

BEFORE THE ENVIRONMENTAL PROTECTION APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

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In re: :
: :
CITY OF ATTLEBORO, MA, : NPDES Appeal Nos. 08-08
WASTEWATER TREATMENT PLANT : 08-09
: :
PERMIT MA 0100595 :
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1201 Constitution Avenue, NW
Washington, D.C.

Thursday, December 18, 2008

The above-entitled matter came on
for ORAL ARGUMENT at approximately 10:00 a.m.

BEFORE:
CHARLES SHEEHAN
EDWARD E. REICH
KATIE A. STEIN

1 PROCEEDINGS
2 MS. DURR: The Environmental Appeals
3 Board of the United States Environmental
4 Protection Agency is now in session for oral
5 argument in re: City of Attleboro,
6 Massachusetts, Wastewater Treatment Plan, Permit
7 No. MA0100595, NPDES Appeal Nos. 08-08 and
8 08-09, the Honorable Judges Charles Sheehan, Ed
9 Reich, Katie Stein presiding.
10 Please turn off all cell phones and
11 recording devices.
12 Please be seated.
13 JUDGE REICH: Good morning. The Board
14 is hearing oral argument this morning in the
15 matter of City of Attleboro and NPDES Permit
16 Appeal pursuant to the Board's order of
17 October 15, 2008. This morning, we will follow
18 the order set forth in the Board's October 15,
19 2008 order regarding oral argument.
20 Rhode Island has been allocated 10
21 minutes for its argument, and may, if it
22 chooses, reserve at the beginning of its

1 APPEARANCES:
2 On behalf of State of Rhode Island:
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5 Management
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10 On behalf of City of Attleboro:
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16 On behalf of Environmental Protection Agency:
17 SAMIR BUKHARI, ESQUIRE
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20 U.S. EPA, Region 1
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ALSO PRESENT:
Eurika Durr
Jonathan Zilinski
* * * * *

1 argument up to five minutes for rebuttal.
2 The City of Attleboro has been allocated 25
3 minutes for its argument, and similarly may,
4 if it chooses, reserve at the beginning of
5 its argument up to five minutes for rebuttal.
6 Then the Region will be afforded 35 minutes
7 for its argument, followed by rebuttal, if
8 any, from Rhode Island and the City.
9 I'd like to begin by asking counsel
10 to state their names for the record and whom
11 they represent, proceeding in the order in
12 which they will be arguing, beginning with
13 Rhode Island.
14 MS. FORCIER: Susan Forcier, Rhode
15 Island Department of Environmental Management.
16 JUDGE REICH: Thank you.
17 MR. WILKINS: Good morning, Your
18 Honors. My name is Douglas Wilkins from the
19 firm of Anderson & Kreiger, representing the
20 City of Attleboro.
21 MR. BUKHARI: Your Honor, my name is
22 Samir Bukhari. I represent the Region in this

<p style="text-align: right;">5</p> <p>1 matter, and I'm joined today by Pete Ford of the 2 Office of General Counsel. 3 JUDGE REICH: Okay, thank you. 4 Ms. Forcier, you can proceed. 5 MS. FORCIER: Thank you. Good 6 morning, Your Honors. Before I start, I'd like 7 to reserve five minutes for rebuttal, if I may. 8 JUDGE REICH: Yes. 9 MS. FORCIER: Thank you. And I want 10 to thank the Board for hearing from the State of 11 Rhode Island this morning. There are some 12 issues here that concern the state that we'd 13 just like to address, if I can. 14 This facility, as you know, is an 15 8.6 million gallon a day facility discharging 16 into the Ten Mile River approximately 200 17 yards north of the Rhode Island border. That 18 Ten Mile River, along with the Turner 19 Reservoir and Seekonk River where it 20 discharges, are currently deemed impaired for 21 various constituents. And the Seekonk River 22 is marine water, where nitrogen is the</p>	<p style="text-align: right;">7</p> <p>1 facilities discharging directly to the 2 Providence River or the Bay have been 3 held -- where the flushing rate is 4 higher -- can be held to a less stringent 5 standard of 8. 6 RIDEM has issued instate permits 7 consistent with that line of reasoning, and 8 we believe the Region has appropriately done 9 the same here. 10 I'd also like to express DEM's 11 support on the record for the Region's 12 determination of the phosphorous limit in 13 this permit. The draft permit, as you can 14 see from the record, was initially issued 15 with a phosphorous limit of .2 milligrams per 16 liter, but in the urging of DEM, the Region 17 pulled back that draft and reissued it with a 18 more stringent .1 milligram per liter limit 19 in August of 2007. And that limit has 20 remained in this final permit. 21 The Region, of course, has the duty 22 to ensure that Rhode Island water quality</p>
<p style="text-align: right;">6</p> <p>1 limiting nutrient. And because of this, the 2 Region tailored the nitrogen limit in this 3 permit to achieve compliance with Rhode 4 Island water quality standards. 5 DEM supports the nitrogen limit 6 imposed in the permit of 8 milligrams per 7 liter, as it's equivalent to the limits Rhode 8 Island has been imposing on its instate 9 facilities. Excuse me. Rhode Island noted 10 in a 2004 evaluation report cited by the 11 Region in providing its justification for the 12 limit that the appropriate wastewater 13 treatment facility total nitrogen 14 concentrations varied based on the 15 environmental impact of the facility. 16 And that's to say with regards to 17 Narragansett Bay, that this means that larger 18 facilities discharging relatively greater 19 amounts of nitrogen into more severely 20 impacted upper reaches of the system are held 21 to a stricter standard of 5 or 3 milligrams 22 per liter, while relatively smaller</p>	<p style="text-align: right;">8</p> <p>1 standards are met at the Rhode Island border, 2 and in this case, that line closely 3 corresponds with the Turner Reservoir, which 4 DEM considers a lake for purposes of our 5 water quality standards. 6 JUDGE REICH: While you're on that 7 then, Attleboro cites your comments on the draft 8 permit, and it's quoted at page 42 of the 9 Response to Comments, where the state does seem 10 to talk about the criteria in the Federal 11 Guidance Manual and indicates that the Turner 12 Reservoir meets those criteria. And they infer 13 from that that you agree that those are the 14 relevant criteria for defining where the lake is 15 for Rhode Island purposes. Is that a correct 16 reading of Rhode Island's position? 17 MS. FORCIER: In our water quality 18 standards, we do list the Turner Reservoir as a 19 freshwater lake. 20 JUDGE REICH: Based on the Agency's 21 guidance or based on Rhode Island's own 22 definition of lake?</p>

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1 MS. FORCIER: I think it's on Rhode
2 Island's definition of a lake, Your Honor, where
3 based on the residence time. We follow the 7Q10
4 flow so that for impounded -- excuse me, for
5 river impoundments and effluent-dominated water
6 bodies such as the Turner Reservoir, we would
7 use 7Q10 as opposed to -- as the City proposed,
8 excuse me, a seasonal or annual average.
9 JUDGE REICH: Is residence time part
10 of the definition of lake under the Rhode Island
11 law?
12 MS. FORCIER: I believe it is. I
13 would have to look back in our regulations, but
14 I believe it is.
15 JUDGE SHEEHAN: Okay. So in that
16 vein, how did the City of Attleboro get it
17 wrong?
18 MS. FORCIER: Excuse me?
19 JUDGE SHEEHAN: How did the City of
20 Attleboro get it wrong in terms of how it
21 classified Turner?
22 MS. FORCIER: I think the City has

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1 proposed that we use a seasonal average or an
2 annual average as opposed to the 7Q10 in
3 evaluating whether the criteria has been met.
4 And it's Rhode Island's position that because
5 this is a river impoundment and because it's
6 largely effluent-dominated, that the 7Q10 should
7 be applied as opposed to an annual or a seasonal
8 average.
9 JUDGE REICH: In terms of the 303(d)
10 listing, the Region at least indicates that you
11 identified that as an impaired lake in that
12 listing. In looking at the listing itself, I
13 could not see where it was identified as a lake.
14 I could see where it was identified as impaired,
15 but not necessarily as a lake. Do you think it
16 was identified as a lake in the 303(d) listing,
17 and if so, can you help me find where that is?
18 MS. FORCIER: Yes, I believe it was.
19 I would need to look at the listing again to
20 direct your attention, I guess. But I know that
21 the Agency has always interpreted it to be a
22 lake, and has always interpreted the 303(d) list

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1 to classify it that way.
2 JUDGE REICH: The 303(d) list itself,
3 at least the pages I'm looking at, Group 2, use
4 the word reservoir. Turner Reservoir. No use
5 of the word lake.
6 MS. FORCIER: We treat lakes and
7 reservoirs the same for the purpose of the
8 criteria.
9 I think our nutrient criteria
10 refers to lakes, ponds, kettle holes and
11 reservoirs -- I believe is the language.
12 JUDGE REICH: So you think because
13 -- I mean, that's part of the name, though,
14 right? That because it's part of the name of
15 the Turner Reservoir, that that in and of itself
16 means we should infer that you're classifying it
17 as a lake?
18 MS. FORCIER: Not strictly based on
19 the name, no.
20 JUDGE REICH: I mean, looking at the
21 list, basically the columns I see are water body
22 ID, name description, and the name/description

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1 just basically describes Turner Reservoir south
2 of Newman Avenue Dam, East Providence. Water
3 body size, water quality classification, causes,
4 calendar year for target MD year, MDL, and
5 target for MDL comment. And nowhere in there
6 did I see any reference to a descriptor calling
7 it a lake. So I just wasn't sure how much the
8 303(d) listing really supported the idea that
9 you've identified it as a lake. I'm not saying
10 you haven't, I'm just focused on whether this
11 document itself does that.
12 MS. FORCIER: If it's not entirely
13 clear from that document, I think that perhaps
14 other DEM publications might make it clearer
15 that that's the way that we've consistently
16 treated the Turner Reservoir.
17 JUDGE REICH: Thank you.
18 MS. FORCIER: Thank you. So the
19 Region appropriately applied that same
20 requirement here of using the 7Q10 flow that the
21 State uses in accordance with its duty to ensure
22 the compliance with our water quality standards.

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1 As I said, seasonal or annual
2 averages might be appropriate in a more
3 typical lake that is not a river impoundment
4 and is not effluent-dominated, but in this
5 case, RIDEM has consistently applied 7Q10 for
6 this and other water bodies that we consider
7 to be river impoundments that are
8 effluent-dominated.

9 JUDGE REICH: Can I ask some
10 questions? We didn't give you -- I know, all
11 that much time, in part because your appeal was
12 more narrowly focused and because you were not
13 an intervenor in Attleboro's appeal, where they
14 were in yours. But let me ask you first a few
15 questions related to the actual substance of
16 your appeal. And then I had a couple of
17 questions relating to positions that Attleboro
18 has ascribed to Rhode Island.

19 But in terms of the issue of
20 whether the Region should have considered the
21 data that came out of the 2007-2008 sampling
22 in the Ten Mile River watershed, do you know

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1 at the time of the first comment period on
2 the draft permit whether it was clear that
3 such a sampling program was going to go
4 forward? Was the Agency aware? Was Rhode
5 Island aware that there would be this
6 sampling program back in 2006, which was the
7 first comment period for the permit?

8 If you don't know, you can say so.

9 MS. FORCIER: I'm trying to recall the
10 exact dates that the study was being put
11 together and approved, and I can't recall off
12 the top of my head what those dates are.

13 JUDGE REICH: So you don't know
14 whether the Region had any reason during the
15 first comment period to know that there was this
16 plan for subsequent testing?

17 MS. FORCIER: I believe they did, but
18 I would need to, again, check those dates. I
19 don't have them in front of me right now.

20 JUDGE REICH: Do you think there's
21 something in the record that would clearly
22 identify that?

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1 MS. FORCIER: I believe that there is.
2 But again, I need to check the dates again.

3 I'm sorry.

4 JUDGE SHEEHAN: Okay. Do you know the
5 data -- as I understand it, the only place in
6 the Region that's been identified as having the
7 actual data itself was the Chelmsford Lab. Do
8 you know whether the data in the form that they
9 had it at the lab was directly usable for
10 setting the permit limit, or were there
11 subsequent steps by way of analysis,
12 correlation, QA/QC that needed to take place
13 before that data itself could be used in
14 developing the effluent limitations?

15 MS. FORCIER: Obviously, QA/QC has to
16 take place before the data can be relied on.

17 JUDGE REICH: So the Region could not
18 have used the data that the Chelmsford Lab had
19 until that took place.

20 MS. FORCIER: I think that the
21 administrative record remains open until the
22 permit is issued. And so whether at the initial

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1 time that the data was submitted to the lab it
2 hadn't gone through the QA/QC yet to allow it to
3 be relied on, but subsequent to that, I think
4 the data was ready and usable prior to the
5 permit being issued, and should have been relied
6 on.

7 JUDGE REICH: Are you aware of any
8 occasion in the record where Rhode Island raised
9 the question of whether the Agency should be
10 proceeding without considering this data?

11 MS. FORCIER: I'm not sure I
12 understand the question, Your Honor.

13 JUDGE REICH: I mean, obviously, Rhode
14 Island was aware this data was being generated.
15 Obviously, Rhode Island thought and thinks this
16 data is relevant. Did Rhode Island at any point
17 prior to permit issuance come back to the Region
18 and say you need to wait, you need to look at
19 this data, you need to reopen the comment period
20 -- something before you issue the final permit?
21 Or are you saying that the Agency should have
22 known to do that on its own initiative?

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1 MS. FORCIER: The State of
2 Massachusetts, who was an issuer of this permit,
3 as well as the Region, were both aware that the
4 study was being undertaken at the time the whole
5 permit process was proceeding. And I think that
6 in our comment letter, we did make reference to
7 other data showing lower hardness limits in the
8 downstream waters as opposed to --
9 JUDGE REICH: But not this data.
10 MS. FORCIER: I don't know whether we
11 specifically referred to this data, but we did
12 comment that there were lower hardness values
13 observed downstream.
14 JUDGE REICH: I think at the time of
15 your comment letter, this data wouldn't have
16 existed, because that would have been during the
17 first comment period, which predated the
18 generation of this data.
19 The data that -- you did allude to
20 values typically observed in Rhode Island
21 waters. Did you actually submit any data?
22 MS. FORCIER: There were a couple of

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1 tables attached with our comment letter that I
2 think included certain numbers that we more
3 typically see in some calculations using those
4 numbers.
5 JUDGE REICH: Hardness levels, do you
6 think?
7 MS. FORCIER: That's right.
8 JUDGE REICH: So if it's anywhere, it
9 would be in the tables that are attached to the
10 comment letter?
11 MS. FORCIER: I believe so, Your
12 Honor.
13 JUDGE REICH: Okay.
14 JUDGE SHEEHAN: Do you think that
15 knowing -- the State of Rhode Island knowing
16 that this joint water sampling data was
17 underway -- this generation of it was
18 underway -- did the State have any obligation,
19 knowing that, to plant a flag with the Region
20 and say this is coming, you need to take account
21 of it, be watching for it? And otherwise, very
22 clearly signal to the Region to take this into

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1 account?
2 MS. FORCIER: Potentially --
3 JUDGE SHEEHAN: See, the Region should
4 have known, but did Rhode Island have an
5 obligation itself to plant that flag?
6 MS. FORCIER: I think that the Region
7 was already aware of it, as was the State of
8 Massachusetts. And I think that our comment
9 letter raising the fact that lower hardness
10 levels had been observed and should be adhered
11 to did that.
12 JUDGE REICH: When you say the Region
13 was aware, do you mean the lab was aware, or do
14 you have reason to believe that someone outside
15 the lab was aware?
16 MS. FORCIER: The Region did approve
17 the whole study that took place.
18 JUDGE REICH: Who approved it? Do you
19 know?
20 MS. FORCIER: I'm not sure off the top
21 of my head. I would have to find the approval
22 sheet. I know there was --

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1 JUDGE REICH: Is the approval sheet
2 part of the record?
3 MS. FORCIER: I'm not sure. I have to
4 go back and check again. I'm sorry.
5 JUDGE REICH: In your comments, I
6 think one of the things you did, as I recall,
7 was demonstrate that water quality standards
8 would not be met if you used this 100 milligram
9 per liter hardness value. The Region in its
10 response to comments put forth two factors that
11 they thought you had not considered that would
12 in essence undercut the argument you were
13 making.
14 I don't remember seeing a response
15 to that in your petition. Did I miss
16 something?
17 MS. FORCIER: I think that mainly what
18 the Region's response did was justify that they
19 were using values from above the North Attleboro
20 facility here. And those numbers weren't
21 representative of the receiving waters.
22 JUDGE REICH: But to the extent that

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1 they also took issue with your analysis, you did
2 not respond -- you did not address that in your
3 petition I don't believe.

4 MS. FORCIER: I'm not sure exactly
5 which criticism you're referring to from the
6 Response to Comments.

7 JUDGE REICH: Any questions on that
8 aspect? Otherwise, I have a couple on something
9 not related.

10 JUDGE SHEEHAN: No.

11 JUDGE REICH: Let me take advantage of
12 the fact that you're there to ask you just a
13 couple of questions, if you happen to know,
14 because they tend to be things where Attleboro
15 ascribes to Rhode Island to a certain position
16 or raises questions that I think it's helpful to
17 have your perspective on.

18 The phosphorous level is defined as
19 average total phosphorous shall not exceed.
20 What does the word "average" mean in that
21 context? They challenge, I think, the use of
22 7Q10 conditions as not being average. I

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1 think you indicated that typically, you do
2 use 7Q10 conditions. And so I was wondering
3 what the State meant when it says average
4 total phosphorous, and whether that was
5 necessarily inconsistent with use of 7Q10.

6 MS. FORCIER: Our water quality
7 standards require us to evaluate at critical
8 conditions. And that's the basis for us
9 generally using 7Q10. And I believe in most
10 instances, that's evaluated on a monthly
11 average.

12 JUDGE REICH: So you think the word
13 average has to be qualified by -- I think it's
14 Rule 8(e) that requires you to look at the most
15 critical conditions.

16 MS. FORCIER: Right.

17 JUDGE REICH: Okay. Final thing that
18 I have, at least, is the City claims that your
19 comments on -- the September 12, 2006 comments
20 in essence endorse the idea that waste load
21 allocations are required in setting water
22 quality-based effluent limitations. And they

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1 specifically reference Rule 7 as contemplating a
2 waste load allocation approach. Is that, in
3 fact, Rhode Island's position?

4 MS. FORCIER: Can you repeat the
5 question again?

6 JUDGE REICH: In essence, what I'm
7 saying is Attleboro has said that Rhode Island
8 takes the position, which they are advocating,
9 that some kind of waste load allocation is
10 required in setting water quality-based emission
11 limitations or effluent limitations. And I'm
12 asking whether that is in fact Rhode Island's
13 position.

14 MS. FORCIER: No, I don't think that
15 it is. I think our position is that you can't
16 always wait for allocations to be put in place,
17 and you can't delay setting limits in attempting
18 to achieve compliance with our standards until
19 something is put in place.

20 JUDGE REICH: Okay.

21 JUDGE SHEEHAN: No.

22 JUDGE REICH: Okay, thank you.

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1 MS. FORCIER: Thank you.

2 MR. WILKINS: Good morning.
3 May it please the Board, Doug
4 Wilkins for the City of Attleboro. I would
5 like to reserve five minutes for rebuttal.

6 JUDGE REICH: Yes, sir.

7 MR. WILKINS: I will address three
8 issues primarily. One is the nitrogen issue
9 relating to the marine waters -- the Seekonk
10 River first, then followed by the Providence
11 River, and the Narragansett Bay. I will address
12 the phosphorous relating to the freshwaters, and
13 I will also address the metals limit.

14 I will expressly waive the argument
15 on page 31 of our brief that a compliance
16 schedule should have been set up. The Region
17 has made clear in its comments that it's
18 willing to entertain discussions about an
19 enforcement order if in fact that becomes
20 necessary.

21 And so we're willing to take the
22 Region at its word on that.

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1 JUDGE REICH: When you say waive, are
2 you saying that you're in essence withdrawing it
3 from the petition?
4 MR. WILKINS: On that issue, yes.
5 JUDGE REICH: On that issue. So it's
6 not just you're not going to argue it; you're in
7 essence withdrawing it.
8 MR. WILKINS: Yes, I'm asking for no
9 decision from this Board, and we're willing to
10 allow the Region's action on that discreet
11 aspect to go into effect.
12 JUDGE REICH: Okay, thank you.
13 MR. WILKINS: Now, beginning with
14 nitrogen, we made some general arguments and
15 some specific ones. I realize that the specific
16 ones are more persuasive at the appellate level.
17 But I do want to pause for a moment, because
18 there's a general theme to our argument, which
19 is that we need to be sure that the limits we're
20 subjected to are based on sound science. It's
21 part of the relationship, I think, between the
22 regulator and the permittee.

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1 The regulator is supposed to, by
2 statute, and also according to the Response
3 to Comments, set limits that are necessary.
4 That is neither too strict no too lax. And
5 from the permittee's standpoint, it's very
6 important to have some degree of certainty.
7 The kind of degree of certainty that we could
8 get from a TMDL. We could get that from a
9 waste load allocation. But at the minimum,
10 what we're urging is that sound science be
11 applied here.
12 Now, on the nitrogen question,
13 there are three areas where the Region has
14 departed, we think, significantly and
15 reversibly from the requirements of the Clean
16 Water Act. As you know, the Region primarily
17 based its nitrogen levels on the study by the
18 Marine Ecology Research Lab, or MERL. And
19 yet when you look at what the Region says
20 about that study and when you look at the
21 study itself, it only addresses general
22 scientific principles relating, to be sure,

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1 to waters that were tested in this estuary's
2 own system.
3 It does stand for the proposition
4 that nitrogen affects eutrophication. But
5 when you test that against the in-stream
6 conditions -- and RIDEM admits this, so does
7 EPA -- that you find that there's a
8 significantly lower nitrogen concentration
9 than the model would have predicted.
10 And so the basic question is
11 whether these experiments can be applied to
12 this particular discharge at all.
13 JUDGE SHEEHAN: Wasn't the MERL model
14 peer reviewed?
15 MR. WILKINS: Yes. I'm not suggesting
16 that it's unsound as general science. What I'm
17 suggesting is that there's no nexus. There's no
18 criteria that allow that model to be applied to
19 our discharge into these particular waters and
20 come up with a number.
21 JUDGE SHEEHAN: So you seek a
22 mathematical model instead?

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1 MR. WILKINS: Well, I will take any
2 model that doesn't have the kind of deficiencies
3 that I'm about to outline. I think it's going
4 to have to be for the Region to figure it out.
5 But the fact that -- they say that
6 you cannot -- the system is too complicated
7 to come up with a mathematical model. And
8 yet they do cite a model. They cite the
9 Kester model in their comments relating to
10 dissolved oxygen.
11 So there's an inherent
12 contradiction in what the Region is saying
13 here.
14 JUDGE REICH: But if they've
15 said -- which I think they did -- that a model
16 might be usable for certain pollutants but not
17 others, why is that inherently a contradiction?
18 MR. WILKINS: Because the model -- the
19 Kester model does refer to nutrients. It takes
20 about modeling nutrients, not just dissolved
21 oxygen.
22 The Region's response to our

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1 petition suggested that this was a model that
2 was relating to dissolved oxygen. And that's
3 just too limited a view of what the Kester
4 model is about.

5 JUDGE SHEEHAN: But hadn't the Region
6 wrestled for years with the mathematical model
7 or something of that stringency with respect to
8 Narragansett Bay, and just found that it was
9 impractical, did not work given the
10 complexities?

11 MR. WILKINS: Well, that's what they
12 say, but then they cite a model. That leaves us
13 throwing our hands up to say, you know, is the
14 Kester model good or not? It is not limited to
15 dissolved oxygen.

16 I think that's the key point about
17 it for the purposes of this appeal. You
18 know, the Board may have questions of me, but
19 I think all the questions relating to the
20 applicability of that model remain unanswered
21 because they were not explored on the record.
22 This was something that showed up in the

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1 Response to Comments. It was not previously
2 subject to our comment.

3 Now, the other, we think, very
4 significant error that was made by the Region
5 relates to dilution factors. And of course,
6 that plays into the regulations under which
7 the Region is supposed to operate. It plays
8 into the scientific applicability of various
9 models. It is one of the reasons -- dilution
10 and attenuation -- why the MERL model does
11 not in fact predict in-stream conditions.

12 The dilution in the MERL model was
13 based on 27 days of full dilution. The
14 Seekonk River, into which our discharge finds
15 its way first in terms of marine waters, has
16 a turnover of 1.2 days on average.

17 And if you look at the studies that
18 the Region cited, even if you exclude any
19 freshwater at all -- so 7Q10 may have at
20 least a little bit of freshwater -- but you
21 have 3.5 days. That's a huge factor by which
22 the MERL model overstates the contribution of

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1 our plant to these waters. And if you do the
2 math, you come out with -- it's an
3 overstatement by a factor of 22 on the
4 average, and it's a factor of 7.8 if you look
5 only at the so-called 7Q10 conditions.

6 Now, on its surface, the Region
7 seems to say, well, we use the 10X approach
8 based on MERL. MERL had a unit of nitrogen
9 that was induced into the system, and then it
10 did factors -- increasing factors of that and
11 saw what the results were.

12 And Region 1 says that somewhere
13 around 2 to 4X is the key. But if you divide
14 the 10X by 7.8, you're well below that
15 factor. And it suggests, at least in the
16 back of the envelope -- and I suggest in
17 terms of what we ought to be worried
18 about -- that there is a vast over-regulation
19 here, perhaps a limit that is twice as
20 stringent as it needs to be.

21 JUDGE REICH: Can I --
22 MR. WILKINS: I don't ask -- I'm

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1 sorry.

2 JUDGE REICH: I'd like to take sort of
3 a little step back for a second. I want to make
4 sure that I have the right frame of reference
5 for all of this. Am I correct in regarding
6 Attleboro's petition and its reply brief as
7 saying you need to have waste load allocation as
8 a prerequisite for setting water quality-based
9 effluent limitations?

10 MR. WILKINS: I think you do need to
11 have that, although I recognize that if you
12 don't have that, they still have to issue a
13 permit.

14 JUDGE REICH: Is that a Clean Water
15 Act requirement or a Rhode Island requirement,
16 or both?

17 MR. WILKINS: I think it's a Rhode
18 Island requirement. I think the Clean Water Act
19 requirement is that there be sound science.

20 JUDGE REICH: The Rhode Island
21 requirement you cite to support that -- Rule 7.
22 Rule 7 as I see it is purely a definition

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1 section. And I looked to see where the term of
2 waste load allocation as used, and I only saw it
3 being used in defining a TMDL. So where would I
4 find in the Rhode Island regulations an actual
5 requirement for a waste load allocation apart
6 from the context of a TMDL as a prerequisite to
7 setting effluent limitations?

8 MR. WILKINS: Let me backtrack a
9 little bit. Rhode Island's only comments on
10 this permit urged that a waste load allocation
11 approach be applied. And we've cited that in
12 our petition and in our comments.

13 JUDGE REICH: Right, but Rhode Island
14 has said they don't see that as a requirement of
15 their law, however those comments be
16 interpreted. So I want for the moment to focus
17 on your reference that Rule 7 "contemplates a
18 waste load allocation approach." And find out
19 what you mean apart from the fact that
20 obviously, Rule 7 defines a TMDL.

21 MR. WILKINS: Right. By
22 "contemplate," I am referring to the Rhode

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1 Island comments and the support in Rule 7 for
2 the notion that Rhode Island believes that an
3 allocation approach is appropriate.

4 I don't mean that their regulations
5 say no permit if you don't have an allocation
6 approach. I mean, that's what I said earlier
7 in response to your question. If you don't
8 have an allocation approach, you still have
9 to issue a permit. I recognize that.

10 JUDGE REICH: So you see it as a
11 preference rather than a requirement?

12 MR. WILKINS: Yes. I think the
13 requirement is that they have a sound, rational,
14 scientific basis. And here, they've applied the
15 MERL model. You can't have a model --

16 JUDGE REICH: And you're saying that
17 for the Federal requirements as well?

18 MR. WILKINS: Yes. You can't have a
19 rational permit without a sound scientific
20 basis.

21 JUDGE REICH: All right.

22 MR. WILKINS: And here, they've said

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1 you can't have a model, yet they use MERL as
2 though it were a model. That's no better than
3 using Kester. There's no explanation why they
4 didn't use Kester. What we think is that
5 they've gone back and forth. Rhode Island has
6 gone back and forth on what its regulations
7 mean.

8 We need to have these
9 errors -- including the misstatement of the
10 dilution -- they refer to the dilution of the
11 Providence River, when in fact it's the
12 Seekonk River into which our discharge first
13 flows -- I mean, these are detailed errors
14 that could be corrected -- should be
15 corrected. And if they were corrected, I
16 don't know what the result would be, but at
17 least we would be on the road towards having
18 a scientific and rational basis for some kind
19 of permit that might come out of it.

20 And in fact, the issue on dilution
21 goes to the crux of MERL comparison, because
22 there's no dispute here. Region 1 agrees

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1 that differences in flushing rates exist
2 between Providence and Seekonk and the MERL
3 model. So how do you possibly get a
4 defensible position unless you take account
5 of those differences and you do it correctly?
6 You do it with the correct value for the
7 Seekonk River.

8 Now, there is also an interstate
9 aspect to this. And we have argued that to
10 some degree -- to some length in our
11 petition. I think one thing I would like to
12 pose as a rhetorical question is here, you've
13 got a number of wastewater treatment
14 plants -- some in Rhode Island, some in
15 Massachusetts. You've got different rivers
16 with different attenuation rates. Region 1
17 says Ten Mile has a 40 percent attenuation
18 rate. The Patuxent has an 18 percent, and
19 Blackstone has a 13 percent.

20 And yet the Rhode Island discharges
21 into the Patuxent and Blackstone. I'm
22 talking about Cranston, Warwick, West

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1 Warwick, and Woonsocket -- have the same 8.0
2 nitrogen limit as we do.
3 Now, how can that possibly be where
4 the dilution and attenuation rates are
5 concededly different? There's something
6 wrong with that picture. And I suggest that
7 what's wrong with it is that this has not
8 been -- a permit has not been issued on a
9 scientific basis; it's been issued on some
10 other basis. And that it needs to be based
11 on science.
12 We did a number of calculations.
13 We even assumed that the Region was right and
14 we were wrong in terms of how much nitrogen
15 is relatively produced by the wastewater
16 treatment plants. We took their 90 percent
17 figure, and you come out with our effective
18 contribution to the Rhode Island waters as
19 being somewhere between 3.4 and 4.3, which is
20 significantly low. Again, interestingly, by
21 roughly a factor of 2.
22 JUDGE REICH: Mr. Wilkins, I'll let

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1 you proceed how you will, but you may want to
2 consider shifting to phosphorous in light of the
3 time.
4 MR. WILKINS: Yes, I've lost track of
5 that. Thank you.
6 Now, phosphorous. The Region used
7 the same data to come up with a 0.2 limit in
8 the first permit as it did to come up with
9 the 0.1 limit. Now, we suggest that is the
10 result not of any particular scientific
11 approach but of several errors. Now, one was
12 the definition of the lake that has already
13 been the subject of questioning to Rhode
14 Island.
15 Rhode Island's only comments quoted
16 EPA's guidance, which when read in context
17 appears very clearly, to us anyway, to be an
18 interpretation of its own view of what a lake
19 is.
20 JUDGE REICH: I agree that the quoted
21 guidance is a little confusing, which is
22 obviously why I asked Ms. Forcier about it. But

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1 looking solely at the definition in the Rhode
2 Island regulation, tell me how this is not a
3 lake under that definition.
4 MR. WILKINS: Well, the definition
5 itself, I think everyone recognizes, needs some
6 interpretation. Because the definition
7 nominally refers to any body of water, which
8 would include any flowing body of water. And
9 yet the Region agrees quite sensibly that it
10 doesn't refer to flowing bodies of water.
11 So the question is, what is a
12 flowing body? The Rhode Island regulation
13 does not answer that question, but their
14 comments in the first round of permitting
15 appeared to answer it by adopting the same
16 interpretation that EPA adopted, which is the
17 standard definition.
18 You have to have a certain acreage
19 and a residence time more than 14 days. It
20 wasn't until we pointed out that the average
21 residence time is less than 14 days -- in
22 fact, less than 10 days -- that the Region

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1 and Rhode Island appeared to have shifted
2 ground on that.
3 Now, I suggest that that is not the
4 rule of law. That is arbitrary and
5 capricious -- that Rhode Island's comments
6 were the fairest statement of what they
7 really think. If you look at their TMDLs, by
8 the way, and I think it's fair game to look
9 at them for other bodies of water because we
10 weren't confronted with this until the
11 Response to Comments came out -- we didn't
12 know that they were shifting to a 7Q10
13 theory -- but if you look at their other
14 TMDLs, they use average. They don't use
15 7Q10.
16 So what is Rhode Island doing? It
17 seems to me they're picking and choosing.
18 There is, I think, a concern in the Clean
19 Water Act that although upstate entities have
20 to comply with downstate regulations, that
21 there is a potential for upstate -- and it
22 used to be overregulated if, in fact, the

1 downstate is allowed to do this sort of
 2 thing.
 3 JUDGE REICH: So how do you see the
 4 impact or non-impact of Rule 8(e)1 on the
 5 definition of the phosphorous standards for the
 6 lake? I think what Rhode Island was arguing
 7 earlier is you have to look at the word average
 8 and how that's applied within the context of
 9 8(e), which requires the most adverse
 10 circumstances, and 7Q10 essentially is the most
 11 adverse circumstances.

12 MR. WILKINS: It may be the most
 13 adverse circumstances, but it's not the most
 14 adverse average. I mean, average is a
 15 representation of some central value, whether
 16 it's a mean, a median, or a mode. It's not the
 17 extreme low flow.

18 JUDGE REICH: But doesn't average
 19 still allow you to decide what dataset you're
 20 averaging?

21 MR. WILKINS: Well, that's not the
 22 plain meaning of that, and that's not how Rhode

1 Island has applied it in other circumstances.
 2 Rhode Island has been very unpredictable about
 3 that.

4 JUDGE REICH: Are you saying the
 5 average has to mean typical?

6 MR. WILKINS: Average means -- yeah,
 7 average is typical. I mean, this is a
 8 plain-meaning argument that we rely on. I don't
 9 know of any particular case law or any rulings
 10 that apply to it.

11 So average means mean, mode,
 12 median. One of those mathematical terms.
 13 And 7Q10 is intentionally designed to be a
 14 statistical number that is not average. It
 15 is an extreme low flow, and if they meant
 16 that, they should have said that.

17 JUDGE REICH: Maybe Rhode Island will
 18 want to elaborate on that in rebuttal.

19 MR. WILKINS: Yes, perhaps.

20 JUDGE REICH: Proceed.

21 MR. WILKINS: Now, on phosphorous,
 22 also, there's been ignoring of attenuation and

1 dilution. We were just talking about 7Q10. The
 2 phosphorous limits are nominally based upon a
 3 need to protect the receiving waters under 7Q10
 4 conditions. And yet when we get to questions
 5 about dilution and attenuation at page 67 of the
 6 Response to Comments, we see that EPA is going
 7 to downplay the fact that phosphorous levels are
 8 lower during low flows. They downplay it based
 9 upon the spring sampling. In other words, high
 10 flows.

11 Now, if they were going to say that
 12 the worst case conditions are the spring
 13 conditions, that would make sense. But they
 14 haven't. They've said the worst case
 15 conditions are 7Q10. So they're picking and
 16 choosing datasets and inserting them in the
 17 place that results in the lowest number.
 18 That, in our view, is how they get from 0.2
 19 to 0.1 without changing the data.

20 The Region also says that they can
 21 ignore the low flow data because phosphorous
 22 settles. But that is a phenomenon that has

1 been going on since the beginning of time.
 2 Certainly the beginning of wastewater flows.
 3 And it's already included in the data.
 4 Whatever effect that has is already included
 5 in the data -- the low flow data. So it's a
 6 non sequitur.

7 Now, I want to turn a little bit to
 8 metals. Aluminum in particular.

9 JUDGE SHEEHAN: Can I ask, before we
 10 pass on to that, about your argument about the
 11 Gold Book and the use of -- the Region's use of
 12 the Gold Book and setting the permit limits for
 13 phosphorous as instantaneous, and your problem
 14 with that? The Region, evidently, so they say,
 15 had used this Gold Book method elsewhere. And
 16 so it seemed to be something they were
 17 accustomed to doing.

18 Why is that wrong here?

19 MR. WILKINS: That's wrong because if
 20 you're going to use a dataset that's calculated
 21 on seasonal flows, then that should be your
 22 limit for seasonal flows. To apply it to a

45	<p>1 different time period is -- it's a mis-statement 2 of the statistical basis on which you are 3 regulating. And it has a great potential for 4 over-regulation. If you have to meet 7Q10, 5 which is a seven-day flow for a month, then you 6 are going to be discharging -- I'm sorry, you're 7 going to have an unnecessarily strict limit. 8 And again, the key to -- and on the 9 statute and on the Response to Comments, it 10 says "necessary." What's necessary? 11 You can certainly change these time 12 periods. Use data from one time period and 13 apply it to a different time period in the 14 permit, and come up with a limit that is too 15 stringent according to the very same data 16 that you're using. 17 JUDGE REICH: Were you saying, 18 relative to the Gold Book, that you could not 19 establish instantaneous values, or that if you 20 were going to do that, you had to somehow adjust 21 seasonal data to come up with some equivalents 22 in terms of instantaneous values?</p>	47	<p>1 MR. BUKHARI: Good morning, Your 2 Honors. 3 Despite submitting hundreds of 4 pages of detailed comments and voluminous 5 technical materials, as well as multiple 6 rounds of legal briefs, the City has failed 7 to carry the particularly heavy burden 8 required for Board review of the permit's 9 nitrogen and phosphorous limits, which are 10 essentially technical issues. 11 Narragansett Bay and its 12 tributaries are grossly impaired as a result 13 of cultural eutrophication, suffering from 14 anoxia, fish kills, and toxic blue-green 15 algal blooms. Arguments surrounding the 16 precise level of nutrient control necessary 17 to prevent cultural eutrophication in these 18 important New England fisheries and aquatic 19 resources amount to a difference of technical 20 opinion among the Region's experts and the 21 City's engineers. 22 I will begin by addressing three</p>
46	<p>1 MR. WILKINS: You have to put them on 2 the same basis. You have to have applies to 3 applies, to use a cliché. So yes, you could 4 take data from one period and adjust that so it 5 was appropriate for a different period. That's 6 not what was done here. 7 JUDGE REICH: So there's nothing 8 inherently wrong with using an instantaneous 9 value as long as you set the level 10 appropriately? 11 MR. WILKINS: Yes, if you're going to 12 use an instantaneous value for a monthly, then 13 there's got to be some process by which you 14 translate one into the other. You've got a 15 common denominator. 16 JUDGE REICH: Let me see if we have 17 any other questions. 18 You can feel free to raise metals 19 as part of your rebuttal if you wish. 20 I think we're out of time. 21 MR. WILKINS: Okay, thank you. 22 JUDGE REICH: The Region?</p>	48	<p>1 contested issues concerning the nitrogen 2 limit, in the order raised by the City. 3 Specifically, the extent of 4 Attleboro's contribution to the impairments 5 in the Bay, including a showing that the 6 Attleboro nitrogen discharge affects Rhode 7 Island waters and contribute to cultural 8 eutrophication. 9 Number two, whether the nitrogen 10 level of eight was reasonable and equitable, 11 including a discussion of the City's 12 arguments with respect to attenuation. And 13 finally, the use of the MERL model, where 14 I'll also address petitioners' arguments 15 concerning dilution and flushing rates. 16 Then I will move to two phosphorous 17 issues. Number one, the use of the Gold Book 18 value of .1, assuming 7Q10 close. And number 19 two, the twin independent bases for the 20 phosphorous limit under both Massachusetts 21 and Rhode Island standards. And in this 22 context, I will discuss the various issues</p>

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1 raised today regarding the interpretation of
2 the word "lake."
3 The recent conclusion at the
4 Attleboro facility was contributing to
5 nitrogen-induced water quality impairments in
6 the Seekonk River was reasonable and firmly
7 grounded in the record. The Attleboro
8 facility discharges hundreds of pounds of
9 nitrogen per day at concentrations of up to
10 30 milligrams per liter just 8 miles upstream
11 of the mouth of the Seekonk River, the most
12 highly enriched estuary in Rhode Island.
13 The City's own calculation of its
14 so-called effective or post-attenuation limit
15 concedes that approximately 42 percent of
16 this load is being delivered to the mouth of
17 the Seekonk. A 303(d) listed water that is
18 already exceeding its capacity to assimilate
19 nitrogen.
20 As discussed in the Response to
21 Comments, in-stream data from 2007, referred
22 to by the City itself in its comments, in a

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1 challenge to the nitrogen limit, instead
2 showed the severity of eutrophication in
3 these waters. Particularly at the confluence
4 of the Ten Mile River and the Seekonk River,
5 there was indication of wild swings between
6 low dissolved oxygen or hypoxia, dissolved
7 oxygen super-saturation up to 250 percent, as
8 well as very, very high chloroform A levels,
9 consistent with cultural eutrophication.
10 On these facts, Your Honor, it was
11 reasonable for the Region to conclude
12 that -- to see these discharges were
13 contributing or affect the Rhode Island
14 waters and applicable Rhode Island water
15 quality standards with respect to nutrients
16 and cultural eutrophication.
17 Number two, the nitrogen limit here
18 was both reasonable and equitable. When
19 establishing water quality-based effluent
20 limits for nitrogen for the various
21 Massachusetts facilities, foreign sources
22 whose discharges reach Narragansett Bay, the

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1 Region applied end of pipe limits based on
2 the size of the facility and their location
3 in the watershed.
4 This method was reasonable because
5 among other reasons, it reduces the total
6 mass of nitrogen reaching the
7 nutrient-impaired estuaries of the upper bay.
8 The City would prefer to establish pollutant
9 loads based on all facilities delivering at
10 the exact same concentration of nitrogen to
11 the estuary after accounting for attenuation.
12 But this embodies simply a
13 difference of technical opinion and not a
14 demonstration of air.
15 There are three reasons for this,
16 Your Honor. Number one, the City's
17 permitting scheme fails to consider the total
18 mass of nitrogen delivered to the estuary.
19 Current attenuation rates are largely driven
20 by phosphorous-driven cultural nitrification
21 in the freshwater segments of the Ten Mile
22 River. The new phosphorous limits will

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1 reduce the amount of aquatic plant growth in
2 these waters and will lessen the amount of
3 uptake of nitrogen in the intervening waters
4 from the discharge -- between the discharge
5 and the mouth of the Seekonk River.
6 This nitrogen, in any event, is
7 retained in the system, and that it resides
8 in the plants. Moreover, the current
9 attenuation rates will fall as a result in
10 the new permit limits for phosphorous.
11 Providing the City with an attenuation credit
12 in the form of an increased discharge limit
13 would not address these concerns, which the
14 Region adequately explained in the
15 comments -- adequately explained in the
16 record below.
17 Second, the City's proposed plan
18 fails to account for where the load is
19 delivered. When determining appropriate
20 permit limits, it is a meaningful
21 distinction, not an arbitrary one, that
22 Attleboro discharges to the highly impaired

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1 upper reaches of the Seekonk River -- of the
2 upper Narragansett Bay into the Seekonk
3 River, while other facilities discharge to
4 the lower portions of the Bay where the
5 impacts are less severe. Equal
6 concentrations at the mouth of the river do
7 not account for this fact.

8 The Region appreciates that the
9 City holds a different opinion -- a different
10 technical opinion on this point. But the
11 Region's methodology makes sense given the
12 extreme nutrient overloading in the
13 downstream estuaries, and was fully explained
14 on the record.

15 Moreover, the permit design does
16 not lead to inequity, contrary to what you
17 just heard from the City. RIDEM, like the
18 Region, also applied end of pipe
19 concentration-based limits to all major Rhode
20 Island facilities discharging into the Bay.
21 Indeed, the Region demonstrated that whether
22 existing continuation rates are assumed or

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1 zero attenuation is assumed, the Attleboro
2 discharge is roughly equal to the Woonsocket
3 discharge in terms of mass load into the Bay.
4 Woonsocket is a good point of comparison,
5 because it's the next largest plant, and it
6 also -- in terms of design flow -- and also
7 discharges to the upper portion of the
8 Narragansett Bay, the Seekonk River. I'm
9 sorry, the Blackstone River into the Seekonk.

10 I will quickly address the issue of
11 MERL, and the Region's rational basis for
12 relying on this model. And in that context,
13 I will discuss the City's point about
14 dilution and flushing rates.

15 The Region's decision to rely on
16 the MERL experiments as a basis for the
17 permit's limits was reasonable and rationally
18 accounted for both similarities and
19 differences between the MERL model and the
20 real world ecosystem. The MERL tank
21 experiment was peer reviewed, and has
22 withstood the scrutiny of the scientific

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1 community.

2 EPA itself cited the model with
3 approval in its estuary and coastal nutrient
4 technical guide document. It is
5 well-settled, Your Honors, that models need
6 not be perfect analogues to real world
7 conditions. This would defeat the very
8 purpose of water quality modeling.

9 Here, the model was rationally
10 related. The conditions in the Bay and the
11 Region accounted for both similarities and
12 differences as I mentioned, for three
13 reasons, Your Honor.

14 Number one, the MERL tanks were
15 specifically designed to reproduce the range
16 of nutrient enrichment levels seen in real
17 estuaries. That was its expressed design.
18 The 2004 RIDEM evaluation for the Upper
19 Seekonk River -- for the Seekonk and
20 Providence Rivers -- expressly tied the MERL
21 tank experiments to actual conditions using
22 in-stream data.

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1 Both the MERL experiments and the
2 receiving waters indicated similar
3 correlations between nitrogen loadings, the
4 causal variable on the one hand, and the
5 corresponding eutrophic response variables,
6 such as chloroform A and dissolved oxygen
7 levels.

8 It is true that the DIN
9 concentrations, the dissolved inorganic
10 concentrations in the Providence and Seekonk
11 Rivers, were lower than those seen in the
12 MERL experiments for a given nutrient
13 loading. The City has correctly described
14 that. But -- and that is in part due to
15 flushing. But the City -- the Region
16 adequately accounted for this difference.

17 JUDGE SHEEHAN: Excuse me.
18 Has the MERL model been used in
19 Woonsocket and all the other discharge points
20 mentioned in this area?

21 MR. BUKHARI: Your Honor, the MERL
22 model along with the RIDEM study interpreting

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1 that model and expressly linking it to
2 conditions in the Bay has been used for a
3 variety of facilities in Rhode Island. Those
4 permits have been issued. They're final, and
5 construction is underway to meet the limits
6 based on the MERL model, Your Honor.
7 JUDGE SHEEHAN: For all the Upper
8 Narragansett Bay discharge points, has the model
9 been used?
10 MR. BUKHARI: It has, Your Honor. And
11 that includes Massachusetts facility as well.
12 We've applied a nitrogen limit of 8 based on the
13 MERL and the RIDEM studies for North Attleboro
14 POTW, and the permit issued to the Upper
15 Blackstone facility also relies on this
16 analytical framework.
17 JUDGE REICH: How has the Kester model
18 been used?
19 MR. BUKHARI: The Kester model was
20 used for a specific point about dissolved oxygen
21 demand in the Upper Narragansett Bay.
22 JUDGE REICH: Was it used in any other

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1 permit proceeding?
2 MR. BUKHARI: To our knowledge, it
3 hasn't been used. It may have been used, Your
4 Honor, and if I'm incorrect on this, I'll
5 correct the record. But it may have been used
6 in response to comments on the Upper Blackstone,
7 in the Upper Blackstone context.
8 But as far as the Kester model, in
9 particular, the nutrient -- it's reference to
10 a potential nutrient model has not been used
11 for the purpose of designing any permit
12 limits in either Rhode Island or in the Bay.
13 And I think it's important to point
14 out on that specific issue that in the City's
15 petition for review, that model is described
16 as potentially valid. That model has not
17 been calibrated; has not been validated for
18 the specific -- specifically for nutrients in
19 Upper Narragansett Bay.
20 Indeed, when Rhode Island was faced
21 with that very, very difficult task, given
22 the complexities of these receiving waters

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1 and given the complexities of the
2 hydrological changes to the receiving waters,
3 Rhode Island's technical advisory committee,
4 comprised of experts in modeling and in water
5 quality impacts, basically threw up their
6 hands because it was too difficult.
7 So for the Region now to move the
8 permit rider in this case to attempt to model
9 nutrient impacts based on the Kester model is
10 simply not a reasonable route forward, Your
11 Honor.
12 I would like to turn back to the
13 issue of dissolved oxygen -- dissolved
14 inorganic nitrogen levels in the Bay, and the
15 differences that we see between the MERL
16 model and the actual conditions in the Bay.
17 Rhode Island speculated that this
18 may be due to differences in flushing rates.
19 And given that reason -- given that reason,
20 EPA determined not to choose the
21 most-stringent loading scenarios available to
22 them. So EPA expressly accounted for this

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1 significant difference in loading and
2 flushing rates between the MERL model and
3 real world conditions. Rhode Island also
4 mentioned, and this is contained in the 2004
5 study, that flushing rates may not be the
6 only reasons -- or dilution. I'm using this
7 as a proxy for the City's arguments on
8 dilution -- that this may not be the only
9 reason for the differences in DIN
10 concentrations.
11 One other reason may be the
12 presence of eutrophic conditions in the Bay.
13 The presence of aquatic plant growth on the
14 rivers' bottom -- on the Bay's
15 bottom -- taking up this nitrogen. And so
16 EPA did not feel it was appropriate to credit
17 the facility for these sorts of ongoing
18 violations of water quality standards.
19 I want to make one last point about
20 this. And that is that even if -- the City
21 concedes here -- that even if the -- it's
22 understanding of flushing -- the differences

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1 in flushing were accounted for -- accurately
2 accounted for -- was between 3.5 days and
3 something less in the Seekonk River, it's
4 unclear what the difference in the permit
5 limit would be.

6 And we contend -- the Region
7 submits -- that there would be no difference
8 in the flushing rate. The Region made the
9 point very clearly that whether the flushing
10 rates in the Upper Narragansett Bay and the
11 Seekonk River are somewhat less than 3.5 or
12 somewhat more than 3.5, they are much lower
13 than the 27 days assumed in the MERL tank
14 experiments. And that was a difference that
15 was accounted for by the Region.

16 Finally, the other point to bear in
17 mind and to balance against the whole issue
18 of differences in flushing rates and its
19 potential effect on dissolved inorganic
20 nitrogen is that the MERL model did not
21 replicate stratification in the receiving
22 waters. And stratification is basically a

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1 process in the Providence River in which the
2 bottom waters are sealed from the
3 nutrient -- from the oxygen-enriched upper
4 layers, and that exacerbates the dissolved
5 oxygen impacts in the receiving water.

6 And it was for this reason that the
7 Region decided not to opt for any of the
8 other less stringent loading scenarios, such
9 as the 8X or 16X that were also in the record
10 before it.

11 By the way, I would -- I think at
12 this point, given my time, I'll move to the
13 phosphorous issues. And I'd like to address
14 in doing so the specific issues raised in
15 argument just a moment ago by the City. The
16 first issue I'd like to discuss is a use of
17 the Gold Book under 7Q10, Dilution Flow to
18 calculate the permit limit.

19 The Region's application of the
20 Gold Book was reasonable and consistent with
21 the text of the applicable water quality
22 standards, the practice of other states, and

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1 EPA guidance, including nutrient criteria,
2 technical guidance manual, and the
3 recommended ecoregional criteria.

4 In developing the phosphorous
5 limit, the region consulted national
6 guidance, peer reviewed literature that
7 recommended in-stream phosphorous values from
8 .01 to .1 milligrams per liter. That was the
9 range available to the Region.

10 JUDGE REICH: Can I ask one question
11 in terms of EPA guidance? Attleboro quotes on
12 page 24 of their petition, from EPA, Zambia, and
13 water quality criteria recommendations,
14 information supporting the development of state
15 and tribal nutrient criteria, lakes and
16 reservoirs, and nutrient echo Region 14. And
17 they quote -- and I haven't gone back to the
18 original to verify the accuracy of the quote,
19 but their quote is EPA does not recommend
20 identifying nutrient concentrations that must be
21 met at all times. Rather, a seasonal or annual
22 averaging period is considered appropriate.

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1 Is that guidance applicable here?
2 And if so, how does that square with what the
3 Region has done by way of setting effluent
4 limitations?

5 MR. BUKHARI: Your Honor, the
6 ecoregional criteria documents and the
7 supporting materials are expressly designed to
8 be starting points. And those are the words
9 that are used in the actual documents. And the
10 ecoregional guidance expressly acknowledges that
11 in some cases -- and that quote soon after that
12 quote -- expressly acknowledges the fact that
13 how a limit is expressed, and whether or not a
14 limit would be appropriate, turns on the state
15 water quality standards. And that is the point
16 of departure for us.

17 You know, there's nothing in the
18 Clean Water Act, per se, that would prevent
19 the imposition of a seasonal limit. But when
20 writing an MPS permit, when writing a water
21 quality-based effluent limit, we have to
22 comply with state water quality standards as

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1 written. And as written, both Rhode Island
2 and Massachusetts standards require water
3 quality to be achieved -- water quality
4 criteria to be achieved under the most severe
5 hydrological conditions. That low flow
6 condition is described in both. And this is
7 not precatory; this is mandatory.
8 The State's demand that the 7Q10
9 dilution flow be used. And for that reason,
10 we wrote the limit in the way we did.
11 And the implications of that are
12 important for this. I'd like to speak very
13 briefly to that, if I could, given -- they're
14 important given the impaired nature of these
15 waters.
16 The Region demonstrated that the
17 phosphorous limit would not only result in
18 meeting the Gold Book recommended value under
19 7Q10 Conditions, but would also meet the
20 other seasonally based criteria from EPA
21 guidance, and peer review literature under
22 seasonal flow conditions.

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1 So in this way, Your Honor, we can
2 say that the limit as expressed in the permit
3 not only met standards -- the standards as
4 written under 7Q10 conditions, but was also
5 low enough to meet the seasonally based
6 criteria available to EPA in both the
7 nutrient criteria technical guidance manual
8 and the ecoregional criteria.
9 The Region's approach here
10 effectively reconciled all the values, all
11 the information in the record in a logical
12 way. And its approach in doing so was fully
13 explained on the record. In other words,
14 Your Honor, by establishing the .1 milligram
15 per liter at 7Q10 conditions, in-stream
16 phosphorous concentrations would be lower,
17 and water quality better when calculated over
18 the seasonal average.
19 This approach is not only mandated
20 by applicable water quality standards, as
21 I've just explained, but it makes perfect
22 sense in this particular context. It will

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1 give the hypereutrophic Ten Mile River a
2 water quality buffer, time in which to halt
3 the cycle -- the ongoing cycle of cultural
4 eutrophication.
5 A decision by a state to include
6 critical low flow provisions and state
7 standards is intended to address precisely
8 this sort of situation. And EPA merely
9 achieved the purposes of the state -- of both
10 states -- Massachusetts and Rhode
11 Island -- in constructing the permit in this
12 way.
13 In contrast -- in contrast, Your
14 Honor, the City's proposed use of highest and
15 best practicable technology at .2 and the
16 imposition of a .1 limit based on seasonal
17 flows would not ensure that the .1 limit is
18 met in-stream under 7Q10 conditions. And
19 that would be inconsistent with the Rhode
20 Island-Massachusetts regulations.
21 Finally, a point that I think bears
22 special emphasis, before concluding and

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1 taking any questions, is that the phosphorous
2 limit for this facility, which sits on the
3 Massachusetts and Rhode Island border, some
4 200 yards from the state line -- is required
5 to comply with both Massachusetts and Rhode
6 Island standards, and must be met under
7 critical low flow conditions.
8 Technical disputes over the finer
9 points of dilution and attenuation in the
10 context of phosphorous prior to reaching the
11 Turner Reservoir will not change the result
12 in this permit. It is immaterial, Your
13 Honor. The Region has clearly demonstrated
14 that the .1 limit is necessary to comply with
15 Massachusetts Water Quality
16 standards -- immediately below the discharge
17 and before the intervening stretch and the
18 inlet to central pond and Turner Reservoir.
19 JUDGE STEIN: Can we ask --
20 JUDGE REICH: Can we -- go ahead.
21 JUDGE STEIN: I had a couple of
22 questions about Rhode Island's appeal on the

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1 hardness value. And you've pointed out that
2 it's essential that you meet Rhode Island's
3 Water quality standards as well as
4 Massachusetts. How is it that this limit meets
5 the standards of Rhode Island if the hardness
6 value that you select is from upstream rather
7 than downstream?
8 MR. BUKHARI: Your Honor, we use the
9 hardness value. First of all, hardness is not
10 defined. There is no value for hardness that's
11 mandated by Rhode Island water quality
12 standards. We need to look at the information
13 that's available to us at the time of
14 permitting. And at the time of permitting, EPA
15 did not have before it the values adverted to by
16 the Rhode Island -- by Rhode Island in its
17 appeal. But I would just add quickly, Your
18 Honor, that the range of values described by
19 Rhode Island in its petition are consistent with
20 what the Region ultimately selected.
21 The Region selected a hardness
22 value of 100. And the values referred to by

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1 RIDEM range from -- depending on the flow
2 condition -- around 78 to 115. And 48 to
3 115, I believe. And 78 to 97. All within
4 the range. And that's your specific
5 question. I'm sorry I'm taking so long to
6 get there.
7 The use of the upstream value -- of
8 a value upstream for hardness, all things
9 considered, is a conservative selection,
10 because the intervening discharges from the
11 treatment plans would have the effect of
12 raising the hardness value.
13 So upstream of the Attleboro POTW
14 would be representative -- it would be a
15 conservative -- using these hardness values
16 would be a conservative selection.
17 JUDGE REICH: Can I ask one question
18 about what you said in terms -- granted that the
19 data from 2007 study would not have been
20 available, are you saying that there was no
21 downstream hardness data available at all at the
22 time you developed the draft permit?

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1 MR. BUKHARI: EPA was not aware of any
2 such data.
3 JUDGE REICH: Any at all.
4 MR. BUKHARI: When determining the
5 hardness value. And at the time of the draft
6 permit. I think ultimately, it's a question
7 of -- it's an administrative record question,
8 Your Honor. And the administrative record under
9 MPA has regulations. The permit needs to be
10 based on the administrative record under MPDS
11 permit regulations. The administrative record
12 is closed once the final permit is issued.
13 And the types of conversations that
14 we're having now over what the Region would
15 have done had it had these data before it is
16 exactly the type of post-hoc speculation that
17 the permitting regulations and the Board's
18 decision on these cases -- you know, speak to
19 and are designed to prevent.
20 JUDGE STEIN: I'm not convinced by
21 Rhode Island's argument that the Region had an
22 obligation to consider data that wasn't

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1 expressly pointed out to it. You know, that
2 might be floating around in somebody's files but
3 not in the permanent record files.
4 But what I am concerned about is
5 Rhode Island's comments that were made during
6 the comment period questioning the use of
7 upstream versus downstream hardness data, and
8 where in the record you could point me to
9 where the Region responded to that specific
10 issue.
11 I see the Region's response
12 directed to -- well, here's why 100 makes
13 sense. But I haven't -- you know, and I
14 don't admit to be -- you know, fully
15 knowledgeable about what's in this
16 record -- but I haven't seen where the Region
17 specifically confronted Rhode Island's more
18 general comment, which was made during the
19 comment period, and which did state that what
20 was being used (A) was not representative of
21 Rhode Island values; and (B), made a
22 reference to the upstream versus downstream

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1 issue.

2 And perhaps you could let me know

3 where else I might look, if anywhere, to find

4 an answer to my question.

5 MR. BUKHARI: Your Honor, I think that

6 it makes sense to look at the comment and look

7 at the response and determine whether the

8 response adequately encompassed the concern

9 being raised. And the concern needed to have

10 been raised with specificity in order for the

11 Region to have provided a meaningful response.

12 And all the Rhode Island comment

13 went to was a question for a request for an

14 explanation of how the Region came up with

15 this hardness value of 100, and a generic

16 reference to the fact that in Rhode Island

17 waters, hardness values are typically lower.

18 It's unclear why, Your Honor, suddenly across

19 the state line, a short distance from the

20 North Attleboro -- a relatively short

21 distance, given -- particularly given the

22 fact that the hardness values would be

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1 increased as a result of the intervening

2 discharges -- would suddenly be atypical, or

3 why the upstream values would be atypical.

4 And so the Region took the comment

5 on its own terms, and responded with a level

6 of generality that corresponded with the

7 generality in the comment.

8 JUDGE STEIN: But when you're dealing

9 with a state who has expertise in what it takes

10 to meet their water quality standards, and they

11 say point-blank that our numbers are lower, or

12 our hardness values are lower than the number

13 that you're using, isn't there some obligation

14 on the Region's part to engage that state? I

15 mean, if it was an upstream state, they

16 basically could have done a certification and

17 not certified the permit.

18 But here, you've got a downstream

19 state. And what I'm struggling with is in

20 the absence of a certification, you

21 nonetheless have comments from a state which,

22 under the structure of the Clean Water Act,

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1 you know, are a fairly significant issue.

2 And why is it -- I mean, I understand that

3 there may have been more general than the

4 data that is now there, but was there no

5 conversation in between Massachusetts and

6 Rhode Island? Is there nothing in the record

7 to suggest that there was a discussion

8 between the state and -- either Massachusetts

9 or EPA -- about picking the right

10 conservative number that in fact reflected

11 the conditions in Rhode Island?

12 MR. WILKINS: Well, I think, Your

13 Honor, it's an important point, because there

14 were discussions -- there were many discussions

15 regarding the permit. But the issue of

16 hardness values was never raised again by the

17 State of Rhode Island.

18 And the appropriate -- I mean, if

19 it was truly concerned -- and obviously, as

20 evidenced by the Region's practices on the

21 nutrient limits in this permit -- it takes

22 Rhode Island's positions extremely seriously

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1 and tries to -- not tries to -- writes

2 permits that will ensure compliance with its

3 standards.

4 But there was no follow-up on the

5 part of the City in this -- I mean, on the

6 part of Rhode Island in this respect. So --

7 JUDGE STEIN: But they did do that.

8 They did do their comments, and then the Region

9 responded to the comments. But that's it.

10 There's nothing else that I could find that

11 would show how this was addressed. There's no

12 other document in the record?

13 MR. BUKHARI: Your Honor, I think

14 that's a fair statement, that the Region's

15 response set forth the entirety of its thinking

16 on this issue -- that's entirely fair.

17 With respect to whether Rhode

18 Island is now sort of left -- you know, out

19 of time and out of luck on this issue, this

20 material is before the Region. And of

21 course, is now before the Region and can form

22 the basis for a potential modification of the

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1 permit. And the issue, to the extent that
2 there remains a concern over it, given all
3 the other issues in the permit, it can be
4 cured in that manner.
5 JUDGE REICH: Let me ask another
6 record-related issue.
7 I know the Region obviously must
8 have made a determination and asserted that
9 the water quality standards in Rhode Island
10 could be protected using the 100 milligrams
11 per liter hardness value. Rhode Island came
12 back and presented an analysis showing why
13 that was not the case. The Region took
14 objection to that analysis and cited a couple
15 of reasons why they thought that in fact, the
16 level would still be protected.
17 But what I don't remember seeing
18 was -- the very starting point of the
19 analysis was an actual analysis that showed
20 how the Rhode Island water quality standards
21 were being met with the 100 hardness level.
22 I saw an assertion of that. I didn't

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1 actually see an analysis of that. Is there
2 in fact a technical analysis that showed
3 that? And where in the record would that be?
4 MR. BUKHARI: Your Honor, I think, as
5 I mentioned to Judge Stein, that I think the
6 entirety of the Region's analysis is
7 reflected -- including with respect to Rhode
8 Island -- to meeting downstream standards -- is
9 reflected in the response to comments.
10 JUDGE REICH: So if we don't see it in
11 the Response to Comments, we can assume it
12 doesn't exist?
13 MR. BUKHARI: Right. I think that
14 that's a fair statement. And I think that
15 that's probably all that the Region has to say
16 on this, on this issue.
17 JUDGE REICH: Can I ask on a different
18 subject, going back to the question of the
19 definition of a lake, how do you respond to the
20 City's argument that the Rhode Island definition
21 necessarily requires some interpretation, and
22 viewing Rhode Island's comments on the draft

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1 permit -- the most logical interpretation is to
2 in fact import EPA's criteria relative to
3 residence time into the definition of lake for
4 Rhode Island purposes.
5 MR. BUKHARI: Your Honor, I would
6 begin with the definition as it appears -- the
7 plain language of the definition as it appears
8 in the Rhode Island standards. The plain
9 language makes no reference to hydraulic
10 residence times. No reference.
11 The State of Rhode Island
12 deliberately wrote the regulation. And
13 encompassing matter to encompass the very
14 types of situations that we are confronted
15 with here. And I would remind you that, you
16 know, when interpreting -- when interpreting
17 various provisions of Rhode Island standards,
18 it's important to look at the intent of the
19 state. And the intent of the state has
20 always been to treat this particular water
21 body as a lake.
22 And this is in keeping with the

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1 purposes -- this is in keeping with the rules
2 of construction for the Rhode Island
3 standards. We're supposed to give a liberal
4 construction to the terms and the definitions
5 and the standard. And I would just point
6 out, Your Honor, that the very purpose of the
7 water quality standards is to -- the dual
8 regulatory purpose -- is to provide a basis
9 for water quality-based effluent limits, and
10 to restore the chemical, physical, and
11 biological integrity of Rhode Island's water.
12 JUDGE REICH: If I understood what the
13 City was saying, how do you respond more
14 specifically to the fact that the definition
15 references any body of water which can include
16 free-flowing bodies of water. And therefore,
17 you need something else to limit the definition
18 so that you don't get essentially absurd
19 results.
20 MR. BUKHARI: I think the definition
21 itself -- the words themselves are self-limiting
22 at the point that we made in the brief. You

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1 know, a lake -- you know, by its dictionary
2 definition, is not a brook. It's not a stream.
3 But the lake here -- and you look at the facts
4 of the particular hydrology to which this
5 definition is being applied, and here, we have a
6 water body which is heavily impounded, which
7 extends beyond 200 acres in terms of area, and
8 has severe eutrophication as a result of point
9 source loading.

10 And under these circumstances, and
11 under the consistently held treatment of this
12 water body as a lake by the State of Rhode
13 Island, it would be an observed result to say
14 it's not a lake, simply for the reasons
15 referred to by the City based on a parsing of
16 these words. They need to be read in
17 context, I think is the point that needs to
18 be underscored here.

19 JUDGE REICH: Okay, thank you.
20 MR. BUKHARI: Thank you.
21 JUDGE REICH: We'll now turn to Rhode
22 Island for rebuttal.

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1 Maybe you can begin if you have any
2 further thoughts on this definition of lake
3 and residence time.

4 MS. FORCIER: I think that the
5 statements that the Region just made to end his
6 argument are basically accurate for how the
7 Department has been treating it. And that
8 pretty much assesses -- encompasses the
9 Department's opinion on the definition of lakes.

10 JUDGE REICH: So does that affect the
11 answer you gave earlier as to whether the
12 definition of lake for Rhode Island purposes
13 includes residence time?

14 MS. FORCIER: It does not. I misspoke
15 earlier. It does not include residence time. I
16 apologize.

17 JUDGE REICH: Thank you for clarifying
18 that.

19 MS. FORCIER: And also to clarify a
20 bit further on that and to get into a bit of
21 what Mr. Wilkins indicated for the City,
22 regarding the 7Q10 criteria as opposed to an

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1 annual or seasonal average, DEM admittedly has
2 used an annual or a seasonal average for a more
3 traditional lake. And again, back to what the
4 Region stated, this is not a traditional lake in
5 that it's a river impoundment and it's an
6 effluent-dominated and impaired water body. And
7 so it will be treated differently than we would
8 a traditional lake for that reason.

9 The only other comment I wanted to
10 raise is again in response to the City's
11 comments on the nitrogen limits at some other
12 Rhode Island facilities, where he indicated a
13 number of facilities on different rivers,
14 different tributaries, and stated that
15 they're all set at a nitrogen limit of 8.

16 And that's not the case.

17 As the Region indicated, again, the
18 Woonsocket plant, which is one of the largest
19 in the state and is the largest in Rhode
20 Island on the Blackstone River, currently has
21 a limit of three, which we view as the limits
22 of technology. And that was achieved through

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1 consent agreement, with the permit being
2 reissued with a limit of three. And a number
3 of other facilities are at five, as well,
4 including a couple that were listed.

5 Basically, the State views these
6 nitrogen limits as all relative. As I think
7 the Region very clearly summed up, we base it
8 on the location of the facility, the capacity
9 of the facility, and the equivalent amount of
10 nitrogen that's being deposited. Facilities
11 that are smaller or that are closer to the
12 Bay with an increased flushing rate tend to
13 have a less stringent limit; whereas
14 limits -- facilities such as Woonsocket that
15 are more in the upper reaches of the system
16 are imposed -- have a stricter limit imposed
17 on them.

18 Thank you.
19 JUDGE REICH: Thank you.
20 Mr. Wilkins?
21 MR. WILKINS: Thank you. I'll try to
22 address metals, and then there are a couple of

<p style="text-align: right;">85</p> <p>1 things that came up in questioning that if I 2 have time, I'll get to.</p> <p>3 First on aluminum. The 4 Massachusetts limit incorporates the 5 EPA-recommended water quality criterion. 6 Now, that criterion is not just a number. 7 There is a number 87, and then there are 8 three footnotes that appear in the National 9 Recommended Water Quality Criteria. And 10 among those footnotes is footnote L, which 11 was the subject of the comments of Mass 12 DEP (?) talking about three major reasons why 13 the use of water effects ratio might be 14 appropriate.</p> <p>15 We're in an odd situation, in my 16 view, because EPA said, well, Massachusetts 17 adopted the criteria and the criteria say 87. 18 And so we can't deviate from that. And yet 19 what Massachusetts adopted was EPA's 20 recommended criteria, which does have a 21 disqualifying footnote. So we suggest that 22 Region 1 had more authority than it thought</p>	<p style="text-align: right;">87</p> <p>1 instead was just to pose a number. And so the 2 argument I bring to you is that they thought 3 they had a limit on their authority, and that 4 limit does not exist.</p> <p>5 I'm not asking you to say they 6 should have exercised that authority or they 7 shouldn't have exercised that authority. I'm 8 asking you to send it back to them saying you 9 have the ability to do what the City has 10 asked for; please decide. And of course, 11 they'll have to decide in the usual, rational 12 manner.</p> <p>13 JUDGE REICH: But I still don't 14 understand how the response to the argument that 15 Massachusetts may have that authority, but 16 absent Massachusetts exercising at the Region, 17 in fact, does not have that authority.</p> <p>18 MR. WILKINS: I don't read their 19 Response to Comments as saying that. I think 20 the response to comments says it's 87, period. 21 Now, as far as the hardness issues 22 go, the hardness issues are of course very</p>
<p style="text-align: right;">86</p> <p>1 it did.</p> <p>2 JUDGE REICH: Is the decision whether 3 to exercise the authority reflected in the 4 footnote? Is that discretionary?</p> <p>5 MR. WILKINS: Well, it's discretionary 6 within the usual limits, yes. Certainly, they 7 need to go through the three major reasons why a 8 water effects ratio might be appropriate, and 9 apply it to this case and decide yes or no.</p> <p>10 JUDGE REICH: So what -- if the Agency 11 looked at the Massachusetts regulations in toto, 12 why could they not conclude that yes, it's 13 discretionary, but the state itself has reserved 14 that discretion for itself and established 15 formal procedures for adopting site-specific 16 criteria. And therefore, consistent with the 17 totality of the Massachusetts regs, EPA cannot 18 independently exercise that authority.</p> <p>19 MR. WILKINS: Well, that's not what 20 they did. If they had done that, of course, we 21 would be going over to Mass DEP and say, well, 22 will you exercise that authority? What they did</p>	<p style="text-align: right;">88</p> <p>1 important to the metals limits. I absolutely 2 agree with what Region 1 has said here is 3 that using upstream is conservative, because 4 when we discharge, we raise the hardness. In 5 fact, as we pointed out in our reply to 6 write-in, there was a mistake -- a 7 transcription error in some of the data. And 8 in fact, the 100 value that EPA Region 1 used 9 is in fact too low. It should have been much 10 higher.</p> <p>11 But we have not been given RIDEM's 12 data. The data that they were relying on 13 here. It wasn't presented for comment before 14 Region 1. And in fact, Region 1 did respond 15 to the only comment that was made, which was 16 please provide justification for the 100 17 limit. And EPA did provide that 18 justification. RIDEM provided no other data 19 that would have provided any possible other 20 answer.</p> <p>21 And then more globally on the 22 metals limits, as we pointed out in our</p>

1 petition, the limits are not producing
2 toxicity according to the whole effluent
3 test. And in fact, especially when you're
4 adding limits on aluminum and then saying we
5 have to meet at 0.1 instead of 0.1 and
6 instead of 0.2 phosphorous limit -- this is
7 really pinching the ability of the facility
8 to operate.

9 So I would request that you grant
10 review and overturn Region 1.

11 JUDGE REICH: I would like to thank
12 Counsel for the excellent quality of the
13 argument this morning.

14 This argument stands adjourned.

15 (Whereupon, at approximately
16 11:32 a.m., the ORAL ARGUMENT was
17 adjourned.)

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