and only you prepared?

11 DR. ANDERSON: It is.

12 MS. MANNING: Thank you. Madam
13 Hearing Officer, Petitioner's Exhibit No. 3,
14 Dr. Brian Anderson.

15 MS. TIPSORD: Thank you, Ms. Manning.
16 If there's no objection, we will enter the pre-filed
17 testimony of Dr. Brian Anderson as Exhibit No. 3.
18 Seeing none, it is Exhibit No. 3.

19 Ms. Manning, you were going to
20 explain Dr. Anderson's role here today?

21 MS. MANNING: Yes. I did want to
22 explain that Dr. Anderson is here. His current
23 position is the director of the Illinois Natural
24 History Survey, and as I -- as I indicated, the

1 Illinois Department of Natural History, the survey,
2 is -- I'm sorry -- the Natural History Survey is
3 currently conducting a scientific study in terms of
4 the nature of boron and -- for purposes of bringing
5 the rulemaking to the Board.

6 Dr. Anderson, when he was
7 contracted by the city of Galva, had a prior
8 position as a vice president at --

9 DR. ANDERSON: Assistant to the
10 president.

11 MS. MANNING: Assistant to the
12 president at Lincolnland Community College. And at
13 that time he was contracted with us, he had no role
14 whatsoever in any of the boron studies that are
15 ongoing at the Illinois Natural History Survey. And
16 since his transfer to the Illinois Natural History
17 Survey, because of his involvement in the city of
18 Galva, he has specifically excused himself from any
19 involvement with -- in the Natural History Survey in
20 terms of what they're doing right now in terms of
21 studying the nature of boron.

22 So he is not and would not be
23 prepared to answer any questions about the survey
24 studies, because he is not -- purposely not involved

1 in this because of the opinion that he gave in this
2 particular matter.

3 MS. TIPSORD: Thank you, Ms. Manning.

4 MS. MANNING: Thank you.

5 MS. TIPSORD: With that, are there any
6 questions for the witnesses?

7 DR. GIRARD: I think I have a question
8 for Mr. Bruner on the boron monitoring results.

9 MR. BRUNER: Yes.

10 DR. GIRARD: I know it wasn't required
11 by your MPDS permit, but did you monitor for boron
12 at the north eastern sewage treatment plant? You
13 have --

14 MR. BRUNER: No, sir. Not to my
15 knowledge.

16 DR. GIRARD: Okay. So -- but you did
17 at the southwest plant?

18 MR. BRUNER: Correct. And then we
19 also took tests on the public water, the portable
20 water supply. That's where we determined it was
21 naturally occurring in Galva's well water.

22 DR. GIRARD: Okay.

23 MR. BRUNER: The assumption being that
24 we're going to see similar levels of boron at the

1 northeast plant --

2 DR. GIRARD: Okay.

3 MR. BRUNER: -- in the effluent.

4 DR. GIRARD: And in terms of those
5 results from the southwestern plant down there, you
6 had -- it was a three-year monitoring period, as I
7 understand it?

8 MR. BRUNER: That's correct.

9 DR. GIRARD: And most of the time, it
10 appeared that the boron levels were measured -- the
11 levels were less than two milligrams per liter. Is
12 that correct?

13 MR. BRUNER: That is correct.

14 DR. GIRARD: But you had -- there
15 were --

16 MR. BRUNER: There were some spikes
17 where it elevated.

18 DR. GIRARD: There were two data
19 points which were up around three milligrams per
20 liter?

21 MR. BRUNER: Right. Those were, we
22 think, drop conditions where we didn't get a lot of
23 infiltration and in flow into the sewer system,
24 which would naturally tend to dilute the

1 concentration of boron and wastewater. We think
2 that's why those spikes occurred.

3 DR. GIRARD: So you did correlate it
4 with weather conditions at the time?

5 MR. BRUNER: That was the implication
6 when we looked at the spikes and all that. You
7 know, weather-wise, that was a period -- it was very
8 dry in this part of the state.

9 DR. GIRARD: Did you run any
10 statistical analysis of all the readings to see if
11 maybe, you know, another way you can deal with it?
12 You know, would you consider those statistical
13 outliers or results that did not fit in the pattern
14 statistically?

15 MR. BRUNER: We didn't have very many
16 data points to run anything like that that we felt
17 would make it valid to run it through a statistical
18 analysis, so no. The answer is no, we did not run a
19 statistical analysis on it.

20 DR. GIRARD: Okay. Thank you.

21 MR. BRUNER: Thank you.

22 MS. TIPSORD: Anything further?

23 MS. LIU: Good morning, Mr. Bruner.

24 MR. BRUNER: Good morning.

1 MS. LIU: I had some questions about
2 your mass balance calculations.

3 MR. BRUNER: Okay.

4 MS. LIU: Besides the contribution
5 from boron from the sewage treatment plant to the
6 receiving waters, the equations that you used to
7 calculate the relief necessary for compliance in the
8 TSE don't account for any other contributions of
9 boron?

10 MR. BRUNER: That's correct. We did
11 not do a scientific study on the streams. We did
12 not try and determine existing boron levels that
13 might be present. So that would affect the results,
14 yes.

15 MS. LIU: Okay. Are you aware of any
16 other discharges or NPDES discharge into either the
17 south branch or Muddy Creek?

18 MR. BRUNER: I am not aware of any
19 permitted discharges in those two receiving streams
20 before we get to the dilution point.

21 MS. LIU: Did you happen to research
22 whether or not there might be, or is this just based
23 on your personal knowledge?

24 MR. BRUNER: Just personal knowledge

1 of the area and looking at the streams and knowing
2 where the existing treatment plants are.

3 MS. LIU: Okay. Did you happen to
4 have any stream monitoring data at all --

5 MR. BRUNER: No.

6 MS. LIU: -- that might indicate
7 existing boron levels?

8 MR. BRUNER: No.

9 MS. LIU: If it turns out that the
10 contributions of boron from other sources is greater
11 than zero, which was more than what you would've
12 assumed in your calculation --

13 MR. BRUNER: Then it would take more
14 dilution.

15 MS. LIU: Okay.

16 MR. BRUNER: That's correct.

17 MS. LIU: It might push the dilution
18 point further down the stream. Is that correct?

19 MR. BRUNER: It might.

20 MS. LIU: Okay. Do you have any
21 concern about if, at this point, whether or not that
22 might affect compliance later on after the water
23 quality standard?

24 MR. BRUNER: Based upon the fact that

1 we did not find any irrigation sources out of the
2 receiving streams up to the dilution point, I
3 personally don't have a concern. I would leave that
4 more to the scientific end of the -- of the
5 argument.

6 MS. LIU: Okay.

7 MR. BRUNER: But boron is a concern
8 where you have irrigation sources that heavily
9 depend on that. We did not find any, so that tends
10 to, you know, ease any concerns I would have in that
11 area.

12 MS. LIU: The technical support
13 document presents a mass balance calculation during
14 a worst case scenario --

15 MR. BRUNER: Right.

16 MS. LIU: -- that involved the 7Q10
17 low flow with a minimum average monthly discharge
18 along with the highest boron concentration that you
19 found?

20 MR. BRUNER: Correct.

21 MS. LIU: In the worksheet in your
22 TSD, you indicated that the monthly -- minimum
23 monthly average flow is .37 CFS, but then the flow,
24 based on the Illinois state water survey 7Q10 map,

1 is .24 CFS, and there is a note in the worksheet
2 here --

3 MR. BRUNER: Well, the stream is the
4 effluent. The effluent is the stream --

5 MS. LIU: Okay.

6 MR. BRUNER: -- basically during those
7 kind of drought conditions.

8 MS. LIU: So there is really no
9 upstream, right?

10 MR. BRUNER: Yeah.

11 MS. TIPSORD: Is there a page number
12 on that worksheet you referred to as a worksheet?
13 If there's not, that's okay. I just --

14 MS. LIU: It's part of an appendix.

15 MS. TIPSORD: It's just for purposes
16 of the record. If there's not, that's okay.

17 MS. LIU: Appendix C to the technical
18 support document, the worksheet for the northeast
19 sewage treatment plant.

20 MS. TIPSORD: Thank you.

21 MS. LIU: In your notes --

22 MS. MANNING: It's labeled Bruner,
23 Cooper and Zuck at the top left. Is that correct,
24 Ms. Liu?

1 MS. LIU: Yes. Thank you.

2 MS. MANNING: And it's the first of
3 those two sheets?

4 MS. LIU: Yes.

5 MS. MANNING: Thank you.

6 MS. LIU: In your notes, you have a
7 little asterisk, and it says to use the 0.37 CFS,
8 but add 0.13 CFS to 7Q10 flows to adjust for the
9 additional flow. And, of course, the .13 is the
10 difference between the .37 and the .24 that was on
11 the map.

12 MR. BRUNER: Well, the .37 was used in
13 the calculations.

14 MS. LIU: Right. Was the 0.13 CFS
15 added because the Illinois state water survey map
16 underestimated the flow coming from the Galva plant?

17 MR. BRUNER: That very well could be.

18 MS. LIU: Okay.

19 MR. BRUNER: We were taking actual
20 plant flows.

21 MS. LIU: Okay.

22 MR. BRUNER: They might have -- I
23 guess I'm not enough of a historian on the 7Q10
24 database to know when those values were arrived at

1 and how they arrived at them. My guess would be
2 that's what they assumed the plant flow was when
3 those data points were put together. We used the
4 actual .37.

5 MS. LIU: Do you happen to have a date
6 on the map at all, or what years it might represent?

7 MR. BRUNER: I don't have that with
8 me.

9 MS. LIU: Is that something that you
10 might be able to find out?

11 MR. BRUNER: Sure.

12 MS. LIU: Okay. I only ask because it
13 would give us a time perspective if the STP has
14 increased its flow since the map was made.

15 MR. BRUNER: The plant operator's here
16 in the audience. He, maybe, could address that, how
17 plant flows have changed over the years.

18 MS. MANNING: He could also address,
19 Ms. Liu, any questions regarding concerns about
20 boron. He's been here for quite some time, Larry
21 Lawson. So if you'd like him to provide
22 some answers, he could do that as well if we swear
23 him in.

24 MS. TIPSORD: Sure. Let's swear him

1 in.

2 (Witness sworn.)

3 MS. MANNING: Larry, before you answer
4 the questions, would you mind if you just explain a
5 little bit about your educational background and as
6 well what your job here is with the city of Galva?

7 MR. LAWSON: Okay. Background,
8 basically a bachelor's degree in chemistry, master's
9 degree in organic from Iowa State. I came out
10 during a low time in the economy, so I had to start
11 my own business operating water and sewage treatment
12 plants. So I've made a career of running small
13 plants, none of which are over half a million
14 gallons a day, but enough of them to make a living.
15 I've been with the city here since May 1980, so I've
16 got -- I grew up 15 miles from here.

17 MS. MANNING: And he and I were
18 talking if the Board wants to grant the five
19 milligrams per liter standard, I think we've
20 underestimated we're perfectly fine with that. But
21 he's also happy to answer any questions that you
22 might have.

23 MR. BRUNER: And Larry can obviously
24 tell you a lot more about plant flows than I can.

1 MS. LIU: We were discussing how old
2 the map that they used in their calculations might
3 be in relation to the numbers that we're actually
4 using to calculate the water quality standards.

5 MR. BRUNER: We used the latest 7Q10
6 off the internet.

7 MS. LIU: Okay.

8 MR. BRUNER: So whatever the date is
9 on that.

10 MR. LAWSON: And as far as waste
11 plants go, we've had some wetter years here, so our
12 average flows are typically higher than what would
13 be seen in the major drought period.

14 MS. LIU: Okay.

15 MR. LAWSON: And, of course, 7Q10 is
16 your major drought.

17 MS. LIU: Okay.

18 MR. LAWSON: So we're a little wetter
19 than 7Q10.

20 MS. LIU: Has your minimum changed
21 much over the years?

22 MR. LAWSON: The minimum flow on
23 that --

24 MR. BRUNER: The plant -- you changed

1 plant flows.

2 MR. LAWSON: Yeah. I would say we had
3 diverted probably 25,000, 30,000 gallons a day into
4 that plant above what it was 25 years ago. But
5 other than that, we've been pretty flat lined as far
6 as our contributing population. Our wet weather is
7 a different story, but the dry weather is pretty
8 flat.

9 MS. LIU: Okay. The .37 CFS minimum
10 average flow that was used here, what years was that
11 representing?

12 MR. BRUNER: That was correlated to
13 the years that we took the boron samples.

14 MR. LAWSON: Correct.

15 MR. BRUNER: So the chart that's in
16 the report at the time frame that we showed the
17 boron samples, that would be corresponding average
18 plant flows for a time period.

19 MR. LAWSON: Yes.

20 MS. LIU: So 2004?

21 MR. LAWSON: Four, five, and six.

22 MR. BRUNER: There's a graph there,
23 yes. 2004 through --

24 MS. LIU: 2008?

1 MR. BRUNER: I've got to refresh my
2 memory here. Oh, it did go through -- we did add on
3 to it, and we went through May of 2008. That is
4 correct.

5 MS. LIU: Okay. Further downstream on
6 that same Illinois state water survey and map, they
7 show a stream flow of .80 CFS just before the south
8 branch converges with the Edwards River.

9 MR. BRUNER: Okay.

10 MS. LIU: And in the calculations, you
11 also added the .13 to that flow as well. Is that
12 just based on the fact that you think that the data
13 that you actually have from the plant is more
14 accurate than what's on the map?

15 MR. BRUNER: Yeah. Yes, we tried to
16 make that consistent throughout the reach of the
17 waterway.

18 MS. LIU: Okay. And one more question
19 along those lines. On Figure 12 in your TSD is the
20 points of dilution map.

21 MR. BRUNER: Figure 12?

22 MS. LIU: Yes.

23 MR. BRUNER: Okay.

24 MS. LIU: The label for the boron

1 concentration that's pointing to Muddy Creek --

2 MR. BRUNER: Oh, on the south end.

3 Okay.

4 MS. LIU: -- reads boron concentration
5 equaled 0.03 milligrams per liter with a 7Q10 flow
6 of 0.015 CFS.

7 MR. BRUNER: Okay.

8 MS. LIU: I think there's a mistake
9 there.

10 MR. BRUNER: That might be a misprint,
11 yeah.

12 MS. LIU: Okay.

13 MR. BRUNER: That's probably a
14 misprint.

15 MS. LIU: I think it's supposed to be
16 1.5 milligrams per liter. Does that sound correct?

17 MS. MANNING: That would be correct.
18 Thank you for pointing that out.

19 MR. BRUNER: Yeah. That's a -- that's
20 a drafting error.

21 MS. LIU: Okay. That's fine. Just so
22 we have the correct version, would it be possible to
23 provide it?

24 MS. MANNING: Yes. We'll amend the

1 record and present that.

2 MS. LIU: Okay. Thank you. I think
3 that's it for me.

4 MR. BRUNER: Thank you.

5 MS. LIU: Thank you very much.

6 MR. BRUNER: You're welcome.

7 MS. MANNING: Thank you.

8 MS. TIPSORD: Any further questions
9 for the city of Galva's witness? Thank you very
10 much.

11 MS. MANNING: Thank you.

12 MS. TIPSORD: We'll move on to the
13 IEPA then.

14 Good morning, Ms. Hurst. Did you
15 have an opening statement?

16 MS. HURST: No. Can I just pretend
17 that part of what Ms. Manning said was mine, since
18 she said she went over? I'm Vera Hurst. I'm a
19 lawyer with the Illinois EPA. I have with me Brian
20 Cook, who is a toxicologist in our water quality
21 standards unit, and we do support the relief that
22 the city of Galva is seeking.

23 MS. TIPSORD: And let's have Mr. Cook
24 sworn in.

1 (Witness sworn.)

2 MS. TIPSORD: And then if we could
3 have his testimony. If there's no objection, we
4 will mark Mr. Cook's testimony as Exhibit 4. Yeah
5 just to be -- this is your testimony, correct?

6 MR. COOK: Oh, yes. This is my
7 testimony.

8 MS. TIPSORD: Seeing no objection,
9 Mr. Cook's testimony is Exhibit 4. And are there
10 any questions for Mr. Cook?

11 DR. GIRARD: Yes. I have a couple of
12 questions. Mr. Cook, in her opening statement,
13 Claire Manning made the comment that the waters in
14 the streams are not capable of being mixed. So I
15 assume that that means that her position is that the
16 establishment of a mixing zone is not an alternative
17 to be considered here by the Board.

18 Does the Illinois EPA agree with
19 that assessment, that a mixing zone would not take
20 care of the problem here with the boron standard?

21 MR. COOK: I believe so. I'll have to
22 check the technical document they filed, but I do
23 believe both receiving waters, initial receiving
24 waters, are zero flow streams, as far as 7Q10 flow

1 is concerned. And in those instances were there's a
2 discharge -- or discharge into a zero flow stream,
3 the Illinois EPA does not grant mixing.

4 So essentially, the water quality
5 standard of one milligram per liter of boron will
6 have to be the effluent standard. No mixing will be
7 allowed.

8 DR. GIRARD: Thank you. I also have a
9 question about whether or not the Illinois EPA has
10 any monitoring data for either one of these streams.
11 Do you know of any data in your files?

12 MR. COOK: I'm not aware, because both
13 of these receiving waters are smaller bodies of
14 water. We wouldn't have our ambient water quality
15 monitoring stations at these sites. There may be
16 some site-specific monitoring that was done in the
17 past, and I can follow up on that for you. But
18 right now, I do not believe that there is any data
19 that I'm aware of.

20 DR. GIRARD: Thank you. So you will
21 go back and look through your files and if you have
22 anything submit it as a comment?

23 MR. COOK: Yeah, that's true. I'll
24 look up information on each segment and see if

1 there's any monitoring data. To my knowledge, there
2 is not, otherwise we probably would've included that
3 in the calculations.

4 DR. GIRARD: Thank you.

5 MS. TIPSORD: Are there any other
6 discharges to these -- NPDS discharges to these
7 streams?

8 MR. COOK: I'm not aware of any.

9 MS. TIPSORD: And also, I had a couple
10 questions about the NPDS permit, and I understand
11 that it's the southwest permit that has the effluent
12 standard of -- I'm sorry -- southeast has the 1.0
13 milligram per liter. The northeast STP does not
14 have a boron standard in it currently. Both of the
15 permits expire in August of '09. Would you
16 anticipate that the new permits issued as to Galva
17 will reflect the site-specific standard?

18 MR. COOK: Are you asking if these new
19 permits will have the three milligrams per liter
20 adjusted standard?

21 MS. TIPSORD: Yes.

22 MR. COOK: Yeah, I believe so.

23 MS. TIPSORD: So it will be a three
24 milligram per liter effluent standard?

1 MR. COOK: Effluent standard,
2 essentially, yes.

3 MS. TIPSORD: And does the USEPA
4 review NPDS permits?

5 MR. COOK: Yes.

6 MS. TIPSORD: And how long does that
7 take?

8 MR. COOK: I'm unsure of that.
9 However, we have been in contact with USEPA in
10 regards to approval of the three milligrams per
11 liter for Galva, and it's my understanding that they
12 are in agreement with us that three milligrams per
13 liter will be protective of aquatic life. I don't
14 believe we've received a formal letter from them to
15 date, but I've been in numerous contacts with them
16 regarding that.

17 MS. TIPSORD: Okay. And has Galva --
18 have they issued -- have they applied for a new
19 permit or amendment to the permit yet?

20 MR. COOK: I'm not aware.

21 MS. TIPSORD: Thank you. Anything
22 else for the Agency? Thank you very much. It's
23 been a pleasure. Just to be clear, are there any
24 questions from the audience again? Okay. At this

1 point, is there anyone in the audience who wishes to
2 testify that did not pre-file or anyone who has a
3 comment they'd like to make on the record? Okay.
4 Let's go off the record for just a second.

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

7 MS. TIPSORD: Again, I want to be
8 clear. Is there anyone who wants to comment on
9 DCEO's decision not to perform an economic impact
10 study? Okay. Seeing none, I want to thank the city
11 of Galva for the use of their facilities, and thank
12 you very much for your hospitality.

13 We will adjourn today and have a
14 final comment date of Thursday, April 30th, and I'll
15 put a hearing officer order out to that effect as
16 well. Does anyone have anything else?

17 MS. MANNING: Thank you.

18 MS. TIPSORD: Thank you very much.

19 We're adjourned.
20
21
22
23
24

1 STATE OF ILLINOIS)
) SS
2 COUNTY OF COOK)

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

REBECCA A. GRAZIANO, being first
duly sworn on oath says that she is a court reporter
doing business in the City of Chicago; that she
reported in shorthand the proceedings given at the
taking of said hearing and that the foregoing is a
true and correct transcript of her shorthand notes
so taken as aforesaid and contains all the
proceedings given at said hearing.

Rebecca Graziano
REBECCA A. GRAZIANO, CSR
29 South LaSalle Street, Suite 850
Chicago, Illinois 60603
License No.: 084-004659

SUBSCRIBED AND SWORN TO
before me this ____ day
of _____, A.D., 2009.

Notary Public

A				
able 5:5 6:19 24:10	20:22	applied 10:4,19 34:18	based 8:16 19:22 20:24 21:24 28:12	19:5,9,12 20:7 20:10 21:7,18 24:20 27:13,17 28:24 29:4 31:20 32:5 33:14
about 6:8 9:22 15:23 19:1 20:21 24:19 25:5,24 32:9 33:10	after 3:24 5:1 9:20 20:22	appointed 3:2	basically 22:6 25:8	both 31:23 32:12 33:14
above 27:4	again 34:24 35:7	appropriate 6:24	basis 9:7,13	branch 19:17 28:8
above-entitled 1:13	Agency 2:6 4:22 7:2,24 10:6,19 34:22	approval 34:10	bears 12:9,10 13:12,13 14:9	Brian 2:7,11,12 11:15 13:23 14:14,17 30:19
absence 9:13	ago 27:4	April 35:14	become 10:4	bringing 15:4
accept 4:16	agree 31:18	aquatic 34:13	before 1:13,15 4:17 5:2 7:3 9:18 11:1 19:20 25:3 28:7 36:19	brought 10:10
accordance 4:7	agreement 34:12	area 20:1 21:11	begin 5:2	Bruner 2:10 11:14 12:21,22 12:24 13:1,5,9 13:15,20 16:8 16:9,14,18,23 17:3,8,13,16 17:21 18:5,15 18:21,23,24 19:3,10,18,24 20:5,8,13,16 20:19,24 21:7 21:15,20 22:3 22:6,10,22 23:12,17,19,22 24:7,11,15 25:23 26:5,8 26:24 27:12,15 27:22 28:1,9 28:15,21,23 29:2,7,10,13 29:19 30:4,6
account 19:8	agriculture 9:12	argument 21:5	behalf 5:15 6:2 6:8	build 5:9
accurate 28:14	Alisa 2:4 3:12	around 17:19	behind 9:23	building 1:18 5:20
acknowledge 4:24	allowed 32:7	arrived 23:24 24:1	being 8:3 10:7 16:23 31:14 36:5	business 25:11 36:7
acknowledged 5:1	along 21:18 28:19	asked 5:8	benefit 10:16	
act 3:18,19 4:8 7:12 8:12 10:3	alternative 31:16	asking 9:17 33:18	Besides 19:4	C
acting 3:10	although 12:10 13:12 14:8	assessment 31:19	between 23:10	C 1:3 2:1 22:17
acts 6:15 7:10	ambient 32:14	Assistant 15:9 15:11	bias 5:11	calculate 19:7 26:4
actual 23:19 24:4	amend 29:24	assume 31:15	bit 25:5	calculation 20:12 21:13
actually 7:21 8:6 26:3 28:13	amendment 34:19	assumed 20:12 24:2	board 1:4,15 2:2 3:3,10,13,19 4:2,8,10,13 5:8 5:16 6:5,14,23 7:8,12,16,20 8:13 9:17,20 9:21 11:11 12:7 15:5 25:18 31:17	calculations 19:2 23:13
add 23:8 28:2	analysis 18:10 18:18,19	assumption 16:23	Besides 19:4	
added 23:15 28:11	Anderson 2:12 11:15 13:23,23 14:4,11,14,17 14:22 15:6,9	asterisk 23:7	between 23:10	
additional 23:9	Anderson's 14:20	audience 24:16 34:24 35:1	bias 5:11	
address 24:16 24:18	another 8:24 18:11	August 33:15	bit 25:5	
adjourn 35:13	answer 6:7 15:23 18:18 25:3,21	available 4:4,15 9:14	board 1:4,15 2:2 3:3,10,13,19 4:2,8,10,13 5:8 5:16 6:5,14,23 7:8,12,16,20 8:13 9:17,20 9:21 11:11 12:7 15:5 25:18 31:17	
adjourned 35:19	answers 24:22	average 21:17 21:23 26:12 27:10,17	Board's 4:14 5:9 6:12,15 8:7,10 8:10	
adjust 23:8	anticipate 33:16	aware 19:15,18 32:12,19 33:8 34:20	bodies 32:13	
adjusted 7:17 33:20	anyone 5:12 35:1,2,8,16	A.D 1:19 36:20	body 10:7	
adjustment 6:16 6:17,18	anything 9:17 9:23 18:16,22 32:22 34:21 35:16	a.m 1:20	boron 1:8 3:6 5:17 7:19 8:9 8:19 9:3,7,10 15:4,14,21 16:8,11,24 17:10 18:1	
Adm 1:10 3:7	appeared 17:10	B		
Administration 1:17	appendix 22:14 22:17	B 3:18,19 4:7		
administrator 12:2		bachelor's 25:8		
adopted 8:15		back 4:15 7:9 8:6 32:21		
adoption 3:22		background 7:7 25:5,7		
affect 19:13		balance 19:2 21:13		

26:2 28:10 33:3 called 1:14 came 25:9 capable 10:6 31:14 care 31:20 career 25:12 case 21:14 cause 1:13 caused 12:6 certain 3:22 certainly 10:15 CFS 21:23 22:1 23:7,8,14 27:9 28:7 29:6 chairman 3:10 6:2 change 6:21 changed 24:17 26:20,24 chart 27:15 check 31:22 chemistry 25:8 Chicago 36:7,16 choses 3:23 city 1:7,17 2:9 3:5 4:20 5:18 6:3,5,9,15 10:10,24 12:1 12:2 15:7,17 25:6,15 30:9 30:22 35:10 36:7 city's 6:11 Claire 2:10 6:3 31:13 Clean 7:12 8:12 10:3 clear 34:23 35:8 clearly 8:20 9:21 close 4:17 Code 1:10 3:7 College 15:12 coming 23:16 commencing 1:19 commend 10:24 comment 31:13	32:22 35:3,8 35:14 comments 4:16 Commerce 3:20 Community 15:12 complete 5:9 compliance 19:7 20:22 concentration 18:1 21:18 29:1,4 concern 20:21 21:3,7 concerned 9:21 32:1 concerning 4:16 concerns 21:10 24:19 condition 10:11 conditions 17:22 18:4 22:7 conduct 3:21,23 4:9 conducted 4:13 conducting 4:4 15:3 confluence 10:2 consider 5:17 18:12 considered 31:17 consistent 28:16 consultant 9:5 contact 34:9 contacts 34:15 contains 36:11 context 11:11 contracted 15:7 15:13 contributing 27:6 contribution 19:4 contributions 19:8 20:10 Control 1:4,14 2:2 controlling 9:3	converges 28:8 conversations 7:3 Cook 2:7 30:20 30:23 31:6,10 31:12,21 32:12 32:23 33:8,18 33:22 34:1,5,8 34:20 36:2 Cook's 31:4,9 Cooper 12:24 22:23 copy 4:14 correct 13:14,15 16:18 17:8,12 17:13 19:10 20:16,18 21:20 22:23 27:14 28:4 29:16,17 29:22 31:5 36:10 correlate 18:3 correlated 27:12 corresponding 27:17 cost 10:16 costly 9:7 10:15 11:4 County 1:3,16 36:2 couple 31:11 33:9 course 7:3 23:9 26:15 court 5:4 11:19 36:6 created 8:14 13:7 14:8 creation 8:9 Creek 1:9 3:7 19:17 29:1 crops 8:17 CSR 1:16 36:15 current 14:22 currently 15:3 33:14	24:3 28:12 32:10,11,18 33:1 database 23:24 date 24:5 26:8 34:15 35:14 dated 4:8 David 2:11 11:13 12:18 day 1:19 4:14 5:11 25:14 27:3 36:19 days 3:24 4:5 DCEO 3:23,24 4:9,14 DCEO's 4:3,15 35:9 deal 18:11 dealing 7:2 decision 5:10 35:9 degree 25:8,9 Department 3:20 15:1 depend 21:9 determine 19:12 determined 11:3 16:20 difference 23:10 different 6:24 27:7 dilute 17:24 dilution 19:20 20:14,17 21:2 28:20 director 13:24 14:23 discharge 8:19 10:12,13 19:16 21:17 32:2,2 discharges 1:9 3:6 19:16,19 33:6,6 discussing 26:1 discussion 35:5 distillation 9:6 distilled 9:6 diverted 27:3 docketed 3:8	4:13 document 12:11 12:14 13:7,9 13:13 14:10 21:13 22:18 31:22 doing 10:14 15:20 36:7 done 32:16 down 17:5 20:18 downstream 28:5 Dr 2:4,12 5:14 5:15 11:15 13:23,23 14:4 14:11,14,17,20 14:22 15:6,9 16:7,10,16,22 17:2,4,9,14,18 18:3,9,20 31:11 32:8,20 33:4 drafting 29:20 drop 17:22 drought 22:7 26:13,16 dry 18:8 27:7 duly 36:6 during 21:13 22:6 25:10 Dyer 2:11 11:13 12:1,1,3,8,14 12:18
E				
E 2:1,1 each 5:4 32:24 earlier 8:24 earliest 6:15 ease 21:10 eastern 16:12 economic 3:20 3:21,23 4:1,3,5 4:9,12,17 10:24 35:9 economy 25:10 educational 25:5 Edwards 1:9 3:6 28:8 effect 35:15				
D				
data 9:6 17:18 18:16 20:4				

effluent 7:14 8:21 10:1,5,6 10:13,19,20 17:3 22:4,4 32:6 33:11,24 34:1	existing 19:12 20:2,7 expire 33:15 explain 7:7 14:20,22 25:4 explained 7:24 explanation 4:3 express 5:10	formal 34:14 forward 5:21 found 21:19 Four 27:21 frame 27:16 from 3:11 5:12 7:1 8:4 9:10 11:16 15:18 17:5 19:5,5 20:10 23:16 25:9,16 28:13 34:14,24 Front 1:18 further 18:22 20:18 28:5 30:8 future 8:2	16:24 Good 3:1 5:15 18:23,24 30:14 grant 25:18 32:3 graph 27:22 Graziano 1:16 36:5,15 great 11:19 greater 20:10 grew 25:16 guess 23:23 24:1	Hurst 2:7 30:14 30:16,18
effort 5:19 either 19:16 32:10 elevated 17:17 employed 12:23 end 5:11 21:4 29:2 engineer 12:23 enough 23:23 25:14 ensure 13:6 enter 12:17 14:16 entitled 3:4 environmental 2:6 3:18 4:21 7:2 10:5,16 11:7 EPA 30:19 31:18 32:3,9 equaled 29:5 equations 19:6 error 29:20 essentially 32:4 34:2 established 6:14 7:8,13,14 8:5 establishment 7:11 31:16 even 11:1 everyone 5:16 evidence 6:6 8:8 8:16,22 10:22 11:18 examine 13:5 exceptions 7:17 7:18 excused 15:18 Exhibit 12:5,18 12:19 13:4,17 13:20,20 14:6 14:13,17,18 31:4,9	<hr/> F <hr/> facilities 35:11 fact 7:11 12:11 13:6,12 14:7 14:10 20:24 28:12 far 26:10 27:5 31:24 February 3:13 4:9 Federal 7:12 felt 18:16 Figure 28:19,21 filed 6:8 11:12 31:22 files 32:11,21 filing 12:11,13 13:8,14 final 35:14 find 11:2 21:1,9 24:10 finds 6:23 fine 6:20 25:20 29:21 firm 12:24 first 3:13,14,17 12:1 23:2 36:5 fit 18:13 five 25:18 27:21 flat 27:5,8 flow 17:23 21:17 21:23,23 23:9 23:16 24:2,14 26:22 27:10 28:7,11 29:5 31:24,24 32:2 flows 23:8,20 24:17 25:24 26:12 27:1,18 follow 32:17 foregoing 36:9	<hr/> G <hr/> G 2:4 3:11 gallons 25:14 27:3 Galva 1:7,18 2:9 3:5 4:21 5:18 6:3,6,9,16 10:10,24 12:2 15:7,18 23:16 25:6 30:22 33:16 34:11,17 35:11 Galva's 16:21 30:9 gave 16:1 general 6:12 7:22 gets 9:19 getting 7:4 8:1 Girard 2:4 3:11 5:14,15 6:2 16:7,10,16,22 17:2,4,9,14,18 18:3,9,20 31:11 32:8,20 33:4 give 11:10 24:13 given 36:8,12 go 5:24 26:11 28:2 32:21 35:4 going 14:19	<hr/> H <hr/> half 25:13 hand 4:24 11:21 13:3 handed 12:5 handled 9:12 happen 19:21 20:3 24:5 happened 10:2,9 happy 6:4 25:21 harm 8:17 hear 4:20 5:12 6:6 hearing 1:13 3:3 3:16 4:5,18,20 5:16 6:1,5 11:16 12:20 13:16 14:13 35:15 36:9,12 heavily 21:8 held 1:12 help 5:9 helped 14:1 Henry 1:16 her 31:12,15 36:10 high 10:16 higher 8:17 26:12 highest 21:18 him 24:21,23,24 himself 15:18 historian 23:23 History 13:24 14:24 15:1,2 15:15,16,19 hospitality 35:12	<hr/> I <hr/> IEPA 30:13 Ill 1:10 3:7,15 Illinois 1:2,4,14 1:17,18 2:2,6 4:21 8:18 13:24 14:23 15:1,15,16 21:24 23:15 28:6 30:19 31:18 32:3,9 36:1,16 immediate 3:9 3:11 11:14 immediately 4:23 impact 3:21,24 4:1,3,6,10,12 4:17 35:9 implication 18:5 importantly 8:21 included 33:2 increased 24:14 indicate 20:6 indicated 9:2,6 14:24 21:22 indicating 4:12 individually 9:12 inexpensive 9:14 infiltration 17:23 information 9:2 9:14,24 32:24 initial 31:23 instances 9:11 32:1 insure 14:7 intended 5:8 interestingly 8:11 interference 9:11 internet 26:6 invested 5:20 involved 15:24

21:16 involvement 15:17,19 Iowa 25:9 irrigated 8:17 9:9 irrigation 8:18 9:22 21:1,8 issued 33:16 34:18	latest 26:5 Lawson 2:12 24:21 25:7 26:10,15,22 27:2,14,19,21 LAWSONE 26:18 lawyer 30:19 lead 8:8 least 4:5 leave 21:3 left 3:9 11:13,14 22:23 less 17:11 letter 4:8,11,14 4:15 34:14 let's 11:19 24:24 30:23 35:4 level 8:15 levels 8:17 16:24 17:10,11 19:12 20:7 License 36:17 licensed 12:22 12:23 life 34:13 like 18:16 24:21 35:3 limits 9:8 Lincolnland 15:12 lined 27:5 lines 28:19 liter 6:13,18,19 7:9,13,22 8:3 8:16 9:19 10:12,18 17:11 17:20 25:19 29:5,16 32:5 33:13,19,24 34:11,13 little 9:2 11:9 23:7 25:5 26:18 Liu 2:4 3:12 6:2 18:23 19:1,4 19:15,21 20:3 20:6,9,15,17 20:20 21:6,12	21:16,21 22:5 22:8,14,17,21 22:24 23:1,4,6 23:14,18,21 24:5,9,12,19 26:1,7,14,17 26:20 27:9,20 27:24 28:5,10 28:18,22,24 29:4,8,12,15 29:21 30:2,5 living 25:14 long 34:6 longer 11:9 look 5:21 7:21 32:21,24 looked 8:8 18:6 looking 20:1 lot 7:17 17:22 25:24 lots 7:14 low 9:8 21:17 25:10	many 7:3 18:15 map 21:24 23:11 23:15 24:6,14 26:2 28:6,14 28:20 March 1:5,19 3:15 4:11 8:14 12:7 Marie 1:13 2:3 3:2 mark 13:19 31:4 marked 13:3 mass 19:2 21:13 master's 25:8 matter 1:6 3:4 7:6,10 16:2 may 6:7 7:6 9:12 25:15 28:3 32:15 maybe 18:11 24:16 means 31:15 measured 17:10 meet 10:13,18 member 3:10 5:8 memory 28:2 methods 8:23 9:15 microfiche 8:7 might 19:13,22 20:6,17,19,22 23:22 24:6,10 25:22 26:2 29:10 miles 25:16 milligram 6:13 7:9,13,22 8:2 8:16 10:12,18 32:5 33:13,24 milligrams 6:17 6:19 9:19 17:11,19 25:19 29:5,16 33:19 34:10,12 million 9:8 25:13 mind 25:4 mine 30:17	minimum 21:17 21:22 26:20,22 27:9 minor 6:16 misprint 29:10 29:14 mistake 29:8 mixed 10:7 31:14 mixing 31:16,19 32:3,6 monitor 16:11 monitoring 16:8 17:6 20:4 32:10,15,16 33:1 monthly 21:17 21:22,23 more 20:11,13 21:4 25:24 28:13,18 morning 3:1 5:15 18:23,24 30:14 most 17:9 move 30:12 MPDS 10:11 16:11 much 10:22 11:4 26:21 30:5,10 34:22 35:12,18 Mud 1:9 3:7 Muddy 19:17 29:1 must 4:2
J	January 9:1 job 25:6 just 7:6 9:18 11:10 19:22,24 22:13,15 25:4 28:7,12 29:21 30:16 31:5 34:23 35:4 justification 10:24	living 25:14 long 34:6 longer 11:9 look 5:21 7:21 32:21,24 looked 8:8 18:6 looking 20:1 lot 7:17 17:22 25:24 lots 7:14 low 9:8 21:17 25:10	marked 13:3 mass 19:2 21:13 master's 25:8 matter 1:6 3:4 7:6,10 16:2 may 6:7 7:6 9:12 25:15 28:3 32:15 maybe 18:11 24:16 means 31:15 measured 17:10 meet 10:13,18 member 3:10 5:8 memory 28:2 methods 8:23 9:15 microfiche 8:7 might 19:13,22 20:6,17,19,22 23:22 24:6,10 25:22 26:2 29:10 miles 25:16 milligram 6:13 7:9,13,22 8:2 8:16 10:12,18 32:5 33:13,24 milligrams 6:17 6:19 9:19 17:11,19 25:19 29:5,16 33:19 34:10,12 million 9:8 25:13 mind 25:4 mine 30:17	monitor 16:11 monitoring 16:8 17:6 20:4 32:10,15,16 33:1 monthly 21:17 21:22,23 more 20:11,13 21:4 25:24 28:13,18 morning 3:1 5:15 18:23,24 30:14 most 17:9 move 30:12 MPDS 10:11 16:11 much 10:22 11:4 26:21 30:5,10 34:22 35:12,18 Mud 1:9 3:7 Muddy 19:17 29:1 must 4:2
K	K 1:3 kind 11:10 22:7 kinds 10:14 know 6:13 7:16 16:10 18:7,11 18:12 21:10 23:24 32:11 knowing 20:1 knowledge 16:15 19:23,24 33:1 Koch 2:11	made 24:14 25:12 31:13 major 26:13,16 make 4:2 18:17 25:14 28:16 35:3 making 11:8 manner 14:2 Manning 2:10 5:24 6:1,3 11:21,24 12:4 12:9,15,20 13:2,11,16,22 14:5,12,15,19 14:21 15:11 16:3,4 22:22 23:2,5 24:18 25:3,17 29:17 29:24 30:7,11 30:17 31:13 35:17	marked 13:3 mass 19:2 21:13 master's 25:8 matter 1:6 3:4 7:6,10 16:2 may 6:7 7:6 9:12 25:15 28:3 32:15 maybe 18:11 24:16 means 31:15 measured 17:10 meet 10:13,18 member 3:10 5:8 memory 28:2 methods 8:23 9:15 microfiche 8:7 might 19:13,22 20:6,17,19,22 23:22 24:6,10 25:22 26:2 29:10 miles 25:16 milligram 6:13 7:9,13,22 8:2 8:16 10:12,18 32:5 33:13,24 milligrams 6:17 6:19 9:19 17:11,19 25:19 29:5,16 33:19 34:10,12 million 9:8 25:13 mind 25:4 mine 30:17	morning 3:1 5:15 18:23,24 30:14 most 17:9 move 30:12 MPDS 10:11 16:11 much 10:22 11:4 26:21 30:5,10 34:22 35:12,18 Mud 1:9 3:7 Muddy 19:17 29:1 must 4:2
L	L 12:18 label 28:24 labeled 13:4 22:22 lack 8:22 land 12:23 large 8:19 Larry 2:12 24:20 25:3,23 LaSalle 36:16 last 10:3 later 20:22	M 2:10 13:5,19 Madam 6:1 12:20 13:16 14:12 made 24:14 25:12 31:13 major 26:13,16 make 4:2 18:17 25:14 28:16 35:3 making 11:8 manner 14:2 Manning 2:10 5:24 6:1,3 11:21,24 12:4 12:9,15,20 13:2,11,16,22 14:5,12,15,19 14:21 15:11 16:3,4 22:22 23:2,5 24:18 25:3,17 29:17 29:24 30:7,11 30:17 31:13 35:17	milligram 6:13 7:9,13,22 8:2 8:16 10:12,18 32:5 33:13,24 milligrams 6:17 6:19 9:19 17:11,19 25:19 29:5,16 33:19 34:10,12 million 9:8 25:13 mind 25:4 mine 30:17	N N 2:1 name 3:1 5:2 6:3 Natural 13:24 14:23 15:1,2 15:15,16,19 naturally 16:21 17:24 nature 15:4,21 near 8:2 necessary 19:7 necessitated 6:11 7:8 never 7:20

<p>new 33:16,18 34:18</p> <p>next 12:21</p> <p>none 12:18 13:20 14:18 25:13 35:10</p> <p>north 16:12</p> <p>northeast 17:1 22:18 33:13</p> <p>Notary 36:21</p> <p>note 5:7 22:1</p> <p>notes 22:21 23:6 36:10</p> <p>notice 1:15 3:13 3:14</p> <p>notion 5:10</p> <p>NPDES 19:16</p> <p>NPDS 33:6,10 34:4</p> <p>number 22:11</p> <p>numbers 6:24 26:3</p> <p>numerous 34:15</p> <hr/> <p style="text-align: center;">O</p> <hr/> <p>O 1:3,3</p> <p>oath 36:6</p> <p>objection 12:17 13:18 14:16 31:3,8</p> <p>obviously 6:23 11:3 25:23</p> <p>occurred 18:2</p> <p>occurring 16:21</p> <p>off 26:6 35:4,6</p> <p>office 13:7</p> <p>officer 1:13 3:3 6:2 12:21 13:17 14:13 35:15</p> <p>officer's 11:16</p> <p>offices 8:7</p> <p>Oh 28:2 29:2 31:6</p> <p>okay 11:24 12:15 13:11,16 16:16,22 17:2 18:20 19:3,15 20:3,15,20 21:6 22:5,13</p>	<p>22:16 23:18,21 24:12 25:7 26:7,14,17 27:9 28:5,9,18 28:23 29:3,7 29:12,21 30:2 34:17,24 35:3 35:10</p> <p>old 26:1</p> <p>omit 9:10</p> <p>one 5:3 6:13,14 7:9,10,13,22 8:2,16 10:12 10:18 28:18 32:5,10</p> <p>ongoing 15:15</p> <p>only 14:10 24:12</p> <p>opening 30:15 31:12</p> <p>operating 25:11</p> <p>operator's 24:15</p> <p>opinion 16:1</p> <p>opportunity 3:21 7:20,21</p> <p>order 8:10,14,24 9:21 35:15</p> <p>organic 25:9</p> <p>original 7:10</p> <p>other 5:4 14:3 19:8,16 20:10 27:5 33:5</p> <p>otherwise 33:2</p> <p>out 10:12 20:9 21:1 24:10 25:9 29:18 35:15</p> <p>outliers 18:13</p> <p>over 5:4 24:17 25:13 26:21 30:18</p> <p>own 25:11</p> <hr/> <p style="text-align: center;">P</p> <hr/> <p>P 2:1,1</p> <p>page 22:11</p> <p>part 18:8 22:14 30:17</p> <p>participants 5:19</p> <p>particular 6:9</p>	<p>7:7,19 8:9 16:2</p> <p>particularly 8:15</p> <p>parts 9:8</p> <p>past 32:17</p> <p>pattern 18:13</p> <p>Patterson 9:4</p> <p>people 11:12</p> <p>per 6:13,17,19 7:9,13,22 8:2 8:16 9:8,19 10:12,18 17:11 17:19 25:19 29:5,16 32:5 33:13,19,24 34:10,12</p> <p>percent 8:18</p> <p>perfectly 25:20</p> <p>perform 35:9</p> <p>period 17:6 18:7 26:13 27:18</p> <p>permit 10:11 16:11 33:10,11 34:19,19</p> <p>permits 33:15 33:16,19 34:4</p> <p>permitted 19:19</p> <p>personal 19:23 19:24</p> <p>personally 21:3</p> <p>perspective 8:4 24:13</p> <p>petition 6:8,22 7:7 14:1</p> <p>petitioner's 7:1 12:5 13:3,17 14:6,13</p> <p>pipe 10:13</p> <p>plant 16:12,17 17:1,5 19:5 22:19 23:16,20 24:2,15,17 25:24 26:24 27:1,4,18 28:13</p> <p>plants 9:9 20:2 25:12,13 26:11</p> <p>please 5:1,3,7 13:6 14:7</p>	<p>pleasure 34:23</p> <p>point 5:21 7:1,4 8:1 10:10 19:20 20:18,21 21:2 35:1</p> <p>pointing 29:1,18</p> <p>points 17:19 18:16 24:3 28:20</p> <p>Pollution 1:4,14 2:2</p> <p>population 27:6</p> <p>portable 16:19</p> <p>position 14:23 15:8 31:15</p> <p>possible 29:22</p> <p>preceded 8:11</p> <p>preconceived 5:10</p> <p>prepared 12:12 13:10 14:10 15:23</p> <p>present 11:5,18 19:13 30:1</p> <p>presented 9:4 10:22 11:6 12:12 14:1</p> <p>presents 21:13</p> <p>president 15:8 15:10,12</p> <p>presiding 3:10</p> <p>pressure 11:17</p> <p>pretend 30:16</p> <p>pretty 27:5,7</p> <p>pre-file 5:13 35:2</p> <p>pre-filed 4:20 11:6,12,15 12:6,17 13:4 13:19 14:2,16</p> <p>pre-filing 14:9</p> <p>prior 3:22 7:11 15:7</p> <p>probably 27:3 29:13 33:2</p> <p>problem 6:24 31:20</p> <p>problems 9:4</p> <p>proceed 4:23</p>	<p>proceeding 3:3</p> <p>proceedings 1:12 36:8,12</p> <p>process 5:21</p> <p>produce 4:1</p> <p>product 9:9</p> <p>professional 12:22</p> <p>promulgated 7:22 10:4</p> <p>promulgating 10:1</p> <p>promulgation 8:10</p> <p>proponent 4:20 5:24</p> <p>propose 6:21</p> <p>proposed 1:7 3:4,22 4:2,6 5:18 8:20,21 10:23</p> <p>Protection 2:6 3:18 4:21 7:2 10:6</p> <p>protective 34:13</p> <p>provide 24:21 29:23</p> <p>public 4:4,5 16:19 36:21</p> <p>published 3:14</p> <p>purpose 3:16 14:9</p> <p>purposely 15:24</p> <p>purposes 12:11 12:12 13:8,13 15:4 22:15</p> <p>pursuant 1:15</p> <p>push 20:17</p> <p>put 6:6 24:3 35:15</p> <hr/> <p style="text-align: center;">Q</p> <hr/> <p>quality 1:8 3:5 5:17 6:12 7:14 9:7,13 20:23 26:4 30:20 32:4,14</p> <p>quantities 8:19</p> <p>question 16:7 28:18 32:9</p>
---	--	--	--	--

questioning 5:22	reported 36:8	scenario 21:14	9:18 32:16	28:6 36:1
questions 4:23 5:3,5,7 6:7 15:23 16:6 19:1 24:19 25:4,21 30:8 31:10,12 33:10 34:24	reporter 5:4 36:6	science 9:22	33:17	statement 30:15 31:12
quite 24:20	represent 5:2 24:6	scientific 8:4 15:3 19:11 21:4	six 27:21	stations 32:15
<hr/> R <hr/>	representing 27:11	second 4:19 35:4	size 11:4	statistical 18:10 18:12,17,19
R 2:1	request 3:20 4:1 6:11 11:7	Section 3:18,19 4:7	small 9:5 25:12	statistically 18:14
raise 4:24 9:16 9:20 11:21	requested 4:8 7:19,21	sections 6:22 7:4	smaller 32:13	Stephen 2:10 13:19
range 9:8	required 16:10	see 16:24 18:10 32:24	sole 9:7	Steve 11:14
reach 28:16	requires 3:19 10:11	seeing 11:2 12:18 13:20 14:18 31:8 35:10	solution 11:3	Steven 12:21 13:5
read 4:22	research 19:21	seeks 9:18 30:22	something 24:9	story 27:7
readings 18:10	response 4:11	seen 26:13	sorry 15:2 33:12	STP 24:13 33:13
reads 29:4	results 16:8 17:5 18:13 19:13	segment 32:24	sound 29:16	stream 20:4,18 22:3,4 28:7 32:2
really 7:20 22:8	review 14:6 34:4	seldom 9:4	sources 20:10 21:1,8	streams 19:11 19:19 20:1 21:2 31:14,24 32:10 33:7
reason 4:19	right 3:11 11:13 11:21 12:16 15:20 17:21 21:15 22:9 23:14 32:18	sent 3:13 13:7	south 19:17 28:7 29:2 36:16	Street 1:18 36:16
reasonableness 10:23	River 1:9 3:6 28:8	serve 3:3	southeast 33:12	studied 8:4
Rebecca 1:15 36:5,15	role 14:20 15:13	sewage 16:12 19:5 22:19 25:11	southwest 16:17 33:11	studies 15:14,24
received 4:11 34:14	room 4:16	sewer 17:23	southwestern 17:5	study 3:21,24 4:1,3,4,10,12 4:17 15:3 19:11 35:10
receiving 10:7 19:6,19 21:2 31:23,23 32:13	rule 1:7 3:5 6:10 10:23	sheets 23:3	speak 5:3	studying 15:21
recommended 7:5	rulemaking 3:8 3:12,17 4:10 5:20 8:1,6 15:5	shorthand 36:8 36:10	speaking 5:4	subject 3:17
record 4:17 5:6 5:9,20 22:16 30:1 35:3,4,6	Rulemaking-... 1:9	show 28:7	specific 1:7,8 3:4 3:5	submit 32:22
reevaluated 8:3	rules 3:22,23 4:2 4:6 7:18	showed 27:16	specifically 15:18	SUBSCRIBED 36:19
referred 22:12	run 18:9,16,17 18:18	signature 12:10 12:10 13:12,13 14:9	spikes 17:16 18:2,6	Suite 36:16
reflect 33:17	running 25:12	significance 11:7	SS 1:2 36:1	supply 16:20
refresh 28:1	R09-11 1:7 3:8	similar 14:2 16:24	staff 5:8	support 21:12 22:18 30:21
Reg 3:15	<hr/> S <hr/>	simply 9:18 10:13	standard 1:8 3:6 5:18 6:12,17 7:9,19,23 8:3,9 8:14,21 10:1,5 10:14,18,19,20 20:23 25:19 31:20 32:5,6 33:12,14,17,20 33:24 34:1	supposed 29:15
regarding 6:9 24:19 34:16	S 2:1	since 15:16 24:14 25:15 30:17	standards 7:15 7:17 9:13 26:4 30:21	Sure 24:11,24
regards 34:10	same 4:14 9:1 28:6	sir 16:14	start 25:10	survey 13:24 14:24 15:1,2 15:15,17,19,23 21:24 23:15 28:6
regulation 6:20 9:11,19	samples 27:13 27:17	site 1:7,7 3:4,5	state 1:2,17 5:1 18:8 21:24 23:15 25:9	surveyor 12:23
regulations 6:21	says 23:7 36:6	sites 32:15		swear 11:19 24:22,24
relation 26:3	scale 9:5	site-specific 1:8 5:17 6:10 7:18		
relief 19:7 30:21				
report 27:16				

swearing 11:17	35:11	transfer 15:16	version 29:22	17:21 23:19,24
sworn 11:23	they'd 35:3	treatment 8:22	very 6:4 7:15 8:2	24:3 25:17
25:2 30:24	think 7:24 10:22	9:15,23,24	9:2 10:16 18:7	26:1 32:1
31:1 36:6,19	16:7 17:22	10:14 11:2	18:15 23:17	wet 27:6
system 17:23	18:1 25:19	16:12 19:5	30:5,9 34:22	wetter 26:11,18
	28:12 29:8,15	20:2 22:19	35:12,18	we'll 12:17
	30:2	25:11	vice 15:8	29:24 30:12
<hr/> T <hr/>	thirdly 13:22	tried 28:15	view 7:1	we're 9:17,21
take 20:13 31:19	three 6:17,19	true 32:23 36:10		10:1,17,21
34:7	9:19 11:12	try 19:12	<hr/> W <hr/>	11:8 16:24
taken 1:15 4:22	17:19 33:19,23	trying 11:2	wait 4:24	25:20 26:3,18
6:5 7:20 36:11	34:10,12	TSD 21:22	want 14:21 35:7	35:19
taking 23:19	three-year 17:6	28:19	35:10	we've 7:3 25:19
36:9	through 18:17	TSE 19:8	wanted 11:10,10	26:11 27:5
talking 25:18	27:23 28:2,3	turn 11:24 13:22	wants 25:18	34:14
Tanner 2:4 3:11	32:21	Turning 12:21	35:8	whatsoever
technical 3:12	throughout	turns 20:9	wasn't 16:10	15:14
21:12 22:17	28:16	two 14:2 17:11	waste 26:10	while 7:16 8:17
31:22	Thursday 35:14	17:18 19:19	wastewater 18:1	wishes 5:13 35:1
technologies	time 5:3,11,19	23:3	water 1:8 3:5	witness 11:23
9:23,24	5:21 6:4 7:15	twofold 3:17	5:17 6:12 7:12	25:2 30:9 31:1
technology 9:3	9:5 15:13 17:9	typically 26:12	7:14 8:12 9:7	witnesses 11:20
tell 6:21 25:24	18:4 24:13,20		9:13 10:3,8	14:3 16:6
tend 17:24	25:10 27:16,18	<hr/> U <hr/>	16:19,20,21	work 6:20 11:1
tender 13:17	Tipsord 1:14 2:3	uncontrolled	20:22 21:24	worksheet 21:21
14:5	3:1,2 5:23	8:19	23:15 25:11	22:1,12,12,18
tends 21:9	12:16 13:18	underestimated	26:4 28:6	worst 21:14
terms 9:23 10:22	14:15 16:3,5	23:16 25:20	30:20 32:4,14	wouldn't 32:14
11:2,17 15:3	18:22 22:11,15	understand 17:7	32:14	would've 20:11
15:20,20 17:4	22:20 24:24	33:10	waters 19:6	33:2
testify 5:13 35:2	30:8,12,23	understanding	31:13,23,24	
testimony 4:22	31:2,8 33:5,9	7:23 34:11	32:13	<hr/> Y <hr/>
5:12,22 6:6,7	33:21,23 34:3	undesirable	waterway 28:17	yeah 22:10 27:2
7:24 11:5,6,13	34:6,17,21	8:20	way 7:9 18:11	28:15 29:11,19
11:15 12:6,17	35:7,18	unit 3:12 30:21	weather 18:4	31:4 32:23
13:5,19 14:2,8	today 3:9 4:18	unlikely 8:18	27:6,7	33:22
14:17 31:3,4,5	5:22 6:16	unsure 34:8	weather-wise	year 9:1
31:7,9	10:17,21 11:8	upstream 22:9	18:7	years 10:3 24:6
tests 16:19	11:11 14:20	use 6:12 7:23	welcome 5:16	24:17 26:11,21
thank 5:18,22	35:13	23:7 35:11	30:6	27:4,10,13
5:23 6:1 12:15	today's 3:16	used 19:6 23:12	well 8:9 10:5	
12:20 13:11	4:19 9:10	24:3 26:2,5	11:5,8 16:21	<hr/> Z <hr/>
14:12,15 16:3	together 24:3	27:10	22:3 23:12,17	zero 20:11 31:24
16:4 18:20,21	top 22:23	USEPA 34:3,9	24:22 25:6	32:2
22:20 23:1,5	town 11:4	using 26:4	28:11 35:16	zone 31:16,19
29:18 30:2,4,5	toxicologist		went 8:6,7 28:3	Zuck 12:24
30:7,9,11 32:8	30:20	<hr/> V <hr/>	30:18	22:23
32:20 33:4	transcript 1:12	valid 18:17	were 7:4 11:4	
34:21,22 35:10	36:10	values 23:24	14:19 17:10,11	<hr/> 0 <hr/>
35:11,17,18		Vera 2:7 30:18	17:15,16,18,19	0.015 29:6
their 10:12 26:2				

0.03 29:5	37 21:23 23:10			
0.13 23:8,14	23:12 24:4			
0.37 23:7	27:9			
084-004659	3898 3:15			
36:17				
09 33:15	<hr/> 4 <hr/>			
<hr/> 1 <hr/>	4 31:4,9			
1 12:5,18,19	4th 4:11			
1.0 33:12	45 3:24			
1.5 29:16	<hr/> 5 <hr/>			
100 8:17	5th 3:14			
11:00 1:19	<hr/> 6 <hr/>			
12 28:19,21	6th 3:15 9:1			
13 23:9 28:11	60603 36:16			
15 25:16	<hr/> 7 <hr/>			
16th 12:7	7Q10 21:16,24			
19th 4:9	23:8,23 26:5			
1972 6:15 7:10	26:15,19 29:5			
7:12,15 8:5,6	31:24			
8:15 9:20	7th 8:14			
1980 25:15	<hr/> 8 <hr/>			
<hr/> 2 <hr/>	80 28:7			
2 13:4,17,20,21	850 36:16			
20 4:5				
2004 27:20,23				
2008 27:24 28:3				
2009 1:5,19 3:14				
3:15 4:9,12				
12:7 36:20				
210 1:18				
24 22:1 23:10				
25 27:4				
25,000 27:3				
27 3:18,19 4:7				
29 36:16				
<hr/> 3 <hr/>				
3 14:6,13,17,18				
30 3:24				
30th 35:14				
30,000 27:3				
303.347 1:10 3:7				
30334 6:22				
30340 6:22				
31 1:5				
31st 1:19				
33 3:15				
35 1:10 3:7 10:3				