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RE Indian Point Fuel Peak

Docket Number: 50-247 and 50-286

Location: (telephone conference)

Date: Monday, July 11, 2011

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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10 CFR 2.206 PETITION REVIEW BOARD (PRB)

CONFERENCE CALL

RE

INDIAN POINT FUEL PEAK CLAD TEMPERATURE

DOCKET NOS. 50-247 + 50-286

+ + + + +

MONDAY

JULY 11, 2011

+ + + + +

The conference call was held, Fred Brown,
Chairperson of the Petition Review Board, presiding.

PETITIONERS:

PHILLIP MUSEGAAS AND MARK LEYSE, representing
Riverkeeper

PETITION REVIEW BOARD MEMBERS:

FRED BROWN, Chairperson; Director, Division of
Inspection and Regional Support, NRR

BRICE BICKETT, Region I Division of Reactor Projects

JOHN BOSKA, Project Manager, NRR

RICHARD DUDLEY, Rulemaking Branch, NRR

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1 TANYA MENSAH, PRB Coordinator, NRR

2 SHIH-LIANG WU, Nuclear Performance and Code Review
3 Branch, NRR

4 PRB ADVISOR:

5 BRETT KLUKAN, Office of General Counsel

6
7 ALSO PRESENT:

8 NANCY SALGADO, Branch Chief, Division of Operating
9 Reactor Licensing, NRR

10 WILLIAM DENNIS, Entergy

11 BOB WALPOLE, Entergy

12 JOHN SIPOS, State of New York

13 ADAM DOBSON, State of New York

14 TOM COCHRAN, National Resources Defense Council

15 MATTHEW MCKINZIE, National Resources Defense Council

16 JON McLAUGHLIN, National Resources Defense Council

17 CHRISTOPHER PAINE, National Resources Defense Council

18 GEOFFREY FETTUS, National Resources Defense Council

19 JORDAN WEAVER, National Resources Defense Council

20 BOB LEYSE
21
22
23
24
25

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P R O C E E D I N G S

1:04 P.M.

MR. BOSKA: This is John Boska from NRC Headquarters. I'm the NRC's Petition Manager for this petition. I'd like to thank everybody for attending this meeting. We're here today to allow the Petitioners, Ms. Brancato and Mr. Leyse, to address the Petition Review Board. And actually, Mr. Musegaas is sitting in for Riverkeeper today.

We're here to allow the Petitioners to address the Petition Review Board on behalf of Riverkeeper regarding their 2.206 petition dated March 28, 2011, on the fuel peak cladding temperature at Indian Point Nuclear Generating Unit Nos. 2 and 3, which are located about 24 miles north of New York City on the east bank of the Hudson River.

I am the Petition Manager for the petition. The Petition Review Board Chairman is Fred Brown.

As part of the Petition Review Board's review of this petition, Ms. Brancato and Mr. Musegaas have requested this opportunity to address the Petition Review Board which may also be referred to as the PRB.

This meeting is scheduled to conclude by 3

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1 p.m. The meeting is being recorded by the NRC
2 Operations Center and will be transcribed by a court
3 reporter. The transcript will become a supplement to
4 the petition. The transcript will also be made
5 publicly available.

6 I'd like to open this meeting with
7 introductions. As we go around the room, please
8 state your name, your position, and the office that
9 you work for within the NRC for the record.

10 I'm John Boska. I'm a project manager in
11 the Office of Nuclear Reactor Regulation, which is
12 also referred to as NRR.

13 MS. SALGADO: This is Nancy Salgado. I am
14 a branch chief in the Division of Operating Reactor
15 Licensing in NRR.

16 MR. WU: Shih-Liang Wu. I'm in NRR,
17 Division of Safety Systems, Nuclear Performance and
18 Code Review Branch.

19 MR. DUDLEY: Richard Dudley. I'm in the
20 NRR Rulemaking Branch and I'm the project manager for
21 the review of Petition for Rulemaking 50-93 and 50-95.

22 MR. BOSKA: We've completed introductions
23 in the room here at headquarters. At this time I'll
24 let Fred Brown, the Petition Review Board Chairman
25 introduce himself.

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1 CHAIRPERSON BROWN: Thanks, John. This is
2 Fred Brown. I'm the Petition Review Board Chairman in
3 the Office of NRR.

4 MR. BOSKA: Thank you, Fred. We also have
5 a Petition Review Board member from Region I in
6 Pennsylvania and I'll let Brice Bickett introduce
7 himself.

8 MR. BICKETT: This is Brice Bickett, NRC
9 Region 1 and I'm a senior project engineer.

10 MR. BOSKA: We also have assistance from
11 our Office of the General Counsel and I'll let Brett
12 introduce himself.

13 MR. KLUKAN: Hi, this is Brett Klukan.
14 I'm the Office of the General Counsel representative
15 to the PRB.

16 MR. BOSKA: Are there any other
17 participants from NRC headquarters on the phone?

18 MS. MENSAH: This is Tanya Mensah. I'm a
19 2.206 coordinator.

20 MR. BOSKA: Are there any other NRC
21 personnel on the phone? All right, hearing none, are
22 there any representatives for the licensee on the
23 phone?

24 MR. WALPOLE: Bob Walpole, licensing
25 manager.

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1 MR. BOSKA: Hello, Mr. Walpole.

2 MR. WALPOLE: Hi, John, how are you?

3 MR. BOSKA: Very good.

4 MR. DENNIS: Bill Dennis, Entergy Legal.

5 MR. BOSKA: Welcome, Mr. Dennis.

6 All right, Mr. Musegaas, would you please introduce
7 yourself for the record?

8 MR. MUSEGAAS: Certainly. My name is
9 Phillip Musegaas. It's M-U-S-E-G-A-A-S. I'm an
10 attorney and representing Riverkeeper, Incorporated on
11 this petition. Thank you.

12 MR. BOSKA: All right, Mr. Bob Leyse, will
13 you please introduce yourself for the record?

14 MR. M. LEYSE: Perhaps you mean Mark
15 Leyse?

16 MR. BOSKA: You can go ahead, Mark Leyse.
17 I believe we had Bob on also.

18 MR. BOSKA: Go ahead, Mark.

19 MR. M. LEYSE: Mark Leyse introducing
20 myself for the record.

21 MR. BOSKA: And Mr. Bob Leyse, are you
22 still on? He was on earlier. I think he'll probably
23 come back later, so we'll continue.

24 It is not required for members of the
25 public to introduce themselves for this call.

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1 However, if there are any members of the public on the
2 phone that wish to do so, please state your name for
3 the record?

4 MR. Bob LEYSE: This is Bob Leyse, it
5 takes me a while to find #6 and I'm now off.

6 MR. BOSKA: All right, thank you, Mr.
7 Leyse.

8 MR. FETTUS: Hi. This is Geoff Fettus, G-
9 E-O-F-F F-E-T-T-U-S. And I'm an attorney for the
10 Natural Resources Defense Council and I'm joined here
11 by Tom Cochran, Matthew McKinzie, Jordan Weaver, and
12 Jon McLaughlin. Thank you.

13 MR. BOSKA: All right, welcome.

14 MR. PAINE: This is Christopher Paine. I
15 direct the Nuclear Program at the Natural Resources
16 Defense Council.

17 MR. BOSKA: Welcome, Mr. Paine.

18 MR. DOBSON: This is Adam Dobson. I'm an
19 Assistant Attorney General for the State of New York.

20 MR. BOSKA: Welcome, Mr. Dobson.

21 MR. SIPOS: And good afternoon. This is
22 John Sipos, S-I-P, as in Paul, O-S, as in Sam, also an
23 Assistant Attorney General for the State of New York.
24 Good afternoon, everyone.

25 MR. BOSKA: Welcome, Mr. Sipos. Are there

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1 any others on the phone line who wish to introduce
2 themselves? All right, hearing none, we will
3 continue.

4 I'd like to emphasize that we each need to
5 speak clearly and loudly to make sure that the court
6 reporter can accurately transcribe this meeting. If
7 you do have something that you would like to say,
8 please first state your name for the record.

9 For those dialing into the meeting, please
10 remember to mute your phones to minimize any
11 background noise or distractions. If you do not have
12 a mute button this can be done by pressing the keys
13 *6. And to unmute your phone, press the *6 keys
14 again. Please do not place this call on hold since
15 many phone systems music when a call is put on hold
16 which is very annoying for the other callers. Thank
17 you.

18 The Petition Review Board's initial
19 recommendation is to not accept this petition for
20 review. The reason is that it presents generic
21 concerns that are properly handled through a petition
22 for rulemaking and the NRC is already considering two
23 petitions for rulemaking on these issues, PRM 50-93
24 and PRM 50-95.

25 10 CFR 50.46(b)(1) states that the

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1 licensee's LOCA analyses must demonstrate that the
2 calculated maximum fuel element cladding temperature
3 shall not exceed 2200 degrees Fahrenheit. The PRB
4 finds no evidence that Indian Point Units 2 or 3 are
5 in violation of 10 CFR 50.46.

6 Unless the review of PRM 50-93 and PRM 50-
7 95 demonstrate the need to revise the regulation or
8 the method of analysis, the PRB's position is that
9 compliance with the existing regulation is sufficient
10 to provide adequate protection of public health and
11 safety.

12 The purpose of today's meeting is to give
13 the Petitioners an opportunity to provide any
14 additional explanation or support for the petition
15 before the Petition Review Board makes a final
16 recommendation on whether or not to accept this
17 petition for review.

18 I would like to summarize the scope of the
19 petition under consideration and the NRC activities to
20 date. On March 28, 2011, Riverkeeper submitted to the
21 NRC a petition under 10 CFR 2.206 regarding the fuel
22 peak cladding temperature at Indian Point Nuclear
23 Generating Unit Nos. 2 and 3 which may also be called
24 IP2 and IP3.

25 This petition is available from the NRC's

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1 public website, www.nrc.gov, from the Electronic
2 Reading Room, under ADAMS documents with the accession
3 number ML110890956.

4 The Petitioners request that the NRC order
5 the licensee of IP2 and IP3 to lower the licensing
6 basis peak cladding temperatures of IP2 and IP3 in
7 order to provide necessary margins of safety, to help
8 prevent partial or complete meltdown in the event of
9 loss-of-coolant accidents, also called LOCAs.

10 The Petitioners state that experimental
11 data demonstrate that IP2 and IP3's licensing basis
12 peak cladding temperatures of 1937 degrees Fahrenheit
13 and 1961 degrees Fahrenheit, respectively, do not
14 provide necessary margins of safety in the event of
15 LOCAs.

16 The Petitioners state that the data
17 demonstrates that IP2 and IP3's licensing basis peak
18 cladding temperatures need to be decreased to
19 temperatures lower than 1832 degrees Fahrenheit in
20 order to provide necessary margins of safety.

21 Second, the Petitioners request that the
22 NRC order the licensee of IP2 and IP3 to determine how
23 far below 1832 degrees Fahrenheit the licensing basis
24 peak cladding temperature values of IP2 and IP3 need
25 to be lowered in order to provide necessary margins of

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1 safety.

2 Third, the Petitioners request that the
3 NRC order the licensee of IP2 and IP3 to lower both of
4 IP2 and IP3's licensing basis peak cladding
5 temperatures to 1600 degrees Fahrenheit until
6 conservative values for IP2 and IP3 are determined.

7 Fourth, the Petitioners request that the
8 NRC order the licensee of IP2 and IP3 to demonstrate
9 that IP2 and IP3 emergency core cooling systems, also
10 called ECCS, would effectively quench the fuel
11 cladding in the event of LOCAs and prevent partial or
12 complete meltdowns. Experimental data indicate that
13 IP2 and IP3's ECCS may not effectively quench the fuel
14 cladding in the event of LOCAs if fuel cladding
15 temperatures approached or reached IP2 and IP3's
16 licensing basis peak cladding temperatures of 1937 and
17 1961 degrees Fahrenheit respectively.

18 The Petitioners also state that although
19 revisions to the 10 CFR 50.46(b)(1) limit of 2200
20 degrees Fahrenheit on peak cladding temperature have
21 been proposed in a rulemaking petition, PRM 50-93,
22 this petition has been filed separately under 10 CFR
23 2.206 because the concerns affect IP2 and IP3 and need
24 prompt resolution to protect the lives, property, and
25 environment of the people of New York. The safety

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1 issues raised in this petition are of an immediate
2 nature and require prompt NRC review and action.

3 Allow me to discuss the NRC activities to
4 date. On March 28, 2011, the NRC received this
5 petition. The petition was assigned to the NRC's
6 Office of Nuclear Reactor Regulation for evaluation.
7 On April 18th, the Petitioners met by teleconference
8 with the PRB. The transcript of that teleconference
9 is in the NRC's Electronic Library under accession
10 number ML111570242.

11 On June 7th, I informed the Petitioners
12 that the PRB's initial recommendation was to reject
13 the petition and offered the opportunity to address
14 the PRB again, to which the Petitioners agreed. That
15 led to this teleconference.

16 As a reminder for the phone participants,
17 please identify yourself if you make any remarks as
18 this will help us in the preparation of the meeting
19 transcript that will be made publicly available.
20 Thank you.

21 At this time, I'll turn it over to the
22 Petition Review Board Chairman, Fred Brown.

23 CHAIRPERSON BROWN: Thank you, John. And
24 thank you, everyone, for participating this afternoon
25 in this PRB meeting.

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1 I want to remind everybody, as at our
2 previous meeting on this petition, that this is not a
3 hearing nor is it an opportunity for the Petitioners
4 to question or examine the Petition Review Board on
5 the merits of the issues presented in the petition
6 request. This is not a decision-making meeting and no
7 decisions regarding the merits of this petition will
8 be made during the meeting.

9 Following the meeting, the Petition Review
10 Board will conduct a final internal deliberation and
11 the outcome of the internal meeting will be discussed
12 with the Petitioners. The Board members remain the
13 same as stated in our previous call and as indicated
14 by John as he went through introductions a few minutes
15 ago.

16 So with that I'll turn it over, I believe,
17 to Mr. Mark Leyse and Mr. Musegaas, if you're speaking
18 for Ms. Brancato, to provide any additional
19 information that you'd like the PRB to be aware of.

20 MR. MUSEGAAS: Thank you, Mr. Brown. This
21 is Phillip Musegaas again representing Riverkeeper on
22 the call. I would like to make a short opening
23 statement and then I will turn it over to Mr. Leyse
24 who will give you additional, he will be providing
25 additional technical comments regarding the petition.

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1 To begin, Riverkeeper formally disagrees
2 with the decision by the NRC and the PRB on April 19th
3 of this year to deny our request for emergency action
4 through this petition. Again, for the reasons stated
5 in the petition itself, we believe that Indian Point
6 presents a unique risk to the people of New York and
7 to the property of New York State and the Hudson
8 Valley. Twenty million people live within 50 miles of
9 Indian Point. It's located less than a mile from two
10 active seismic zones. The plant presents a unique
11 risk and unique circumstances apart from any other
12 nuclear plant currently operating in the United
13 States. And so we believe that those circumstances
14 require that out of an abundance of caution the NRC
15 should have acted on our request for emergency action
16 and indeed should have required during the review of
17 our petition and the review of the rulemaking
18 petitions that Indian Point reduce its operating
19 temperature.

20 Second, of course, Riverkeeper formally
21 disagrees with the decision by the PRB, that we were
22 notified of on June 7th via email, to make an initial
23 decision to deny the petition. We again believe that
24 the petition on its merits requires review. We
25 believe the fact that we are discussing Indian Point

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1 and concerns about the effects of a LOCA accident at
2 Indian Point puts this in a different and unique
3 framework apart from a generic rulemaking as we have
4 stated in the petition.

5 I would also like to comment on this
6 process. We have serious concerns about the adequacy
7 of this process up to this point and our main concern
8 here is that although we've been given this additional
9 opportunity to address the Petition Review Board, and
10 describe why we believe our petition should be
11 accepted for review, we are doing that without any
12 additional information or specific detail from the
13 Nuclear Regulatory Commission or the Petition Review
14 Board as to the specific reasons why this
15 recommendation has been made, both the actual denial
16 of our request for emergency action and the initial
17 decision to deny our petition. Basically those were
18 communicated to us through email communication of a
19 couple of paragraphs each that contained no real
20 detail about the basis for the PRB's decision. And so
21 it's very difficult for us as Petitioners representing
22 the public to present new information and to respond
23 to the NRC's decision when we don't know what the
24 basis for that decision is.

25 One last comment, I just would like to

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1 comment to an email that we received from Mr. Boska,
2 Riverkeeper and Mark Leyse and Deborah Brancato
3 received on June 8th. Mr. Boska was responding to
4 comments made by Mr. Leyse at a June 2nd public
5 meeting regarding Indian Point.

6 In his email, Mr. Boska said, "The format
7 of a PRB meeting does not include the discussion of
8 comments from an annual assessment meeting. We will
9 have to stay with the PRB format." With all due
10 respect, we very strongly disagree with that.
11 Riverkeeper made comments regarding our emergency
12 petition at the public meeting. Mr. Boska,
13 representing the Nuclear Regulatory Commission, made
14 the decision to make a substantive response during
15 that public meeting to a room full of the public, full
16 of reporters, with our representatives there. We
17 believe that that opened the door and that allows us
18 the right to respond to the comments made by Mr. Boska
19 and that is what Mr. Leyse did by email. So I would
20 like that to go on the record that we believe that
21 these comments should be included in this record.

22 That concludes my comments on this.
23 Again, we formally disagree with the denial of the
24 request for emergency action. We disagree with the
25 initial decision to deny the petition.

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1 I would also like to seek clarification of
2 comments Mr. Boska just made at the beginning of this
3 call regarding the status of the petition. I'm a
4 little unclear on it and I understand the procedure is
5 that I do not ask questions of the PRB, but I would
6 like to seek clarification of the comment. It is
7 unclear to me at this time whether the PRB has made an
8 initial decision to deny the petition or whether the
9 PRB is basically holding the petition in abeyance
10 while it concludes the rulemaking process for PRM 50-
11 93 and the other rulemakings that are related to this
12 petition.

13 So if it is possible to have clarification
14 of that issue, I would appreciate it. Thank you.

15 And I will turn it over now to Mark Leyse
16 to continue our comments.

17 MR. M. LEYSE: First, I wanted to see if
18 they wanted to answer you, Phillip, on what you just
19 asked.

20 MR. BOSKA: This is John Boska. Fred,
21 it's up to you. Do you want me to provide an answer
22 or would you like to say a few words?

23 MR. KLUKAN: Why don't you go for it --
24 this is Brett Klukan. Why don't you try to answer it,
25 John, and then I'll supplement, as necessary.

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1 MR. BOSKA: Thanks, Brett. All right.
2 This is John Boska. The question had to do with the
3 current status of the petition. The petition is not
4 being held in abeyance awaiting the petition for
5 rulemaking. The NRC is proceeding with dispositioning
6 the petition. The Petition Review Board has made an
7 initial recommendation to the Director of the Office
8 of Nuclear Reactor Regulation to reject the petition.

9 And the way the procedure works is the Petitioner has
10 another opportunity for a discussion with the Petition
11 Review Board and then the Petition Review Board makes
12 a final recommendation to the Director of the Office
13 of Nuclear Reactor Regulation who then can agree or
14 disagree with the Petition Review Board at that point
15 in time.

16 So we have done the initial
17 recommendation. We're now having this meeting with
18 the Petitioners and then the Petition Review Board
19 will provide a final recommendation.

20 Mr. Musegaas, do you have any questions on
21 that?

22 MR. MUSEGAAS: I appreciate that
23 clarification. Does that mean then that the -- we'll
24 make our statements today. You'll take that under
25 review and will you issue a more substantive response

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1 as to the reasons for the denial before you make a
2 final recommendation? Could you explain the process
3 there a little further?

4 MR. BOSKA: The final recommendation is
5 made to the Nuclear Reactor Regulation office managers
6 and if they are in concurrence with the final
7 recommendation then a letter will be issued to
8 Riverkeeper explaining the reasons for the denial of
9 the petition. Or if they decide to accept it for
10 review, then a letter will be issued explaining the
11 reasons for accepting it for review.

12 MR. MUSEGAAS: So I don't mean to belabor
13 this, I am just trying to understand the process.
14 Requesting a subsequent meeting after today from
15 Riverkeeper's perspective, we would not have any
16 additional information from the NRC as to the reasons
17 for the recommendation prior to you making a final
18 recommendation to NRR to assumedly deny the petition.

19 I guess I'm at a loss to what the reason
20 for a subsequent PRB phone conference would be if we
21 don't have additional information to respond to.

22 MR. BOSKA: There is no additional PRB
23 phone conference. This is the final PRB phone
24 conference.

25 MR. KLUKAN: This is Brett Klukan. This

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1 is your opportunity -- we've given you our initial
2 recommendation. This is your opportunity to
3 supplement that with additional information in
4 response to our initial recommendation or to just
5 directly respond to our initial recommendation and
6 provide your reasoning for why you disagree.

7 MR. MUSEGAAS: Okay, again, I apologize
8 for the confusion. So this is the final PRB. You
9 send a final recommendation after this. After this
10 call, we would be getting a letter from NRR. Is that
11 correct?

12 MR. BOSKA: This is John Boska. The
13 office director or his representative has to actually
14 make the final decision. So our final recommendation
15 would go to the office director or his representative
16 and they would make the final decision and then the
17 letter would be issued.

18 MR. MUSEGAAS: Okay, thank you.

19 MR. BOSKA: Mr. Musegaas, this is John
20 Boska again. In my introductory remarks, I did have a
21 section where I talked about the reason why the
22 Petition Review Board's initial recommendation was to
23 not accept the petition for review. It had to do with
24 the generic concerns that are properly handled through
25 a petition for rulemaking.

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1 MR. MUSEGAAS: Okay. I will review the
2 transcript on those comments and in the interest of
3 timeliness, and if I have specific questions if I
4 could follow up with you on that, that would be great.

5 I'm happy to proceed at this time, if you are.

6 MR. BOSKA: Yes, we are ready to proceed.

7 MR. M. LEYSE: Okay, this is Mark Leyse
8 speaking. First, before I say anything, I would like
9 to give other members of the public or other people
10 who have called in an opportunity to say something
11 first because I'm probably going to be half an hour or
12 so.

13 MR. COCHRAN: This is Tom Cochran. I have
14 a question if I could to John. Is that reasonable?

15 MR. BOSKA: Fred, this is John Boska. Are
16 you willing to take the question now?

17 CHAIRPERSON BROWN: I'm willing to listen
18 to the question.

19 DR. COCHRAN: There was in the
20 introduction an indication that a Richard Dudley was
21 in the room and was responsible for PRM 50-93 and 50-
22 95. And as I understood one of the arguments given
23 for declining this petition was that the issues were
24 covered in those two rulemaking petitions. As I
25 understand it, those rulemaking petitions were filed

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1 some years ago and I would like to learn from Mr.
2 Dudley what the prognosis is for the disposition of
3 those two rulemakings. Is that going to be soon or
4 years from now?

5 MR. DUDLEY: This is Richard Dudley.
6 Under the existing petition-for-rulemaking process,
7 the NRC staff would be required to complete its review
8 of all the issues in the petition for rulemaking and
9 then present our recommendations to the Commission
10 itself for decision on that petition. If we were to
11 do that, it would take us about, we believe, we've
12 looked -- there's about 16 different issues in the
13 petition. We prioritized them and we've looked at
14 several already. But if we went through that process,
15 we think we'd be making a recommendation to the
16 Commission in about 10 to 12 months from now.

17 The Commission itself would then take
18 three or four months to review it. And a decision on
19 the petition for rulemaking would be over a year and a
20 half away.

21 We're concerned that by delaying that long
22 it looks like we're not making progress on this
23 review. And so we've requested to the Commission to
24 be allowed to change our petition-for-rulemaking
25 process for this particular petition so that as we

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1 complete our review of each individual category of
2 issues or topics that we could make that information
3 publicly available on an interim basis. It wouldn't
4 be a final determination because no determinations are
5 final until after the Commission has reviewed our
6 recommendations.

7 So we've made that recommendation to the
8 Commissioners by virtue of a meeting with their
9 assistants. Their assistants asked that we meet with
10 them once again to provide them with additional
11 information. And so at this point, it's a possibility
12 that we'll be allowed to release interim results of
13 our petition for rulemaking evaluation, but we're
14 waiting to hear back from the Commissioners'
15 assistants, allowing us to do that.

16 So I guess the long answer to your
17 question is what I gave you. If we use the old
18 process, the complete answers would take at least a
19 year and a half, but we hope to be able to be allowed
20 to release interim conclusions of each category or
21 group of results within the next month or so. We hope
22 we could release some of our interim conclusions.

23 MR. COCHRAN: And also, these issues, it
24 would appear to me have been raised to a new elevation
25 by the Fukushima accident and should be part of the

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1 six-month review by the Commission and the staff of
2 the lessons learned from Fukushima.

3 Do you see these issues being resolved in
4 the context of Fukushima in the next six months?

5 MR. DUDLEY: The Japan review did not
6 consider the PRM 93-95 issues as part of its scope.
7 They're looking at --

8 MR. COCHRAN: Excuse me, that's the 90-day
9 or the 6-month? I thought the scope of the six-month
10 review has not been decided yet.

11 CHAIRPERSON BROWN: This is Fred Brown if
12 I could jump in. The NRC team looking at lessons
13 learned from Japan is aware of the issues in Mr.
14 Leyse's petition for rulemaking. So in that context
15 it is being considered.

16 It would be premature and actually none of
17 us on the phone are in a position to know directly
18 anyway. It would be premature for us to anticipate
19 what recommendations will be made by that review group
20 to the Commission in their 90-day report or their
21 longer-term report. But they are aware of the
22 concerns expressed here.

23 MR. COCHRAN: But NRDC has indicated to a
24 number of the Commissioners that this issue needs to
25 be addressed within the six-month review. So are we

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1 going to get a resolution of this issue within the
2 six-month review of lessons from Fukushima?

3 MR. KLUKAN: This Brett Klukan, again, the
4 attorney representative. While the public is
5 permitted to ask questions regarding the process or
6 the future process, we kind of veered far off scope
7 into questions that are kind of outside not only the
8 individual knowledge of the members of us here, but
9 the PRB itself. And unless you have questions
10 regarding the 2.206 directly, I would prefer that we
11 move on with the presentation by the Petitioners.

12 MR. COCHRAN: This is Tom Cochran. My
13 questions are directly related to the 2.206 petition
14 because the 2.206 petition, as I understand it, is an
15 emergency -- is a request for emergency action.

16 MR. KLUKAN: This is -- excuse me. I'm
17 going to cut you off there. It's a request for
18 enforcement action which can have a piece of it. A
19 request that the NRC take immediate action as a
20 response to the request for enforcement action.

21 What we're now discussing is in part
22 rulemaking and in part something else, which are not
23 directly related to the scope of the 2.206.

24 MR. MUSEGAAS: I respectfully disagree
25 with that. This is Phillip Musegaas from Riverkeeper.

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1 Because the limited basis that you did provide for
2 why you're recommending to deny this petition is that
3 these issues are being dealt with through these
4 generic rulemakings. So that brings us squarely into
5 the framework of this discussion.

6 MR. KLUKAN: What it does is bring in --
7 let me phrase it this way. We're saying that this is
8 a process and the initial recommendation said that
9 this is a process better suited or appropriately
10 suited, excuse me, to the rulemaking process, not the
11 request for enforcement.

12 So what we would ask is that the
13 Petitioners in response provide some information as to
14 why this is properly a request for enforcement as
15 opposed to a request for rulemaking. But if you have
16 questions about the rulemaking, or what's happening,
17 the substance of that rulemaking, the panel is not the
18 appropriate place to raise such issues, but rather
19 through the rulemaking staff, which we only have one
20 representative here and he is not acting in that
21 capacity as part of the PRB.

22 MR. MUSEGAAS: This is Phillip Musegaas.
23 And the reason we made a request for enforcement and
24 request that the NRC order Indian Point and Entergy to
25 lower the operating temperature of the plant is

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1 because LOCA accidents don't wait on hold while these
2 rulemakings are being determined and reviewed. They
3 could happen any time. And so the risk is there.
4 Unique circumstances of Indian Point's location are
5 there, currently in force. The plant is still where
6 it's always been. Not to be facetious here, but we
7 believe that this requires an immediate response
8 because of what we've seen at Fukushima, what we know
9 about Indian Point and its location and the concerns
10 around Indian Point. That is the argument we've made
11 repeatedly in this petition. And so to the extent you
12 can respond to that would be appreciated. Thank you.

13 MR. KLUKAN: One thing I'm going to point
14 out, this is Brett Klukan, that this is not an
15 opportunity for members of the public to question the
16 PRB as to their thinking or what their recommendations
17 are going to be to NRC management on the disposition
18 of the petition.

19 But I would add that in brief is that
20 Petitioners and members of the public have a right
21 under the request for rulemaking to request immediate
22 action to be taken. My point was that is different
23 than saying -- what I'm trying to get at is that is
24 still a request for rulemaking. The fact is that you
25 would like us to proceed immediately doesn't in and of

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1 itself make it a request for enforcement action. And
2 that was the point I was trying to make.

3 But again, if we could proceed with the
4 presentation by the Petitioners I think that would be
5 our best use of time at this point.

6 MR. MUSEGAAS: Tom, do you have anything
7 else?

8 MR. COCHRAN: Excuse me, yes, but I'll
9 wait until Mark finishes. It may be mooted by what
10 Mark says.

11 MR. M. LEYSE: Okay, Mark Leyse speaking.
12 Since some things were said, does anyone else want to
13 say anything first? I just want to give someone else
14 the opportunity if they would like.

15 Okay, so I'm now going to proceed. One
16 thing I would like to just point out before I start,
17 what I have in mind to say is, one thing you said is
18 that one of the reasons the initial decision is to
19 deny this petition for an enforcement action is that
20 we present generic concerns. But another point that
21 you made, you said that we have provided no evidence
22 that the units at Indian Point are in violation of 10
23 CFR 50.46(b)(1) which is the 2200 peak cladding
24 temperature limit.

25 Can you provide a foundation for that

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1 statement? I mean if you're going to make an
2 assertion that we've presented no evidence, where's
3 your evidence for that assertion? Because I think
4 we've pointed out that we've presented quite a bit of
5 evidence in this petition, a lot of evidence that
6 shows that very important experimental data has not
7 been incorporated into your ECCS evaluation models.

8 So it just seems to me that if you're
9 going to make a statement and partly base your
10 decision on the fact that you say we have no evidence,
11 please, some of the things Phillip was saying in terms
12 of transparency, it would seem that if you're going to
13 reiterate that in your final decision, please explain
14 why and provide a number of statements as to why we
15 have presented no evidence.

16 Anyway, that being said, I would like to
17 start. In this meeting, I would like to focus on data
18 from thermal-hydraulic experiments that indicates that
19 the Baker-Just and Cathcart-Pawel correlations are not
20 adequate for use in ECCS evaluation calculations that
21 calculate the metal-water reaction rates that would
22 occur in the heat transfer conditions of design basis
23 accidents.

24 These thermal-hydraulic experiments
25 simulated loss-of-coolant accidents, but first, I

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1 would like to make a few points on data from severe
2 fuel damage experiments. During a Petition Review
3 Board meeting on February 17, 2011, on a 2.206
4 petition on Oyster Creek and Nine Mile Point Unit 1, I
5 mentioned the fact that it is reported in an Oak Ridge
6 National Laboratory report from 1991 discussing the
7 CORA-16 experiment, that's a BWR severe fuel damage
8 experiment, that in the CORA-16 experiment oxidation
9 rates were not accurately predicted by analyses using
10 the available zircaloy-steam oxidation correlations.

11 In more detail, another Oak Ridge report
12 stated that the predicted and observed cladding
13 thermal response are in excellent agreement until
14 application of the available zircaloy oxidation
15 kinetics models causes the low temperature (1652 to
16 2192 degrees Fahrenheit) oxidation to be under-
17 predicted.

18 Anyway, when I was discussing the CORA-16
19 experiment, Mr. Dudley from the Rulemaking Branch
20 asked me a question. He said, and I quote, "I'd like
21 to ask you a question about your CORA-16 statement.
22 Do you have any evidence to say that the CORA test was
23 made under test conditions that were designed to be
24 consistent with a loss-of-coolant accident?" So I
25 answered Mr. Dudley and at this point I don't want to

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1 reiterate what I said, but that is available in the
2 transcript for the February 17, 2011, meeting.

3 But I would like to make a few points.
4 I'd like to point out that because analyses using the
5 available zircaloy-steam oxidation correlations under-
6 predict the oxidation rates that occurred in severe
7 fuel damage experiments, like the CORA and LOFT LP-FP-
8 2 experiments, it means that these correlations are
9 inadequate. And one reason these correlations are
10 used in analyses for severe fuel damage experiments is
11 simply that these correlations are supposed to work in
12 analyses for severe fuel damage experiments, just as
13 they are supposed to work in ECCS evaluation
14 calculations for LOCAs.

15 And today, I will discuss data indicating
16 that analyses using the available zircaloy-steam
17 oxidation correlations under-predict the oxidation
18 rates that occurred in thermal-hydraulic experiments
19 that simulated loss-of-coolant accidents. And
20 this argument goes back quite awhile -- this same
21 issue was brought up about 40 years ago, most likely
22 coming from Henry Kendall of Union of Concerned
23 Scientists. Anyway, in 1971, in the Indian Point Unit
24 2 licensing hearing, intervenors argued that data from
25 the first transient experiment of a zircaloy fuel rod

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1 cluster, that's the FRF-1 experiment, indicates that
2 ECCS evaluation models under predict the amount of
3 hydrogen produced in that experiment. This, in turn,
4 meant that ECCS evaluation models would under-predict
5 the amount of hydrogen produced in the event of a
6 LOCA.

7 The FRF-1 experiment was performed with a
8 7-rod bundle of 27-inch long zircaloy-clad uranium
9 dioxide fuel rods in a flowing steam atmosphere in the
10 TREAT facility. It is reported that in the FRF-1
11 experiment, at cladding temperatures of approximately
12 1800 degrees Fahrenheit, the zircaloy-steam reaction
13 generated 1.2 plus or minus 0.6 liters of hydrogen.
14 So it generated anywhere from 0.6 to 1.8 liters of
15 hydrogen.

16 Intervenor argued that the data from FRF-
17 1 indicates that ECCS evaluation models using the
18 Baker-Just correlation under-predict zircaloy-steam
19 reaction rates at 1800 degrees Fahrenheit. The Atomic
20 Energy Commission had stated that at 1800 degrees
21 Fahrenheit, the zircaloy-steam reaction is predicted
22 to be negligible. And in the Indian Point Unit 2
23 licensing hearing, Westinghouse testified that no
24 zircaloy-steam reaction would be predicted at 1800
25 degrees Fahrenheit.

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1 However, Westinghouse also argued that
2 there had been problems with temperature measurements
3 in the FRF-1 experiment and that there had been -- and
4 I'm quoting now, "An uncertainty in the temperatures
5 of the fuel cladding during the experiment and that
6 one cannot make a direct inference on reported
7 temperatures and lead yourself to the conclusion that
8 the extent of the zirc-water reaction was higher or
9 much higher than would have been predicted by Baker-
10 Just. "

11 Now I want to point out that instead of
12 conducting a series of more tests in the TREAT
13 facility, really to get to the bottom of the problem
14 to figure out if Westinghouse was correct or if the
15 Intervenors were correct, I mean the Intervenors were
16 stating the data. But Westinghouse had an argument
17 that it hadn't been measured properly.

18 But anyway, rather than conducting a
19 series of tests, they may have conducted one more
20 test, but the transient program in the TREAT facility
21 for zircaloy-clad fuel rods with uranium dioxide fuel,
22 it was terminated due to a lack of funding. And also
23 support of Oak Ridge work on fuel rod failure was
24 terminated at the end of Fiscal Year 1971. These are
25 pretty important issues, but apparently they just

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1 didn't want to look into them.

2 In the Indian Point Unit 2 licensing
3 hearing, Union of Concerned Scientists pointed out
4 that the authors of the Oak Ridge report which
5 discusses the FRF-1 experiment, that's ORNL 4635.
6 They contended that the FRF-1 experiment was the most
7 realistic simulation of loss-of-coolant accident
8 conditions up to 1971, when the test was conducted or
9 at the time of the licensing hearing.

10 Westinghouse disagreed with the authors of
11 ORNL 4635. They stated that the four zircaloy tests
12 conducted in the PWR FLECHT program, that they
13 conducted themselves, provided a more realistic
14 representation of the zircaloy-steam reaction in a
15 LOCA environment and that the PWR FLECHT results were
16 in and I'm quoting "very good agreement with the
17 Baker-Just equation."

18 In the last PRB meeting, I criticized the
19 Westinghouse examinations of the oxide samples that
20 were taken from the rods of the four zircaloy PWR
21 FLECHT tests. Just to repeat, Westinghouse did not
22 obtain samples from the locations of the rods from
23 FLECHT runs 8874 and 9573 that incurred runaway
24 oxidation. And it is likely that the sections of the
25 bundles that Westinghouse did examine from runs 8874

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1 and 9573 that they were steam starved.

2 Actually, last time I did not include FLECHT run
3 8874. I only mentioned run 9573. In the PWR FLECHT
4 program, there were four runs conducted with zircaloy
5 multi-rod bundles and two of them incurred runaway
6 oxidation. Those aren't very promising results.

7 Anyway, it is reasonable to assume that,
8 as in the CORA-2 and CORA-3 experiments in which local
9 steam starvation conditions are postulated to have
10 occurred, during PWR FLECHT runs 8874 and 9573 the
11 violent oxidation essentially consumed the available
12 steam that would be in one location. So that time-
13 limited and local steam starvation conditions would
14 have existed in other locations, the ones that
15 Westinghouse measured, which cannot be detected in the
16 post-test investigation.

17 So Westinghouse's application of the
18 Baker-Just correlation to the oxide layers on the
19 bundles from FLECHT runs 8874 and 9573 were most
20 likely to locations that were steam starved. And that
21 is not a legitimate verification of the adequacy of
22 the Baker-Just correlation for use in ECCS evaluation
23 models.

24 Now that was 40 years ago, but in recent
25 years, the same data has been used again. In recent

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1 years, NRC used the same data from the four PWR FLECHT
2 zircaloy runs in its safety analysis of PRM 50-76,
3 which was submitted in 2002. And the NRC basically
4 made the same arguments that Westinghouse made, but
5 included the Cathcart-Pawel correlation, not realizing
6 they were basing their claims on samples that were
7 taken from locations that would have most likely had
8 local steam starvation conditions, which cannot be
9 detected in the post-test investigation. That's for
10 two of the bundles out of the four. Again, this is
11 not a legitimate verification of the adequacy of the
12 Baker-Just and Cathcart-Pawel correlations for use in
13 ECCS evaluation models.

14 In the early 1980s -- on to a new series
15 of experiments -- In the early 1980s, the NRC
16 contracted with National Research Universal at Chalk
17 River, Ontario, Canada to run a series of tests
18 including the Thermal-Hydraulic Experiment No. 1 to
19 evaluate the thermal-hydraulic behavior of a full-
20 length zircaloy 32-rod uranium dioxide fuel bundle
21 during the heat up, reflood, and quench phases of a
22 large-break LOCA, in the NRU reactor.

23 The TH-1 experiment was conducted with
24 low-level fission heat to simulate decay heat. The
25 average fuel rod power for the test was 0.37 kilowatts

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1 per foot and the peak power was 0.55 kilowatts per
2 foot. In a comparison between data from TH-1 and an
3 example of a prediction using the Baker-Just
4 correlation of the behavior of zircaloy uranium
5 dioxide fuel rods under LOCA conditions, which is
6 discussed in Westinghouse's PWR FLECHT Final Report,
7 it is evident that analyses using the Baker-Just
8 correlation under-predict the amount of heat generated
9 by zircaloy oxidation in TH-1 test 128.

10 In TH-1 test 128 with the peak power of
11 0.55 kilowatts per foot, a reflood rate of 2 inches
12 per second and a PCT at the onset of reflood of 1604
13 degrees Fahrenheit, the overall PCT was 1991 degrees
14 Fahrenheit, an increase of 387 degrees Fahrenheit.
15 And in the PWR FLECHT Final Report example, the
16 uranium dioxide fuel assembly with a peak power of
17 1.24 kilowatts per foot, a reflood rate of 2 inches
18 per second and a PCT at the onset of reflood of 1600
19 degrees Fahrenheit was predicted to have an overall
20 PCT of approximately 1880 degrees Fahrenheit, an
21 increase of 280 degrees Fahrenheit.

22 So with similar parameters, but a lower
23 fuel rod power, TH-1 test 128 had an overall PCT
24 increase that was more than 100 degrees Fahrenheit
25 greater than the overall PCT increase predicted in the

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1 uranium dioxide fuel assembly example that's discussed
2 in PWR FLECHT Final Report. This indicates that
3 analyses using the Baker-Just correlation under-
4 predict the amount of heat that zircaloy oxidation
5 generated in TH-1 test 128, a thermal hydraulic
6 experiment simulating LOCA conditions.

7 At the same temperatures, analyses using
8 the Cathcart-Pawel correlation would predict a lower
9 heat generation rate than analyses using the Baker-
10 Just correlation. Therefore, analyses using the
11 Cathcart-Pawel correlation, which are used for best
12 estimate analyses like what are used for Units 2 and 3
13 at Indian Point, the Cathcart-Pawel correlation would
14 also under-predict the amount of heat that oxidation
15 generated in TH-1 test number 128.

16 So I think this is a pretty serious issue
17 -- evidence that we are now presenting that wasn't in
18 the original 2.206 petition. It shows that the ECCS
19 evaluation models used for Indian Point would actually
20 under-predict the peak cladding temperature that would
21 occur in a loss-of-coolant accident. And as Phillip
22 had mentioned they don't wait on hold for a rulemaking
23 process to finish, which as Richard Dudley had
24 mentioned could take up to 18 months before there's a
25 final decision.

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1 And even after that, that can still take
2 longer before it would become a legally-binding rule,
3 so I just want to point out, I think just this alone -
4 - I think is evidence that shows that the Petition
5 Review Board really should consider this petition for
6 review. I will continue.

7 Analyses using the Baker-Just and
8 Cathcart-Pawel correlations would also most likely
9 under-predict the amount of heat that zircaloy
10 oxidation generated in TH-1 test 130 which I discussed
11 in the last meeting. Just to repeat, in TH-1 test
12 130, the reactor shut down when the PCT was
13 approximately 1850 degrees Fahrenheit. And after the
14 reactor shut down, cladding temperatures kept
15 increasing because of the heat generated from the
16 zircaloy-steam reaction. Of course, there would have
17 been a small amount of actual decay heat, but the peak
18 measured cladding temperature went up to 2040 degrees
19 Fahrenheit.

20 So the peak cladding temperature increased
21 by 190 degrees Fahrenheit after the reactor shut down
22 because of heat generated from the zircaloy-steam
23 reaction. Just to repeat. This test was being driven
24 by a low level of fission heat just to simulate what
25 decay heat would have been and the maximum was 0.55

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1 kilowatts per foot. So the actual decay heat would
2 have been about 6 percent of 0.55 kilowatts per foot.

3 So that's very negligible. So this was indeed, this
4 increase of 190 degrees Fahrenheit was predominantly
5 from the heat generated from the exothermic oxidation
6 of the zircaloy fuel rods.

7 Anyway, it is highly unlikely that
8 analyses using the Baker-Just and Cathcart-Pawel
9 correlations would predict the cladding temperature
10 increase of 190 degrees Fahrenheit in TH-1 test 130
11 after the reactor shut down. So data from thermal-
12 hydraulic experiments simulating loss-of-coolant
13 accidents indicates that the Baker-Just and Cathcart-
14 Pawel correlations are not adequate for use in ECCS
15 evaluation calculations that would calculate the
16 metal-water reaction rates that would occur in the
17 heat transfer conditions of a LOCA.

18 The ECCS evaluation calculations that
19 Entergy uses for Indian Point are seriously flawed and
20 the only recourse the public has to try to get this
21 problem corrected, that should have been corrected at
22 least 40 years ago when Indian Point Unit 2 was
23 originally licensed, the only recourse that the public
24 has is to submit enforcement action petitions and
25 rulemaking petitions. And unfortunately, as we have

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1 discussed already, the rulemaking process takes years.

2 So right now, we, Riverkeeper and I, we have
3 presented data from the NRC's own experiments that the
4 NRC has failed to evaluate, experiments that were
5 conducted 30 years ago. I'm speaking specifically of
6 the Chalk River NRU experiments now. And the NRC has
7 actually done worse than nothing since these
8 experiments were conducted.

9 I say that the NRC has done worse than
10 nothing because since that time the NRC has approved
11 power uprates for the reactors at Indian Point. And
12 as Phillip pointed out, there are about 20 million
13 people living within a 50-mile radius of Indian Point
14 and the NRC is allowing the reactors at Indian Point
15 to continue operating at unsafe power levels that were
16 qualified by seriously flawed ECCS evaluation models.

17 And given the population density around Indian Point
18 and the fact that Indian Point was built close to
19 fault lines making it particularly vulnerable to loss-
20 of-coolant accidents, I think that Riverkeeper's 2.206
21 petition is plant-specific.

22 And in the interest of upholding NRC's
23 congressional mandate to protect the lives, property,
24 and environment of the people of New York, the NRC
25 needs to consider that the data from the TH-1 test 128

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1 and most likely also TH-1 test 130, as evidence that
2 the Baker-Just and Cathcart-Pawel correlations are not
3 adequate for use in ECCS evaluation calculations that
4 calculate the metal-water reaction rates that would
5 occur in the heat transfer conditions of a LOCA.

6 The NRC should not allow the reactors at
7 Indian Point to continue operating at unsafe power
8 levels, and to help remedy these problems the Petition
9 Review Board should accept Riverkeeper's 2.206
10 petition for review.

11 Thank you. That concludes my remarks.

12 CHAIRPERSON BROWN: Thank you, Mr. Leyse.

13 At this time do the staff in headquarters have any
14 questions for Mr. Leyse?

15 (No response.)

16 Other NRC staff, any questions?

17 (No response.)

18 Does the licensee's representatives on the
19 phone have any questions?

20 (No response.)

21 Hearing none, let me attempt to quickly
22 summarize the questions that I heard from the National
23 Resources Defense Council and the staff's response and
24 Mr. Leyse, although before I do that, let me also say
25 that the PRB will reconvene and review the information

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1 that Mr. Leyse just went through. So this isn't a
2 conclusory statement. But the basic concern that was
3 addressed I believe was one of timeliness with the
4 NRC's process for dispositioning the specific 2.206
5 and the petition for rulemaking with I believe a
6 stated belief that the petition for rulemaking process
7 takes too long. And the 2.206 process should be
8 handled in a more exigent manner.

9 And I think you heard from members of the
10 PRB and our counsel on a basic differentiation under
11 the regulations for those two processes. But the
12 thing that we didn't state very clearly, that I think
13 is important to leave members of the public with, is
14 that in the petition for rulemaking process, as well
15 as in the 2.206 process for licensee specific action,
16 the staff has been evaluating the information provided
17 to us on an on-going basis for the appropriateness for
18 immediate action. And that interest in immediate
19 action response where necessary and appropriate exists
20 in both processes.

21 Clearly, the Petitioner does not agree
22 with the conclusions of the staff, both the PRB and
23 the rulemaking staff at this time on the actions that
24 we have deemed appropriate for immediate action, but I
25 do want to be clear that while there may be

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1 disagreement, it is part of the process that we are
2 continuously evaluating the necessity for near-term
3 action.

4 So having said that and before I conclude
5 the meeting, members of the public may ask questions
6 about the NRC's process for 2.206 petitions. However,
7 as stated several times, the purpose of the meeting is
8 not to provide an opportunity for the public to
9 question or examine the PRB regarding the merits of
10 the petition request. So at this time, are there any
11 process questions for the members of the Petition
12 Review Board?

13 MR. COCHRAN: This is Tom Cochran. I have
14 a comment I'd like to make with respect to the
15 statement that you just made. You just made a
16 statement that the staff, in fact, has a continuing
17 obligation to evaluate whether a condition or
18 recommendation or petition merits immediate action.
19 And that you are so evaluating the 2.206 and the
20 previous rulemaking petitions in that regard.

21 And I would just say that I don't believe
22 you are correct because since the Fukushima accident,
23 you have been uprating reactors, power reactors. And
24 if, as I believe, Mr. Leyse is correct, you should be
25 derating these reactors. So not only are you not

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1 examining whether you should take immediate action,
2 but you are, in fact, doing just the opposite and
3 denying the existence of these arguments and
4 continuing to uprate reactors. I imagine you will
5 continue to do so prior to resolving 50-93 and 50-95.

6 So I think you're not acting in the public
7 interest with respect to Indian Point by not derating
8 Indian Point, particularly given the circumstances
9 that were outlined regarding the very high population
10 density around Indian Point. And we have new
11 information, namely the Fukushima accident and the
12 implications of a release into an area following
13 hydrogen generation and meltdown of those reactors,
14 and you see that the new information is in the form of
15 the economic consequences in Japan and we know that
16 because Indian Point has a much higher density
17 population than Fukushima the consequences would be
18 exceedingly higher. So that is new information and it
19 does, in my judgment, justify taking action on this
20 2.206 petition and I think you are wrong to infer that
21 your staff is looking at these issues with respect to
22 whether immediate action should be taken. Thank you
23 for taking my comment.

24 CHAIRPERSON BROWN: Thank you. Are there
25 any questions for the staff on the 2.206 process?

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1 (No response.)

2 Hearing none, I want to thank Mr. Musegaas
3 and Mr. Leyse for their comments and taking the time
4 to meet with us again.

5 Before we close, does the court reporter
6 need any additional information for the meeting
7 transcript?

8 COURT REPORTER: This is the court
9 reporter. I think I have everything I need.

10 MR. SIPOS: Excuse me, sir, can you hear
11 me? This is John Sipos from the State of New York.

12 MR. BOSKA: Yes, I can.

13 MR. SIPOS: Thank you, I just want to note
14 for the record I did not have a question, so I didn't
15 speak up at that time, but just a comment, which is
16 that earlier today this office filed some brief
17 comments concerning the petition that is before your
18 Board right now. Thank you very much.

19 CHAIRPERSON BROWN: All right.

20 MR. M. LEYSE: This is Mark Leyse. I just
21 want to say one thing. The information that I covered
22 today, since I did cite some rather detailed
23 information with references, I will submit that to the
24 Petition Review Board in writing so they have access
25 to the references so they will have that at their

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1 fingertips. Thank you.

2 CHAIRPERSON BROWN: Thank you. We
3 appreciate that. With that, this meeting is concluded
4 and we will be terminating the phone call. Thank you
5 again to all the participants.

6 (Whereupon, at 2:16 p.m., the
7 teleconference was concluded.)
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