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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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PETITION REVIEW BOARD (PRB)

CONFERENCE CALL

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FRIDAY

MARCH 4, 2005

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The conference call was held, JIM LYONS,  
Petition Review Board Chairman, presiding.

PETITION REVIEW BOARD:

- JIM LYONS, Chairman, Deputy Director,  
Division of Licensing, Project Mgmt/NRR
- HERBERT N. BERKOW, Project Director, DLPM/NRR
- DONNA M. SKAY, 2.206 Petition Coordinator
- GEORGE DICK, 2.206 Petition Manager and  
Project Manager, Byron Station

PETITIONER:

BARRY QUIGLEY, Exelon

1 NRC HEADQUARTERS STAFF:

2 ABY MOHSENI, NRR

3 GENE SUH, Section Chief, NRR

4 MELISSA DUFFY, Office of General Counsel

5 TOM SCARBOROUGH, Mechanical Engineering  
6 Branch, NRR

7 FRANK ORR, Reactor Systems Branch, NRR

8 NRC STAFF PRESENT FROM REGION III:

9 KEN O'BRIEN, Enforcement Director

10 DAVE PASSEHL, Branch Chief

11 JIM HELLER, Allegation Coordinator

12 RICHARD A. SKOKOWSKI, Senior Resident Inspector

13 PRESENT FROM BYRON STATION:

14 BRAD ADAMS, Director of Site Engineering

15 STEVE KOZINSKI, Site Vice President

16 PRESENT FROM EXELON CORPORATION:

17 KEITH JURY

18 JOE BOWER

19 TOM O'NEILL

20 DEAN LARK

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P-R-O-C-E-E-D-I-N-G-S

1  
2 MR. DICK: Let me just start off by saying  
3 I'm George Dick. I'm the Project Manager for Byron.  
4 And for this particular activity, I'm also the PRB  
5 manager, Petition Manager.

6 What I would like to do initially, we got  
7 the organization. So I'd like just within those  
8 organizations for everyone to identify themselves.  
9 And as far as the people here at headquarters, if  
10 others are interested, we can provide a written list  
11 of who all is participating. So, with that, why don't  
12 we just ask people to identify themselves?

13 MR. BERKOW: Okay. Yeah. Herb Berkow.  
14 I'm a PRB member.

15 CHAIRMAN LYONS: Jim Lyons. I'm the PRB  
16 chairman.

17 (Inaudible.)

18 MS. DUFFY: Melissa Duffy, Office of  
19 General Counsel.

20 MR. SCARBOROUGH: Tom Scarborough,  
21 Mechanical Engineering Branch, NRR.

22 MS. SKAY: Donna Skay, NRC 2.206  
23 Coordinator.

24 MR. DICK: Region III?

25 MR. O'BRIEN: Is Ken O'Brien. I'm the

1 Enforcement Director.

2 MR. PASSEHL: I'm Dave Passehl. I'm the  
3 Branch Chief.

4 MR. HELLER: Jim Heller, the Allegation  
5 Coordinator.

6 MR. SKOKOWSKI: Rick Skokowski, Senior  
7 Resident Inspector.

8 MR. DICK: Okay. Thank you. Exelon  
9 environ site?

10 MR. ADAMS: This is Brad Adams, Director  
11 of Site Engineering.

12 MR. KOZINSKI: Steve Kozinski, Site Vice  
13 President.

14 MR. DICK: Okay. Thank you. Exelon  
15 corporate?

16 MR. JURY: Yes. Here we have Keith Jury,  
17 Joe Bower, Tom O'Neill, and Dean Lark.

18 MR. DICK: Okay. And, Mr. Quigley, you  
19 identified yourself?

20 MR. QUIGLEY: That's correct.

21 MR. DICK: And Frank Orr?

22 MR. ORR: Frank Orr, Reactor Systems  
23 Branch, NRC.

24 MR. DICK: Great. I think we have  
25 everybody. And, with that, I'll just turn it over to

1 Jim Lyons, who is the PRB Chairman for this activity.

2 CHAIRMAN LYONS: Thank you, George. The  
3 subject of this teleconference is a 2.206 petition  
4 submitted by Mr. Barry Quigley dated March 2nd, 2005.

5 The petitioners requested that the NRC  
6 take enforcement action against Exelon for failure to  
7 correct the longstanding problem on a reactor coolant  
8 system cold leg loop stop isolation valve at Byron  
9 Station.

10 The purpose of this teleconference is to  
11 allow Mr. Quigley to address the Petition Review  
12 Board. This is an opportunity to provide additional  
13 explanation in support for this petition. This is  
14 also an opportunity for the staff and licensee to ask  
15 any clarifying questions about the petition. The  
16 purpose of this teleconference, however, is not to  
17 debate the merits of the petition.

18 Following this phone call, the Petition  
19 Review Board will meet to determine whether the NRC  
20 accepts the petition under the 2.206 process or  
21 whether it will be dealt under another mechanism. The  
22 PRB meeting today will not determine whether we agree  
23 or disagree with the content of the petition.

24 This teleconference is being transcribed.  
25 So it will help if anyone making a statement first

1 state their name clearly. The transcript will become  
2 a supplement to the petition and will be made publicly  
3 available.

4 If the PRB decides that the petition will  
5 be considered under 2.206, then the NRC will issue an  
6 acknowledgement letter to the petitioner. The  
7 petition manager will keep the petitioner and licensee  
8 periodically informed of the progress of the staff's  
9 review.

10 So, with that introduction, I'd like to  
11 turn it over to you, Mr. Quigley, to kind of go  
12 through your request and provide any other additional  
13 information you would like us to consider as part of  
14 our deliberations.

15 MR. QUIGLEY: Well, in addition to the  
16 petition, which I wrote relatively quickly due to time  
17 constraints, -- I wanted to get this into the system  
18 because I thought it was very important -- you can  
19 kind of break the issues down into three areas.  
20 There's a technical area, a procedural area, and a  
21 cultural area.

22 The first one I want to deal with is the  
23 technical area. The previous evaluations have not  
24 completely addressed the loose parts that can be  
25 (Inaudible.) valve. (Inaudible.) get into the hot leg

1 (Inaudible.) to get into the hot leg. The flow path  
2 is to the head cooling nozzles, then down through the  
3 (Inaudible.) tubes, then out the hot leg. So that's  
4 (Inaudible.).

5 In the original Westinghouse 1999 safety  
6 evaluation, which I wrote a paper on in 1999, the  
7 response to it was relatively detailed except for one  
8 part that did not address the concern I had raised.  
9 I was questioning the amount of debris in the vessel  
10 (Inaudible.).

11 PARTICIPANT: Mr. Quigley?

12 MR. QUIGLEY: Yes?

13 PARTICIPANT: Sorry to interrupt. You  
14 seem to be breaking up quite a bit on the phone.

15 MR. QUIGLEY: Okay.

16 PARTICIPANT: So we may (Inaudible.) some  
17 parts.

18 MR. QUIGLEY: Let me try something  
19 different here.

20 PARTICIPANT: Okay. I'm going to call on  
21 a different line. Give me a moment, please.

22 PARTICIPANT: Okay.

23 (Pause.)

24 MR. QUIGLEY: Okay. Is that better?

25 PARTICIPANT: We'll let you know when you



1 start talking. We can hear you right now.

2 MR. QUIGLEY: Okay. How is that?

3 PARTICIPANT: It sounds good.

4 MR. QUIGLEY: All right. In the PIP in  
5 1999, I raised the concern about the scope of the  
6 5059. The scope of the 5059 was limited to loose  
7 parts from the loop stop isolate valve. And in two  
8 intervening outages, we have found loose parts that  
9 have not been from the LSIV. So that to me might  
10 invalidate the concerns that the only debris is from  
11 the loop stop isolation valve.

12 Also, the 5059 does not address completely  
13 all the piping valves in the loop stop isolation  
14 valve. There are two tap-offs: the pressurizer spray  
15 and the CVCS let-down system.

16 The 5059 acknowledges that the parts can  
17 get in that area, but they do not fully address the  
18 effects. For the CVCS line, the let-down line, it  
19 says that it's possible that the debris could have  
20 blocked the let-down orifice. That is acceptable  
21 because we have the XF let-down system.

22 The CVCS let-down system is required to  
23 perform a safety function for natural circulation  
24 cool-down to provide let-down from the RCS. And,  
25 therefore, the blocking of that line cannot be

1 dismissed.

2 For the pressurizer spray, the evaluation  
3 talks about getting lodged in a valve seat or lodged  
4 in the nozzle. It does not clearly address the fact  
5 that with a blocked pressurizer spray valve, the RCS  
6 can depressurize and cause a safety injection.

7 The second part relates to procedural  
8 issues. The decision-making process, OPAA 106, 101,  
9 1006, the procedure is not followed completely. The  
10 issue resolution documentation form that was done does  
11 not address operating experience. In addition, the  
12 procedure for the operational decision-making calls  
13 out in several places whether or not an independent  
14 review should be done for significant issues.

15 Now, we could argue about whether this is  
16 significant or not. I believe it is. But more  
17 detailed is a procedure called AQAA 1212. This is a  
18 result of the AMAG event, where we developed a  
19 procedure for technical issues. And basically the  
20 decision-making procedure said it's for technical and  
21 operational decisions and it produces a document.

22 The purpose of the AQAA 1212 is to provide  
23 quality for technical work that produces some tangible  
24 product, usually a document. So in that regard, the  
25 AQAA 1212 procedure should have been used in the

1 decision-making process, which by my read of it would  
2 have kicked it to an independent review, which we did  
3 not get.

4 Also, the evaluations that the  
5 decision-making is relying on are not complete. There  
6 appears to be a hole in the procedures with loose  
7 parts associated with the reactor coolant system, our  
8 Nuclear Fuel Department does a loose parts evaluation.  
9 And that has been done.

10 We also have a procedure for material in  
11 general, which also requires an evaluation. The loose  
12 parts procedure for the nuclear fuels area  
13 specifically excludes things like valve-seat  
14 interactions, flow blockages in other areas. And the  
15 procedure for regular foreign material, if you will,  
16 requires that those types of evaluations take place.  
17 I was not able to find the second evaluation done  
18 under the general foreign material procedure.

19 The third part is the cultural aspect of  
20 this. When we attempt to close this value, it does  
21 what is called torquing out. The motor torques out.  
22 And what we are doing there is we are routinely  
23 actuating a protective feature and then relying on  
24 that feature.

25 As part of the communication from the

1 decision-making plan, we see that the performance of  
2 this valve has improved over time. My contention is  
3 it's improved because we're shaving the metal off and  
4 we're putting it in CRS.

5 The decision-making plan also addresses an  
6 organizational concern that this could be viewed as,  
7 this decision to not repair the valve could be viewed  
8 as, negatively by the organization.

9 The response to that concern was that Mr.  
10 Kozinski issued a page and a half letter describing  
11 the decision-making process and why the decision was  
12 made.

13 That letter was not effective in  
14 correcting any organizational concerns. There has  
15 been a lot of concern among the station employees  
16 about this issue. Their concern has ranged from they  
17 probably shouldn't have done that to rather expressive  
18 concerns using a fair amount of profanity. So the  
19 letter was not effective in addressing that  
20 organizational issue. That's my statement so far.

21 CHAIRMAN LYONS: All right. Thank you  
22 very much. (Inaudible.)

23 With that, I look around the table here.  
24 Are there any questions that we have, any additional  
25 questions, on the issue? Yes. We've got a question

1 here.

2 MR. SCARBOROUGH: This is Tom Scarborough.  
3 I'm with the Mechanical Engineering Branch with NRR.

4 You mentioned about the motor was  
5 torquing out in terms of how it was operated. So I  
6 assume what you're saying is it was operated on the  
7 torque switch when it was closing?

8 MR. QUIGLEY: Yes.

9 MR. SCARBOROUGH: And when they operated  
10 the valve, do you have any knowledge of how the torque  
11 switch was set up, what was used as a basis for the  
12 setup of the torque switch in terms of the weak link?

13 MR. QUIGLEY: No, I do not.

14 MR. SCARBOROUGH: Do you know if after  
15 they operated it, they -- when they operated it a  
16 second time -- you said they continued to operate it.  
17 Did they leave the torque switch in the circuit for  
18 the second try or did they bypass it?

19 MR. QUIGLEY: The torque switch was left  
20 in the circuit.

21 MR. SCARBOROUGH: Okay. So it was  
22 operated that way. Do you know of any other  
23 diagnostics that they had on the motor operator valve  
24 when they were running it?

25 MR. QUIGLEY: They were doing a current

1 trace on the motor.

2 MR. SCARBOROUGH: Okay. Do you have any  
3 results of that, do you know?

4 MR. QUIGLEY: I've had the result  
5 explained to me. And basically by looking at the  
6 current trace, you can tell when the valve guide pops  
7 back in by looking at the current trace. So what we  
8 do is we run the motor until it torques out. And then  
9 we back it up and try again in trying to get the valve  
10 guide to pop back into the seat.

11 MR. SCARBOROUGH: Okay. So what you saw  
12 during the trace was that the guide was not fully  
13 attached and that it was being bent and then once it  
14 got to a certain point, it popped back into its normal  
15 alignment?

16 MR. QUIGLEY: It's a vertical guide that  
17 is essentially hinged at the top and has a smaller pin  
18 you pin at the bottom. And that's all that holds it  
19 in.

20 What is happening is that the pin at the  
21 bottom breaks and it allows the valve guide to  
22 basically kick out a little bit at the bottom as the  
23 pin that's up at the top. And when it does that, the  
24 valve cannot fully close.

25 So closing the valve, repeated attempts to

1 close the valve, will eventually cause that valve  
2 guide to pop back into the body.

3 MR. SCARBOROUGH: Now, what type of valve  
4 body is it?

5 MR. QUIGLEY: It's a stainless steel valve  
6 body.

7 MR. SCARBOROUGH: Do you know what's the  
8 manufacture?

9 MR. QUIGLEY: Westinghouse.

10 MR. SCARBOROUGH: During the operation,  
11 are you familiar with any motor type of burnup issues  
12 or problems of noise issues that accompanied when they  
13 operated the valve?

14 MR. QUIGLEY: No, I'm not.

15 MR. SCARBOROUGH: Okay. Whenever you were  
16 operating, did you notice any valve or stem  
17 degradation or packing issues? Was there any  
18 knowledge of that?

19 MR. QUIGLEY: I reviewed the condition  
20 reports. And I was talking to some of the systems  
21 engineers on this. And I have not heard that  
22 information.

23 MR. SCARBOROUGH: Checking my notes here.

24 (Pause.)

25 MR. SCARBOROUGH: Yes. A question I had

1 was, do you know what the actual -- the guide is  
2 material, what is the guide material?

3 MR. QUIGLEY: I believe the guide is also  
4 stainless steel.

5 MR. SCARBOROUGH: In terms of your  
6 description, it talked about there was a plan for  
7 resolution but then it was cancelled. Can you tell us  
8 a little bit about what the plan for resolution was  
9 that subsequently was cancelled?

10 MR. QUIGLEY: The longstanding plan to fix  
11 this valve that had existed for basically a large  
12 portion of the planning for B1R 13 was to install --  
13 we were going to have the core barrel out. And that  
14 will allow us ready access to the collate connection  
15 to the reactor vessel.

16 The plug has been manufactured and  
17 reviewed by engineering. And that plug is going to be  
18 installed into the cold leg nozzle from the reactor  
19 vessel side, inflated with a dual seal. And that  
20 would have allowed work to proceed on the RCS cold leg  
21 isolation valve.

22 That plan had been reviewed by the POR  
23 Committee, Plant Oversight Review Committee, and  
24 approved by the committee.

25 MR. SCARBOROUGH: And, again, can you talk



1 a little bit about what the actual operation on the  
2 valve was planned to be in terms of what corrective  
3 action was going to be taken?

4 MR. QUIGLEY: The bonnet was going to be  
5 removed and a new type of valve guide installed that's  
6 not acceptable to this type of failure.

7 MR. SCARBOROUGH: Okay. So they were  
8 going to remove that guide itself and weld in a new  
9 guide of some type or attach?

10 MR. QUIGLEY: I don't believe any welding  
11 was involved. I think it was us placing it in.

12 MR. SCARBOROUGH: Okay. Anything else you  
13 can think of that might be helpful in terms of the  
14 technical issue?

15 MR. QUIGLEY: On the valve itself? No.

16 MR. SCARBOROUGH: Right. Okay. Thank  
17 you.

18 CHAIRMAN LYONS: Any other questions here  
19 in headquarters? Region or the residents, do you have  
20 any questions that you have or would like to ask?

21 PARTICIPANT: Region III has nothing from  
22 the office.

23 CHAIRMAN LYONS: Rick?

24 PARTICIPANT: And nothing from the site.

25 CHAIRMAN LYONS: Okay. Frank Orr, who is

1 from headquarters, did you have any questions?

2 MR. ORR: I don't have any questions on  
3 the equipment. I didn't know if we had been satisfied  
4 in our yesterday's discussion that we had -- had we  
5 concluded that we had enough technical information  
6 about the function of the valve and its necessity?

7 CHAIRMAN LYONS: Well, I guess that is one  
8 of the questions (Inaudible.) is one of the questions  
9 that we had had.

10 MR. QUIGLEY: The valve has a maintenance  
11 function to close. It has a safety-related function  
12 as a pressure boundary. And it has an implied safety  
13 function to not put pieces of metal in the reactor  
14 coolant system.

15 CHAIRMAN LYONS: Okay. (Inaudible.)  
16 Exelon, do you have any questions from the site?

17 PARTICIPANT: None from the site.

18 CHAIRMAN LYONS: How about Exelon  
19 headquarters?

20 PARTICIPANT: None from here, Jim.

21 CHAIRMAN LYONS: All right.

22 MS. SKAY: Mr. Quigley, this is Donna  
23 Skay. Just an administrative question. I know you  
24 are trying to fax in a signed copy of the petition.

25 MR. QUIGLEY: Yes.

1 MS. SKAY: Were you ever able to get that  
2 through or did you mail in a --

3 MR. QUIGLEY: I was not able to get it  
4 through.

5 MS. SKAY: Okay. We will use the version  
6 you e-mailed, then, as the sole copy.

7 MR. QUIGLEY: Okay.

8 MS. SKAY: Fine. Thank you.

9 CHAIRMAN LYONS: Okay. If there are no  
10 other questions, I think we had mentioned that we need  
11 to move forward with this. And I appreciate, Mr.  
12 Quigley, your discussion of this. I thought it was  
13 very good that you were able to run through it in an  
14 orderly manner.

15 Sometimes we have people that tend to  
16 stray on their discussions. And it's nice when we  
17 have someone who can explain their issues clearly and  
18 succinctly. So I appreciate that.

19 And hearing no other questions or comments  
20 --

21 MR. QUIGLEY: Well, just one thing I  
22 wanted to close with --

23 CHAIRMAN LYONS: Sure.

24 MR. QUIGLEY: -- is what I believe to be  
25 the driver of this issue --

1 CHAIRMAN LYONS: Okay.

2 MR. QUIGLEY: -- with the excessive  
3 emphasis on dose reduction --

4 CHAIRMAN LYONS: Okay.

5 MR. QUIGLEY: -- and the fact that the  
6 dose reduction plays such a large role in everyone's  
7 bonus, including mine. Now, the same thing happened  
8 at David Bessee with dose, and an engineer came in in  
9 the morning. The scaffold was down because of dose.  
10 They wouldn't let him look at it again because of  
11 dose. Previous jobs they had cut the jobs due to  
12 dose.

13 And their bonuses were tied to production.  
14 Here it's a little bit closer tie where our bonuses  
15 are tied directly to dose. Essentially the  
16 (Inaudible.) has gone out the window because we don't  
17 know what reasonable is because we don't know how much  
18 we're willing to spend to save a millirem.

19 And that money had to come from somewhere  
20 else. And we are diverting money from things that  
21 could be better used for dose. You know, like I said  
22 in the petition, you know, reducing dose sounds noble,  
23 but when it starts compromising safety and you start  
24 deferring maintenance, that becomes the issue.

25 CHAIRMAN LYONS: Okay. Actually, we do

1 have another question here at headquarters.

2 PARTICIPANT: Can we go (Inaudible.)

3 CHAIRMAN LYONS: Yes. Hold on just one  
4 second.

5 PARTICIPANT: Sure.

6 (Pause.)

7 PARTICIPANT: Mr. Quigley (Inaudible.)  
8 just a question of clarification. Your letter states  
9 that you're looking for enforcement action. Can you  
10 provide any more specifics on what particular  
11 enforcement action you had in mind?

12 MR. QUIGLEY: Criterion safety requires  
13 that you correct conditions adverse to quality. This  
14 condition has existed for at least six years and had  
15 not been corrected. So it will be a violation of  
16 criterion 16.

17 PARTICIPANT: So you're looking for a  
18 notice of violation? Is that what you're requesting?

19 MR. QUIGLEY: Yes.

20 PARTICIPANT: Thank you.

21 CHAIRMAN LYONS: All right. Well, thank  
22 you. And I guess hearing no other -- I guess I'll  
23 give kind of a second chance for anybody else if they  
24 have any other questions or comments.

25 (No response.)

1                   CHAIRMAN LYONS:    Okay.    Hearing none,  
2                   again, I appreciate everybody's time and attention on  
3                   this phone call.    After the Petition Review Board  
4                   makes its determination, we will be getting back in  
5                   touch with you, Mr. Quigley.

6                   MR. QUIGLEY:    Thank you.

7                   CHAIRMAN LYONS:    Thank you very much.

8                   MR. QUIGLEY:    You're welcome.

9                   PARTICIPANT:    Thank you.

10                  (Whereupon, the foregoing matter was  
11                  adjourned.)

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