

**Official Corrected Transcript of Proceedings**  
**NUCLEAR REGULATORY COMMISSION**

Title: Public Meeting on NRC Supplemental Draft  
EIS North Anna Site

Docket Number: 52-008

Location: Mineral, Virginia

Date: Tuesday, August 15, 2006

Work Order No.: NRC-1161

Pages 1-178

**NEAL R. GROSS AND CO., INC.**  
**Court Reporters and Transcribers**  
**1323 Rhode Island Avenue, N.W.**  
**Washington, D.C. 20005**  
**(202) 234-4433**

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

+ + + + +

PUBLIC MEETING

+ + + + +

TUESDAY

AUGUST 15, 2006

+ + + + +

MINERAL, VIRGINIA

+ + + + +

The meeting convened at the Louisa County  
Middle School, 1009 Davis Highway, Mineral, Virginia,  
at 7:00 p.m., Chip Cameron, Facilitator, presiding.

SPEAKERS:

CHIP CAMERON	Facilitator
JACK CUSHING	
MARYANN PARKHURST	
MIKE MURPHY	
DAVE MATTHEWS	
LANCE VAIL	
ANDY KUGLER	
GENE GREYCHEK	

1        COMMENTATORS:

2                JIM ADAMS

3                LEE ANTHONY

4                GARY BREEDEN

5                KIRSTIN BREEDEN

6                BILL CAMPBELL

7                KEITH CHEATHAM

8                ROBERT CLARKE, JR.

9                ELINA DAY

10               REBECCA FERRIS

11               PAUL GENOA

12               GERALD GIACCAI

13               AVIV GOLDSMITH

14               PATRICK HANLEY

15               DELBERT HORN

16               ROBIN HORNE

17               SAMA BILBAO Y LEON

18               MELISSA KEMP

19               ALLAN LASSITOR

20               C. LEE LINTECUM

21               CHRIS LLOYD

22               RON MICKENS

23               BILL MURPHEY

24               JERRY ROSENTHAL

25



1        COMMENTATORS (CONTINUED) :

2                    KEN REMMERS

3                    HARRY RUTH

4                    DENNIS SCHABLE

5                    LISA STILES-SHELL

6                    BEN SLONE

7                    SYLENA SMITH

8                    MICHAEL STUART

9                    KELLY TAYLOR

10                   PATRICIA WYCOFF

11                   PATRICK WYCOFF

12                   LOU ZELLER

13

14

15

16

17

18

19

20

21

22

23

24

25

1	<u>AGENDA ITEMS</u>	<u>PAGE</u>
2	Welcome and purpose of meeting . . . . .	5
3	How comments can be submitted . . . . .	16
4	Results of the environmental review . . . . .	27
5	Public comments . . . . .	54
6	Closing . . . . .	176
7	Adjourn	
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

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

(7:00 p.m.)

MR. CAMERON: Good evening everyone. My name is Chip Cameron and I'm the Special Counsel for Public Liaison at the United States Nuclear Regulatory Commission, which we are going to be referring to as the NRC tonight. And I'd just like to welcome all of you to the meeting. And thank all of you for coming out tonight.

The topic tonight is a draft supplemental environmental impact statement that the NRC has prepared as part of our evaluation of an application for an early site permit that we received from Dominion to potentially site two new reactors at the North Anna site.

And it is my pleasure to serve as your facilitator for the meeting tonight. And in that role, I'll try to help all of you to have a productive meeting.

And I just want to cover three items of meeting process before we get into the substance of our discussions tonight. I'd like to talk about the format for the meeting. Secondly, some simple ground rules so that we can have a productive meeting. And finally, I'd like to introduce the speakers who are

1 going to talk with you tonight.

2 In terms of format for the meeting, we're  
3 going to start with some brief presentations from the  
4 NRC and our expert consultants to give you some  
5 background on what we look at in deciding whether we  
6 can grant an application for a permit for an early  
7 site permit. And also we want to talk to you about  
8 the information, the conclusions, the analysis that is  
9 in the draft supplemental environmental impact  
10 statement.

11 After those presentations, we will have  
12 time for some questions about process. We want to  
13 make sure that you understand the NRC process. So we  
14 will have some questions.

15 And then we are going to go to the primary  
16 part of the meeting which is an opportunity for the  
17 NRC to listen to all of you, your recommendations,  
18 your advice, your concerns about the early site permit  
19 and the draft supplemental environmental impact  
20 statement.

21 We are going to take written comment on  
22 these issue but we wanted to be here with you tonight.  
23 And again thank you all for coming out. But we wanted  
24 to be here with you in person. And any comment that  
25 you offer tonight will have the same weight as the



1 written comments that we receive. And the NRC staff  
2 will be telling you in a minute how to submit those  
3 written comments.

4 When we do get to the comment part of the  
5 meeting, I'm going to ask those of you who have signed  
6 up to comment to come up to the podium and speak with  
7 us.

8 I just want to say a couple words about  
9 the focus of the meeting. This meeting is on the  
10 draft supplemental environmental impact statement.  
11 And we know that there may be broader concerns,  
12 broader comments, and we are always willing to listen  
13 to concerns. But we do want to try to focus on the  
14 draft supplemental environmental statement.

15 Now there is also another meeting related  
16 to the early site permit application. And that  
17 meeting is going to be conducted by the Commonwealth  
18 of Virginia and it is on consistency issues with the  
19 Virginia Coastal Resources Management Program.

20 Now we do have Mike Murphy with us tonight  
21 who is the Director of the Division of Environmental  
22 Enhancement with the Virginia Department of  
23 Environmental Quality. And, Mike, where are you out  
24 there? Here's Mike. And I just wanted to introduce  
25 you to him and give him a chance to talk about the

1 state's meeting tomorrow. And you need to speak  
2 pretty loudly into this mike so that we can get it on  
3 the transcript.

4 MR. MURPHY: Okay. It is usually not a  
5 problem for me.

6 Good evening, everybody, and thank you  
7 from the Commonwealth as well for coming out and being  
8 heard.

9 Tomorrow night at six o'clock we will be  
10 doing pretty much what you saw occur here this  
11 evening. We will have representatives from the  
12 Department of Environmental Quality. That is the  
13 agency I'm with. Also Game and Inland Fisheries and  
14 the Health Department will be here. And they are all  
15 here tonight.

16 Our review that is running concurrently  
17 with this one deals only with the coastal zone issues  
18 that the Commonwealth has under the purview of our  
19 Coastal Resources Management Program. If you are not  
20 familiar with that program, we have a display here  
21 tonight. It's down to the left -- right at the end of  
22 the hall before you get into the cafeteria. There are  
23 some fact sheets there.

24 Our public comment period is open right  
25 now as well. And we will run until September 8th.

1 There is information out there about how to submit  
2 comments.

3 At seven o'clock tomorrow, exactly like  
4 tonight, we will open up a formal hearing of our own.  
5 And you are welcome to come back. I understand there  
6 are some folks that aren't here tonight that are  
7 coming tomorrow. We will have a hearing that will  
8 begin at seven. And we will take oral testimony at  
9 that time.

10 And I will be here throughout the evening  
11 if there are any other questions along with some of  
12 our staff that are probably already over at the  
13 display area.

14 Thank you, Chip.

15 MR. CAMERON: Great. Thank you, Mike.

16 And I just wanted to note that it can be  
17 confusing about what is in the NRC bailiwick and what  
18 is in the Coastal Zone Management bailiwick. But as  
19 I understand the arrangement, if you want to have your  
20 comments formally considered by the state, you either  
21 need to go to the meeting tomorrow night and speak or  
22 submit a written comment. And the state is willing to  
23 take any written comments that you might have tonight  
24 and accept that as a formal comment.

25 And there also is an email address that

1 you can get from the state if you want to email a  
2 comment in. So I just wanted to be clear on that so  
3 that misunderstand and think that if you give a  
4 comment tonight, that it is automatically going to be  
5 considered by the state.

6 And we will try, if there are questions on  
7 the difference between the NRC process and the state  
8 process, we will try to answer that during the  
9 question period.

10 Ground rules, very simple. When we go out  
11 for questions during our short question period, if you  
12 could just introduce yourself to us. I'll bring you  
13 this cordless mike. And then ask your question.

14 And I would ask that only one person speak  
15 at a time so that we could give whoever is speaking  
16 our full attention. And also so that we could get a  
17 clean transcript.

18 We are taking a transcript of the meeting.  
19 Our court reporter is back there in the corner. That  
20 is Lindsey Barnes. And that transcript will be our  
21 record -- our record meaning the NRC's and you, the  
22 public, of the meeting tonight. And that will be  
23 available to you.

24 I would ask you try to be concise. It is  
25 hard, I know, on complicated and emotional issues but

1 try to be concise during both your questions and when  
2 you come up to the microphone to give formal comments.

3 We want to make sure that we give  
4 everybody an opportunity to speak tonight. And also  
5 try to get out of here before the sun comes up  
6 tomorrow because we have a lot of people who want to  
7 talk. So try to brief.

8 And when we do get to the formal comment  
9 part of the meeting, I'm going to ask you to try to  
10 follow a three- to five-minute guideline. And I know  
11 that some people are going to be shorter hopefully  
12 than three minutes or five minutes.

13 Some people may go a little bit longer and  
14 I'm going to try to allow that to happen for certain  
15 folks. But at some point, we're just going to have to  
16 ask you to sum up so that we can go on to the next  
17 person.

18 Usually three to five minutes is enough  
19 time to summarize your main points. And it  
20 accomplishes two important objectives for us. One is  
21 it alerts NRC to issues that we should start looking  
22 at right away. And talking to you after the meeting,  
23 if necessary, to try to understand your concern.

24 And secondly, it alerts everybody out  
25 there in the audience to what issues people are

1 concerned about.

2 And I guess a last ground rule is your are  
3 going to hear opinions that are going to differ from  
4 yours tonight I'm sure. And let's just extend  
5 courtesy to all those different opinions.

6 And again I would thank you for being  
7 here. If you are signed up to speak, just be patient.  
8 We will get to you eventually.

9 And let me introduce the main speakers and  
10 then we have our Senior NRC Manager here tonight.  
11 Dave Matthews is going to do a welcome for you.

12 We're going to first go to Mr. Jack  
13 Cushing who is right here. And Jack is the Senior  
14 Project Manager for the environmental review on the  
15 North Anna early site permit application. And he's  
16 going to give you an overview of the early site permit  
17 process.

18 And Jack has been with the NRC for about  
19 eight years. Before that, he had put in a substantial  
20 amount of time as a reactor operator at the Maine  
21 Yankee Nuclear Reactor. And he is a graduate of the  
22 Massachusetts Maritime Academy. His degree is in  
23 Marine Engineering.

24 And after Jack is done, we're going to go  
25 right to the heart of the matter which is the results

1 of the environmental review, this supplement. Again,  
2 it is draft. And we want your comments. It won't be  
3 final until we get your comments.

4 But we have Maryann Parkhurst is right  
5 here who is going to give us that summary. And  
6 Maryann is the team leader for the group of experts  
7 that the NRC has working to review the environmental  
8 issues. And Maryann is a Senior Staff Scientist at  
9 the Pacific Northwest Laboratory. And she has served  
10 as a team leader on other environmental reviews on  
11 reactor licensing issues.

12 She has two master's degrees, one in  
13 ecology from Washington State University and one in  
14 radiological sciences from the University of  
15 Washington. Her bachelor's degree is in chemistry  
16 from the University of New Mexico.

17 And with all that introductory material,  
18 we're going to get started. But first I want to go to  
19 Dave Matthews. And Dave is the Director of New  
20 Reactor Licensing at the NRC. And he is with us  
21 tonight.

22 And Dave?

23 MR. MATTHEWS: Thank you, Chip.

24 And I want to extend my thanks as well to  
25 everybody for coming here tonight. And we really look

1 forward to hearing your comments.

2 I discouraged my staff from making any  
3 prior announcement of my attendance because this close  
4 to Charlottesville announcing that Dave Matthews was  
5 going to be here would probably have overwhelmed our  
6 capability for crowd control. So I try to travel  
7 incognito.

8 All kidding aside, I would also like to  
9 thank the Commonwealth of Virginia for the degree of  
10 participation that they have offered us and degree of  
11 cooperation during this whole review because it has  
12 been -- although we have distinct responsibilities,  
13 there are areas in which those responsibilities merge.

14 We are trying to make sure that that is  
15 not a confusing issue for you, as Chip identified. I  
16 think it has been very helpful that the state and we  
17 were able to schedule these meetings and not only co-  
18 locate it but coincident in time.

19 As a reminder, we were here in February of  
20 2005 to receive your comments on the draft EIS. The  
21 comments you provided us in response to that public  
22 meeting, as part of that public meeting and  
23 subsequently on the original draft EIS do not need to  
24 be resubmitted. We are going to consider those  
25 comments in the publication of the final EIS along



1 with the additional comments you offer on the  
2 supplemental EIS. So there doesn't need to be any  
3 duplication of effort on your part.

4 Obviously, as Chip pointed out, we would  
5 be interested in the additional comments you may have  
6 on this supplemental information.

7 We look forward to hearing your comments,  
8 particularly with regard to the change in the cooling  
9 system prompted by the decision by Dominion to alter  
10 their proposed design. That also occasioned a change  
11 in power level at the same time. And we have  
12 evaluated those impacts in the draft EIS.

13 So those comments along with the prior  
14 comments will be addressed in the EIS. To the degree  
15 to which the EIS, the final EIS might be altered from  
16 the draft in response to those comments will, of  
17 course, depend upon the nature of their comments and  
18 their relationship to the analysis that we have done.

19 But regardless, we have made it a habit  
20 over the last some 10 or 12 years of doing these  
21 evaluations in the license renewal arena and in the  
22 new reactor arena of having a document published  
23 wherein all of the comments are cataloged, recorded,  
24 dutifully responded to by the staff irrespective of  
25 whether they might change an ultimate finding by the

1 staff or occasion the staff to review the additional  
2 analysis.

3 So I wanted to make that point, that your  
4 comments are regarded and they are evaluated  
5 individually.

6 So with that, I'll just turn it over to --  
7 and get out of the way and turn it over to the  
8 experts.

9 MR. CAMERON: Okay. Thank you. Thank you  
10 very much, Dave.

11 We are going to go to Jack and he is going  
12 to do his presentation. And then we will go right to  
13 Maryann and do hers. And then we will go out to you  
14 for questions.

15 This is Jack Cushing.

16 MR. CUSHING: Well, thank you, Chip.

17 Can everyone hear me? No? Now? Can you  
18 hear me now? I feel like that commercial.

19 Could I have the next slide please, Laura?

20 This basically covers the agenda for  
21 tonight's presentation. And, as Chip mentioned, he  
22 wants everyone to be brief and that includes myself.

23 So, Laura, could I have the next slide  
24 please? This slide, it's basically, you know, it  
25 discusses the NRC's mission and our role in this

1 review. And the NRC's mission is threefold. We  
2 protect the public health and safety, we promote the  
3 common defense, and we protect the environment.

4 Now the mission includes nuclear power  
5 plants. And to carry out this mission, we have a  
6 staff of experienced professionals as well as two  
7 resident inspectors, Mr. Jim Reece, if you could stand  
8 up?

9 He is the resident inspector for the North  
10 Anna site. And assisting him is Gerald Wilson. And  
11 they inspect the activities at the site to ensure the  
12 plant is operated safely and in accordance with our  
13 regulation.

14 Next slide please. Okay, I'd also like,  
15 before we go into any of the issues, explain what an  
16 ESP is and what is allowed under an early site permit.

17 An early site permit is a site suitability  
18 review. And in that we review to determine if the  
19 site is suitable for a nuclear reactor or, in this  
20 case, two proposed units, Units 3 and 4.

21 An early site permit does not give  
22 Dominion permission to build or operate a nuclear  
23 power plant. That would be a separate licensing  
24 action and would necessitate another review similar to  
25 this one with another safety evaluation report and an

1 environmental impact statement.

2 Dominion, however, can conduct site  
3 preparation and limited construction activities under  
4 an early site permit. These activities are limited to  
5 non-nuclear activities. They include building roads,  
6 clearing land, foundations so long as they do not have  
7 a nuclear safety component.

8 Now to be able to that, we require a site  
9 redress plan. And the site redress plan, the purpose  
10 for that is in case the site preparation activities  
11 are started but a nuclear power plant is never  
12 completed, the site can be returned to an  
13 environmentally stable condition.

14 And if I could have the next slide? While  
15 the purpose of this meeting is to receive your  
16 comments on the supplement to the draft environmental  
17 impact statement, I'd like to touch briefly on the  
18 safety review. Mr. George Wunder -- George? -- is the  
19 back-up safety project manager. And he will be  
20 available to answer any questions you might have on  
21 the safety review.

22 The key aspects of the safety review are  
23 evaluation of the site characteristics as they relate  
24 to the safety of the plant and emergency planning.  
25 Bruce Musico -- Bruce? -- he is our emergency planning

1 reviewer. And he is also available to answer any  
2 questions you may have on emergency planning.

3 The staff had, in its final safety  
4 evaluation report, determined that the site meets the  
5 siting criteria in the regulation. In addition, the  
6 staff determined that there are not any significant  
7 impediments to successful implementation of an  
8 emergency plan.

9 The supplement to the final safety  
10 evaluation report, which will evaluate the two  
11 changes, the change in power level and the change to  
12 the cooling system, is due to be issued shortly. And  
13 will be made available on our website at [www.nrc.gov](http://www.nrc.gov)  
14 and at the Louisa County Public Library.

15 If you have any questions, on the safety  
16 review, please contact George Wunder. Thank you.

17 And this slide has the contact information  
18 for both George Wunder, who is the back-up PM and for  
19 Nitin Patel, who is the primary PM.

20 Next slide. This slide shows the process  
21 of the issuance of the draft -- from the draft EIS to  
22 the Agency decision. We issued the draft  
23 environmental impact statement for public comment on  
24 December 10th, 2004. And we were here in February  
25 2005 to receive your comments.

1           As Dave mentioned, we do have those  
2           comments and we will consider them. And they will be  
3           included in the final environmental impact statement.  
4           So there is no need to resubmit those comments.

5           In October of 2005, Dominion notified the  
6           NRC that in response to concerns raised by the  
7           Commonwealth and local citizens, it was changing the  
8           cooling system for Unit 3 from a once-through cooling  
9           system to a combination wet and dry cooling system in  
10          order to reduce the impacts to the lake. Unit 4's  
11          cooling system was not changed. It remains a dry  
12          cooling system.

13          In addition, Dominion increased the power  
14          level of Units 3 and 4 from 4,300 megawatt thermals to  
15          4,500 megawatt thermals, less than a five percent  
16          increase in power.

17          The NRC decided that these changes were  
18          substantial and in accordance with our regulations, we  
19          evaluated the changes and issued a supplement to the  
20          draft environmental impact statement in order to give  
21          the public an opportunity to comment on these changes  
22          which is the purpose of tonight's meeting.

23          Now the supplement is a draft, not because  
24          it is incomplete but because we are at an intermediate  
25          stage where we wish to receive your comments and

1 consider them before we issue our final EIS. And in  
2 many cases, your comments result in changes to our  
3 final environmental impact statement.

4 Next slide please. As you can see from  
5 this slide, the staff sought input from a number of  
6 different sources including the applications submitted  
7 by Dominion. We discussed with federal, state, and  
8 local agencies. We conducted a site audit. And we  
9 solicited public comments about the draft and the  
10 supplement to the draft.

11 Now we also discussed the project with  
12 Federal and State Agencies which include the Virginia  
13 Department of Environmental Quality and they have  
14 provided excellent cooperation and input to us, Game  
15 and Inland Fisheries as well. We have also discussed  
16 it with the U.S. Fish and Wildlife Service.

17 And we conducted site audits and visited  
18 the site and audited their records at their office as  
19 well.

20 Now the change to the cooling system  
21 primarily effects Lake Anna and the North Anna River  
22 downstream of the dam. The thermal impacts from the  
23 change were greatly reduced. The combination of the  
24 wet and dry cooling system rather than giving up the  
25 heat to the waste heat treatment facility now gives up

1 the heat to the atmosphere.

2 We also looked at the impacts of  
3 increasing the power level by approximately five  
4 percent and we evaluated those changes and we  
5 discussed them in our supplement to our draft. We  
6 provided copies outside on the table and if you  
7 haven't already, you are welcome to pick up a copy.

8 Now if I could go on to the next slide,  
9 Laura, this slide here discusses the expertise of the  
10 NRC's staff and the technical experts from Pacific  
11 Northwest National Laboratories that have assisted us  
12 in the review. We looked at the full range of  
13 environmental impacts. And we have discussed those in  
14 our draft environmental impact statement.

15 And in the supplement, we are focused on  
16 the changes to the cooling system and the change in  
17 power level.

18 I'd like to turn this over to Maryann  
19 Parkhurst so she can discuss the results of our review  
20 but before I do, are there any questions on process  
21 and how we got to where we are now?

22 MR. CUSHING: Okay. Right, if anybody  
23 would like -- if not, we could go --

24 MR. CAMERON: I think we have a question  
25 here.



1 MR. CUSHING: Sure.

2 MR. CAMERON: If you could just introduce  
3 yourself, sir?

4 MR. WYCOFF: Hello, I'm Lee Wycoff. I  
5 wanted to ask you a question about what the meanings  
6 of those categorizations small, moderate, et cetera  
7 that we have seen through the presentation and also in  
8 published literature.

9 MR. CUSHING: Okay, actually we have a  
10 slide on that. Maryann Parkhurst will be discussing  
11 that in the very next slide. So I think we'll just go  
12 with her next slide.

13 MR. CAMERON: If you still have questions  
14 after Maryann --

15 MR. CUSHING: Yes, if you have a question  
16 after --

17 MR. CAMERON: -- we will go back, go back  
18 and ask you, okay?

19 Yes?

20 MS. DAY: Okay. My name is Elina Day.  
21 I'm just wondering like you issued the supplemental  
22 draft environmental impact statement on the 7th of  
23 July. Isn't it unusual to have a public hearing so  
24 quickly after the issuance of a supplemental draft  
25 environmental impact statement? Shouldn't there be

1 more of a period of time for the public? In addition,  
2 it is August and a lot of people are on vacation.

3 MR. CAMERON: Okay, I think you got the  
4 drift of the question.

5 MR. CUSHING: Right. And basically the  
6 National Environmental Policy Act allows for a 45-day  
7 comment period. And what we try to do is schedule  
8 this with enough time for people to have some time to  
9 read it. And then we will have our meeting.

10 And this meeting isn't the only  
11 opportunity to provide comments. It is also to  
12 provide information to help you formulate comments.  
13 So we also want to have time after the meeting for  
14 people to submit comments.

15 And what we -- no, there is not another  
16 public hearing but we have also extended the comment  
17 period by 15 days until September 12th to provide  
18 people with more time.

19 MR. CAMERON: I think that also one of the  
20 purposes, and Jack, correct me if I'm wrong on this,  
21 but one of the purposes of coming out to do the public  
22 meeting is to answer questions and talk to people who  
23 might want to understand more about the draft  
24 supplemental.

25 So it is as much an opportunity to hear

1        comments as to talk to people so that they can  
2        understand what is in the draft so that if they want  
3        to submit some more informed written comments -- and  
4        that is why we like to get out early, too, I think.  
5        Is that right?

6                MR. CUSHING:    Exactly.    To help people  
7        understand our information, what we presented, so that  
8        it will help them formulate any questions they may  
9        have or comments.

10               MR. CAMERON:    Okay, we have one question  
11        up here.    Yes?

12               MS. LLOYD:    My name is Chris Lloyd.    I'm  
13        here from Louisa.    My question is this is an  
14        environmental study, correct?    Do you take into  
15        consideration your waste products while you are in  
16        construction and through the next 20 or 30 years into  
17        a landfill?

18               MR. CAMERON:    And let me just ask you a  
19        clarifier on that.    When you talk about waste  
20        products, you are not necessarily talking about  
21        radioactive waste.    You are talking about waste that  
22        is generated during the construction process that  
23        might have to go to the landfill?

24               MS. LLOYD:    No, actually both because you  
25        are going to have low-level radiation at every reset

1 -- like even when you clean your floors, you have low-  
2 grade radiation going into our landfill.

3 MR. CUSHING: We do evaluate with the  
4 waste cycle -- we evaluate the full aspect of the fuel  
5 cycle from the actual mining of the fuel right through  
6 to the final disposal of the fuel. So we do look at  
7 a full range of not just the waste from the time it  
8 reaches the plant but actually right from the mining  
9 right through to the end point.

10 MR. CAMERON: And I would just ask for the  
11 NRC staff to maybe talk to this lady after the meeting  
12 to provide some more detail on when and how those  
13 types of concerns are addressed in our process because  
14 Jack is correct in terms of what he said. But there  
15 may be some more details that will give you more  
16 information on your question.

17 MR. CUSHING: I would be happy to go into  
18 more detail with you after the meeting, too.

19 MR. CAMERON: All right. Any questions on  
20 process before we go to Maryann?

21 (No response.)

22 MR. CAMERON: Okay, Maryann? And we won't  
23 forget the small, moderate, large question that was  
24 asked.

25 MS. PARKHURST: I do have a slide related

1 to the small, moderate, and large. It is actually  
2 number three on my steps. So if you will hold out, we  
3 will get to that here soon.

4 Am I coming across okay on the mike? Is  
5 it doing okay?

6 MR. CAMERON: Why don't you keep going?  
7 Maybe we need to --

8 MS. PARKHURST: Oh, maybe that will help.  
9 It looks like it. And sounds like it to me, okay.

10 Dominion has not selected a specific plant  
11 design for proposed Units 3 and 4 yet. Instead,  
12 Dominion's staff submitted an application for an early  
13 site permit with a plant parameter envelope as a  
14 surrogate for an actual design.

15 This PPE is a set of parameters that  
16 Dominion believes bounds the design characteristics.  
17 In other words, the parameters themselves represent  
18 the maximum values of composite characteristics and  
19 are not specific to any design.

20 So why would Dominion use a PPE? Well, it  
21 is because it allows them to defer the reactor design  
22 decision until they make the decision on whether to  
23 proceed with an application for a construction permit  
24 or a combined construction and operating license  
25 called the combined license or short for COL.

1 Dominion selected characteristics from five light-  
2 water reactors and two gas-cooled reactors to develop  
3 its PPE.

4 Next slide please. Using the PPE  
5 parameters, the NRC assessment team evaluated the  
6 construction and operational impacts for the proposed  
7 North Anna ESP site. As part of the overall review,  
8 we also evaluated Dominion's site redress plan, as  
9 Jack was discussing.

10 With an approved early site permit and an  
11 approved redress plan, Dominion would be allowed to  
12 undertake limited construction activities. The  
13 redress plan ensures that the site would be returned  
14 to an environmentally stable and esthetically  
15 acceptable condition in the event that Dominion does  
16 not pursue or is not approved for a construction  
17 permit or a combined license.

18 We also evaluated environmental impacts  
19 for the alternative sites identified in the ESP  
20 application. These included Dominion's Surry site and  
21 the Department of Energy's sites at Savannah River in  
22 South Carolina and the Portsmouth Gaseous Diffusion  
23 Plant in Ohio.

24 We then compared the impacts of the North  
25 Anna ESP site with the alternative sites. After

1 finding that no alternative site was obviously  
2 superior to the North Anna ESP site, our preliminary  
3 conclusion is that the ESP should be issued.

4 Now, the next slide we will talk a little  
5 bit about how we came on to these conclusions, what  
6 they are, and what the categories, impact categories  
7 mean.

8 For each issue, an impact level is  
9 assigned. These issue levels, the impact levels are  
10 small, moderate, and large, and are consistent with  
11 the Council on Environmental Quality's guidance for  
12 NEPA analysis.

13 Small, for instance, is where an effect is  
14 not detectable or is too small to destabilized or  
15 noticeably alter any important attribute of the  
16 resource.

17 Moderate is an effect that is sufficient  
18 to alter noticeably but not destabilize important  
19 attributes of the resource.

20 And a large effect is one that is clearly  
21 noticeable and sufficient to destabilize important  
22 attributes of the resource.

23 Next slide please. We reevaluated the  
24 environmental impacts as a result of the change in the  
25 proposed cooling system design and in the increased

1 power level.

2 Some categories of issues were not  
3 effected by the change in the cooling system and the  
4 increased power level. In others, the staff  
5 reevaluated the impacts and found no change to the  
6 impact level.

7 The primary changes the team evaluated  
8 included land use, in which there was no effect, no  
9 change, air quality, in which cooling towers would  
10 have evaporative plumes that would, at times, extend  
11 about the cooling towers and be visible off site,  
12 water quality and water use, in which changes proposed  
13 by Dominion in regard to Unit 3 cooling system would  
14 have the most significant impact on our EIS analysis.

15 And I'm going to discuss the water use and  
16 water quality a few slides from here.

17 With regard to terrestrial resources, less  
18 of the intake channel bank would need to be contoured  
19 so there would be less disturbance on the land and  
20 fewer terrestrial resources disturbed.

21 As far as aquatic resources, as previously  
22 analyzed, the discharge from a once-through cooling  
23 system was expected to raise the temperature of the  
24 waste heat treatment facility and, to a lesser degree,  
25 the lake itself.



1 Thermal impacts on aquatic ecology were  
2 evaluated based on the once-through design,  
3 particularly as it related to the stripe bass fishery  
4 during times of drought. However with the closed  
5 cycle cooling system now proposed, the effects to the  
6 aquatic biota would be negligible.

7 There was no change in the threatened and  
8 endangered species as the result of the change in  
9 cooling system but we did address recent sightings of  
10 bald eagles in the area. The nearest known nest is  
11 outside the buffer zone for construction activities.

12 Included in the socioeconomic resources  
13 are physical impacts, demographics, and community  
14 characteristics. Dominion's original PPE assumed  
15 enough construction and operational workers to cover  
16 any additions required to construct the cooling  
17 towers.

18 Therefore, the socioeconomic resources  
19 related to the number of workers and families was  
20 included. That information was included in their  
21 draft EIS.

22 Items that did change and were reevaluated  
23 were the visual esthetics of the Unit 3 cooling towers  
24 and recreational use of Lake Anna with respect to  
25 water level impacts.

1           There were no changes to the historic and  
2           archeological resources in the environmental justice  
3           categories.

4           Changes to the cooling system and the  
5           increased power level led to reevaluation of public  
6           health impacts from the waste heat treatment facility.  
7           The thermal discharge from Unit 3 would add minimal  
8           heat to the existing discharge and would be expected  
9           to have little effect on human health.

10          We also reevaluated noise from the new  
11          cooling towers and acute effects of the  
12          electromagnetic fields related to the power level  
13          increase.

14          Next slide please.     Because of the  
15          proposed power level increase, we reevaluated the  
16          environmental effects with regard to accidents, the  
17          uranium fuel cycle and waste management,  
18          transportation, and eventual decommissioning.

19          In each of these categories, as a result  
20          of the change in power level, there was no change to  
21          the impact levels, which remained small.

22          Next slide.   Now I want to return to the  
23          issues of water and aquatic resources.   Lake Anna is  
24          an artificial reservoir created in 1971 by Virginia  
25          Power as a source of cooling water for the North Anna

1 power station.

2 The lake is divided into two distinct  
3 water bodies, the reservoir and the waste heat  
4 treatment system, which is a series of three lagoons.  
5 And I'm going to call it lagoons, cooling lagoons here  
6 on out.

7 North Anna was initially licensed for four  
8 nuclear units of which only two were built. Lake Anna  
9 currently provides cooling water for Units 1 and 2  
10 using a once-through cooling system. Dominion  
11 proposes to use Lake Anna as the source of cooling  
12 water for Unit 3. But rather than using the once-  
13 through cooling, Dominion now proposes to use a closed  
14 cycle combination wet and dry cooling system.

15 And as before, dry tower cooling is  
16 proposed for Unit 4.

17 Now Virginia Power owns the land around  
18 the lake up to the 255-foot high water mark. The land  
19 adjacent to Lake Anna has become increasingly  
20 residential. And Lake Anna has become a popular  
21 recreation destination. The dam provides downstream  
22 flood control.

23 The North Anna River below the dam is used  
24 for municipal water supplies and provides an aquatic  
25 environment that supports recreational fishing.

1 Any future conflicts for water by  
2 downstream communities falls with the regulatory  
3 authority of the Commonwealth of Virginia. Although  
4 a combined wet and dry cooling system for Unit 3 would  
5 eliminate additional thermal discharges to the cooling  
6 lagoons and, therefore, would not measurably increase  
7 lake temperature, evaporation in the cooling towers  
8 would consume water.

9 Next slide please. Dominion proposes two  
10 cooling system operating modes for Unit 3 to balance  
11 energy production and consumptive water use. The  
12 energy conservation mode would occur during periods of  
13 relative water surplus. And wet cooling towers would  
14 be employed to cool Unit 3 during these times. This  
15 is called the energy conservation mode because of the  
16 energy efficiency of wet towers compared with dry  
17 tower cooling.

18 During times of lower water availability,  
19 the dry towers would operate, assuming that suitable  
20 atmospheric conditions exist at the site. And there  
21 are some times when they would expect to use this like  
22 when the water surface elevation dips below 250 feet  
23 above mean sea level for seven or more consecutive  
24 days. That is Dominion's proposal on this.

25 This mode is called the maximum water

1 conservation mode where water use is reduced but so is  
2 energy efficiency.

3 We reevaluated the environmental impacts  
4 as the result of the change in the proposed cooling  
5 system for Unit 3 specifically for entrainment,  
6 impingement, and thermal impacts on aquatic  
7 ecosystems.

8 Entrainment is the passage of organisms  
9 through the traveling screens into the cooling water  
10 system. Entrained organisms are generally small and  
11 include phytoplankton, zooplankton, fish eggs, and  
12 larvae.

13 Impingement occurs when swimming organisms  
14 are not strong enough to escape the cooling water  
15 intake current and are caught or stuck on the screens.

16 Dominion's previous design proposed for  
17 once-through cooling required or pumped a large volume  
18 of water through the condenser where it picked up heat  
19 and discharged it to the cooling lagoons.

20 The new combined wet and dry system would  
21 pump significantly less water, like approximately 97  
22 percent less, from the lake and discharge the majority  
23 of the heat to the atmosphere, not the lake. This  
24 reduction in water being pumped greatly reduces  
25 entrainment and impingement.

1 Previously, the large flow of heated  
2 discharged from the proposed once-through cooling  
3 system was expected to raise the temperature of the  
4 cooling lagoons and, to some degree, the lake itself.  
5 With the change to a closed cycle, combination wet and  
6 dry cooling system, the discharge volume and  
7 temperature is much less and should raise the lake  
8 temperature no more than a maximum of one-tenth of one  
9 degree Fahrenheit.

10 We also evaluated the effects of lake  
11 level using a conservative bounding analysis. We  
12 determined that the change in lake level with the new  
13 cooling system for Unit 3 and the existing Units 1 and  
14 2 operating would cause the water level to be  
15 decreased by less than three inches for about 70  
16 percent of the time. It would be six inches less for  
17 about 85 percent of the time. And it would be less  
18 than 12 inches difference for 94 percent of the time.

19 The average estimated difference would be  
20 less than three percent difference with the third unit  
21 operating in addition to one and two. And the  
22 estimated maximum difference would be less than two  
23 feet, which would probably occur for a day or so.

24 Again, these numbers of using a very  
25 conservative bounding analysis.

1                   Next slide please. We re-analyzed the  
2 radiological impacts to the public, to workers at the  
3 North Anna facility, and to the biota at the proposed  
4 increased power level from 4,300 to 4,500 megawatt  
5 thermal per unit.

6                   Although there was some small increase to  
7 the maximally exposed individual as the result of the  
8 power level increase, the impact level did not change  
9 and the conclusions previously drawn still apply --  
10 that the radiological impacts from construction and  
11 operation would be small.

12                  Next slide please. As part of our  
13 analysis for water usage for cooling Unit 3, we  
14 evaluated alternative plant cooling technologies.  
15 These included once-through cooling as well as wet  
16 cooling towers and dry cooling towers. The once  
17 through system is more energy efficient but has a  
18 higher incident of entrainment and impingement and  
19 heat effects on the lake.

20                  Wet cooling towers would reduce  
21 temperatures discharged to the cooling lagoons but  
22 compared with once-through cooling, would consume more  
23 water and be less energy efficient.

24                  As I mentioned before dry cooling towers  
25 were proposed for Unit 4. Dry towers for Unit 3 would

1 largely eliminate the impacts on water consumption in  
2 waste heat discharge. However, these benefits come at  
3 a high price in energy efficiency.

4 We also evaluated the four identified  
5 alternative sites and assigned impact levels to them  
6 similar to the way we did this in our North Anna ESP  
7 site. Again these are the Surry Power Station, the  
8 Portsmouth Gaseous Diffusion Plant, and the Savannah  
9 River site.

10 Next slide please. We then compared the  
11 impacts of the alternative sites to the North Anna ESP  
12 site. Our preliminary conclusion is that all sites  
13 appear to have potential for a site in the nuclear  
14 plant or plants. Although there were minor  
15 differences among the sites, none of the differences  
16 were sufficient to determine that any of the  
17 alternative sites is obviously superior to the North  
18 Anna ESP site.

19 Therefore, our preliminary conclusion from  
20 the environment perspective is that the early site  
21 permit be granted.

22 It is time for questions now.

23 MR. CAMERON: Thank you very much,  
24 Maryann.

25 And before we go to any questions, just



1 one clarification and it is fairly important in NRC --  
2 the NRC regulatory framework. This is a public  
3 meeting tonight. And when we refer to hearings, it  
4 has a special connotation for the NRC which is the  
5 adjudicatory hearing before our Atomic and Safety  
6 Licensing Board judges in connection with actions like  
7 that. So I just wanted to make sure there wasn't any  
8 confusion on that.

9 And I think this gentleman has a question  
10 for you, Maryann. And please introduce yourself,  
11 sir.

12 MR. MURPHY: My name is Bill Murphy. My  
13 question is could you quantify the "high price in  
14 energy efficiency" please?

15 MS. PARKHURST: High price in energy  
16 efficiency?

17 MR. MURPHY: Yes, could you quantify that?

18 MS. PARKHURST: I can tell you that -- we  
19 are talking about the difference in cooling systems?  
20 We have some information in terms of the approximate  
21 or a general understanding of what it takes the energy  
22 efficiency -- the energy penalty for like a dry  
23 cooling tower. And I believe that number eight and a  
24 half to eleven percent.

25 MR. CAMERON: And that is in the --

1 MS. PARKHURST: That is in the --

2 MR. CAMERON: -- supplement?

3 MS. PARKHURST: It is in the document,  
4 yes, sir.

5 MR. CAMERON: Okay, let me ask Mr. Wycoff,  
6 did you get any clarification on your small, moderate,  
7 large? Or do you have some additional questions?

8 MR. WYCOFF: Sure, I mean I'll take the  
9 opportunity to follow up. You know thank you for  
10 clarifying those. And the other thing I appreciated  
11 you commenting on was the specific rise in temperature  
12 to the cooling lagoons. I do live on the cooling  
13 lagoon side and so that obviously is a big concern of  
14 ours.

15 I wanted to understand a little bit more.  
16 I know you said one-tenth of one degree. If that is  
17 true, then I'm concerned for not -- I'm not as  
18 concerned as I was. You know right now, the lake is  
19 102 to 104 during this time of the year. And that is  
20 obviously very, very hot.

21 If it were to raise another six degrees,  
22 it probably becomes not usable for most recreational  
23 purposes.

24 So I guess if you can confirm that with,  
25 you know, a scientific method, that that is what you

1       came to and you are sure that if you were living there  
2       you would be okay with it, then I'm okay with that.

3               The other thing I wanted to ask you is the  
4       cooling towers that you have cooling the air  
5       temperature. What is that going to do from a thermal  
6       heat pollution to the atmosphere.

7               MS. PARKHURST: We do have information in  
8       the supplement relating to fogging, icing, and some of  
9       those concerns. We also discussed the visible aspect  
10      of the plumes at certain times of the year. So that  
11      information is discussed in this supplement. And will  
12      be in the final environment impact statement.

13              MR. WYCOFF: Okay. And just so there is  
14      no ambiguity, Mr. Wycoff's restatement of what you  
15      said in terms of the raise in temperature, was  
16      captured correctly then? Accurately?

17              MS. PARKHURST: That is my understand is  
18      that is the case. Lance Vail, if he is wanting -- if  
19      that was any -- if you want to clarify it further. If  
20      that was sufficient --

21              MR. CAMERON: Yes, Lance Vail, one of our  
22      experts on the team.

23              MS. PARKHURST: Hydrologist.

24              MR. VAIL: Yes, I'm actually the one that  
25      was responsible for reviewing those water calculations

1 and that tenth of a degree. One of the things you  
2 want to keep in mind is that the blowdown water, this  
3 is the water that actually gets discharged, will end  
4 up going to the waste heat treatment facility, is  
5 limited under their plant parameter envelope at 100  
6 degrees.

7 So when the current discharge is 104, this  
8 small amount of water that would be added would  
9 actually be cooling off effectively the water during  
10 those particular times of the year. So they have  
11 committed to that 100 degrees.

12 But the change that we had to consider was  
13 the fact that because you are evaporating more water,  
14 you have less water in the lake. And that lake has to  
15 basically handle all of that heat load that is going  
16 into there. And so we basically, you know, had a  
17 calculation to basically say okay, how much does this  
18 reduce the amount of water in the lake going to result  
19 in a change in the temperature. And that is where the  
20 tens of a degree goes and stuff.

21 Does that help?

22 MR. WYCOFF: Yes, it sounds like you did  
23 everything, you know, production and then looked at  
24 thermal impacts.

25 MR. CAMERON: Yes, we need to get all of

1 this on the record. And Mr. Wycoff, maybe you could  
2 talk -- Lance, maybe you can talk after the meeting  
3 and get more information.

4 Yes? And please introduce yourself?

5 MS. KEMP: Sure. My name is Melissa Kemp.  
6 And I just want to follow up on his question back  
7 there about the eight -- was it eight to 11 percent,  
8 you were calling it an inefficiency that would be  
9 added by doing the dry cooling tower instead of a  
10 hybrid cooling tower, by efficiency or inefficiency,  
11 you mean it is going to need eight to 11 percent more  
12 electricity to run the dry system?

13 And my question was is that correct? And  
14 also, what would be the cost? What kind of cost is  
15 that to Dominion?

16 MR. CAMERON: Okay. Thank you.

17 MS. PARKHURST: I don't know to what  
18 extent I can answer that part. We call it an inner  
19 energy penalty. If you are looking at once-through  
20 cooling, that is the cheapest situation. That s what  
21 they have got on Units 1 and 2 right now.

22 If you do wet cooling towers, in this case  
23 the combination of wet and dry cooling towers, there  
24 is a fair amount of cost in energy to make the fans  
25 work, you know, to drive that system.

1 MS. KEMP: My question, which is like, you  
2 know, how much electricity are we talking about? And  
3 can we place how much cost -- how much would it cost?  
4 I mean it is making the water -- it is illuminating  
5 the water impacts. How much this would cost Dominion  
6 to make the third reactor completely dry like the  
7 fourth one would be.

8 MR. CUSHING: If I could ask you --

9 MR. CAMERON: And, Jack, let's get you on  
10 the record, okay?

11 MR. CUSHING: The energy penalty doesn't  
12 just mean less electricity. It also means you need to  
13 use more resources to produce that electricity. You  
14 have to use more fuel so fuel cycling impacts  
15 increase. And the increase is an eight-and-a-half to  
16 11 percent penalty increase or a reduction in that  
17 amount of electricity.

18 MS. KEMP: Over what a once-through  
19 system?

20 MR. CUSHING: Over what a once-through  
21 system.

22 MS. KEMP: But the proportion of the whole  
23 --

24 PARTICIPANT: Could you speak to the  
25 microphone please?

1                   MR. CAMERON: We are not getting this on  
2 the system. So could you just -- whatever you need,  
3 if you want to ask a final question, why don't you do  
4 that. And we will try to get an answer and then we  
5 can talk offline.

6                   MS. KEMP: Okay, I can mention it when I  
7 talk for a couple of minutes.

8                   MR. CAMERON: Okay. All right. All  
9 right. Yes? Please introduce yourself.

10                  MS. DAY: My name is Elina Day. And I  
11 want to ask the hydrologist if he recently read about  
12 the nuclear power plant in France and other European  
13 countries. And they are returning water at a much  
14 higher level than it is allowed. You know they are  
15 facing a very, very hot summer. That means both the  
16 temperature of the lake probably or the cooling water  
17 that they use is already higher than they had probably  
18 anticipated.

19                  Now have you all looked at this? Because,  
20 you know, we have had increasingly hot summers. And  
21 we are, you know, probably in the throes of global  
22 warming. I don't know if you people agree with that  
23 or not but it is very apparent that water is just  
24 hotter on its own than --

25                  MR. CAMERON: Okay, Elina, let's -- I

1 don't want to -- I think we know the question. I  
2 don't want to stop you but let's see if Lance has  
3 anything to say about that.

4 Lance Vail?

5 MR. VAIL: Yes, I think the question was  
6 this is the water that is going to be going into the  
7 cooling could be coming in warmer as the result of  
8 climatic conditions, right? And the essence of a wet  
9 cooling system is the evaporation of water.

10 So the change in the temperature is  
11 actually a relatively small fraction. Most -- I don't  
12 want to burden you with the exact numbers but the  
13 amount of energy that it takes to take water from a  
14 liquid state to a vapor state is considerably more  
15 than any change in temperature.

16 So basically it is this evaporation of  
17 water where all that energy is going to be lost. And  
18 so the intake temperature into the cooling tower has  
19 relatively minor significance.

20 Now if it was a once-through system,  
21 that's a much different story because basically they  
22 have to operate at a certain, you know, delta, you  
23 know, change in temperature between the inputs and the  
24 outputs. So in a once-through case, that would be a  
25 big problem. In a wet tower, that's not nearly as



1 significant.

2 Did that answer you?

3 MS. DAY: (Speaking from an unmiked  
4 location.)

5 MR. CAMERON: Okay, Elina, we need to get  
6 you on the record here. So why don't you say your  
7 final thing --

8 MS. DAY: Well, I guess I just wanted to  
9 make people realize that the first two reactors are  
10 still once through. And, you know, they are going to  
11 be using, in the case of higher temperatures  
12 initially, they are going to be using more water  
13 through evaporation.

14 Therefore, you add a third unit, you are  
15 still going to increase the amount overall that is  
16 lost to evaporation.

17 MR. CAMERON: Okay. Thank you, Elina.

18 Other questions on Maryann's presentation  
19 before we go out to all of you to hear your comments?  
20 We have one up here.

21 MS. FERRIS: My name is Rebecca Ferris.  
22 I'm just a regular person. I don't really understand  
23 half of what is being said here but it seems like  
24 there is a lot of attention being paid to cooling.  
25 And I know that in the process all this heat is

1 created.

2 What happens if everything, everything,  
3 everything doesn't work the way it is supposed to and  
4 those towers can't be cooled the way it seems very  
5 important to everybody that they be cooled? Could you  
6 tell me that in regular people's language?

7 (Laughter.)

8 MR. CAMERON: Do we have an expert down  
9 there on regular people's language?

10 (Laughter.)

11 MR. CAMERON: I guess that is you, Andy.

12 MR. KUGLER: I am an engineer so I don't  
13 know if I can speak like a regular person.

14 MR. CAMERON: Well, maybe not.

15 MR. KUGLER: But I'll take a crack at it.  
16 A couple of things really in that comment.

17 The reason that there is so much focus on  
18 the cooling water system is because this supplement is  
19 to address the change in the cooling water system that  
20 Dominion proposed. So that was a primary focus of our  
21 work in this supplement.

22 Now the draft environmental impact  
23 statement did speak about a number of other areas that  
24 were not effected by that change. And so they are not  
25 a focus of this supplement. And basically I think in

1 the supplement we talk about those things but we just  
2 mention that these haven't changed.

3 The other thing I think you are raising is  
4 well what happens if these cooling towers aren't  
5 working. The plant does not rely on these cooling  
6 towers to safely shut down.

7 There is an entirely separate system which  
8 is safety related -- it is built to higher standards  
9 -- that is specifically there to cool the plant down  
10 in an emergency. And that system sits in standby  
11 normally.

12 And what we are discussing here is the  
13 normal cooling system that runs day to day to cool the  
14 plant during periods of operation. So there are  
15 really two separate systems. But there is a system  
16 that is out there to cool the plant in an emergency.

17 MS. FERRIS: Maybe I didn't word my  
18 question clearly enough. What happens if everything  
19 --

20 MR. CAMERON: Okay, I guess the question  
21 is what happens if things don't work. What would  
22 happen? And I guess that -- and we're talking -- you  
23 know we're going to confine this to the cooling  
24 system, okay, because this is what this is about.

25 Andy, maybe if you could just briefly

1 without belaboring it because we can talk to Rebecca  
2 afterwards, but what are the protections against  
3 failure? And maybe Dave is going to come up and talk  
4 about it.

5 (Laughter.)

6 MR. CAMERON: And this is our --

7 MR. MATTHEWS: I hope -- I hope you  
8 understand. Maybe there is a misunderstanding. The  
9 cooling towers are there to get rid of the waste heat  
10 generated while they are generating electricity  
11 because electricity generation does always result in  
12 waste heat. If the cooling towers weren't to  
13 operable, mainly if the cooling towers were to fail by  
14 some reason of either seismology or a failure of any  
15 active components and by the way they're very simple  
16 activities, but if they were to fail, then the  
17 reactors in effect would not be able to rid themselves  
18 of that waste heat through that normal method and the  
19 first thing that would happen is that the plant would  
20 have to be shut down.

21 Then you would go into auxiliary cooling  
22 and the emergency cooling systems that Andy was  
23 describing. So the point is if the cooling system  
24 doesn't operate, the plant cannot operate. So the  
25 cooling system has to be operable in order for the

1 plant to operate. In the event that the cooling  
2 system doesn't operate or the towers fail, the piping  
3 fails or the pump that supply water to the cooling  
4 towers fail, then the option for the operator, in this  
5 case Dominion, is that they aren't going to be able to  
6 generate electricity with that plant by virtue of the  
7 fact that the cooling system has failed.

8 Now there is still waste heat or what they  
9 call residual heat that has to be eliminated as the  
10 reactors shut down. Unfortunately, nuclear reactors  
11 are devices that when you shut them off they still  
12 generate heat by virtue of what's called the sensitive  
13 heat in the core. That's when the auxiliary cooling  
14 systems and the emergency cooling systems go into  
15 effect and those are systems that are in standby.

16 They use reserve cooling water that is  
17 there and available to the plant and they will take a  
18 number of hours and then a number of days to bring the  
19 plant down to a stable level. But the cooling towers  
20 are essential to the plant being able to operate and  
21 generate electricity. So failure in cooling towers  
22 means plant doesn't operate.

23 FACILITATOR CAMERON: Thank you. Thank  
24 you very much, Dave, and we're going to take one more  
25 question and then we're going to go for comments. Yes

1 sir.

2 MR. GIACCAI: My name is Gerry Giaccai.  
3 I live on the cooling side. I thought her question  
4 was and if it wasn't, my question is Dominion says  
5 that and your studies say that the water going back  
6 and into the cooling lagoon will go in at 100 degrees.  
7 It won't affect --

8 PARTICIPANT: Maximum.

9 MR. GIACCAI: Maximum. Okay. What  
10 happens if it goes in at 101 instead? It's measured  
11 at that. What happens if it go in at 110? Do they  
12 just get to do it?

13 FACILITATOR CAMERON: Okay. The answer --  
14 It's a related question. Jack, are you going to take  
15 this?

16 MR. CUSHING: Yes.

17 FACILITATOR CAMERON: All right.

18 MR. CUSHING: Basically, the Commonwealth  
19 of Virginia sets the regulatory limits on the water  
20 discharges. In our evaluation, we evaluate what the  
21 environmental impact would be for this design which  
22 would discharge at 100 degrees. So for instance, if  
23 they do come into that later licensing action, they  
24 have to demonstrate to use that they would come in  
25 with a system that would be 100 degrees or less.

1 FACILITATOR CAMERON: Okay, and there  
2 might be further information after the meeting from  
3 the state in terms of compliance issues which is I  
4 think what you were concerned about. All right. I  
5 think we're going to -- Okay. We'll go to Lou Zeller,  
6 final question and then we're going to go onto public  
7 comment. Lou.

8 MR. ZELLER: Quick question. Lou Zeller  
9 from the Blue Ridge Environmental Defense League. How  
10 many temperature sensors are placed around the lake by  
11 Dominion and the State of Virginia?

12 FACILITATOR CAMERON: Does anybody know  
13 the answer to that?

14 MR. REMMERS: Right here. Twelve.

15 FACILITATOR CAMERON: Okay. Do you want  
16 to repeat that in the microphone?

17 MR. REMMERS: There are 12 sensors around  
18 the lake that measure the temperatures that Dominion  
19 collects.

20 PARTICIPANT: Can you identify yourself  
21 please.

22 FACILITATOR CAMERON: Okay. Pardon me?

23 MR. REMMERS: Ken Remmers with Waterside  
24 Property Owners Association.

25 FACILITATOR CAMERON: Okay. Thanks Ken.

1 All right. That was a pretty definitive answer.  
2 Okay. Thank you very much, Maryann, and thank you,  
3 Jack. And we're going to start off. Usually we find  
4 that it's informative for the public to hear from the  
5 company that submitted the application in terms of  
6 what their vision, their rationale, is and I'm going  
7 to ask Mr. Gene Greychek who is the Vice President for  
8 Nuclear Support Services at Dominion Nuclear North  
9 Anna to come up and talk to us a little bit. Gene.

10 MR. GREYCHEK: Good evening.

11 (Chorus of good evenings.)

12 MR. GREYCHEK: I notice it's about an hour  
13 and I know it's going to be a long night I think. So  
14 we're going to be brief. I just wanted first to thank  
15 everybody for coming out and expressing their  
16 interests in this, particularly those that took time  
17 out from their busy schedules to come support the  
18 project. I really appreciate that.

19 As you know, we submitted our application  
20 for the early site permit back in 2003, September of  
21 2003, and our goal at that time and our goal today  
22 continues to be to maintain the nuclear option for  
23 decisions that need to be made about power needs in  
24 Virginia as we look toward the future years. If  
25 anything's changed since 2003, we now believe that



1 those future needs are even more imminent and more  
2 severe than what we expected three years ago. We  
3 expect that the demand for electricity will increase  
4 substantially in the next decade and we need to our  
5 part to be ready for that.

6 As the NRC indicated to you, the early  
7 site permit will not permit us to start building a  
8 plant. In order to do that, we would have to come  
9 back to the NRC for an application for a combined  
10 operating license. We are working on such an  
11 application and at the present time, we expect that we  
12 should be ready to decide whether to submit that  
13 application in the fourth quarter of 2007.

14 So the questions that we are facing as  
15 Dominion looks at the picture and also the questions  
16 that we're going to be discussing tonight are really  
17 complex. No matter what kind of generation of what  
18 kind of energy supply that you anticipate that we're  
19 going to be using, there are impacts that need to be  
20 weighed and evaluated.

21 If you think about what's been happening  
22 in the energy picture just over the last two and a  
23 half years since the application was submitted, just  
24 think of what's been happening. There have been  
25 dramatic changes in the price of natural gas and I

1 bring that up only because natural gas for the last  
2 ten years or so has been basically the only form of  
3 fuel used for generation at all in the United States  
4 and you can imagine the economic impacts of a  
5 dramatically changing natural gas price that we've  
6 seen over the last couple of years.

7 Coupled with that, the realization that  
8 natural gas production in the United States is  
9 essentially flat or declining which means that if we  
10 go into the future, we're going to be importing that  
11 natural gas in the form of liquified natural gas and  
12 the sources of liquified natural gas are the same  
13 countries around the world that are currently the  
14 source of our imported oil and we know what the  
15 geopolitical consequences of that are.

16 Gasoline prices are above \$3.00 a gallon  
17 many places. Just in the last week, we saw half of  
18 the oil supply from Alaska shut down because of aging  
19 infrastructure and as was already mentioned today and  
20 I'm sure we'll hear more about it, there is continuing  
21 discussion about impacts of energy use on the  
22 atmosphere and particularly in terms of climatic  
23 effects and we need to start thinking about what are  
24 we going to do as a society and as a state to address  
25 some of those issues.

1           We believe that nuclear energy is an  
2           important part of the overall energy supply picture  
3           because it assures a diverse energy supply and it's  
4           something that can continue to be available to meet  
5           future needs. And nuclear is not emitting, a non-  
6           emitting source, from the perspective of carbon  
7           dioxide and therefore, if we are concerned about  
8           carbon dioxide, if as a society we choose to do  
9           something about limiting carbon emissions to the  
10          atmosphere, nuclear will be a vital part of that.

11          As was noted, the NRC had a previous  
12          public meeting back in February and at that time, we  
13          were proposing to cool the potential third nuclear  
14          unit at North Anna with the lake. When we built the  
15          lake back in the early 1970s, it was built, it was  
16          sized, it was designed, to cool four units at the  
17          station.

18          Following that meeting and after we had  
19          many discussions with both the state and with many  
20          residents around the area, we decided to go to the  
21          hybrid cooling system that you've heard described  
22          tonight and that you can read about in the  
23          environmental impact statement. Again, I want to  
24          reiterate, the reason we made that choice and that  
25          choice will probably add about \$200 million to the

1 price of the plant we make the decision to build it,  
2 the reason we made that choice was to eliminate  
3 thermal impact to the lake. There will be essentially  
4 negligible thermal impact to either the waste heat  
5 treatment facility or the lake as a result of the  
6 third unit using this system. And in addition, it  
7 would dramatically reduce the amount of water  
8 consumption that is of particular interest during a  
9 drought condition.

10 Promoting environmental stewardship is  
11 something we're very proud of. We have a long  
12 tradition of working very closely with the state  
13 agencies and the local community groups. We will  
14 continue to do that and particularly as this project  
15 progresses as we start getting into the design  
16 details, we will continue to work very closely with  
17 both community groups and the state agencies. I  
18 believe that our decision that we're discussing  
19 tonight to change the cooling system, to eliminate the  
20 thermal impacts on the lake, demonstrates our  
21 commitment to environmental stewardship.

22 In closing, these are not simple issues.  
23 Nothing in power production is simple. Nothing in  
24 energy consumption or energy economy is simple. Any  
25 project no matter what its size, not matter what its

1 type, will involve some change to the environment.  
2 Our job is to balance that, to decide whether the  
3 impacts are controllable, whether the impacts make  
4 sense in relation to the benefits of the project.  
5 We're confident that after we look at all of these the  
6 EPS process can continue and that the nuclear option  
7 can be maintained. Thank you.

8 FACILITATOR CAMERON: Thank you. And  
9 we're going to go to Lee Lintecum, I'm sorry if I  
10 didn't pronounce that correctly, and then to Robin  
11 Horne. Go ahead. I thought we were going to have a  
12 lawsuit on our hands there.

13 MR. LINTECUM: Unfortunately, you may sue  
14 me. My name is Lee Lintecum. I'm the County  
15 Administrator. I'll first say that we have a good  
16 working relationship with Dominion Virginia Power. As  
17 you may know, they're our largest employer and are by  
18 far our largest taxpayer and being County  
19 Administrator, I'm also involved in safety issues and  
20 find them very cautious and very --

21 FACILITATOR CAMERON: I'm sorry to  
22 interrupt you, but there are people who really want to  
23 hear what you're saying and I guess the microphone is  
24 not picking up that good. Let me slide this forward  
25 a little bit and see if that helps.

1 MR. LINTECUM: It's said that County  
2 Administrators are best seen and not heard. So maybe  
3 that was --

4 (Laughter.)

5 MR. LINTECUM: But I just said that we do  
6 have a good working relationship with Virginia  
7 Dominion Power. Back in early June, a board member  
8 brought up some concerns a citizen had regarding the  
9 proposed impact that it might have on the surrounding  
10 community and the board directed me to meet with  
11 Dominion, make them aware of those concerns which I  
12 did and then Dominion responded to those concerns and  
13 the board asked me to enter this as part of the record  
14 which I have a copy for you. Also in the motion that  
15 directed me to do so, the Board of Supervisors voted  
16 to say that they support Virginia Dominion Power in  
17 their early site permit process.

18 FACILITATOR CAMERON: Thank you. Thank  
19 you for being here and thank you for bringing that to  
20 our attention. Wonderful. Thank you very much and  
21 I'm going to give this to the project manager as an  
22 official comment. All right. And Robin, Robin Horne.

23 MS. HORNE: Hi, I'm Robin Horne, Chairman  
24 of the School Board. I'm here tonight representing  
25 the Louisa County School Board. I feel it very

1 important to say the Louisa County School Board is not  
2 here in support of or in opposition to the new  
3 reactors. Our business is to educate students who  
4 come to Louisa County Public Schools and this will  
5 happen whether the reactors come or not.

6 Dominion Power has provided a very  
7 expansive tax base to the County of Louisa over the  
8 past 30 years. The school division receives  
9 approximately 60 percent of the tax base from Louisa  
10 County. With this money, Louisa County Public Schools  
11 is a strong and growing school division.

12 We have programs starting with our four-  
13 year-old preschool program in all of our elementary  
14 schools. We have three elementary schools and working  
15 on a new one. We hope to open in 02/08 in the Bells  
16 Crossroads area. We provide students in our  
17 elementary schools kindergarten through fifth grade  
18 with a quality education.

19 Our middle school has grades six through  
20 eight with a diverse population. We have classes that  
21 provide for remedial help to advanced classes in all  
22 the core subjects.

23 Our high school provides AP classes, dual  
24 enrollment classes with four different colleges, the  
25 Blue Ridge Virtual Governor's School. All levels of

1 students are accommodated with our large expansive  
2 course offerings. We have a vocational program that  
3 exceeds state's compliance. We have our own director  
4 of the CTE program, Ms. Outlaw, who provides us with  
5 her experience and guidance.

6 We just recently received certification  
7 for NATEF which is the National Auto Tech Education  
8 Foundation. Mr. Vincent Cox from Dominion Power has  
9 been very supportive of our schools and helped a great  
10 deal with the safety issues in getting us certified.

11 Dominion Power has a program called "Power  
12 Start." We have had students from our high school go  
13 through this program successfully. The students  
14 completed an internship as part of the program after  
15 graduation. If they completed both the classroom  
16 instruction and the internship successfully, they were  
17 guaranteed a \$30,000 beginning salary job with  
18 Dominion Power.

19 Our school division just recently  
20 underwent a very extensive efficiency review. We were  
21 commended for operating and administratively  
22 maintaining a high level of school level customer  
23 satisfaction. We're commended for providing a level  
24 of administrative staffing that supports the academic  
25 goals and objectives and we were commended for



1 instituting a regular program of preventive  
2 maintenance. This is very important since most of our  
3 schools are 30 years old. We were commended for  
4 having a transportation department that has a  
5 structure that supports the highest level of  
6 communication.

7 We have areas that also need improvement.  
8 We must expand and upgraded current transportation  
9 departments' facilities and a scholarship coordinator  
10 of human resources position. We're not perfect,  
11 however, we do a good job with the resources we're  
12 given.

13 The school district must remain neutral in  
14 political matters, however, we do have to consider the  
15 contingencies of all outcomes and how they might  
16 impact the school division financially and in terms of  
17 student population. With the increase in taxes from  
18 Dominion Power, we must understand this will raise our  
19 composite index. When the index goes up, the funding  
20 from the State of Virginia will go down and the state  
21 will expect the localities to pick up the lost  
22 funding. We could at best guess estimation lose  
23 between \$6 to \$8 million.

24 We must understand that it will be the job  
25 of our local government to pick up this portion of

1 lost revenue. There could be a lag time between the  
2 lowering of the index and when we actually start  
3 getting more tax dollars. Again the county and its  
4 taxpayers must be willing to fund the school budget  
5 should this happen.

6 The only agenda the Louisa County School  
7 Board has is to educate the children of Louisa County.  
8 We will continue to do this in a manner that is  
9 fiscally responsible and in the best interest of our  
10 children. Thank you.

11 FACILITATOR CAMERON: Thank you, Robin.  
12 Thank you very much. Our next four speakers, we're  
13 going to go Lisa Stiles-Shell next and then Sama  
14 Bilbao y Leon and then to Harry Ruth and then to  
15 Melissa Kemp. And this is Lisa Stiles-Shell.

16 MS. STILES-SHELL: It's much cooler than  
17 it was in February of 2005. Just for my own  
18 edification, could everybody raise their hand that  
19 thinks that new nuclear is a good thing for Louisa,  
20 for Virginia and for the nation? Great. Okay.

21 As you said, my name is Lisa Stiles-Shell  
22 and while I'm temporarily living in Washington D.C.,  
23 my permanent residence is in Glen Allen. I'm a  
24 nuclear engineer by training with degrees from the  
25 University of Missouri Columbia and the Massachusetts

1 Institute of Technology. I worked in the nuclear  
2 industry for over ten years, mostly in used fuel  
3 management.

4 Recently though, I've made a career  
5 change. First, I realized that after a decade that I  
6 just don't have the temperament to be an engineer  
7 forever, probably because I like to talk too much.  
8 I'll try to keep this short.

9 This realization came at about the same  
10 time that the nuclear debate begin anew in Virginia.  
11 I was shocked and amazed at the propaganda and  
12 misinformation that was being perpetuated by anti-  
13 nuclear groups. I was spurred into action and am now  
14 working in public outreach and communication. I'm  
15 also the President of the International Youth Nuclear  
16 Congress and the past President of the North American  
17 Young Generation of Nuclear (NA-YGN) and a member of  
18 the local Virginia section of that organization.

19 Many of the local members that are here  
20 tonight are residents of Louisa or other immediately  
21 surrounding counties. NA-YGN was formed in 1999 as an  
22 organization that unites young professionals that a  
23 share of personal conviction that nuclear science and  
24 technology make important and valuable contributions  
25 to our society.

1           One of the group's primary missions is  
2 public information. We believe that public discourse  
3 often does not give fair play to the benefits of  
4 nuclear technology or the truth about solutions to  
5 safety and environmental concerns. As young nuclear  
6 professionals, we are in a unique position to give  
7 balance to the issues and share our first-hand  
8 knowledge and expertise with our friends, neighbors,  
9 elected officials and media representatives. As  
10 nuclear technology relates to electricity generation,  
11 we want to tell everyone the success story that is  
12 nuclear power in our country. Nuclear energy is safe,  
13 clean and reliable and is an important part of a  
14 balanced energy mix.

15           Currently, nuclear provides about one-  
16 fifth of our nation's electricity and about one-third  
17 of Virginia's. In Virginia, the power output of the  
18 North Anna plants represent about seven million metric  
19 tons of carbon dioxide emissions avoided each year.  
20 Furthermore, we support the ESP process as for the  
21 means to guarantee an open and thorough evaluation of  
22 future nuclear projects, while ensuring the timeliness  
23 and predictability of the process.

24           Tonight's public meeting demonstrates the  
25 benefits of the new process. That is that safety,

1 environmental and licensing issues are resolved before  
2 large capital investments are made. Dominion's  
3 original ESP application utilized a once-through  
4 cooling system as we've just heard about for Unit 3  
5 just like the existing units. When Virginia DEQ  
6 nearby residents raised concerns about the impact on  
7 lake temperature that a third unit would have, as a  
8 result of this public process, Dominion modified its  
9 proposed design to include a cooling tower for a third  
10 unit to address the concerns, exactly what the process  
11 was intended.

12 So as nuclear professionals and as  
13 concerned local citizens, we concur with the NRC's  
14 conclusion that environmental impacts would not  
15 prevent issuing an early site permit for the North  
16 Anna site. The environmental report of Dominion's ESP  
17 application and the NRC's draft environmental impact  
18 statement demonstrate in great detail what has become  
19 patently obvious in an era of increasing concerns  
20 about global warming, air pollution, environmental  
21 protection, energy security and industrial safety.  
22 That is in spite of the misinformed and skewed claims  
23 of those small minority of career anti-nuclear  
24 activists, nuclear power has perhaps the smallest  
25 impact on the environment including water, land,

1 habitat, species and air resources and life cycle  
2 emissions analyses show that per kilowatt hour the  
3 impact of nuclear energy is among the lowest of any  
4 form of electricity generation including wind and  
5 solar.

6 As an aside that we are not here to debate  
7 the issue of spent nuclear fuel, I would like to add  
8 that as an engineer who has years of experience  
9 working and performing research in the management of  
10 nuclear waste, I can say with confidence that the  
11 problems of transportation and disposal are political,  
12 not technical.

13 Unfortunately, though I continue to find  
14 anti-nuclear groups misleading concerned citizens with  
15 their propaganda and scare tactics. We saw it just  
16 tonight. Ma'am, I'm not sure who told you that  
17 sweeping the floors at a nuclear power plant releases  
18 low level waste into the environment regularly, but  
19 it's just not true.

20 PARTICIPANT: (Off microphone.)

21 MS. STILES-SHELL: Okay. Then I  
22 misunderstood. I'm sorry. I thought you said that  
23 sweeping floors puts low level waste into the  
24 environment. If somebody thinks that, it's not true.

25 But some things that I have seen and read,

1 career anti-nuclear idealists continue to try to, Dr.  
2 Mangano and his tooth fairy study, claiming the cancer  
3 rates near nuclear plants, that cancer rates near  
4 nuclear plants have risen, but these claims have been  
5 debunked by the likes of the Center for Disease  
6 Control, the National Institutes of Health, the *New*  
7 *York Times*, the Health Departments of New York,  
8 Connecticut and Illinois, just to name a few.

9 Closer to home, an anti-nuclear group  
10 claimed that cancer rates had risen near North Anna.  
11 But inspecting their work showed that they had  
12 compiled their data rather strangely. While they took  
13 the data from some counties far away from the plant,  
14 they ignored the data from Spotsylvania County right  
15 across the lake. Why did they do that? Because it  
16 didn't support their claims.

17 Anti-nuclear websites claim that a cooling  
18 tower for Unit 3 will evaporate more water than a  
19 once-through system which will cause the lake level to  
20 be permanently lowered. While that would be true for  
21 older designs, the state-of-the-art cooling design  
22 that Dominion has proposed for Unit 3 would evaporate  
23 significantly less water. Plus when lake level is a  
24 concern, a dry cooling tower will be used to maintain  
25 lake level and downstream flow.

1           On this issue, I got into a discussion  
2           with anti-nuclear activist outside in the hall  
3           tonight. Now I admit that I don't recall the exact  
4           evaporation rates of once-through systems, convenient  
5           cooling towers and the hybrid design, though I didn't  
6           appreciate the snide comment that you're a nuclear  
7           engineer and you don't know.

8           Well, the truth is I care about the lake  
9           level, the temperature and the downstream flow. If  
10          all of those needs are met which they are by  
11          Dominion's modified design, why would I care about the  
12          evaporation rates. It's part of the water cycle. One  
13          way or another, water evaporates, it forms clouds and  
14          then it rains.

15          Anti-nuclear groups have made all sorts of  
16          claims related to the fish of Lake Anna. It seems  
17          they conveniently forget that Lake Anna was created  
18          specifically to support nuclear power plants. Some of  
19          the fish that they are so worried about are not  
20          indigenous to this area and have been stocked in the  
21          lake. Furthermore, the existence of the power plant  
22          actually serves to sustain many fish populations. Try  
23          reading an excellent summary of the Lake Anna  
24          ecosystem written by expert anglers at the McCotter's  
25          Lake Anna Guide Service website.



1           An anti-nuclear groups claim that renewals  
2     like wind and solar can replace base low power. I'm  
3     not against wind and solar. I think they're part of  
4     an energy mix, but it simply isn't true that you can  
5     take an intermittent source that operates at a maximum  
6     of 35 percent capacity factor in this country and use  
7     it to replace base load power that operates at 90  
8     percent capacity factor.

9           Anti-nuclear activists conveniently ignore  
10    that all energy technologies have their pros and cons.  
11    Life cycle emissions for wind and solar are actually  
12    higher than nuclear. Furthermore, they ignore that  
13    solar produces about the same amount of toxic waste  
14    per kilowatt hour produced as nuclear does. But this  
15    is waste that never decays or becomes less dangerous.

16           I actually had a green politician in  
17    Europe say I was lying when I said that there was  
18    waste associated with solar. It's just a fact. I  
19    still think we should develop renewables and do  
20    everything we can to use them, but they are a part of  
21    a balanced energy mix, not the entire solution, just  
22    like nuclear.

23           These are just a few examples and I won't  
24    get into the personal attacks, but I would like to  
25    encourage the concerned citizens here tonight to be

1       sure to get all sides of the story. Don't assume the  
2       anti-nuclear groups are the only ones with your and  
3       the environment's best interest in mind. There are  
4       plenty of us nuclear supporters out there that believe  
5       that we as a society must be good stewards of the  
6       environment and we should be good stewards of the  
7       health and safety of our communities. I would not  
8       work in this industry if it violated these principles  
9       and I believe I speak for most, if not all, of the  
10      nuclear professionals here tonight. Thank you.

11               FACILITATOR CAMERON: Okay. Thank you,  
12      Lisa, and not to belabor this, but just in case it  
13      didn't make it on the transcript, the question that  
14      was asked before I didn't think was pejorative. It  
15      was just a simple question about what happens to the  
16      radioactive waste and the construction debris. How is  
17      that considered in these various licensing processes?  
18      I just wanted to point that out and this is Sama Leon.  
19      I didn't get that right, did I?

20               MS. LEON: Good evening. Can you hear me  
21      okay? Okay. I'll try. My name is Sama Bilbao Y Leon  
22      and I am a member of the Virginia section of the  
23      American Nuclear Society and the North American Young  
24      Generation in Nuclear. In fact, I am one of the  
25      founding members of the North American Young

1       Generation in Nuclear.

2               The first thing that I wanted to do today  
3       before I speak is I wanted to give to the NRC 1,190  
4       signatures that the NA-YGN, the North American Young  
5       Generation in Nuclear, has collected for the last  
6       three or four weeks and this is from people all over  
7       the area and actually from all over North American in  
8       support of nuclear power and the new nuclear in  
9       Virginia in particular. So I have it here and I'll  
10      give it to you. [Available in Adams under Accession #  
11      ML062350445]

12              Now let me start with my statement. As  
13      Lisa, I am also a nuclear engineer and as that, I am  
14      extremely proud of the very significant contribution  
15      the nuclear science and technology makes every day to  
16      improve our quality of life. This contribution is  
17      most times very quiet, very unglamorous and made much  
18      behind the scenes. Many people are very unaware of  
19      it. In particular, I think that nuclear makes a very  
20      big -- I'm sorry. It's an unsung hero that every day  
21      generates more than 35 percent of the electricity that  
22      we consume in Virginia and it does that cleanly,  
23      safely, inexpensively and reliably.

24              I am also an active environmentalist. I  
25      share with all of you the concerns about minimizing

1 human impact of the planet and preserving natural  
2 resources for future generations and I actually have  
3 interrupted my lifestyle to minimize those impacts  
4 accordingly.

5 As I said, I'm a young professional in  
6 nuclear and because of that, I know that nuclear power  
7 is the most environmentally sound, large scale option  
8 for new energy investment. Nuclear power minimizes  
9 environmental impact by using a small amount of land  
10 area and a small amount of fuel to produce a large  
11 energy output. Furthermore, it accomplishes this  
12 without emitting any negative gas emissions and  
13 furthermore, the byproducts of nuclear power are the  
14 most manageable of energy waste products because they  
15 are totally contained, transportable and reuseable.

16 So those are the reasons that I can't  
17 really understand how any serious environmentalists  
18 after thoroughly reviewing all the facts can  
19 realistically dismiss the measurable positive  
20 contributions that nuclear power makes today and the  
21 potential beneficial role of new nuclear power plants  
22 to the sustainable development of humankind and of  
23 course, Virginia. I insist that I'm talking about  
24 reviewing unbiased facts, not mundane half-truths or  
25 out-of-context misinterpretative data.

1           So as you all know, we live in a world  
2 where the difference between the people that have and  
3 the people that don't have anything is enormous and  
4 hopefully, there's going to be a huge increase in the  
5 amount of energy. So that gas, it's slowly but surely  
6 being decreased. So we also live in a world where  
7 energy resources are scarce and very unevenly  
8 distributed and this is part of the cause that we are  
9 now living in a world with war and terrorism. We also  
10 live in a world with climate change, partly cold,  
11 especially with human activities. Maybe we will have  
12 an increased number in catastrophic weather events  
13 that we have faced recently.

14           So given all these conditions that shape  
15 the world in which we live, it is difficult not to  
16 arrive to the realization that it will be impossible  
17 to support sustainable development to obtain safety in  
18 energy production and to reduce greenhouse gas  
19 emissions without having nuclear power as an important  
20 part of a balanced energy mix.

21           For example, in the U.S., the studies show  
22 that it is not possible to maintain the existent  
23 percentage of non-emitting energy sources that alone  
24 increase this percentage without the contribution of  
25 nuclear power. This means that just to maintain the

1 current level of environmental quality we will need to  
2 build new nuclear power plants.

3 For that reason, I commend Dominion for  
4 being proactive in planning for respective increases  
5 in increasing power over the coming years while  
6 considering sources that minimize the environmental  
7 footprint as well as the economic burden to Dominion  
8 customers. I also support the ESP process as the  
9 means to warrant an open and thorough evaluation of  
10 future nuclear projects, involving all the  
11 stakeholders and ensuring the timeliness and  
12 predictability of the process.

13 I really think that this process works and  
14 this is why we are all here today. We all have the  
15 opportunity to voice our concerns with Dominion's  
16 plans and thorough discuss them. Dominion was very  
17 proactive to revise the proposal to address the  
18 concerns that were raised in this meeting and are  
19 coming for additional meetings and this is also the  
20 reason why we are here today again.

21 The NRC has issued a supplemental draft  
22 environmental impact statement and here we are all of  
23 us trying to provide the NRC feedback on what we think  
24 of that environmental impact statement. Personally,  
25 I think that their proposal would not have resulted in

1 any negative environmental or social economic impacts  
2 in Lake Anna and the surrounding areas.

3 Therefore, I think that the new revised  
4 plan which has an even smaller footprint on the area  
5 does not result in any negative effects and for that  
6 reason, I want to voice my support for granting to  
7 Dominion Resources an early site permit to construct  
8 new nuclear reactors at its North Anna site. Thank  
9 you.

10 FACILITATOR CAMERON: Thank you very much,  
11 Sama. Great. Thank you. Harry Ruth and then we're  
12 going to go to Melissa.

13 MR. RUTH: The NRC, ladies and gentlemen,  
14 my name is Harry Ruth. I reside at 230 Heather Drive,  
15 Bumpus and I live at the lake. I represent the  
16 Friends of Lake Anna Citizens Group representing 2,650  
17 persons whose mission is to protect Lake Anna, both  
18 the main reservoir and the cooling lagoons and its  
19 surrounding landscape for the health, safety and  
20 welfare of current residents, users and for future  
21 generations.

22 We are not anti-nuclear nor do we have  
23 not-in-my-backyard sentiments. Our goal is simply to  
24 protect Lake Anna for 500,000 plus annual users and  
25 ensure compliance with the law. We believe that the

1 U.S. should become self-reliant for energy sources and  
2 not be dependent on foreign oil, but we do want to  
3 promote the wise and safe use of nuclear energy and  
4 not have the impact of the new nuclear reactors  
5 destroy Lake Anna in the process.

6 If the project at the North Anna plant is  
7 accomplished correctly and takes into account our  
8 concerns, possibly the new reactors could become a  
9 model for the continued growth of nuclear energy  
10 throughout the country. We do support the addition of  
11 the third and fourth nuclear reactors but want to  
12 ensure that all environmental issues are taken care of  
13 prior to the issuance of either an NRC early site  
14 permit or a federal consistency certification. In the  
15 interest of time, I'm going to forward my written  
16 comments to the NRC and I'm going to identify the  
17 highlights only of the presentation.

18 The first part deals with the NRC. The  
19 public should be involved with the safety evaluation  
20 report and be able to comment. That doesn't occur  
21 right now. The NRC does their own thing.

22 And the NRC continues to accept many  
23 changes to the ESP without automatically extending the  
24 public comment period time with these changes and  
25 issues. Recently, we've reviewed just thousands of



1 pages and within the last few weeks, a revision seven  
2 and eight were issued and the public comment period  
3 has not been extended for that there. The current ESP  
4 resembles a three ring circus without having the ring  
5 master to direct all of the acts, but the timekeeper  
6 is making sure that the public audience moves out of  
7 the big top so the next scheduled performance can  
8 begin.

9 We have concerns with fishery management.  
10 The Department of Game and Inland Fisheries has found  
11 that the fish will continue to be adversely affected  
12 even if after the changes to the third reactor have  
13 been made. As stated in the analysis of the draft EIS  
14 which is this environmental impact statement, the  
15 North Anna watershed is too small to allow large water  
16 withdrawals. These would adversely affect the  
17 beneficial uses of the North Anna river. The analysis  
18 clearly indicates that the third unit would increase  
19 the drought cycle and cause decreased water flows  
20 during seven months of the year.

21 Recent Lake Anna Civic Association water  
22 studies have indicated that the North Anna River three  
23 miles before it enters the lake is 13 degrees cooler  
24 than the central part of the lake above the Route 208  
25 bridge. Many areas of the entire lake, both main

1 reservoir and cooling lagoons, have recently  
2 experienced temperatures in the low to high 90s which  
3 clearly exceeds the 89.6 degree Fahrenheit temperature  
4 limitation in the Clean Water Act. Some residents  
5 have reported temperatures as high as 106 degrees.  
6 The entire Lake Anna is being heated as a result of  
7 the current power plant. The NRC and VDEQ have fully  
8 analyzed the impact of any further water temperature  
9 increases resulting from the blow-down discharges of  
10 the proposed Unit 3 cooling towers or any malfunction  
11 of any of the proposed cooling towers or current  
12 generating units.

13 The entire Lake Anna is unique and it's  
14 primarily an impoundment where 99 percent of the water  
15 is recirculated which in turn causes the lake to heat  
16 up since only about one percent of the water is  
17 released over the dam. Since the entire lake is 17  
18 miles long and includes 13,000 acres of water and  
19 water temperatures exceed 90 degrees throughout the  
20 lake, it would seem that Dominion is routinely in  
21 violation of the U.S. Clean Water Act and the  
22 variances that they have. Any additional heat  
23 transfer from the proposed third unit water cooling  
24 tower blow-down discharge will only compound the  
25 problem while the proposed Unit 4 dry cooling air

1 tower would have no additional heat transfer impacts  
2 to the lake.

3 The U.S. Congress passed the Clean Water  
4 Act to restore and maintain the chemical, physical and  
5 biological integrity of the nation's waters. The  
6 national goal of the Act is to achieve water quality  
7 which provides for the protection and promulgation of  
8 fish, shellfish and wildlife and also provides for the  
9 recreation in and on the water.

10 One set of the North Anna River users  
11 should not benefit at the expense of another set of  
12 users. Whatever the final solution is, it should not  
13 for decreasing the inadequate water supply in the  
14 small water shed. The solution should not benefit one  
15 set of users.

16 One alternative to discuss but not  
17 proposed in the environmental impact statement is to  
18 exclusively use dry air cooling for the third unit  
19 which would then negate any further water withdrawals  
20 from the small watershed. This appears to be a  
21 feasible option since this is the same technology that  
22 Dominion has proposed for Unit 4 and is used by many  
23 overseas countries that did not have a local water  
24 source.

25 We're concerned with water temperatures

1 and they should be limited to no more than 104 degrees  
2 at the end of the discharge canal. A point of  
3 compliance for all U.S. water permits should be  
4 changed from dike 3 to the end of the discharge canal  
5 to provide for Clean Water Act protections for all the  
6 cooling lagoons users.

7 Human health problems due to increased  
8 water temperatures and increased bacteria from  
9 increased water temperatures are also a concern. The  
10 impact to wildlife, fish and endangered species, the  
11 bald eagles, as a result of increased water  
12 temperatures, reduced water flowing, increased drought  
13 cycles and possible loss of food supply.

14 Raising of the lake level to retain more  
15 level for the third unit resulting in the destruction  
16 of adjoining property and also for the retention for  
17 downstream users. Lowering the lake level by  
18 increased water use is thereby causing increased  
19 drought cycles ranging from weeks to months.

20 We need to enforce the U.S. Clean Water  
21 Act for recreating in and on the water on both the  
22 main reservoir and the cooling lagoons. Currently,  
23 it's only enforced only on the main reservoir. The  
24 cooling lagoon users have no protections at all.

25 Height of dry and wet cooling towers and

1 facility buildings should not exceed the tree line to  
2 protect the rural aesthetic atmosphere of the  
3 community as Dominion indicated in their January  
4 stakeholder meeting.

5 You have the impact of 5,000 to 7,000 new  
6 workers, construction, periodic maintenance and  
7 professional employees for five years on local roads  
8 and schools. This will create the need for new  
9 expanded roads before the project begins because of  
10 the workers and three newly approved Louisa County  
11 subdivisions in the proximity which is going to add  
12 about 1800 new homes in that area.

13 New schools and other county  
14 infrastructure, police, fire, rescue squads, etc.  
15 will need to be planned and build prior to any new tax  
16 dollars coming from Dominion. Louisa is now the 73rd  
17 fastest growing county in the U.S. Who is going to  
18 pay for all these new requirements? Is the Federal  
19 Government going to give grants to Louisa County  
20 similar to the \$8 to \$10 million grant that you gave  
21 to Dominion for processing this early site permit?

22 We're concerned about emergency evaluation  
23 on the small two lane roads, the spent nuclear fuel,  
24 where it's stored, canisters intact protections, etc.  
25 The impact of additional fog and icing from wet

1 cooling towers on local roadways. The noise concerns  
2 emitted from the 180 to 230 foot buildings that will  
3 travel long distances without having tree barriers to  
4 protection the sound from giant fans.

5 We believe the North Anna project as  
6 currently proposed is inconsistent with the Virginia  
7 Coastal Zone Management Program. We support the  
8 concept of the third and fourth reactors, but the  
9 above environmental items must be resolved prior to  
10 the issuance of any Federal consistency certification.  
11 We request that a Federal consistency certification or  
12 early site permit not be issued until the issues are  
13 satisfactorily resolved.

14 We also request that all state agencies  
15 stop using the designation "waste heat treatment  
16 facility" to describe the cooling lagoons, so it is  
17 not viewed and treated similar to a sewage treatment  
18 facility. This designation affords no public  
19 protection for the over 8,000 users of the cooling  
20 lagoons.

21 Further, we request that the Virginia  
22 Point of Compliance be changed from dike 3 to the end  
23 of the discharge canal and the cooling lagoons start  
24 to be treated by all state agencies as quasi public  
25 works so the health, welfare and safety of those who

1 use the cooling lagoons is protected. The quasi  
2 public water designation would recognize that Lake  
3 Anna is unique of thermal cooling unlike other power  
4 plants that discharge heated waters into oceans or  
5 major free-flowing rivers. It would also permit the  
6 state to treat the cooling lagoons as public waters  
7 and afford them the same protection as other public  
8 works unless there is a nuclear disaster. This would  
9 also adhere to the recent Supreme Court decision SD  
10 Warren v Maine Board of Environmental Protection to be  
11 adhered to which did not permit the privatization of  
12 public waters.

13 If there is a nuclear disaster at the  
14 North Anna plant, this designation would recognize  
15 that the cooling lagoons are adjacent to a nuclear  
16 power plant. In the event of nuclear disaster, only  
17 nuclear byproducts could be discharged into the  
18 cooling lagoons and be quarantined.

19 We request that alternative analysis for  
20 the third unit cooling method be accomplished to fully  
21 consider dry air cooling for the third unit as used by  
22 many overseas countries to eliminate the consumptive  
23 water loss associated with using wet cooling towers.  
24 We also request that the public be involved in  
25 reviewing a draft safety report, read the ESP prior to

1 its final issuance and that's there's an automatic  
2 extension of the public comment period whenever  
3 revision of the EPS occurs.

4 The current public comment period should  
5 be extended to permit the public to have adequate time  
6 to review and comment on Revision 7 and Revision 8  
7 which were just issued after the supplemental draft  
8 environmental impact statement was issued in July just  
9 a few weeks ago. Thank you very much for your time  
10 and consideration of the Bell Binups (PH).

11 FACILITATOR CAMERON: Thank you, Harry,  
12 for those specific comments and for abbreviating your  
13 presentation and we'll look forward to your full  
14 comments. We're going to go to Melissa Kemp and then  
15 we'll go to Lou Zeller, Ben Slone, Robert Clarke Jr.  
16 and Bill Casino and this is Melissa Kemp.

17 MS. KEMP: Hi, my name is Melissa Kemp and  
18 I'm here on behalf of Public Citizen. I would like to  
19 start off just by saying it was great to hear Harry  
20 speak. We're not affiliated at all, but it's really  
21 nice that we're back on the topic of why we all came  
22 here which is this cooling system is it going to  
23 protect the water resources for the lake and for the  
24 people downstream.

25 So I'm here on behalf of Public Citizen.



1 Public Citizen has about approximately 3,000 members  
2 in Virginia and have about 150,000 members nationwide.  
3 As an organization, Public Citizen has been involved  
4 in this project since Dominion has filed its ESP in  
5 2003. I would like to begin my remarks by talking  
6 about the water issues which are the focus of the  
7 NRC's supplemental DEIS.

8 Basically, after reviewing the documents,  
9 NRC, we feel has done an inadequate analysis of the  
10 newly proposed hybrid cooling tower system,  
11 particularly around the issue of water evaporation.  
12 We will agree that this new system will address the  
13 flow impacts to a great extent, will also take in less  
14 water from the lake which is good in terms of what  
15 they're talking about is taking in fish, but the water  
16 evaporation impacts remain.

17 And NRC again has given the impression  
18 that water evaporation will be significantly decreased  
19 by the new cooling system. This, however, is  
20 incorrect. Most of the year, the new reactor will  
21 operate using actually what they call the energy  
22 conservation mode which evaporates about 37.2 cubic  
23 feet per second. Now the once-through system that  
24 Dominion proposed before was actually 26.0 cubic feet  
25 per second.

1           We understand that Dominion said that  
2           we're concerned about drought, so we're also going to  
3           have a maximum water conservation mode which according  
4           to their numbers actually evaporates 25.7 cubic feet  
5           per second which about equivalent to the once-through  
6           system. But this means that most of the year the  
7           actual evaporation rate is going to higher than it was  
8           with once-through system and at the drought conditions  
9           when you use the maximum water conservation mode, it  
10          will be about equivalent. Now there is this whole  
11          question about these are maximum, instantaneous water  
12          evaporation rates, but when we tried to understand  
13          that in the supplemental draft EIS we couldn't find a  
14          clear explanation for why those rates were not  
15          actually valid.

16                 Moving on, we also have concerns about the  
17          hot side of the lake. We don't think it should be  
18          treated as private property or as a waste treatment  
19          center. We think it should be fully regulated under  
20          the law just like the rest of the lake is and should  
21          be subject to the Clean Water Act.

22                 In conclusion about the cooling tower, we  
23          feel strongly that because Dominion obviously is  
24          considering a dry cooling tower for the fourth unit,  
25          the third unit should be dry cooling tower as well.

1 That's why I asked the question earlier how much more  
2 would it cost. It seems like if it would eliminate  
3 the thermal impacts and the evaporation impacts we  
4 should do it. What's important here is protecting the  
5 lake, for people to use their boats in the lake, to  
6 fish in the lake, to swim in the lake if people do  
7 that and to protect downstream people's ability to  
8 kayak and canoe and also the fisheries.

9 Moving on, we have two other concerns that  
10 have not been addressed, their waste and security, and  
11 through the ESP process, waste and security are things  
12 that are basically taken off the table. As you  
13 probably are aware, each reactor at North Anna  
14 produces about 20 metric tons of waste per year and  
15 about over 56,000 metric tons already exist around the  
16 country and we have no near-term solution. I know  
17 that people commonly say there's that mountain in  
18 Nevada. Aren't we going to take it there? I can tell  
19 you by looking thorough at that the problem is it's  
20 not a good mountain. I mean there might be a mountain  
21 somewhere, but that mountain is not a good mountain.  
22 So no time soon are we going to have a safe place to  
23 secure this waste.

24 We also -- In this proceeding, NRC has not  
25 talked about the waste because of the Waste Confidence

1 Rule which is something that says, "Look, we're  
2 confident that we'll take care of the waste, so we  
3 don't have to talk about it." But the waste is going  
4 to be sitting around your lake and it's going to  
5 continue to grow in terms of the amount that's sitting  
6 around your lake and that's something that should be  
7 talked about.

8           Someone before me has also mentioned the  
9 security concerns. You know, it's a building to  
10 reactors. We have a lot of concerns right now about  
11 terrorists, about planes crashing into things and also  
12 just about the safety generally and I think that's  
13 something like as someone mentioned that there was no  
14 public comment on the security issues and it's been  
15 said that it's national security or it's something  
16 that we can't talk about or aren't allowed to talk  
17 about.

18           There was recently a court decision out in  
19 the 9th Circuit in California that said, "Yes, the NRC  
20 has to deal with security issues." Now it was talking  
21 about that case which was about storing waste onsite.  
22 But it seems like NRC should be talking about security  
23 issue. We should be allowed to be talking about  
24 security issues. It shouldn't be something that's  
25 taken off the table.

1           And finally, the final thing is that we  
2           don't feel that NRC has adequately considered the  
3           alternatives to this whole process which they are  
4           legally required to do and obviously earlier this  
5           evening we've heard a lot about everybody loves solar  
6           and everybody loves wind and they are a great part of  
7           the mix, but they just can't cut it on their own. I'm  
8           here to tell you that that's not true. That is just  
9           something that's been said for a long time. We're not  
10          anti-nuclear. We're for whatever is best, whatever is  
11          safest, what is healthiest, whatever has the least  
12          inherent risk and what that is renewable technologies.

13                 According to National Renewable Energy  
14          Laboratory data that was actually published in a study  
15          by the Virginia Center for Coal and Energy Research in  
16          2005 actually concluded from that data that renewable  
17          energy, I mean solar, wind onshore and offshore,  
18          geothermal heat pumps and possibly some advanced  
19          hydropower could actually meet Virginia's electricity  
20          needs in the coming two to three decades completely.

21                 And, yes, some types of wind are  
22          intermittent. Wind can be basal power, but solar is  
23          always intermittent. It's a different paradigm. It's  
24          a different way of combining resources over a larger  
25          geographic areas, of different types of resources,

1 kind of matching different resources and periods of  
2 intermittently together so that you can actually  
3 provide the same type of basal that power you from a  
4 centralized source.

5 The benefit is there's no radioactive  
6 waste, there's no risk from a plant having a problem  
7 or being intentionally sabotaged. I mean that's a big  
8 thing. We're here because we're concerned about our  
9 community and we're here because we're concerned in  
10 some ways about global warming, but the choice is not  
11 coal or nuclear. The choice is coal or nuclear or  
12 renewable technologies and when you're choosing  
13 between those, the decision that you could come to is  
14 very different.

15 Just to give you an idea like wind power  
16 in Virginia alone could generate about 104 million  
17 megawatt hours per year which is about 92 percent of  
18 present Virginia consumption which is about 113  
19 megawatt hours. Solar PV, not thermal, but solar PV  
20 could do a minimum of 46 million megawatt hours which  
21 is about 41 percent of present use.

22 And geothermal heat pumps have another  
23 significant role but more in reducing your electricity  
24 use to begin with. They use them to reduce the  
25 heating and cooling in your home. Heating is often

1 from natural gas, but cooling is from electricity. So  
2 you could reduce that use by 30 to 60 percent.

3 Again, that concludes my comments, but I'd  
4 like to on the record advocate that Dominion should if  
5 it's serious about wanting to protect this community's  
6 water, about protecting the people on the lake so that  
7 they can use their boats and they can fish and they  
8 can really enjoy that environment and doing what's  
9 best for Virginia, they really should get a dry  
10 cooling tower if they want to even put this proposal  
11 forward and they should really seriously look at  
12 alternatives to actually building more reactors in the  
13 first place. Thank you.

14 FACILITATOR CAMERON: Thank you, Melissa.  
15 We're going to Lou Zeller and then we're going to go  
16 to Ben Slone. Lou Zeller.

17 MR. ZELLER: Thank you, Chip. My name is  
18 Lou Zeller and I'm on the staff of the Blue Ridge  
19 Environmental Defense League and I have been on staff  
20 with them since August of 1986. I want to talk about  
21 money tonight.

22 All my comments will be on economic issues  
23 just to be perfectly plain. And, for example,  
24 despite the significant subsidies provided in the  
25 Energy Policy Act of 2005, investments in new nuclear

1 plants remain very risky. The information that I will  
2 be sharing with you comes from a synopsis of a series  
3 of studies done by Peter Bradford and an associate.  
4 Peter Bradford, the NRC folks may remember, is a  
5 former commissioner of the Nuclear Regulatory  
6 Commission and is also former chair of the New York  
7 State Public Service Commission and also the Maine  
8 Public Utilities Commission.

9 What we find is that, for example, the  
10 U.S. Department of Energy has clearly and concisely  
11 stated that new nuclear plants are not expected to be  
12 economical. A 2003 study by the Massachusetts  
13 Institute of Technology forecasted that the base case,  
14 real levelized cost of electricity for new nuclear  
15 reactors being estimated at 85 percent capacity would  
16 be 6.7 cents per kilowatt hour over a projected 40  
17 year operating life which is more expensive than  
18 energy from pulverized coal or natural gas. This  
19 study was done in 2003 at MIT.

20 Further, a 2005 assessment by Synapse  
21 Energy Economics Incorporation showed that the  
22 levelized costs of electricity from a new 2,180  
23 megawatt nuclear power plant would be significantly  
24 higher than obtaining the same amount of energy from  
25 a combination of wind and gas-fired capacity and



1 energy efficiency measures.

2 Wall street has expressed serious concerns  
3 about the credit worthiness of companies that pursue  
4 new nuclear power plants. In January 2006, Standard  
5 & Poors Rating Services found that an electric utility  
6 with nuclear exposure has weaker credit than one  
7 without and can expect to pay more on the margin for  
8 credit. Federal support of construction costs will do  
9 little to change that reality according to Standard &  
10 Poors. Therefore, were utility to embark on a new or  
11 expanded nuclear endeavor, Standard & Poors would  
12 likely revisit its rating on the utility. Standard &  
13 Poors also expressed concern that "from a credit  
14 perspective the 2005 Energy Policy Act provisions may  
15 not be substantial enough to sustain credit quality  
16 and make nuclear generation a practical strategy."

17 What other factors might the economics of  
18 a proposed nuclear power resurgence? A success  
19 attack, a terrorist attack, such as the one that was  
20 thwarted this week could halt new construction even  
21 after significant expenditures are made and sight  
22 preparation.

23 For example, Robert Mueller, the FBI  
24 Director, testified before the Senate Select Committee  
25 in 2005 stating "Another area we consider vulnerable

1 and target rich is the energy sector particularly  
2 nuclear power plants. al-Qaeda planner Sheikh  
3 Mohammed had nuclear power plants as part of his  
4 target set and we have no reason to believe that al-  
5 Qaeda has reconsidered." That's according to the FBI  
6 Director Mueller.

7 The Nuclear Regulatory Commission  
8 shortcomings are also troublesome in that we may be  
9 putting nuclear economic interests ahead of safety and  
10 public confidence. It was 27 years ago that President  
11 Carter's Commission found a mindset at the Nuclear  
12 Regulatory Commission that was preoccupied with the  
13 licensing of plants and not giving primarily  
14 consideration to overall safety issues.

15 More recently, shortcomings of the U.S.  
16 Nuclear Regulatory process were clearly implicated in  
17 the 2001 near accident at the Davis Besse plant in  
18 Ohio. The NRC Inspector General's report there found  
19 a clear connection between cost considerations and the  
20 NRC laxity in the fact that the licensee sought and  
21 NRC staff and allowed Davis Besse to operate without  
22 performing inspections was driven in large part by a  
23 desire to lessen the financial impact that would  
24 result from an early shutdown.

25 More troubling, a 2002 internal NRC survey

1 showed that almost half of all NRC employees thought  
2 their careers would suffer if they raised safety  
3 concerns and nearly one-third of those who had raised  
4 safety concerns felt they had suffered harassment  
5 and/or intimidation as a result.

6 Nuclear power will not reduce U.S.  
7 dependence on energy supplies from abroad. In 2004,  
8 over 80 percent of uranium for the U.S. nuclear plants  
9 came from foreign countries. This is according to the  
10 U.S. Department of Energy, Energy Information Agency.  
11 There are 14 countries that sell uranium to the United  
12 States.

13 The evolution of power supply markets  
14 affects nuclear power. The MIT study I cited before  
15 said that "nuclear power is the technology force-fed  
16 into an unsophisticated power supply selection process  
17 at a pace too fast for the nuclear industry to  
18 assimilate the lessons of operating experience.  
19 Moreover, the evolution occurs in ways that concealed  
20 or understated the real costs and the real problems  
21 assuring a series of unpleasant surprises and a  
22 deepening public mistrust. A real nuclear revival  
23 does not exist until private capital is available to  
24 build plants which will require market prices that  
25 assure competitive success on one hand and

1     profitability on the other." This is the MIT study.  
2     "However, even with their ability to compete on the  
3     basis of operating costs clearly established, the most  
4     recent sales of nuclear units have not been at a price  
5     that would support the building of a new plant."

6             Finally, global warming. There are much  
7     better solutions. Global warming is occurring. We  
8     need to take action, but more nuclear plants are not  
9     the answer. Further investment in nuclear power would  
10    squander resources necessary to implement meaningful  
11    climate change mitigation policies.

12            Moreover, nuclear power's role in  
13    mitigating climate change and a reducing oil  
14    dependence is constrained because it is limited to the  
15    electric generation sector. Wind power and other  
16    renewables along with energy efficiency and  
17    conservation and co-generation are much more cost  
18    effective and can be deployed much faster. This is  
19    all from the report from Peter Bradford.

20            In conclusion, I would just like to insert  
21    into the record a written document which is a report  
22    done by us in October of last year which documents the  
23    geologic faulting under proposed North Anna Units 3  
24    and 4. [Adams # ML062350263] Thank you.

25            FACILITATOR CAMERON: Thank you very much

1 and give that to Jack and this is Ben.

2 MR. SLONE: Yes.

3 FACILITATOR CAMERON: All right.

4 MR. SLONE: Since I don't know what I'm  
5 doing, I'll pull this out, so hopefully everybody can  
6 hear me. My name is Ben Slone. I'm a resident of  
7 Matense (PH) Virginia which about 19 miles southeast  
8 of here and I spoke last February or February a year  
9 ago at the meeting then and I've read NUREG 1811 and  
10 let me say I'm a father of three. I'm a husband,  
11 business owner. The business is probably about 20  
12 miles away from the North Anna site and I'm in full  
13 support of what I've read in the supplement.

14 To me, it seems a very logical - I'm very  
15 pro nuclear as a result of everything I've read on it.  
16 You know, it's one of the fascinating things where we  
17 have a power source we can keep all our waste  
18 together. As I spoke last February, I have mercury  
19 poisoning and the reason I have mercury poisoning is  
20 because I eat fish and I eat unfortunately a little  
21 bit too much fish, but there is native mercury  
22 entrapped in fish today and it's because of our power  
23 generation techniques.

24 If we run out of space up at North Anna to  
25 put fuel, I have 30 acres down at Goshen. You can

1 live down there. I don't have any problem with that.  
2 I really don't.

3 (Applause.)

4 -- at the point it's moved out of the  
5 reactor and I'm fine with it. But I applaud Virginia  
6 Power in first of all escalating the power rating of  
7 the reactor of the proposed Unit 3 and Unit 4. I  
8 think that's a good move because I'm also a rate  
9 payer. I'm not a shareholder or officer or in any way  
10 involved with Dominion Virginia Power. But I am happy  
11 to see more power being produced at a base load  
12 facility at one location that's controlled, that's  
13 secure, that's safe and that makes me proud.

14 I'm also proud of the fact that in reading  
15 about the change to the once-through to mechanical and  
16 dry cooling, the concern they have for the environment  
17 and even though you mention it's going to cost \$200  
18 million more, I'm willing to pay that as a taxpayer or  
19 as a rate payer, excuse me, because I understand the  
20 concerns, talking about the lake.

21 Talking about the lake, I'm really  
22 confused about. You know, here we're dealing with a  
23 lake as far as I understand is your property, Virginia  
24 Power's property, and I'm also a big advocate of  
25 property rights. I don't want somebody coming and all

1 of a sudden putting constraints on my property. But  
2 at the same time, I understand your wanting to be fair  
3 and treat the environment properly and I applaud you  
4 for that. So I thank you very much. And to the NRC,  
5 I thank you for the job you've done with the review,  
6 with the EIS and I've included my comments in the  
7 previous session back in February and I thank you for  
8 the opportunity to speak.

9 (Applause.)

10 FACILITATOR CAMERON: Thank you, Ben.  
11 Robert Clarke Jr.

12 MR. CLARKE: I'm here.

13 FACILITATOR CAMERON: There he is.

14 MR. CLARKE: Evening. My name is Robert  
15 Clarke. I'm Chairman of the Industrial Development  
16 Authority here in Louisa County and a retired banker.  
17 I should have gotten the ground rules before I got  
18 here because I was going to talk about economic  
19 benefits and money just as we heard some of. So I'm  
20 not going to waste a lot of your time tonight talking  
21 about the benefits to Louisa County and the State of  
22 Virginia and the nation that this project could  
23 provide and the fact that the benefits that Dominion  
24 Power has provided this county over the last 20 or 25  
25 years. So that's all I have unless there are some

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 questions.

2 (Laughter and applause.)

3 FACILITATOR CAMERON: Thank you very much.  
4 All right. I guess someone is at least following the  
5 ground rules. Bill Casino.

6 MR. CASINO: Good evening everybody. I'm  
7 Bill Casino. I live way down in Lynchburg. So I'm  
8 not a local resident. I'm also a professional nuclear  
9 engineer. I don't work for Dominion. I'm a member of  
10 the American Nuclear Society and the North American  
11 Young Generation in Nuclear.

12 I want to express my personal desire to  
13 see this supplemental EIS get approved. I think it's  
14 going well and it's a good idea. I want to spend the  
15 bulk of my comments talking about public institutions  
16 and our faith and/or questioning or lack of faith in  
17 them and their charge for doing what's best for the  
18 public interest.

19 As an engineer, I am obligated to obey  
20 engineering ethical guidelines and through the  
21 performance of my responsibilities and if I violate  
22 those ethics or don't adhere to them to the best of my  
23 ability, I'm held to high consequence for that.  
24 There's a fundamental truth about doing engineering  
25 analysis in that we can debate public policy, which



1 direction of this or that is right or wrong or good or  
2 bad, but engineering analysis thankfully and probably  
3 this is not why I'm in the public sector are fairly  
4 black and white.

5 It's a fundamental thermodynamic exercise  
6 to do a calculation to figure out how much heat a body  
7 of water can take and how much it will raise the  
8 temperature of the water and how much evaporation will  
9 happen. So it concerns me when some of the watchdog  
10 organizations come up with alternative values and  
11 other numerical analysis which may at least indirectly  
12 suggest that the NRC analysis is some way inaccurate  
13 or not thorough.

14 I don't know any of the folks personally  
15 in the Nuclear Regulatory Commission, but I know from  
16 seeing who gets hired and what kinds of practices that  
17 they engage in that they are a very high integrity  
18 group of folks and I have a great deal of faith that  
19 they're executing their jobs with very accurate and  
20 very attention to detail. I'm not saying that I  
21 question the qualifications of the other  
22 organizations. As a matter of fact, I think it's  
23 imperative that as a part of ensuring the public  
24 trust, watchdog organizations are constantly looking  
25 over the shoulder of industry and of governmental

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 institutions to ensure that we execute our job  
2 responsibilities and adhere to our code of ethics and  
3 our public trust. I applaud you guys for being active  
4 in making sure that we keep our act clean. I'll never  
5 object to you doing that.

6 I do have issue. I do take issue with  
7 when it seems as though there's some obvious  
8 discrepancy between one group's analysis and another  
9 group's analysis. I know from being a practicing  
10 engineer that there's usually only one solution to a  
11 mathematical equation and it's usually pretty easy --  
12 Well, I don't want to say easy, but it's usually  
13 pretty easy to come up with a consensus opinion on how  
14 to approach a problem with what solution, with what  
15 the solution value is.

16 So I would like to challenge those who  
17 question the analysis, techniques and the results of  
18 the Nuclear Regulatory Commission to make your  
19 processes public so that people can stack them up  
20 against what the Nuclear Regulatory Commission has  
21 done to see if there are some differences in  
22 assumptions that each groups have made or if there is  
23 some other reason why there is a discrepancy in value.

24 But I understand also that most of the  
25 folks around here, now you don't have the time or you

1 don't want to get bogged down in details like that.  
2 You just want to know that you have faith and that you  
3 can trust that the institutions that have been charged  
4 with taking care of this matter for you are competent,  
5 are ethical and are diligent in doing what you need  
6 them to do for you.

7 I'd like to say that as a practicing  
8 engineer, I have a great deal of faith that these  
9 folks are doing their job right. Certainly, there is  
10 going to be because we're all human beings there's  
11 going to be slip ups and issues and circumstances that  
12 happen. So we try and protect ourselves with checks  
13 and balances and the watchdog organizations are a part  
14 of that process and so is this public hearing.

15 As a matter of fact, I think this public  
16 hearing is an example I would say of a success story  
17 in that feedback was given, that of certain aspect of  
18 this plant design was not optimally, people listened,  
19 changes were made, actions were taken and hopefully at  
20 least some of those concerns were addressed. That's  
21 basically what I want to say.

22 It boils down to a question of do you  
23 trust the institutions. Are they doing what's in your  
24 best interest? Are they competent? Are they ethical?  
25 If not, what can you do to change that? I believe

1 this public discourse is part of ensuring that the  
2 system is working the way it's supposed to and if you  
3 believe it's not, you at least have a way to redress  
4 or make your concerns known. That's all I'd like to  
5 say. Thanks.

6 FACILITATOR CAMERON: Thank you. We're  
7 going to go to Pat Hanley and then to Patrick Wycoff  
8 and Mike Stuart and we have Pat Hanley coming down  
9 right now.

10 MR. HANLEY: My name is Patrick Hanley.  
11 I'm Chairman of the Louisa County Chamber of Commerce.  
12 I live on the lake and I will be brief. The Chamber  
13 of Commerce supports the approval of the early site  
14 permit for the North Anna Power Station. The addition  
15 of one new nuclear unit is good. The addition is  
16 better for the economy.

17 Dominion is a good citizen of our  
18 community. They pay their taxes. They employ more  
19 than 900 people with average wages significantly  
20 average the average wage of the community as a whole.  
21 They provide good, clean electric power and they help  
22 reduce our dependence on oil.

23 Their proposal to expand the capacity of  
24 the North Anna plant should be applauded. It makes  
25 sense. It increases tax revenues at very little

1 expense to the community. It adds high paying jobs  
2 for construction and ongoing operations. It is at the  
3 leading edge of initiatives to reduce our dependence  
4 on oil. It's good business and it's good for business  
5 and we support it. Thank you.

6 (Applause.)

7 FACILITATOR CAMERON: Thank you. Lee, do  
8 you want to say anything at this point?

9 MR. WYCOFF: I can get up there and read  
10 some comments.

11 FACILITATOR CAMERON: Okay.

12 MR. WYCOFF: I wasn't planning on  
13 speaking, but I can --

14 FACILITATOR CAMERON: I thought you signed  
15 up.

16 MR. WYCOFF: No, I sent an email just to  
17 make sure I'd registered --

18 FACILITATOR CAMERON: Okay.

19 MR. WYCOFF: I can share a couple  
20 thoughts.

21 FACILITATOR CAMERON: Why don't go up  
22 there, sir?

23 (Laughter.)

24 MR. WYCOFF: Hello everyone. Thanks for  
25 taking a moment to listen to me. I'll try and keep it

1 real brief since everyone is. I live on the lake as  
2 I mentioned earlier and actually on the cooling lagoon  
3 side. I would very much support anything that moved  
4 toward regulating that side and dropping the  
5 temperatures on that side, but the warm water is good.  
6 We all benefit and take on some risk by living that  
7 close to a nuclear power plant.

8 Adding third and fourth reactors does  
9 increase, and I realize the risk is low, the risk of  
10 something catastrophic happening there. Any time you  
11 have four independent operating things, your risk  
12 increases twofold versus two independent operating  
13 things. I realize that risk is minuscule and that the  
14 issues that we've had worldwide have been slim to  
15 none. So I think that's all I have for today.

16 FACILITATOR CAMERON: Thank you.

17 MR. WYCOFF: I'm undecided. I'm listening  
18 in both sides and I'm gaining a lot of education  
19 tonight. So that's good. Thanks.

20 FACILITATOR CAMERON: Okay. Thank you  
21 very much, Lee, and I guess the truth is you don't  
22 want to wing it. Right?

23 MS. WYCOFF: Actually --

24 FACILITATOR CAMERON: Maybe she does.

25 MS. WYCOFF: No. I just want to say that

1 -

2 FACILITATOR CAMERON: You have to get up.

3 MS. WYCOFF: No, I'm not walking up there.

4 (Laughter.)

5 MS. WYCOFF: I would just like to say this  
6 is a real education. I love the way --

7 PARTICIPANT: Would you identify yourself  
8 please?

9 MS. WYCOFF: I personally love sitting on  
10 Lake Anna. I enjoy the water. I enjoy the warm water  
11 and I support anything environmentally and I want to  
12 continue to live there. I do support the process that  
13 you're going through and in a profession I've focused,  
14 my career is process management, so it's nice to see  
15 it in action and that I can be a part of it.

16 PARTICIPANT: Identify yourself please.

17 PARTICIPANT: Would you state your name?

18 FACILITATOR CAMERON: This is Patricia  
19 Wycoff.

20 MS. WYCOFF: Good boy.

21 FACILITATOR CAMERON: And for the record,  
22 Patricia is Lee's wife.

23 (Laughter.)

24 PARTICIPANT: I just have one question.

25 FACILITATOR CAMERON: Can you hold it? We

1 really need to -- We'll get an answer for you, but we  
2 really need to move through. Did you want to answer  
3 a question about Patricia and Lee?

4 PARTICIPANT: No, a question of the room.  
5 I want to know how many people in this room are from  
6 Louisa County.

7 FACILITATOR CAMERON: I think that we've  
8 had that asked before, but okay. Great. So let's go  
9 to Michael Stuart.

10 MR. STUART: Hello. My name is Michael  
11 Stuart. My family and I live and work in the  
12 community. My wife is actually a school teacher, but  
13 I'm not here talking on behalf of the schools or  
14 behalf of anybody else except for North American Young  
15 Generation in Nuclear and myself as a citizen that  
16 lives within the ten mile APZ of North Anna. I'd like  
17 to read to you War and Peace.

18 (Laughter.)

19 MR. STUART: That's just a joke. I'll  
20 make this quick. I lived in the community for over 14  
21 years and I built an energy efficient home that  
22 employs passive solar heating. It also employs a  
23 geothermal heat pump. So I'm very much in tune with  
24 environmental concerns by my own practices.

25 And by my own observations as well as



1 published polls that I'm familiar with, the vast  
2 majority of the people of the community are in favor  
3 of expansion at North Anna. It's little wonder since  
4 North Anna has provided employment for so many  
5 thousands of people right here in this community. In  
6 this community, North Anna has provide a tremendous  
7 tax base for the local community and Dominion  
8 employees have provided valuable voluntary services  
9 including volunteering in this very school that I'm in  
10 speaking right now.

11 It's fascinating to follow the opposition  
12 to expansion at North Anna because at first the  
13 opponents didn't want to increase water temperature  
14 and as a result, Dominion took on tremendous extra  
15 expense to address that. But now the focus has moved  
16 to evaporation and even though the advanced cooling  
17 tower design that Dominion is going with significantly  
18 reduces the evaporative water loss that was initially  
19 planned over the once-through cooling, that evidently  
20 is not enough.

21 Now people are talking about they don't  
22 want the noise even though the noise levels are well  
23 below the country ordinance levels in residential  
24 areas. The amount of noise we're talking about is  
25 about the same as a refrigerator at that distance. So

1 if you find your refrigerator annoying, then you would  
2 find the nuclear plants annoying.

3 Some have mentioned that the traffic on  
4 Rt. 652 and others mentioned the increase in the kids  
5 in schools, but what we're really talking about here  
6 is not in my backyard. That's what it really boils  
7 down to. Sure, everybody wants safe, clean and  
8 affordable electricity and they certainly don't mind  
9 the tax revenue and associative benefits, but many of  
10 the people who opposed the expansion forget that Lake  
11 Anna was a creek bed that was virtually devoid of life  
12 before nuclear power. Dominion bought the land.

13 (Applause.)

14 Dominion bought the land and built the  
15 lake specifically to support four nuclear units. They  
16 forget that the flow rates in the North Anna River  
17 varied from a barely trickled creek to a flooded river  
18 before the dam started regulating the flow. Now the  
19 downstream flows are regulated. They forget that the  
20 recreational lake whose boat traffic is audible from  
21 great distances would not even be there if it wasn't  
22 for nuclear power nor would their lakefront property  
23 and astronomical property values.

24 (Laughter.)

25 They forget that Rt. 652 was a dirt road

1 before nuclear power. When I came to the county in  
2 1990, it was practically a dirt road with all the  
3 potholes and stuff. They forget what the tax revenue  
4 from North Anna has meant to the school systems of  
5 Louisa. In fact, most of these people who are opposed  
6 to the expansion at North Anna would not even live  
7 here if it wasn't for nuclear power and the fact that  
8 they brought that lake.

9 In order for Virginia to continue to be a  
10 place for families to live and businesses to thrive,  
11 we need reliable, safe, clean and affordable energy.  
12 Nuclear has been providing much of this energy in  
13 Virginia for the last 30 years and it's been doing it  
14 safely and economically. As we move forward, we will  
15 need all forms of non-polluting energy to cover our  
16 current energy needs, not just the renewables, not  
17 just nuclear, but all of them.

18 We also need to embrace conservation,  
19 continue to develop our renewable energy supplies and  
20 employ safe, clean nuclear energy as a continued part  
21 of balanced energy mix. That's why I support the idea  
22 of expanding the use of nuclear energy in Virginia  
23 particularly at North Anna Power Station. Thank you.

24 (Applause.)

25 FACILITATOR CAMERON: Okay. Thank you,

1 Michael. Is George Cristus or John Besta here? Okay.  
2 The next three speakers, Ron Mickens, Kirsten Breeden  
3 and Bill Campbell and this is Ron. Great. Thank you.

4 MR. MICKENS: Good evening everyone. My  
5 name is Ron Mickens. I'm a safety specialist with  
6 Dominion at the North Anna Power Station. I've been  
7 a safety specialist for the past three years. Prior  
8 to that, I was an armed security officer at the North  
9 Anna Power Station for almost 11 years and that's my  
10 topic. This will be within three to five minutes.  
11 Okay?

12 (Laughter.)

13 MR. MICKENS: So let's talk about security  
14 just for a second. Is security important at the North  
15 Anna and nuclear power stations? You bet it is. Let  
16 me break this down just a little bit here. Let's talk  
17 about the individual security officer and what he goes  
18 through to be a security officer.

19 When he's hired, he or she is hired, they  
20 go through nine weeks of intensive training just to be  
21 on shift. After that, they're put with a mentor for  
22 40 hours minimum. They receive 120 hours after that  
23 of continuous training related only to security. All  
24 of this doesn't include all the drills that are run at  
25 North Anna. No, it doesn't.

1           Our hardware, our software, our detection  
2       devices are state-of-the-art. For obviously reasons,  
3       I can't go into a whole lot of detail about this. I  
4       really can't, but I will say this about the security  
5       force and the security department at the North Anna  
6       Power Station. The security force is a formidable  
7       force. Our security officers are motivated. They are  
8       enthused. They are physically fit. They have to pass  
9       a physical fitness test once a year. It is not an  
10      easy test. No it's not.

11           As a landowner here in Louisa, I recently  
12      purchased land, five acres I'm proud to say. Can't  
13      afford to put a house on it just yet with a kid in  
14      college, but we will soon.

15           (Laughter.)

16           MR. MICKENS: Looking at a map, an  
17      overhead map, I live approximately five and a half  
18      miles from the power station. And I wasn't going to  
19      say this but I'm going to say it. My wife and my  
20      daughters mean more to me than life itself and I feel  
21      very comfortable moving five and a half miles from the  
22      North Anna Power Station. Okay. Thank you.

23           (Applause.)

24           FACILITATOR CAMERON: Thank you very much,  
25      Ron. And this is Kirsten.

1 MS. BREEDEN. Kirsten.

2 FACILITATOR CAMERON: Kirsten. I'm sorry.

3 MS. BREEDEN: My name is Kirsten Breedon  
4 and I'm also an employee of Dominion Virginia Power as  
5 well. I actually work in the Radiation Protection  
6 Department for the last four years, but I'm not here  
7 to talk about Dominion's policies. I'm here to talk  
8 for me.

9 I've been employed for four years and  
10 that's not a very long time, but my father has worked  
11 for the company for 30 years. So I've grown up with  
12 Dominion. Before North Anna, I knew several things  
13 about the company. It was close to home, it paid  
14 rather well and it gave us a lake to play in. I grew  
15 up on the island at North Anna.

16 It was only when I came to work here that  
17 I learned the more important aspects of the company,  
18 one of those being their commitment to safety.  
19 Dominion has set high standards for safety throughout  
20 their fleet, personnel safety, industrial safety and  
21 that which directly affects my department and what I  
22 do radiological safety. High standards naturally mean  
23 high expectations and I think that we at North Anna  
24 meet and exceed those expectations when it comes to  
25 our radiological safety.

1           When it comes to our occupational  
2 exposure, our Unit 2 has the second lowest radiation  
3 exposure in the nation for our type of reactor and  
4 Unit 1 has the ninth lowest exposure. That's speaking  
5 pretty good for us.

6           As for public dose, it's minimal. Natural  
7 sources of radioactive, medical and dental x-rays for  
8 example, account for 82 percent of just radiation  
9 exposure to the average man, whereas nuclear power  
10 only accounts 0.1 percent. Nuclear power is a safe  
11 producer of electricity and Dominion is one of the  
12 best to do it.

13           But our successes here at North Anna  
14 aren't only important to me because I work here.  
15 They're important to me because I live here as well.  
16 My kids swim in the lake. I fish from the shores. We  
17 play on the fields. North Anna's commitment to safety  
18 directly affects me just as it does you and every  
19 other member of the community. And if Dominion does  
20 build Unit 3, I believe it will only strengthen our  
21 pursuit of excellence and dedication to this  
22 community. Thank you.

23           (Applause.)

24           FACILITATOR CAMERON: Thank you. And Bill  
25 Campbell.

1 MR. CAMPBELL: How are you doing? My name  
2 is Bill Campbell. I'm employed at Dominion Virginia  
3 Power at North Anna. I've been there for six years as  
4 an operator, nonlicensed operator. Before that for 18  
5 years, I was a contract health physics technician and  
6 had the opportunity to work at several nuclear plants  
7 on the east coast.

8 First off, I would like to thank everybody  
9 for coming here, for or against, however you want to  
10 do. This is America at its finest. God I love this  
11 country.

12 Now that being said, having worked at  
13 Virginia Power, the reason I stopped on the road  
14 contract work and came here was two reasons. (1) I  
15 loved the North Anna area and (2) I love the people at  
16 North Anna. Having worked all over the east coast,  
17 these are some of the greatest people that really care  
18 about what they do. They care about the environment.  
19 They care about the lake and everything. They care  
20 about how they do their job.

21 For the whole -- I first came here in  
22 1984. For the whole time that I've been here, the  
23 times I came here, they have always helped the  
24 community and the environment. We have put fish  
25 structures in. We've helped stock the lake. We've



1 done everything we could to make the lake a viable  
2 resource for the community to use.

3 That being said, the cooling lagoon was  
4 designed as a cooling lagoon and that's where I used  
5 to live is on the hot side just like you people and I  
6 love the hot water. It was great in July. Ninety-  
7 eight degrees is little tough right away, but that was  
8 all right. I just dove six feet under. But I have  
9 now since moved to Louisa. I have three children that  
10 go to the high school right across the driveway here  
11 and I would never do anything to endanger them or my  
12 family.

13 We have always been and always will be a  
14 clean, safe, reliable, cheap energy provider and we  
15 have expanded our nuclear portfolio and Wall Street  
16 hasn't really hurt us that bad about that, you know,  
17 and it is about money and it is about what's good for  
18 the community, not just a group community.

19 Evaporation is a concern and we do have  
20 viable wind power. That is a viable part. How much?  
21 How much can we get from wind? What's the impact of  
22 wind going to be on the bald eagle population when  
23 they fly into a turbine which they've had a problem  
24 with at the turbine farm in West Virginia of birds  
25 flying into the turbines?

1           There are pros and cons for everything,  
2           but it's what's good for the whole. We just set three  
3           records in the last three weeks, two of them one day  
4           apart about energy usage. Virginia Power is committed  
5           to providing safe power for this country. We have  
6           invested a huge amount of money in a new switchyard  
7           and reliability on the grid. So when you go home and  
8           flip on your light switch your lights on or when you  
9           turn on your air conditioner up, your air conditioning  
10          comes on.

11           Is there something we all can do to help  
12          the environment? Yes there is. But I firmly believe  
13          that nuclear power is going to lead the way in the  
14          21st century until there is something viable, better  
15          for the majority of the power we consume because we  
16          consume a lot.

17           That being said, thank you very much and  
18          have a great evening.

19           (Applause.)

20           MR. CAMERON: Our next four speakers,  
21          we're going to go first to Rebecca Ferris, and then  
22          we're going to go to Rick Parrish, Jerry Rosenthal,  
23          and Kelly Taylor. And this is Rebecca Ferris.

24           MS. FERRIS: Thank you. I'm not up on a  
25          lot of the technology and everything that's going on,

1 but I would like to react to everything I've seen and  
2 heard tonight. A lot of people have left already, but  
3 just for my edification, would people who work for  
4 Dominion, or who have ever worked for Dominion, or who  
5 in any way make their living associated with nuclear  
6 energy raise your hands, please? You all got a dog in  
7 the fight. Well, so do I. Many of you, maybe like I,  
8 were raised in the 1950s and the 1960s. We were  
9 taught that there were some -- that in the atom, we  
10 would have the answer to all of society's needs for  
11 clean, safe, cheap, and unlimited energy. What I  
12 realized in the last couple of years - I'm a school  
13 teacher and I've been studying this - what I realized  
14 in the last couple of years is that there is no magic  
15 in fissioning the atom. There is horrible death,  
16 there is the potential for complete planetary  
17 destruction, and there is heat. Apparently, that's  
18 what we're talking about. Apparently, there is an  
19 enormous amount of heat associated with the fissioning  
20 of the atom; many, many times more heat than is needed  
21 to boil water, because as I understand it, that's what  
22 all this is about. That's what we're talking about.  
23 We're talking about boiling water, boiling water that  
24 turns into steam, that turns a turbine, that creates  
25 electricity. Haven't improved much on that in the

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 last 150 years, huh?

2 I am not anti-nuclear. I am pro life. We  
3 are not against electricity. We are not against folks  
4 making a living. We are not against counties having  
5 a viable tax base. When did we all buy into this idea  
6 that having enough energy to meet our needs meant that  
7 we also had to become a terrorist threat, that we had  
8 to face terrorist threats?

9 These nuclear reactors are cocked and  
10 loaded nuclear bombs, essentially. When did we have  
11 to become -- you know, all the mocking and everything  
12 that I've seen tonight and the name calling and stuff,  
13 I just don't know if it has a place. And like I said,  
14 I'm just a regular person, but I understand some of  
15 this. We don't need to have lethal poisoning for  
16 millions of years just to boil water. We don't have  
17 to have our children, and our futures dying of  
18 leukemia and cancers just to boil water. This is not  
19 an either/or proposition. We can do both. We can  
20 have our electricity, and have a safe world.

21 Do you really believe that if we shut down  
22 nuclear today, that all of us would end up living in  
23 dark caves rubbing sticks together to make fire? Is  
24 that what you're trying to tell us? I don't buy that.  
25 This North American young generation nuclear - these

1 people speak with pride of their careers, and of their  
2 education, and I truly believe that they are Americas  
3 brightest, and Americas best. And I really believe  
4 that if they put their minds to it, they could figure  
5 out a different way to boil water. Don't you think  
6 they're smart enough to do that? I do. I believe  
7 with all my heart that they're smart enough to come up  
8 with a new way to boil water.

9 How do you explain the fact that we seem  
10 to be more willing to protect our fragile psyches from  
11 looking honestly at the horror that we are creating,  
12 than doing everything that we can to protect our  
13 babies? We have to stop hiding behind oh, we'll fix  
14 it tomorrow. Let's let another generation pay for it,  
15 or accidents never happen. I have never seen such a  
16 rosy scenario painted for any event in life than what  
17 I've seen tonight; impact is negligible, no problem  
18 whatsoever in any way, shape, or form. You know, I  
19 don't really understand that, because no matter how it  
20 comes, no matter if it is through the destruction of  
21 our DNA, no matter if it is through poisoned air and  
22 water, no matter if it's through a terrorist bomb, the  
23 end game of nuclear is death, and we can do better.  
24 I truly believe that.

25 You can fill a thousand rooms with

1 Dominion, Virginia Power employees. You can throw  
2 acronyms around all day long. You can draw a million  
3 posters with flowers coming out of cooling towers, but  
4 there aren't enough green and white balloons in the  
5 universe to make it true that nuclear is safe, and  
6 that nuclear is clean.

7 We live in an era of perverse cynicism.  
8 We have companies that create sterile seeds. We have  
9 governments that wage war in the name of peace, and we  
10 have perfectly bright Americans who want to stand up  
11 here and talk about nuclear as clean and green. All  
12 this is about boiling water, and to do what we have  
13 done with nuclear is like trying to cut butter with a  
14 chain saw.

15 I noticed tonight, and I'll finish with  
16 this, that my question about what happens when the  
17 towers don't cool, and what happens when the safety  
18 system that's in place that's supposed to take care of  
19 what happens when the towers don't cool don't work?  
20 What happens then? My question wasn't answered, and  
21 I wonder if it's because the truth is that when those  
22 systems fail, what we will face is a nuclear disaster  
23 that each and every one of us will have to face.

24 MR. CAMERON: Thank you, Rebecca. I would  
25 just repeat the one answer that was given; which was,

1 when the cooling systems are not working, the plant  
2 has to shut down.

3 All right. Rick Parrish. Jerry  
4 Rosenthal.

5 MR. ROSENTHAL: Hi, I'm Jerry Rosenthal.  
6 I've been at this longer than probably anybody in the  
7 room, and I just want to say I'm a 30-year Louisa  
8 resident. I'm a fifth generation Virginian. I'm a  
9 Dominion shareholder, and I spoke at the first Earth  
10 Day, and my speech was for nuclear power. I was wrong  
11 then.

12 I want to deal quickly with some general  
13 stuff about the nukes, and then get on to our subject  
14 because I don't want to take up a lot of time. Nukes,  
15 if they're safe, get your own insurance, very simple.  
16 If the nuclear plant is safe, get private insurance.  
17 Right now, it's coming out of my pocket. If it's  
18 safe, get it yourself. If it's cheap, don't take any  
19 government subsidies, build it. I would urge Dominion  
20 to go ahead and do it, just don't take my taxpayer  
21 money. If it's good, build it. If it's clean, take  
22 responsibility for your own waste. If I had an  
23 outhouse, I got the privy, I know where my waste is  
24 going. Let Dominion take it. When they give it to  
25 the government, it's terrible. The federal government

1 has been an abject failure 100 percent of the time,  
2 not quite, every DOE project dealing with waste has  
3 created a mess. I don't want it to go to them.  
4 Dominion, at least, is safe. It stays there. But for  
5 those people who live around the lake, just think of  
6 this. It's there for good. This is our legacy, and  
7 people want to say not in your backyard. It's in my  
8 backyard. I accept it, but everybody in this room  
9 should accept it, too. It's our's, and we've got it.

10 Last, nuclear power is nuclear  
11 proliferation. You want to talk about this - the  
12 current plants in North Korea, Pakistan, and Iran are  
13 all the products of clean, safe, reliable, wonderful  
14 nuclear power. Does everybody like where it is?  
15 We'll keep that.

16 Now on to our current NRC thing. I notice  
17 the mission of the NRC - to protect the public health  
18 and safety, to promote the common defense, and protect  
19 the environment. For a long time I felt that the NRC  
20 was doing this, but they've moved to be a rah-rah club  
21 for the nuclear industry. And they've moved away from  
22 our common goal, to protect us, our health and safety,  
23 our defense.

24 Anybody with Defense would say you don't  
25 build another one of these potential targets. You



1 protect the environment? You can't protect the  
2 environment by creating the most lethal poison that's  
3 going to be around for 100,000 years. The engineers  
4 say we know the answers, the answers are clear, so  
5 they went to the National Academy of Sciences, and  
6 they say how long does nuclear waste last? And they  
7 say it's dangerous for 100,000 years. That's the  
8 scientific answer, that's a little math that you can  
9 work out, but that doesn't work with the NRC, it  
10 doesn't work with the agencies. They can't figure out  
11 100,000 years, so they're going to Congress, and  
12 they're going to get Congress to pass a law, and you  
13 know that the politicians are brilliant scientists.  
14 And what they're going to declare is it's not 100,000  
15 years, it's 10,000 because they can deal with 10,000,  
16 but they can't deal with 100,000. So we're going to  
17 solve the problem by having Congress pass the law. I  
18 hope it makes you all feel better. It doesn't make  
19 sense.

20 Evaporation issues at the lake - we've got  
21 this evaporation. One thing that comes to my mind  
22 that we haven't talked about - the water is going up.  
23 What else is going to be evaporated beside the water?  
24 We know we have PCBs in the lake. Is this a potential  
25 source, to put the PCBs out? How that other pollutant

1       setter in the water, are they going to be spread out  
2       into the atmosphere?   We've got the lowered lake  
3       levels in the lake downstream.

4               When we're doing these things, we need to  
5       be thinking about the whole situation.   The young  
6       engineers and all the other pro nuclears have jumped  
7       up here and said whew, this is a great idea.   Well, if  
8       you got their comments from last time, it was a great  
9       idea last time when it was going to ruin the warm side  
10      of a lake.   They haven't found a nuclear plan they  
11      don't like.

12              Whew, we've got a weird thing.   And Louisa  
13      County, the officials are falling all over themselves,  
14      and all the guys oh, yeah, we love it, love it, love  
15      it, tax revenues.   We've gotten \$212 million from  
16      Dominion, and how much has Louisa County saved?  
17      Anybody know the answer?   Zero.   Two hundred and -- if  
18      you won the lottery, I think you would have put aside  
19      a hundred bucks.   And how much have they planned to  
20      save?   Zero.   So it's a windfall, but they're blowing  
21      it.   We need to do better.   We need to do better.

22              The NRC scientists should be embarrassed.  
23      They also approved this plan the first time.   All of  
24      this information was out about the water temperature  
25      on the warm side of the lake.   It was there, and they

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 said (panting) yeah, yeah, yeah, they liked it, we  
2 like it.

3 (Laughter.)

4 MR. ROSENTHAL: A big thank you has to go  
5 out to the Friends of Lake Anna and Harry Ruth.  
6 They've done an excellent job of bringing these issues  
7 up, getting them discussed and doing it. Also, these  
8 ESP is for two new units, and I read that people say  
9 well, one might be okay, but the second, that doesn't  
10 make -- that's out of the question. This is your last  
11 chance. This is the deal. If they approve it, you  
12 get two. You don't get one, you get two.

13 And, lastly, again I would like to thank  
14 the people for coming out, the citizens and everybody,  
15 for taking their time and paying attention to what  
16 really matters here in Louisa County.

17 (Applause.)

18 MR. CAMERON: Thanks, Jerry. This is Kelly  
19 Taylor. And then we're going to go to Delbert Horn  
20 and Gina Gasadei, and Sylena Smith. Kelly Taylor.

21 MS. TAYLOR: That is a really tough act to  
22 follow. That was great, Jerry.

23 My name is Kelly Taylor, and I work at the  
24 power station. I am a resident of Louisa County.  
25 Although, I'm wearing this lovely green tee shirt for

1 North American Young Generation Nuclear. For the  
2 record, my remarks do not reflect North American Young  
3 Generation Nuclear, they do not reflect Dominion, they  
4 are my own.

5 I have learned a lot to sit here and  
6 listen this evening. I really appreciate Harry Ruth's  
7 remarks, in particular, because what I heard him say  
8 is that they are all in favor of new nuclear, as long  
9 as the cooling towers are invisible, make no noise,  
10 cause no evaporation, and don't increase any of the  
11 temperatures in the lake. Our engineers that I have  
12 met at Dominion are very, very good, but I don't think  
13 they're that good. So you have to compromise  
14 somewhere; what are you in favor of? It was a real  
15 shock to me to hear that Public Citizen is not anti-  
16 nuclear. I think I'm sure that I misunderstood what  
17 Melissa Kemp had to say about that.

18 As far as the waste issue goes, many of  
19 you have seen the little plastic models that they have  
20 of a uranium pellet that is made from the uranium  
21 dioxide from which the fuel is composed. It's a  
22 ceramic. It's a solid substance. That's what shape  
23 it's in when it goes into the reactor, that's what  
24 shape it's used to produce tremendous amounts of  
25 power, and it's that same shape when it comes back out

1 of the reactor, it's stored in spent fuel casks, and  
2 left as a repository, unfortunately, waiting for the  
3 government to fulfill its obligation to take use of  
4 the used fuel, in the hope that one day it's not  
5 waste, it's not spent fuel, it's not something we can  
6 do nothing with. It's an energy repository, 95  
7 percent of the energy that's in that fuel pellet is  
8 still recyclable, and we can use it again.

9 And when you say that you want an instant  
10 cure to make this stuff go away, you are hurting  
11 future generations that can benefit from the energy  
12 that's still stored in that pellet. You don't want  
13 some place you can put it, and never touch it again.  
14 You want to be able to bring it back and recycle it  
15 for when it is one of the finer energy sources that  
16 are available. Right now we don't recycle the fuel  
17 because it's not cost-effective. There's enough  
18 uranium available that it's cheaper to use the once-  
19 through fuel production than it is to recycle what's  
20 out there.

21 As far as the health issues, for those of  
22 us who work at the power station, we are not doing it  
23 out of ignorance. We are not doing it out of neglect,  
24 and we're certainly not doing it out of a self-serving  
25 interest to harm the rest of the community. We

1 understand the health effects of radiation. And if  
2 you want to talk about the health effects on a  
3 community population, then you need to be fair, what  
4 kind of issues you're evaluating. You're not looking  
5 fairly at, for example, the medical sources of  
6 radiation, which we've already heard this evening are  
7 tremendously higher for the impact on the population  
8 than the impact from the radiation that comes from a  
9 nuke station.

10 To be perfectly frank with you, you're not  
11 looking at the radiation that comes from fossil fuels  
12 and what's released from burning from those. It's  
13 very easy to say I want you to find a better answer,  
14 and I want to assure anybody that feels that way, that  
15 research and development of power sources hasn't  
16 discontinued. We haven't stopped, but nuclear is one  
17 of the best answers we have available today,  
18 particularly if you are concerned about the members of  
19 your community that struggle to pay their electric  
20 bill every month.

21 Now I have friends like this, and I feel  
22 for them; although, yes, renewable resources are  
23 great, and I'm a some time advocate of solar and wind  
24 in the right applications. They are very expensive,  
25 and when you start talking about low capacity factors,

1 and huge build-up of solar and wind energy resources,  
2 you're also talking about having to store the power,  
3 which makes it infinitely more expensive, and it costs  
4 the people that are my neighbors, and my friends, and  
5 the people that live in my community. Nuclear is an  
6 inexpensive source of power.

7 Now Jerry takes issue with that, and he's  
8 certainly entitled to do that. There are answers for  
9 the insurance issues. Those of you who think you are  
10 safe drivers, you are welcome to buy as much insurance  
11 as you can possibly afford. You, as a driver, don't  
12 have unlimited insurance while you drive your vehicle.  
13 You have a cap on how much insurance you provide. The  
14 nuclear industry isn't any different, except that the  
15 federal government helps assist in negotiating what  
16 that cap needs to be. The insurance companies don't  
17 provide unlimited insurance for anybody for anything.  
18 When you buy a policy, you buy X amount of liability,  
19 and that's what you pay for. And the nuclear industry  
20 is not any different from the coal industry, or the  
21 chemical industry, or the drivers of their cars,  
22 except that Congress gets involved in mandating how  
23 that insurance is apportioned.

24 I have other comments, but you've listened  
25 a lot and attentively this evening, and I thank you

1 all for being here.

2 (Applause.)

3 MR. CAMERON: Thanks, Kelly. Delbert, do  
4 you want to put your maps up? All right.

5 MR. HORN: Good evening. My name is  
6 Delbert Horn. I'm a Guchelin County resident, and a  
7 Dominion employee. But as Kelly mentioned, views  
8 tonight are my own. These are my own personal hot  
9 buttons.

10 I worked inside the fence at North Anna  
11 for five years, and can tell you after many, many  
12 hours spent in the control room, that North Anna is  
13 one of the safest, best run, and best protected  
14 industrial facility anywhere in the country. I'd like  
15 to talk tonight about a couple of studies.

16 In October 2004, Mr. Lou Zeller, on the  
17 Blue Ridge Environmental website, cited a study by  
18 Joseph Mangano, which claimed the death rate for  
19 children almost doubled in the nine counties closest  
20 to North Anna. The study examines causes of death in  
21 a 30-mile radius from the plant. This first map shows  
22 those nine counties and the 30-mile radius. Let me  
23 show this to you for a second. The nine counties  
24 closest to the plant in a 30-mile radius that the  
25 study considered. Note that Caroline and Hanover

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



1 Counties to the east and southeast were not included,  
2 even though they're within 10 miles from the plant.  
3 Green County to the west was included, although it's  
4 completely outside the 30-mile radius. The black dot  
5 to the west is the City of Charlottesville. It was  
6 included, but it's also outside the 30-mile radius.  
7 Richmond is the same distance as Charlottesville to  
8 the southeast, but was excluded, as was Fredricksburg,  
9 which is only 25 miles from the plant.

10 Five months later in March 2005, Mr.  
11 Zeller, in written comments to the NRC, cited yet  
12 another flawed health study. This one claimed women's  
13 deaths from breast cancer increased 73 percent in the  
14 ten counties closest to North Anna. If you thought  
15 this new study added Caroline or Hanover Counties in  
16 as the tenth county, you'd be wrong.

17 This next map shows the differences in  
18 green. The second study dropped Madison and Culpeper  
19 Counties to the northwest, but added Nelson,  
20 Buckingham, Cumberland, and Palatan Counties to the  
21 southwest. Nelson County is 50 miles from North Anna,  
22 yet they still ignored Hanover and Caroline Counties  
23 only 10 miles away. Strangest of all, and Lisa  
24 mentioned this, they ignored Spotsylvania County in  
25 the study, which is right across the lake from North

1 Anna. Spotsylvania has more people than any of the  
2 ten counties included in the study. Does hand-picking  
3 counties and cities like this bias the results of the  
4 study? You bet it does.

5 Ladies and gentlemen, this is what junk  
6 science looks like. After the public meeting last  
7 year, Mr. Zeller wrote the NRC saying I falsely  
8 accused him of misusing public health data. I wish to  
9 clarify. They aren't just misusing public health  
10 data, as you can see, they're playing shell games with  
11 women's and children's death statistics. It's a  
12 shameful scare tactic.

13 This misinformation is still on the Blue  
14 Ridge website today. I checked. Now Pace is a local  
15 chapter of the Blue Ridge Environmental Defense  
16 League, and they're also accountable for this fear-  
17 mongering, as well. You see, it costs a lot of money  
18 to commission junk science, and travel around the  
19 country scaring people. This is why they solicit  
20 donations on their website, but there's something that  
21 they need far worse than money. They need a simple  
22 lesson in Virginia geography. Please, send them a  
23 Virginia state map, help them out by identifying the  
24 ten counties that are actually closest to North Anna.  
25 Don't get sucked in by their junk science, or their

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 fear-mongering. Thank you very much.

2 (Applause.)

3 MR. CAMERON: Is Gina Casadei, here? How  
4 about Sylena Smith? Sylena Smith, and then we'll go  
5 to Elina Day.

6 MS. SMITH: I am Sylena Smith. I'm  
7 actually a Master of Science in Engineering student at  
8 the Ohio State University, majoring in nuclear  
9 engineering. And I actually specialize in nuclear  
10 waste management, and I just wanted -- I know that one  
11 of the biggest complaints of the public with nuclear  
12 power is the waste that creates, and I just wanted to  
13 take a minute to put it in the scope, put it in scope  
14 what this waste is for all of you. So I have in my  
15 pocket an item about the same size as the nuclear  
16 waste that would be generated if nuclear fuel produced  
17 all of the electricity that I personally would use in  
18 my life time. You're probably wondering why my pants  
19 aren't bigger. It's because the item in my pocket is  
20 pretty small. It's not a ton of coal, it's not even  
21 a cubic foot of natural gas. All I have is my wallet.  
22 All of the nuclear waste I would generate in my entire  
23 life time is the size of my wallet after it's  
24 vitrified.

25 You see, this is because the energy,

1 nuclear energy doesn't spew its waste into the air, or  
2 spill it into the water. The residents of Lake Anna  
3 never have to breathe it, they never have to see it,  
4 they never have to smell it, you never have to taste  
5 it. And that's because with nuclear energy, we always  
6 know where the waste is. It's not the air, and it's  
7 not in the water, it's not in the local wildlife. It  
8 will never aggravate a child's asthma, or speed up  
9 global warming, and it will never disrupt the flight  
10 path of migrating birds.

11 Think of this when you consider what kind  
12 of energy you want to be your legacy for our ever-  
13 increasing demands for power. And yes, you can say  
14 that we don't need this power now, but you will need  
15 it. And we have passed peak oil production, you will  
16 need it. When I decide what I want my legacy to be,  
17 I don't want it to be a hot earth with droughts and  
18 melting ice caps, hurricanes, disappearing glaciers.  
19 I'd rather it be clean, efficient, environmentally  
20 friendly nuclear power. That's all I wanted to say.

21 (Applause.)

22 MR. CAMERON: Thank you. We're going to  
23 go to Elina Day, and then Ken Remmers, Bill Murphey,  
24 and Gary Breeden. Elina.

25 MS. DAY: Hi, I'm with Peoples Alliance

1 for Clean Energy, and I just think we should draw  
2 ourselves back to the issue at hand, which is the  
3 supplemental draft environmental impact statement,  
4 which has to do with Unit 3, wet/dry cooling tower.  
5 Okay? I mean, let's just get back to that, just for  
6 a second.

7 And I think this NRC process, here they  
8 are reviewing Dominion's proposal, and yet, they can't  
9 even answer a question as to how many temperature  
10 sensors are out there on the lake. I mean, someone in  
11 the audience had to answer that. These guys are paid  
12 our taxpayer money. NRC is supposed to be looking  
13 after our interests, not the interest of Dominion,  
14 which sometimes I question, I think they're looking  
15 after the interest of Dominion. I mean, they can't  
16 even tell us how many temperature sensors are out  
17 there on the lake. That's the issue at hand. I mean,  
18 what is this third unit going to be doing to our lake?  
19 We need to have some baseline as to what the two units  
20 that are operating are doing to the lake. I mean,  
21 it's really obvious.

22 And then the other thing I take issue with  
23 is, this person from Dominion, I don't think he's here  
24 any more. Oh, yes, you are. You tell us that we're  
25 going to need a whole lot more electrical generating

1 capacity in the future. Hey, what's the basis for  
2 this? And, also, is it Virginia that's going to need  
3 it, or are you going to be exporting it elsewhere?  
4 Well, then I say not in my backyard. I don't want to  
5 see two more nukes here in my backyard, because you're  
6 going to be using that electrical generating capacity  
7 to sell to other states.

8 The other thing I think that we - like  
9 since we're not going to be talking about this - well,  
10 one more comment about the water. Okay. We have two  
11 existing units. We do have a situation in which we  
12 have higher water temperatures because our summers are  
13 warmer. That means that there is already more  
14 evaporation. Has the evaporation rate of warmer  
15 water, because we have higher temperatures in the  
16 summers, been studied? Have downstream flows been  
17 evaluated? Has the effect of decreased downstream  
18 flows, higher evaporation rates, previous to  
19 constructing or even thinking of constructing a third  
20 unit been evaluated in the course of the last few  
21 years?

22 What's this doing to our flora, our fauna  
23 in the downstream of the York River water shed, which  
24 impacts our bay? I mean, I think these things are  
25 something that the NRC just can't flippantly abandon.

1 I mean, this is everybody's water. What if hearings  
2 were held not here in Louisa County, which benefits  
3 very greatly economically from the two reactors that  
4 are currently serving, or currently generating power  
5 at North Anna? What if we held hearings downstream in  
6 the four counties that are thinking about using water  
7 in the York River water shed for increasing numbers in  
8 their community? What if we held hearings in  
9 Charlottesville, which is a very environmentally-  
10 minded community that they, maybe Louisa thinks it's  
11 okay in my backyard, but maybe Charlottesville doesn't  
12 think that it is okay in Louisa's backyard. Maybe  
13 they don't think it's okay in their backyard. How  
14 about Fredricksburg, how about Richmond?

15 I mean, part of the NRC's mission is to  
16 protect our interest. It's also to allow us to  
17 educate ourselves by gaining information. I advocate  
18 for more hearings around the state.

19 Oh, I guess I've gone on long enough.  
20 I've just heard so many, so much garbage, like  
21 decreased dependence on foreign oil by building more  
22 nukes. Hello. Think about it. We only generate  
23 what, 2 percent of our electricity by burning oil from  
24 oil-fired plants. I mean, where's this one coming  
25 from?

1           Anyway, let's just stick to the issue at  
2           hand and our wet/dry cooling tower, and what that does  
3           to our evaporation rate, and to downstream water  
4           flows, and to flora and fauna in the York River water  
5           shed, and onward into the bay.

6           MR. CAMERON: Thank you. Ken Remmers.  
7           This is Ken Remmers, then Bill Murphey, and Gary  
8           Breedon. I guess that wasn't Ken Remmers. He's  
9           heading for the door. Here he is. Sorry.

10          MR. REMMERS: Good evening, everybody, and  
11          I'd also like to thank you all for coming, the rest of  
12          you who are still here. My name is Ken Remmers. Some  
13          of you may recognize me as the Lake Anna Civic  
14          Association's Water Quality Chairman. I'm not coming  
15          here to talk in relationship to them this evening.  
16          I'm also the Homeowner's Property Association for  
17          Waterside's President, and I'm speaking for them this  
18          evening.

19          It's a small community on the cold side,  
20          the reservoir side down by the dam, and we have some  
21          concerns about the new third and fourth reactor. My  
22          concerns, and some inconsistencies which I see in some  
23          of the documents. The first one is relative to pre-  
24          lake water flows. It's identified in the SDEIS as  
25          historical pre-dam minimum flows of 5 cubic feet per



1 second, or less. And in a letter from the Department  
2 of Fish and Gaming Inland Fisheries, they state in  
3 their July 7<sup>th</sup> letter that the pre-lake dry conditions  
4 is 12 cubic feet per second, so there's some  
5 disconnects here that I think we should straighten out  
6 in the documents.

7 Another issue is the sprayers in the  
8 discharge canal. I've spoke about this several times  
9 in the past, that in order to reduce some of the  
10 temperature that is exited at the discharge canal, we  
11 might consider using some sprayers in the discharge  
12 canal just during the time periods when the temperate  
13 really gets hot like it has been lately. Some of the  
14 temperatures that I've measured in the discharge canal  
15 exit have now exceeded 104.6 degrees, and that  
16 sprayers could be turned on during those couple of hot  
17 days or those hot weeks, and you could alleviate the  
18 problem with minimal cost.

19 Water levels and temperature for the plant  
20 operations - once again, there's some inconsistencies  
21 in the documents. Unit 3 is stated to operate until  
22 the water level drops down to 242 feet, that's 8 feet  
23 below normal level. And it can take it at inlet  
24 temperatures up to 100 degrees from the cold side, it  
25 can run up to that point. Now the other part of the

1 document says 243.5 feet instead of the 242 for Unit  
2 3, and 245.2 for the existing units. And it also  
3 states that Unit 1 and 2 can operate up to 95 degrees  
4 temperature.

5 Now these temperatures of 95 and 100  
6 degrees far exceed the variances that have been  
7 granted to Dominion in their VPDES discharge permit.  
8 We need to put some controls on the temperatures to  
9 delineate the exact values instead of just heat  
10 transfer numbers. Another item is chemicals added to  
11 the blow-down water. The blow-down water from Unit 3,  
12 which is about 13 cubic feet per second at a maximum  
13 temperature of 100 degrees. The chemicals that they  
14 talk about adding, some of them are phosphates, and  
15 this combined with the high temperatures can cause  
16 algae blooms, which we're very careful on the rest of  
17 the lake that we don't have phosphates, or try to  
18 minimize the phosphates in the water, so that's  
19 another concern.

20 The third unit cooling tower with air cool  
21 towers - overseas they use this technique, these  
22 towers, where they can't get a lot of water available  
23 in that area, so why can't Dominion use a completely  
24 air-cooled tower for Unit 3, as well as what they talk  
25 about for Unit 4.

1           The duration of the flows is another  
2 concern over the dam of 20 cubic feet per second.  
3 Once again, the document states that 20 cubic feet per  
4 second will increase from 6 percent of the time to 11  
5 percent of the time, which is like 22 days out of the  
6 year, going up to 40 days out of the year. But the  
7 Dominion state in their presentation that the 20 cubic  
8 feet per second discharge would only go from 5.2,  
9 maybe to 7 percent. And the difference really isn't  
10 explained in the document why they're different.

11           Relative to Unit 4, I don't think enough  
12 attention has been given to Unit 4, and its dry  
13 cooling. NRC needs to address this issue and  
14 Dominion's answer that new technology in the next 10  
15 to 15 years will solve the problems. It doesn't seem  
16 to be acceptable. Since the ESP is good for 20 years,  
17 why not include Unit 3 with this same technology, the  
18 technology currently used overseas and where they  
19 don't have a lot of local water source. I think  
20 Dominion should explain this new technology, and state  
21 why it would or would not work for Unit 3. And my  
22 question is, is Dominion ready to go for a COL soon  
23 after they get an early site permit, because I think  
24 the public is due an answer on this question, and  
25 Dominion should be forthwith and tell us what their

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 plans are. Thank you very much.

2 (Applause.)

3 MR. CAMERON: Thank you, Ken. You really  
4 did take us back to the document. Thank you. And are  
5 you going to submit some --

6 MR. REMMERS: Yes.

7 MR. CAMERON: Okay. More detailed  
8 comments. Bill Murphey. Bill.

9 MR. MURPHEY: Hi, my name is Bill Murphey.  
10 I live right on the lake, about 5 miles from here.  
11 I'm speaking - the remarks I'm making have been  
12 approved by the Lake Anna Civic Association, which has  
13 about 700 families around the lake, and for the  
14 Windward Coves Property Owner's Association, which has  
15 about 270 families.

16 Dominion's nuclear North Anna has been a  
17 responsible, good neighbor over the years. The  
18 Dominion staff has worked with LACA on a number of  
19 issues to our mutual benefit. Dominion has met with  
20 us a number of times with regard to the early site  
21 permit. They provided briefings to us, and they've  
22 answered a number of our inquiries.

23 Although as in any group of hundreds of  
24 people, we have members with differing opinions, we as  
25 a whole are strongly in favor of proceeding with the

1 third and fourth North Anna units. We have had no  
2 fundamental unanswered concerns running to the nuclear  
3 portions of the units, or to the accident safety of  
4 the total plant.

5 We believe, however, that there are  
6 several correctable adverse effects, and we request  
7 that these adverse effects be corrected. We recognize  
8 that the authority and responsibility to correct these  
9 effects is distributed. It's distributed between the  
10 NRC, Virginia Department of Environmental Quality,  
11 other Virginia state agencies, and Dominion resources.  
12 We asked the cooperation between all the agencies and  
13 the parties to be to correct these effects.

14 The effects that we would like to talk  
15 about are discharge water temperature, the lake level,  
16 application of Virginia law, and the evacuation  
17 problem. With temperature, we request that the water  
18 temperature at the end of the discharge canal be  
19 limited to 104 degrees Fahrenheit. The temperature is  
20 a matter of safety for the people swimming in the  
21 first lagoon. It's well documented in hot tub  
22 literature that swimming in water temperatures above  
23 104 degrees is life-threatening. We would not like to  
24 see any accident related to the operation policy of  
25 the power plant. We feel if there is an accident, NRC

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 will be involved immediately.

2 Lake level - the third unit and the  
3 existing units use lake water through evaporative  
4 flows. We request that simple, obvious steps be taken  
5 to improve the management of the available lake water  
6 during times of low rainfall. We request that the  
7 release over the dam be changed to limit it to 5 cubic  
8 feet per second for lake levels below 250 feet. This  
9 is a complicated issue. It'll require all the people  
10 involved. This limitation will have a minimal effect  
11 on downstream users, because there are other stream  
12 flows into the North Anna River about a half a mile  
13 below the Lake Anna Dam.

14 Application of Virginia law - this is  
15 another complicated question. There are a number of  
16 state regulations which relate to the health, safety,  
17 and welfare of citizens living around and  
18 recreationally using public water. These regulations,  
19 many of them would not effect the operation of the  
20 plant at all if applied to the cooling lagoons. We  
21 request that the state agencies be legally required to  
22 apply these health and safety regulations to the  
23 cooling lagoons. I mention this point here to assure  
24 that the NRC has no objection to this request.

25 Nomenclature - I notice that the NRC

1 speaker is already talking about cooling lagoons. We  
2 support the use of the terminology cooling lagoons  
3 instead of the waste heat treatment facility. The  
4 reason is that when people hear the name "waste" in  
5 the leading word of the WHTF, it immediately gives a  
6 bad name and a misleading image of the clean and  
7 recreational use of the cooling lagoons. These areas  
8 are quite attractive to people, and they're being used  
9 by a large number of people, and it's important to  
10 describe them in a way that reflects their attractive  
11 nature.

12 Evacuation - we request that Virginia DOT  
13 upgrade the roads at the lake so that they are  
14 adequate for evacuation of the current and expected  
15 populations. We request that VDOT, Dominion, and the  
16 public develop a traffic management plan relevant to  
17 evacuation.

18 We believe that the noise issue is  
19 currently covered by the Louisa County Noise  
20 Ordinance, as measured at adjacent non-Dominion  
21 properties. The Lake Anna Civic Association asks  
22 these requests and recommendations be implemented.  
23 Thank you.

24 MR. CAMERON: Thank you very much, Bill.  
25 Thank you.

1 (Applause.)

2 MR. CAMERON: Is Gary Breeden still here?  
3 Gary, and then we're going to go to Richard Ball. We  
4 have several other people, but I think we'll be  
5 finished within the next half hour or so.

6 MR. BREEDEN: Hi, my name is Gary Breeden.  
7 I work at the North Anna Control Room. I am also a  
8 Louisa County resident, and President of the Aspen  
9 Homeowner's Association. In May, we had our  
10 homeowner's association meeting, and we talked about  
11 the cooling tower change for the new units. And as  
12 our homeowner's association, I've been given approval  
13 to say that we fully support implementing and  
14 constructing the new power plants.

15 We are located on the first lagoon, so  
16 we're the ones that are going to be most directly  
17 affected by the temperatures that these cooling towers  
18 should alleviate for us. That's all I have to say.

19 (Off mic comments.)

20 MR. CAMERON: Okay. This can be off the  
21 record, as you're asking about that. Thank you.  
22 Richard Ball. And then we're going to go to Keith  
23 Cheatham. Richard.

24 MR. BALL: Yes. I'm Richard Ball. I'm  
25 the Energy Issues Chair of the Virginia Chapter of the



1 Sierra Club, and I will try to stick to the issues at  
2 hand here, which is the supplemental DEIS, and the  
3 adequacy of that DEIS. And, particularly, the issue  
4 of the changes that have been made in the cooling  
5 system.

6 I think the key issues are, we had  
7 previously testified on a number of subjects, but we  
8 particularly found previously that we felt the DEIS  
9 was deficient in a number of respects. And one was we  
10 didn't feel it had sufficient analysis of the impacts,  
11 the downstream impacts of the water withdrawals. And  
12 I appreciate that the changes that have been made in  
13 the design of the cooling system for Unit 3 may have  
14 been made for legitimate reasons to try to address a  
15 lot of the concerns of the residents and others about  
16 the lake temperature, and entrainment and the cooling.  
17 I wouldn't want to criticize that. But, nonetheless,  
18 the consequence is that we've gone to a system that  
19 could potentially have even greater impacts downstream  
20 in terms of releases.

21 Let me just give a couple of numbers. The  
22 previous water consumptive use due to Unit 3 was  
23 estimated at 11,700 gallons per minute. The new plan  
24 with the combined wet and dry evaporative tower is two  
25 modes of operation. In the normal so-called EC mode,

1 the water use increases to 22,298 gallons per minute.  
2 That's approximately 90 percent greater than with the  
3 once-through cooling. There's an additional mode  
4 that's used when the water becomes - in drought  
5 situations when the water becomes more scarce, called  
6 the MWC mode. That uses 15,384 gallons per minute,  
7 which is still 31 percent greater than the consumption  
8 that would have occurred with the once-through  
9 cooling, so we seem to have made a trade-off. We've  
10 increased the total water use substantially in order  
11 to be able to get the benefits of reducing the  
12 immediate lake impact.

13 What I had said before, and this is, I  
14 think, consistent with what the Virginia Department of  
15 Environmental Quality has been saying - let me just  
16 read a quote from March 2005 findings, which was, of  
17 course, appropriate to the old system, the previous  
18 proposal. "The DEQ's Division of Water Resources  
19 commented previously in regard to its concerns for the  
20 adequacy of Lake Anna as a source of cooling water for  
21 a third nuclear reactor. These concerns remain." And  
22 basically, they and we - and the Sierra Club both  
23 raise the issue of whether Lake Anna has sufficient  
24 water resources to support cooling, consumptive  
25 cooling use for a third nuclear reactor. And I think

1 these figures on water use testify to that.

2 Now the problem is that under either of  
3 the regimes, the once-through cooling or this regime,  
4 it's estimated that the percentage of time when the  
5 flow has to be reduced from the normal minimum of 40  
6 cubic feet per second down to 20 cubic feet per  
7 second, that increases from about 6 percent to 11  
8 percent with the addition of Unit 3. And that is  
9 really kind of the nub of the problem.

10 To make a long story short, what our  
11 concern is, that the DEIS or the SDEIS, the  
12 supplemental, has not adequately evaluated, or  
13 properly evaluated the ecological impact of that  
14 change. And that is a principal concern. All the  
15 other things, I won't try to talk about tonight. So  
16 we're still concluding that the supplemental DEIS has  
17 not -- is still deficient, and not adequately  
18 analyzing that issue, as well as some other issues  
19 that we've raised previous, and I won't go into  
20 tonight.

21 One question is whether Lake Anna is a  
22 suitable site, or at least whether you need other  
23 alternatives to be discussed for cooling Unit 3,  
24 including the extreme of going to dry cooling, which  
25 is what you're already proposing for Unit 4. The

1 question is, if it's good enough for Unit 4, why isn't  
2 it good enough for Unit 3? Now I think I'll close  
3 with that.

4 MR. CAMERON: Okay. Thank you. Will you  
5 submit some --

6 MR. BALL: I will. Thank you.

7 MR. CAMERON: -- comments to us, and it  
8 would be interesting to see if there is dry cooling  
9 for the other unit, whether that would alleviate the  
10 problems that you identified. Thank you very much.  
11 Keith.

12 MR. CHEATHAM: I'm not an engineer. Good  
13 evening. My name is Keith Cheatham. I'm the Vice  
14 President of Government Affairs for the Virginia  
15 Chamber of Commerce. I'm speaking this evening to  
16 register our strong support for Dominion's early site  
17 permit application for the North Anna Power Station  
18 site, and the NRC staff's preliminary recommendation  
19 that the permit be issued. I will keep my comments  
20 brief, but I would ask that my 200-page letter be  
21 entered into the record. If anybody would like for me  
22 to read that tonight at 10:30, I can do that. I'm  
23 kidding.

24 The Virginia Chamber of Commerce is  
25 Virginia's largest and most diverse business

1 organization. Its membership includes Fortune 500  
2 firms that do business worldwide, to small family  
3 firms that do business right here in Louisa County.  
4 Nuclear energy is extremely important to the citizens  
5 and businesses in the Commonwealth of Virginia.  
6 Dominion's nuclear stations in Virginia have provided  
7 and continue to provide a significant portion of  
8 electricity used in this state.

9 The low-cost energy produced from these  
10 generating facilities has enhanced the state's  
11 economic climate, enabling Virginia to attract new  
12 business growth. Existing companies have also  
13 benefitted from a lower cost energy environment that  
14 has allowed them to remain competitive and expand  
15 operations in the Commonwealth.

16 Dominion is among the very top nuclear  
17 operators in the country, and the North Anna Power  
18 Station is one of the nation's most efficient nuclear  
19 generation facility. The lack of affordable, reliable  
20 energy in other parts of the United States has already  
21 had a negative impact on the economies of those areas.  
22 Because more base load electricity will be required in  
23 the future, it is important that nuclear energy  
24 remains an option to meet this growing demand.  
25 Virginia businesses must have access to reliable, low-

1 cost energy if they are to remain competitive in a  
2 global marketplace.

3 The construction and operation of an  
4 additional unit at North Anna would also result in  
5 significant economies, economic benefits for the  
6 region, and for the Commonwealth. Dominion estimates  
7 that 400 permanent employees will be required to  
8 operate the new facility. These are high-paying jobs,  
9 as we've heard earlier, with annual salaries over  
10 twice the average salary level in the region.

11 The Virginia Economic Development  
12 Partnership, which is a state agency, estimates that  
13 1,500 additional jobs would be created due to economic  
14 activity associated with the plant. The permanent  
15 workforce and the construction workforce estimated at  
16 2,000, will provide significant opportunities for  
17 local, regional, and state businesses to grow and  
18 prosper.

19 Additionally, the direct and indirect tax  
20 revenues generated by the project will provide over  
21 \$70 million per year to local and state coffers, as  
22 estimated by the Virginia Economic Development  
23 Partnership. This will provide much needed funding  
24 for schools and other critical infrastructures in the  
25 region.

1 Dominion's nuclear facilities have an  
2 excellent safety record. North Anna Power Station has  
3 been recognized by the NRC, the Institute of Nuclear  
4 Power Operators, Operations, and the World Association  
5 of Nuclear Operators as a top-performing nuclear  
6 station in the areas of safety and efficiency.

7 Dominion also is an excellent  
8 environmental steward, and has demonstrated that it is  
9 a good neighbor by agreeing to spend \$200 million on  
10 a cooling tower system to cool a potential third  
11 reactor at the North Anna site. Dominion made this  
12 commitment to satisfy concerns expressed by state  
13 regulatory agencies, and local citizens about the  
14 potential thermal impacts on Lake Anna and the waste  
15 treatment facility from using the lake for once-  
16 through cooling.

17 NRC has performed a rigorous review of the  
18 potential environmental impacts associated with  
19 operation of additional reactors at the North Anna  
20 site. The Virginia Chamber commends the agency staff  
21 for its meticulous review of Dominion's early site  
22 permit application, and supports its conclusions.  
23 Thank you for your time and attention.

24 MR. CAMERON: Thank you very much, Keith.  
25 Bill McGrath, Dennis Schable, Paul Genoa, and Mike

1 Beers. Bill McGrath here? How about Dennis, Dennis  
2 Schable?

3 MR. SCHABLE: I did have some prepared  
4 comments, but in the interest of brevity, I'll mail  
5 them in. But I have a question, and if it's within  
6 Roberts Rules to ask the Dominion representative - and  
7 I don't work for Dominion, but I do own your stock -  
8 my question is, if wet/dry cooling is better than  
9 once-through cooling, and your fourth reactor is  
10 planned for dry cooling, why don't we have dry cooling  
11 for the third reactor? If you are a regulated  
12 industry, and your charges are based on your cost to  
13 some great extent, your costs are more, your rates are  
14 greater, you still make money, everybody's happy, so  
15 why don't we go with dry cooling for three and four?  
16 That's my question.

17 MR. CAMERON: Okay. Thanks, Dennis. And  
18 I'm just going to let them do that off-line with you.  
19 And I'm sure other people have that same question.  
20 But thank you very much. Paul Genoa, and then we'll  
21 go to Mike Beers, if he's still here. This is Paul  
22 Genoa.

23 MR. GENOA: Well, thank you for the  
24 opportunity to be here. As a way of introduction, my  
25 relevant academic training is in the area of the



1 environment. I received my Bachelor of Science degree  
2 in Environmental Health from Colorado State University  
3 from the College of Veterinary Medicine and Biomedical  
4 Sciences. And in my professional career, I focused on  
5 the environmental impacts of energy systems. That  
6 professional career has spanned 25 years, with  
7 experience working on both the technical, regulatory,  
8 and policy issues associated with the environmental  
9 impacts of delivering energy systems. Just  
10 anecdotally, I've worked for three different public  
11 utility companies, Consumers Energy in Michigan  
12 working at the Big Rock Nuclear Plant; Arizona Public  
13 Service, working for the Palo Verde Project; and  
14 Florida Power Corporation, working for Crystal River  
15 Nuclear Plant. And yes, my wife, Denise, and my son,  
16 Matthew, and I lived within six miles of the Crystal  
17 River Nuclear Plant for six years, and we're very  
18 happy and comfortable living there. Crystal River is  
19 a wonderful place.

20 But to the issue at hand, I am familiar  
21 with the hybrid cooling system proposed by Dominion in  
22 its modified early site permit, and it seems to me  
23 that it's a responsive approach by Dominion that  
24 mitigates the thermal impacts of the plants, when  
25 those impacts are critical, and allows for the maximum

1 efficiency of those plants under normal conditions.  
2 And I am confident that these permits will be  
3 approved, ultimately, and I encourage Dominion to  
4 pursue Units 3 and 4.

5 Since I am a Dominion customer, my home is  
6 Ashburn, Virginia, and my home relies on the  
7 affordable, reliable nuclear energy that's provided by  
8 North Anna. And as a trained environmentalist, I know  
9 that nuclear energy has one of the smallest life-cycle  
10 environmental impacts. And it is comparable with  
11 those impacts associated with other renewal energies,  
12 but at a much lower cost, and one that operates 24-  
13 hours a day, seven days a week, 365 days a year. And  
14 that's why I truly support this permit request. And  
15 with that I'll keep it brief, and say goodnight.  
16 Thank you.

17 (Applause.)

18 MR. CAMERON: Thank you very much, Paul.  
19 Is Mike Beers here? He's gone. Okay. Dr. Lee  
20 Anthony. Dr. Anthony, you've been very patient. Dr.  
21 Anthony.

22 DR. ANTHONY: Thank you very much. I  
23 appreciate the opportunity to meet with you, and to  
24 discuss a few thoughts, most of which are rather  
25 strategic, and they will be relatively short, so we'll

1 go with that.

2 I come from Physics Associates. I'm a  
3 member of the Virginia Health Physics Society, and  
4 academic background - physics, chemistry, nuclear  
5 engineering, and medical physics. We have spent about  
6 50 years now with our radiation, radiation safety, and  
7 these various concerns, all of which tie-in with the  
8 general subject here.

9 I would like to speak in favor of moving  
10 nuclear energy forward as rapidly as we can. Various  
11 speakers here this evening have referred to, for  
12 example, the situation with respect to the OPEC  
13 countries, the oil and gas situation, and things are  
14 looking much worse across the pond that they have been  
15 for a long time. We need energy independence, and  
16 nuclear is the way to go. It is a clean form of  
17 energy.

18 We have the capability, and we need to  
19 remember, to remind ourselves that the first nuclear  
20 reactor was American. And America produced the first  
21 commercial nuclear energy, but now as one of the  
22 earlier speakers mentioned, about 20 percent of our  
23 energy is nuclear. If you go over to France, I  
24 believe, Elina, you mentioned France there, and France  
25 is producing about 75 to 80 percent of their energy

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701

1 from nuclear. We have dropped the ball. We have  
2 gotten, if you'll pardon the pun, behind the power  
3 curve on that one, so we need to really take a look at  
4 where we're going with that.

5 One of the sticky subjects, which was  
6 brought up tonight, was disposal of radioactive waste,  
7 and two comments there. One speaker mentioned the  
8 fact that radioactive waste serves as a source of  
9 heat energy. We have to remember that, to wake up and  
10 to use that source of energy. It can used as a pre-  
11 heating device or whatever, and as far as burning the  
12 stuff in Yucca Mountain or wherever, remind me where  
13 did the uranium come from to begin with; from in the  
14 earth, so we need to keep that fact in mind, as well.

15 One of the speakers was concerned that we  
16 might be, in the State of Virginia, exporting  
17 electricity at some time in the future. Well, you  
18 know, one of the greatest concerns in the western part  
19 of Virginia these days has been the fact that we have  
20 a line coming in from West Virginia bringing  
21 electricity into the state, not the converse.

22 Okay. We do need, in the nuclear  
23 industry, the NRC and all of us involved, to push  
24 forward the concept of the generic plans for reactor  
25 plants, so that reactor plants can be built swiftly,

1 efficiently, consistent with good, safe practices.  
2 That is coming forward, but needs to be pursued much  
3 more rapidly.

4 Bottom line here is, once again, we're  
5 looking at the opportunity to have a good, clean  
6 source of power, a source of power which has no acid  
7 rain associated with it, which has no - remember -  
8 radioactive ash residue from it, and so forth. So  
9 this is the way that we will go in the future, and I  
10 would like to speak very favorably for the additional  
11 of the two extra units here in North Anna, and indeed,  
12 for the entire nuclear power industry overall. Thank  
13 you so much for your time.

14 MR. CAMERON: Thank you.

15 (Applause.)

16 MR. CAMERON: Kevin Haggerty, Gerald  
17 Giaccai, and Olin Compton. Is Kevin still here? How  
18 about Gerald? Gerald, you switched seats.

19 MR. GIACCAI: Yes.

20 MR. CAMERON: I'm sorry. Now I've really  
21 botched your last name, so maybe you could introduce  
22 yourself to us.

23 MR. GIACCAI: Everybody knows, that's not  
24 an issue.

25 MR. CAMERON: All right.

1 MR. GIACCAI: My name is Gerry Giaccai.  
2 I'm a recent resident of Louisa County, permanent  
3 resident on, as I mentioned earlier, living on the  
4 water on the cooling lagoon side. And I guess my  
5 concerns have been that people talk about the  
6 improvement in the plan from the earlier plan, which  
7 was flow-through cooling to the wet/dry tower cooling.  
8 And from what I've heard tonight, what we're  
9 sacrificing for that is water. It's going to cost us  
10 more water, and I'm concerned about that. Okay?

11 And similar to what other people just  
12 recently asked, I guess my question is, if that was an  
13 improvement, wouldn't the dry cooling be an even  
14 bigger improvement to eliminate even that problem?  
15 And I guess I'd like to know why Dominion isn't  
16 considering it, and why the Nuclear Regulatory  
17 Commission isn't requiring it.

18 MR. CAMERON: Okay. Thank you very much.  
19 Okay. Olin Compton. How about Allan Lassitor from  
20 Spotsylvania County?

21 MR. LASSITOR: Thank you very much. My  
22 name is Allan Lassitor. I do live in Spotsylvania  
23 County at 1512 Sunset Harbor Boulevard. Yes, it's in  
24 Mineral, Virginia, but I live in Spotsylvania. I'm in  
25 one of those counties on that map right there. I'm on

1 the Board of Directors of our Property Owner's  
2 Association for Sunset Harbor. I'm a member of the  
3 Lake Anna Civic Association, I'm a member of Friends  
4 of Lake Anna. I'd like to support everything that  
5 they have put on the record tonight, all their  
6 comments and concerns, and I ask you to address them.  
7 And I have two questions, and one comment.

8 Question number one - the last three  
9 speakers have addressed it - to-date, Dominion has  
10 changed the design of Unit 4 from a wet tower to a dry  
11 tower, and Unit 3 from once-through discharge into the  
12 lagoons to the closed loop wet and dry combined  
13 towers. Are there any other cooling designs been  
14 contemplated? Is that it? And if not, if Number 4,  
15 the dry tower's obvious conclusion to cooling number  
16 4, why are we not using it in Number 3? So I think  
17 I'm the fourth speaker in a row to question that.

18 My second question involves the  
19 presentation by Marvin Smith at the Lake Anna Civic  
20 Association meeting on July the 29<sup>th</sup>. Marvin stated  
21 that, in response to questioning, that Dominion would  
22 not undertake any site construction activities until  
23 a full-blown decision had been made to go forward with  
24 the whole project. And I'm curious if anybody from  
25 Dominion can verify that statement.

1 I think I heard earlier this evening the  
2 Chairman, or whoever the person was from Dominion, say  
3 that they already started working on the permit, and  
4 that it would probably be filed fourth quarter of  
5 2007. So I guess I can assume that that means by that  
6 point you'll probably have a decision on at least  
7 applying to build the operation, 2007. Correct? Thank  
8 you.

9 Last but not least, and I meant to bring  
10 my copy with me, but on page 7.4 of the EIS  
11 supplement, it is Chapter 7 of the Cumulative Impacts  
12 of the entire operation, there are eight factors  
13 there. Seven of them conclude that the impact is  
14 small, and that mitigation is not warranted. But on  
15 the issue of water use and water quality, it says,  
16 "Water quality is unresolved."

17 Now after everything we've heard tonight,  
18 and all the analysis that's been done, and all the  
19 changes that are proposed, it's still hard for me to  
20 understand why water quality is still unresolved.  
21 Thank you.

22 MR. CAMERON: Thank you, Allan. In regard  
23 to your question and comment, and Gerald Giacciai's  
24 comment and question, we heard from Dennis, I guess,  
25 in terms of alternatives to what's presented for



1 cooling systems for Units 3 and 4, is - I translate  
2 what they're saying as a comment that that alternative  
3 should be evaluated. And I don't know if we have or  
4 not, but I'm just trying to put that concern into play  
5 in terms of what our responsibilities are.

6 All right. Aviv Goldsmith, John Higgins,  
7 and Steve Montgomery. And is it Aviv?

8 MR. GOLDSMITH: Yes. I don't know if I  
9 can talk, and read, and hold this all at the same  
10 time. My name is Aviv Goldsmith. I live and work in  
11 Spotsylvania County, just outside of the emergency  
12 alert radius for the North Anna Nuclear Reactor. It's  
13 nuclear, not nuclear.

14 Mr. Cushing mentioned earlier that an ESP  
15 involves the determination of whether a proposed site  
16 is a suitable location for a nuclear plant.  
17 Unfortunately, in my reading I don't see how the draft  
18 EIS or the supplemental supports staff's  
19 recommendation to approve the ESP. I believe that  
20 there are probably at least nine reasons that support  
21 my position that the EIS is not a complete document.

22 First, it doesn't provide sufficient  
23 detail on the planning and consideration for potential  
24 nuclear incidents, not just likely nuclear accidents.  
25 Second, the document fails to adequately address the

1 potential for a terrorist act. Terrorism, by the way,  
2 is not an accident. Acts of terrorism are numerous  
3 and planned, and North Anna is a possible target. The  
4 fuel and waste storage areas at North Anna are  
5 especially vulnerable to a terrorist attack. How is  
6 this in the public interest to worsen the situation?  
7 It isn't.

8 There's been no real analysis of  
9 transportation, whether for a construction workforce  
10 of 5,000, or for the innumerable people that may need  
11 to be evacuated in the event of a nuclear incident.  
12 The supplement and the draft basically says that all  
13 is well because many new roads are planned, and they  
14 will be built before the plant is built. Well, if you  
15 live in the area or read the newspaper, or even just  
16 drive on 95, you know that transportation congestion  
17 is one of the biggest problems in the region. There's  
18 little to no funding for new roads and improvements.  
19 How is Route 208 going to evacuate any meaningful  
20 number of people? It can't. The other roads in the  
21 area can't.

22 A more thorough EIS would tell us what the  
23 data is from VDOT on the level of service rating for  
24 the roads, what their carrying capacity is, and how  
25 the project laid over that would support or worsen the

1 traffic situation. My guess is it would worsen the  
2 traffic situation to a point that the roads cannot  
3 support what's required. And we need more roads.  
4 What's that going to cost? Who's going to pay for it?  
5 A thorough socio-economic analysis would tell us what  
6 those costs are, and what the trade-offs are.

7 There's no real plan for waste disposal.  
8 I can't get a building permit to build a home unless  
9 I have approved septic plan, but you propose to more  
10 than double the amount of nuclear waste at Lake Anna,  
11 and no one has a secure long-term plan. Mr. Cushing  
12 said earlier tonight that an analysis was done to the  
13 end-point of the fuel cycle. I'd like to know what  
14 that is. Where is this waste going to go? Who's  
15 going to pay for it? Who's going to protect it for  
16 the tens of thousands of years?

17 It's unclear to me whether the supplement  
18 is strictly about the cooling system change, or the  
19 whole project. A more thorough draft document would  
20 show what the changes are in each section, it's  
21 possible to redline each word. The supplemental draft  
22 is not clear in several sections, which I'll submit in  
23 detailed writing later.

24 Sixth, the draft shows no real  
25 consideration of renewable energy and demand-side

1 management. These are clearly alternatives, discussed  
2 tonight from people on both sides of the table, and  
3 this should be evaluated. The draft and supplemental  
4 draft don't seem to me to be NEPA-compliant documents.  
5 They should be re-done with more thorough analysis,  
6 and circulated for review and comment. A more  
7 thorough EIS would have multiple public hearings at  
8 different times. I had to take off from work tonight  
9 to be here. I can't take off from work tomorrow night  
10 to come to that hearing. Different times, different  
11 locations throughout the areas of impact would  
12 facilitate public participation.

13 Lastly, the project offers no conclusive  
14 evidence that there are benefits from this project for  
15 the region. There's no clear cost benefit analysis,  
16 so how do we know that this is good? I can only  
17 assume it's bad, because I don't see the benefits  
18 written down.

19 I appreciate the opportunity to comment  
20 tonight, but what we're talking about here is a  
21 federal action that has potentially serious regional  
22 consequences that have not yet been properly analyzed  
23 and documented. I hope that the NRC takes corrective  
24 action sooner rather than later, and gives the public  
25 additional information. Thank you.

1 MR. CAMERON: Thank you. John Higgins, or  
2 Steve Montgomery. And then we're going to go to Julie  
3 Curry, Jim Adams, and Jean moss Holland. This is  
4 Steve, Steve Montgomery.

5 MR. MONTGOMERY: I just wanted to, first  
6 of all, thank all you for coming to Louisa. I have  
7 been here most of my life, and I just want to share a  
8 couple of comments with you. I have been at North  
9 Anna for 31 years, and I now work in the Training  
10 Department. Before that, I taught school at Louisa  
11 and coached football, and I actually graduated from  
12 Louisa just a few years ago. But I wanted to share  
13 one thing with you.

14 I had some comments that I had put  
15 together about the purpose of this meeting tonight  
16 with ESP, but when Rebecca was here and she said  
17 something about being a regular person, I just wanted  
18 to share something that happened this past Thursday,  
19 that I thought you'd really appreciate. And I've  
20 heard a lot of things about safety and security, and  
21 so forth, but the man that stocks our vending machines  
22 at North Anna, he came in - what I do is I teach a  
23 little class, just basic information about security  
24 and safety, and emergency planning, and radiation  
25 protection, and a few other things, and it's really

1 just very basic information. And I really love what  
2 I do, but the man that stocks our vending machines,  
3 when he finished his little course this past Thursday,  
4 he said, "Can I just talk to you for a minute out in  
5 the hall?" And so I went out there with him, and he  
6 said, "You know, I don't know who I'd tell this to",  
7 but he said, "I've been here for a year now, and I was  
8 scared to come here when I first started bringing  
9 these Twinkies and everything else." And he said,  
10 "You know, I just want to thank somebody and tell them  
11 how much I appreciate the safety and everything, all  
12 the checks that we go through." And he said he'd been  
13 sharing a lot with the people in his community. And  
14 being a local resident here all my life pretty much,  
15 I get a lot of questions from the locals here, and it  
16 really gives me a lot of pleasure to share that  
17 information. Thank you.

18 MR. CAMERON: Thanks, Steve. Is Julie  
19 here? How about Jim, Jim Adams? Oh, Jim.

20 MR. ADAMS: So, hi, and I'm Jim Adams.  
21 And it's been just about 50 years since I became a  
22 anti-nuclear activist, which is one of the hate words  
23 that Lisa put out, but to me, she is a narrow-minded  
24 fanatic, so I guess we balance on that. But I became  
25 an anti-nuclear activist because when I looked at the

1 industry back in the late 50s, there were several  
2 things that weren't working. One of the things at the  
3 top of the list was that the power plants were not  
4 user-friendly by the people who operated them, and  
5 that was downright scary.

6 I want to acknowledge you all for having  
7 created power plants that are user-friendly, that is  
8 the most user-friendly part of the entire operation,  
9 in fact. And you've done great on that. You have an  
10 admirable safety record that I think is the envy of  
11 all kinds of other industries out there.

12 Now I get that you're driven to do it, and  
13 that the bosses in Congress are coming down on you  
14 every time something goes wrong, and says correct it  
15 quick. But all the same, your record is fantastic,  
16 and I thank you for that.

17 Now where I have problems with it is that  
18 both ends of the nuclear industry are sloppy and  
19 messy. The mining part of it creates a kind of  
20 pollution that's kind of deadly downstream, and is  
21 kind of bad for the miners. But, you know, a few  
22 lives lost. The coal industry has lost a bunch, and  
23 the oil industry has lost a bunch, and so does  
24 nuclear, but that's the price of progress. Right?

25 The other end of it is even messier and

1 sloppier, and it's still garbage disposal. I wish we  
2 had a word that wasn't so euphemistic. You all use  
3 "waste". I prefer "garbage", it's a little more  
4 better defined. And yes, "garbage" can be a resource  
5 in future generations, but garbage is such a  
6 euphemistic term for something that is one of the most  
7 poisonous substances on the face of the earth. It is  
8 so poisonous, it is so nasty that it is the only power  
9 industry that has 24/7 security. Can you imagine a  
10 coal plant, or a solar plant, or even a wind plant  
11 that has the kind of security that nuclear plants  
12 have, and yet we put up with this.

13           You've done very well at keeping the  
14 materials out of harm's way, because that's  
15 significant, that you can deal with the world's worst  
16 poison, most lethal poison out there, and keep us as  
17 safe as we have been, barring a few minor accidents  
18 here and there, and not counting the great testing  
19 thing at Chernobyl. But it still doesn't answer what  
20 we're going to do. The last time I'd said that if we  
21 had put out, or completed the first nuclear power  
22 plant in the year zero, and the first nuclear waste  
23 had come out at that time, we would only have to guard  
24 that waste for another 8,000 years. And that is using  
25 the one that you want to have politically mandated,

**NEAL R. GROSS**

COURT REPORTERS AND TRANSCRIBERS  
1323 RHODE ISLAND AVE., N.W.  
WASHINGTON, D.C. 20005-3701



1 the 10,000 year limit, not the 100,000 year limit. If  
2 we're going to guard it for 100,000 years, then we  
3 only have to guard it for, what is it, 98,000 more  
4 years?

5 So I understand, also, that you who have  
6 dedicated your lives to this are really, really  
7 attached to what you do, and you are very defensive  
8 about what you do. I know that I'm defensive about  
9 what I get involved in. And yet, this is still the  
10 most lethal substance that's out there. I ask you to  
11 look at the collaterals that go along with it. The  
12 collaterals, of course, are the things that Gerry was  
13 talking about, that I hope we're all happy with, the  
14 power plants that Pakistan, and Korea, and others have  
15 put out, that this is the material for nuclear bombs.  
16 And we are worried about nuclear materials getting  
17 out, coming out of Russia, and that terrorists will  
18 have this, these materials. That's scary. That's  
19 really scary. And this is some of the collateral  
20 materials that come from the industry that you're  
21 involved in.

22 Another thing we're dealing with to deal  
23 with waste is spent nuclear material used in bullets,  
24 large caliber rifle bullets that are scattered all  
25 over other parts of the world, and so be thankful that

1 they're not scattered around our part of the world.  
2 If they were, we would complain a lot more about what  
3 we're doing, but we don't have to live with it. And  
4 that, to me, is an object of shame, guilt, upset,  
5 because we created that material, we put it out into  
6 the world. And some bright engineer came along and  
7 said hey, I can make bullets out of this, and it's  
8 effective. We can take out tanks. Of course, we leave  
9 spent nuclear material all over the place, and this is  
10 a byproduct of your industry. You have created it.  
11 We have to live with it.

12 So I ask you to consider these things, and  
13 start developing a conscience for the world, a  
14 conscience for humanity. This is something I find  
15 missing in this entire argument that we're going  
16 through, is a conscience issue. We do have clean  
17 nuclear plants, and this is a plus. But the side  
18 issues are still so sloppy, and I have a hard time  
19 living with it, and I think it's worth junking the  
20 entire industry, because of the side issues, the parts  
21 that you have not dealt with. And I ask you to deal  
22 with those parts, if you're going to continue in the  
23 industry. Thank you.

24 MR. CAMERON: Thank you for those  
25 comments, Jim. I appreciate your perspective, and it

1 is late in the night, and we have one more speaker.  
2 Just a comment - I think both perspectives on nuclear  
3 power that have been offered here tonight, I think  
4 it's been pretty clear in some cases what people with  
5 one perspective thought about the people with the  
6 other perspective, and vice versa. But I don't think  
7 it's good, in a public forum I think we should try to  
8 avoid characterizing someone with the term that is  
9 probably a pejorative term, and I just would say that  
10 for the future times that we're going to be down here  
11 with all of you. And I know there are strongly held  
12 beliefs here, but I just wanted to offer that.

13 Jean Moss Holland. Okay. Well, Jim, I  
14 think you were our last speaker. And I know you've  
15 been here for a while. I'm going to ask Dave Matthews  
16 to close the meeting for us. David.

17 MR. MATTHEWS: I'll do this very briefly.  
18 I just want to thank everybody that has participated  
19 actively and patiently this evening, those who have  
20 left, and particularly those that are still here.  
21 You've shown great perseverance. I just remind  
22 everybody that we did extend the public comment period  
23 in response to a question from the Commonwealth and  
24 from a private citizen. The public comment period is  
25 being extended by 15 days until September 12<sup>th</sup> of 2006

1 to allow additional opportunity for you to prepare  
2 written comments, which we will address.

3 (Off mic comment.)

4 MR. MATTHEWS: Right. We focus our  
5 attention with regard to public comments in the  
6 directly affected areas, which are in the locales of  
7 the intended permits and licenses. Thank you, again.

8 MR. CAMERON: And if that's a comment that  
9 was made on the record, the staff will at least  
10 consider it, but we heard this.

11 (Whereupon, the proceedings went off the  
12 record at 11:01 p.m.)  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25