

# Official Transcript of Proceedings

## NUCLEAR REGULATORY COMMISSION

Title: Draft Environmental Impact Statement  
Peach Bottom Power Station, Units 2 & 3  
License Renewal - Evening Session

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U.S. NUCLEAR REGULATORY COMMISSION

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PEACH BOTTOM POWER STATION, UNITS 2 AND 3

LICENSE RENEWAL

DRAFT ENVIRONMENTAL IMPACT STATEMENT

+ + + + +

PUBLIC MEETING

+ + + + +

Wednesday,

July 31, 2002

+ + + + +

The meeting was held at 7:00 p.m. at the  
Peach Bottom Inn, 6085 Delta Road, Delta,  
Pennsylvania, Chip Cameron, Facilitator, presiding.

PRESENT:

CHIP CAMERON, FACILITATOR

JOHN TAPPERT

RAJ ANAND

DUKE WHEELER

BRUCE MCDOWELL

BOB PALLA

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

(7:00 p.m.)

FACILITATOR CAMERON: Good evening, everyone. I would like to welcome you to the Nuclear Regulatory Commission's public meeting tonight.

My name is Chip Cameron, and I'm the special counsel for public liaison at the Nuclear Regulatory Commission, and it is my pleasure to serve as your facilitator for tonight's meeting.

The subject of the meeting tonight is the applications by Exelon Generation Corporation to renew operating licenses for units 2 and 3 at the Peach Bottom atomic power station.

We were here last November with you to explain what the NRC's license renewal process is, how we do our evaluation, and to get your ideas on what type of information we should consider in preparing the environmental review on the license renewal application.

We've done a draft review based on your comments, and based on other government agency comments, and we are here to discuss this document with you tonight. It is a draft environmental impact statement.

And our objectives tonight are two-fold.

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1 One, we want to make sure that we clearly describe to  
2 you what the NRC's license renewal process is, and  
3 what the findings are in the draft environmental  
4 impact statement.

5 And I do want to emphasize the word draft.  
6 This statement will not be finalized, and will not be  
7 used in the NRC's decision making process on the  
8 license renewal applications, until we factor in the  
9 public comments that we are going to receive from you  
10 tonight, and written comments that we are also asking  
11 for.

12 And that is the second objective tonight,  
13 is to listen to your concerns, to listen to your  
14 comments on the draft environmental impact statement,  
15 and on the license renewal process.

16 We are taking written comments, and the  
17 NRC staff will be telling you where to submit those  
18 comments if you want to submit them, and by what time.  
19 But we wanted to be here tonight to talk with you in  
20 person about your comments.

21 And let me just emphasize, also, that  
22 anything you say tonight, any comments we receive  
23 tonight will carry the same weight as a written  
24 comment.

25 So you may be submitting written comments,

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1 but if you don't want to, we are going to keep a  
2 record of what you say tonight. We are taking a  
3 transcript of the meeting and so we will consider your  
4 comments.

5 In terms of the format for the meeting  
6 tonight, basically we are going to have two parts to  
7 the meeting, and they match up with the two objectives  
8 that I mentioned earlier.

9 The first part of the meeting is to give  
10 you some background on the license renewal process,  
11 the environmental review, and most importantly,  
12 describe the preliminary findings in the draft  
13 environmental impact statement.

14 So we are going to have a series of brief  
15 NRC presentations, for you, and after each of those  
16 presentations we are going to go out to you to see if  
17 you have any questions for the speaker.

18 So that will be a more interactive part of  
19 the meeting. The second part of the meeting is for us  
20 to listen to anybody who wants to make a more formal  
21 comment to us. And we have some yellow sign-up cards  
22 up there. If you do wish to speak tonight, please  
23 fill a card out. It is not a requirement, but it does  
24 give us an idea of how many people we have, who do  
25 wish to speak.

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1           And in a minute I'm going to introduce the  
2 NRC staff who will be doing the presentations, and  
3 tell you a little bit about what they do, and what  
4 their background is.

5           In terms of the ground rules, they are  
6 very simple. One is if during the question, during  
7 the presentation, the first part of the meeting, if  
8 you have a question just signal me and I will bring  
9 you this talking stick, or you can use the floor mike,  
10 and please tell us your name and affiliation, if  
11 appropriate. And ask your question and we will try to  
12 answer it.

13           A second ground rule is that I would ask  
14 that only one person speak at a time. Not only so  
15 that we can have a clean transcript, identify who is  
16 speaking, but so that we could give our full attention  
17 to whomever has the floor at the time.

18           A third ground rule I would ask you to be  
19 concise. These are complex issues, it is hard to be  
20 concise, it is hard to be brief. But if you could try  
21 to do that, then we could achieve an important  
22 objective, which is to make sure that everybody gets  
23 a chance to talk tonight.

24           And when we get to the second part of the  
25 meeting, the formal comments, I'm going to ask

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1 everybody to follow a guideline of five minutes for  
2 their presentation.

3 And we don't have one of those chutes that  
4 goes out to the sidewalk if you go past five minutes.  
5 But just try to keep it to five, and I will give you  
6 a little urging when you are, you know, going too far  
7 over, so that we can ask you to summarize for us.

8 This is a really important decision that  
9 the NRC has to make on whether to renew the licenses  
10 for Peach Bottom, and we just really appreciate the  
11 fact that you've all come out tonight to talk to us,  
12 to help us with that decision.

13 And with that I'm going to introduce the  
14 NRC staff who are going to be presenting tonight. And  
15 although this is not really a presentation, I've asked  
16 John Tappert, who is right here, from the NRC to give  
17 you a brief welcome tonight.

18 John is the section leader of the license  
19 renewal and environmental impact branch at the NRC.  
20 And John and his staff, any license renewal  
21 application that comes in, they are the ones who are  
22 responsible for supervising the preparation of the  
23 environmental review. And John used to be a resident  
24 inspector at nuclear plants here in NRC region 1. He  
25 has been with the NRC for approximately 11 years.

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1 He has a master's degree in environmental engineering,  
2 and his bachelor's is in oceanographic and aeronautic  
3 engineering.

4 After John gives his welcome, we are going  
5 to go to Raj Anand, who is right here. Raj is the  
6 project manager for the safety review of the Peach  
7 Bottom license renewal applications. And he is going  
8 to tell you what is involved in that safety review.

9 And Raj is with, again, the license  
10 renewal and the environmental impact branch. That is  
11 within our office of nuclear reactor regulation back  
12 at NRC headquarters.

13 He has been with the NRC for 22 years  
14 dealing with system and plant design for nuclear power  
15 plants, and he has a bachelor's in mechanical  
16 engineering, and has taken graduate courses in nuclear  
17 science at Catholic University in Washington, D.C.

18 We will go to you for questions about the  
19 license renewal process, the safety evaluation, and  
20 then we will go to Mr. Duke Wheeler, who is right  
21 here.

22 And Duke is sort of the impresario of this  
23 particular meeting, I think, as he is the project  
24 manager for the environmental review on the Peach  
25 Bottom license renewal application, and that is what

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1 we are here, tonight, to specifically address.

2 He is going to give us an overview of the  
3 environmental review process. And Duke, like Raj, has  
4 been with the Agency for about 21, 22 years. He has  
5 been involved in licensing work in nuclear power  
6 plants, also serving as a project manager for specific  
7 operating nuclear power plants.

8 He also has inspection experience with the  
9 NRC, and he is a graduate of the military academy at  
10 West Point.

11 When Duke is done we will, again, go out  
12 to you to see if there is any questions. And then we  
13 are going to go to the real meat of the meeting  
14 tonight, and that is to describe the findings in the  
15 draft environmental impact statement.

16 And we have Bruce McDonnell with us  
17 tonight to do that. As Duke will explain, we use a  
18 team of experts to help us evaluate the various  
19 aspects of the environment, when we do these  
20 environmental reviews.

21 And Bruce is the team leader for the  
22 environmental review on the Peach Bottom license  
23 renewal applications. He is from Lawrence Livermore  
24 National Lab in California, and he is part of the  
25 Environmental Protection Department there.

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1 He has a couple of master's degrees from  
2 the University of California, one in economics, one in  
3 business. And he is also going for a PhD in  
4 atmospheric sciences.

5 So he will be presenting that to you, and  
6 then we will go out to you for questions. We are  
7 going to have a separate presentation on a specific  
8 part of the draft environmental impact statement. And  
9 that is the analysis of severe accident mitigation  
10 alternatives.

11 And we have Bob Palla, from the NRC staff,  
12 with us who is going to do that. He is a senior  
13 reactor engineer in something called the probabilistic  
14 safety assessment branch, again, office of nuclear  
15 reactor regulation at NRC headquarters in Washington,  
16 D.C.

17 He has been involved for about 21 years  
18 with risk analysis of severe accidents at the NRC, and  
19 he has a master's degree in mechanical engineering  
20 from the University of Maryland.

21 We will come back out to you for  
22 questions, and then we will turn it back to Duke to  
23 give us some very specific information about when to  
24 file comments, where information is available, how to  
25 contact him so that if you have questions or concerns

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1 you can call him up.

2 And, again, thank you for being here, and  
3 I'm going to ask John to give you a welcome.

4 MR. TAPPERT: Thank you, Chip, and  
5 welcome. As Chip said, my name is John Tappert, I'm  
6 chief of the environmental section in the office of  
7 nuclear reactor regulation.

8 And, again I would like to welcome you to  
9 this meeting, and thank you for participating in our  
10 process.

11 As Chip mentioned, there are several  
12 things we would like to accomplish tonight, and I  
13 would like to briefly reiterate the purposes of  
14 tonight's meeting. First we would like to give you a  
15 brief overview of the entire license renewal process.

16 This includes both a safety review as well  
17 as an environmental review, which is the principal  
18 focus of today's meeting. Second we will provide you  
19 the preliminary results of our environmental review,  
20 which assesses the environmental impacts associated  
21 with extending the operating license of the Peach  
22 Bottom units for an additional 20 years.

23 Finally we will provide you the schedule  
24 for the balance of our review, and also give you  
25 information about how you can participate in this

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1 process by submitting written comments on our draft  
2 environmental impact statement.

3 At the conclusion of the Staff's  
4 presentation we will be happy to receive any questions  
5 or comments that you may have on our draft  
6 environmental impact statement.

7 But first let me provide some context for  
8 the license renewal program. The Atomic Energy Act  
9 gives the NRC the authority to issue operating  
10 licenses to commercial nuclear power plants for a  
11 period of 40 years.

12 For Peach Bottom Units 2 and 3 these  
13 operating licenses will expire in 2013 and 2014,  
14 respectively. Our regulations also make provisions  
15 for extending these operating licenses for an  
16 additional 20 years, as part of the license renewal  
17 program, and Exelon has requested license renewal for  
18 both of these units.

19 As part of the NRC's review of that  
20 license renewal application we conducted an  
21 environmental scoping meeting here last November. At  
22 that meeting we provided information on the license  
23 renewal process, and also sought your input on issues  
24 to be included in the environmental impact statement.

25 As we indicated at the scoping meeting, we

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1 return now, today, to provide the preliminary results  
2 of our review. And, again, one of the principal  
3 reasons for the meeting today, is to receive your  
4 questions and comments on that draft.

5 And with that brief welcome I would like  
6 to ask Raj Anand to give a brief overview of the  
7 safety portion of the license renewal.

8 MR. ANAND: Thank you, John. Good  
9 evening, ladies and gentlemen. My name is Raj Anand.  
10 I'm the project manager for the safety review of the  
11 application for license renewal for Peach Bottom  
12 \*\*Atomic Power Station, Unit 2 and 3.

13 The Atomic Energy Act, and the National  
14 Environmental Policy Act, provides that the Nuclear  
15 Regulatory Commission is responsible for the public  
16 health and safety, protection of the environment, and  
17 the common defense and security.

18 It also provides that each power reactor  
19 would have a 40 year license term. But the Atomic  
20 Energy Act went on to say that those licenses could be  
21 renewed. The original 40 year license term was based  
22 on the antitrust and economic factors, not on the  
23 technical limitation of the plant design.

24 License renewal is governed by the  
25 requirements of 10CFR Part 54. This license renewal

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1 rule defines the regulatory process by which a nuclear  
2 utility, such as Exelon Generation Company, applies  
3 for a renewed operating license.

4 License renewal rule incorporates 10CFR  
5 Part 51 by reference. 10 CFR Part 51 provides for the  
6 preparation of an environmental impact statement, or  
7 EIS. The license renewal rule process defined in 10  
8 CFR Part 54 is very similar to the original licensing  
9 process in that it involves safety reviews, and  
10 environmental impact evaluation, plant inspections,  
11 and review by the Advisory Committee of the Reactor  
12 Safeguards, ACRS.

13 The ACRS is a group of scientists and  
14 nuclear industry experts, who serves as a consulting  
15 body to the Commission. The ACRS performs an  
16 independent review of the license renewal application,  
17 and the staff's safety evaluation, and they report  
18 their findings, and recommendations directly to the  
19 Commission.

20 The next slide illustrates two parallel  
21 processes. You will see one at the top of the slide,  
22 the other toward the bottom of the slide. The two  
23 parallel processes are the safety review process, and  
24 the environmental review process.

25 These processes are used by the Staff to

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1 evaluate two separate aspects of the license renewal  
2 application. The safety review involves the Staff's  
3 review of the technical information in the application  
4 for renewal to verify, with reasonable assurance, that  
5 the plant can continue to operate safely during the  
6 extended period of operation.

7 The Staff assesses how Applicant proposes  
8 to monitor or manage aging of certain structures, or  
9 components, that are within the scope of license  
10 renewal.

11 The Staff's review is documented in a  
12 safety evaluation report and the safety evaluation  
13 report is provided to ACRS for review, and an ACRS  
14 report is prepared to document their review of the  
15 Staff's finding.

16 The Staff's process also involve two or  
17 three inspections which are document in the NRC  
18 inspection reports. These inspection reports are  
19 considered with the safety evaluation report, and the  
20 ACRS report, in NRC's decision to renew the operating  
21 licenses.

22 If there is a Petition to Intervene,  
23 sufficient standing can be demonstrated, and an aspect  
24 within the scope of the license renewal has been  
25 identified, then the hearings may also be involved in

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1 the process. These hearings will play an important  
2 role in the NRC's decision on the application, as  
3 well.

4 At the bottom of the slides I another  
5 parallel process, the environmental review, which  
6 involves scoping activities, preparation of the draft  
7 supplement to the generic environmental impact  
8 statement, solicitation of public comments on the  
9 draft supplement, and then the issuance of the final  
10 supplement to the generic environmental impact  
11 statement.

12 This document also factors into the  
13 Agency's decision on this application. During the  
14 safety review the Staff assesses the effectiveness of  
15 the existing, or proposed inspection, and maintenance  
16 activities to manage aging effects applicable to a  
17 defined scope of passive structures and components.

18 Part 54 requires that the application also  
19 include evaluation of time limited aging analyses,  
20 which are those design analyses that specifically  
21 include assumption about plant life, usually 40 years.

22 Current regulations are adequate for  
23 addressing active components, such as pumps, valves,  
24 which are continuously challenged to reveal failures  
25 and degradation, such that corrective actions can be

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1 taken.

2 Current regulations also exist to address  
3 other aspects of the original license, such as  
4 security, and emergency planning. These current  
5 regulations will also apply during the extended period  
6 of operation of the plant.

7 Two parallel products from the NRC staff  
8 are the safety evaluation report, and the  
9 environmental impact statement. Those are taken  
10 together with two other pieces.

11 One is an independent review of the safety  
12 issues by the Commission's Advisory Committee on  
13 Reactor Safeguards. That is an independent body of  
14 experts from the industry and academia, who have the  
15 particular expertise on safety issues, and they look  
16 at the quality of the Staff's safety findings.

17 There is also an independent inspection  
18 program that verifies certain key elements of the  
19 Staff's safety findings. Our decision on this license  
20 renewal application will rely on a safety evaluation  
21 report, and environmental impact statement that  
22 developed with public participation, an ACRS report,  
23 and an independent inspection report. And those are  
24 the four principal products.

25 The schedule for this activity is about a

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1 25 month schedule, because for this application we  
2 have had no petitions to intervene for a hearing. Had  
3 there been a petition for a hearing submitted and  
4 granted, then the schedule would have been 30 months  
5 to get through the whole process.

6 I will be available, after the meeting, if  
7 there are any questions that you have about the aging  
8 management program review, or the specifics of the  
9 safety review process, or the contents of the safety  
10 evaluation report.

11 Thank you for your attention.

12 FACILITATOR CAMERON: And thank you, Raj.  
13 Raj has just given us an overview of the entire  
14 license renewal process but, also, the focus on aging  
15 that is done in the safety review.

16 Are there any questions for Raj before we  
17 go into the environmental review process?

18 (No response.)

19 FACILITATOR CAMERON: Okay, great.  
20 Thanks, Raj. And before we go on, I just wanted to  
21 tell you there is coffee and iced tea back there. We  
22 won't be taking a break tonight, but please feel free  
23 to help yourself to the coffee and iced tea that is  
24 back there.

25 And I introduced Bruce as Bruce McDonald,

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1 and I hear you are going by Bruce McDowell, now. So  
2 I have been corrected on that, and I apologize. Since  
3 '56? Okay. One of those youngsters.

4 Duke Wheeler is going to tell us about the  
5 environmental review.

6 MR. WHEELER: Good evening. I'm Duke  
7 Wheeler, I'm the environmental project manager  
8 responsible for the development of the draft  
9 environmental impact statement for the Peach Bottom  
10 license renewal review.

11 My primary responsibility is to coordinate  
12 the efforts of the NRC staff, and our National Labs,  
13 to develop the environmental impact statement.

14 The National Environmental Policy Act of  
15 1969 requires a systematic approach in evaluating the  
16 impacts of proposed major federal actions.  
17 Consideration is to be given to the impacts of the  
18 proposed action and also to mitigation for any  
19 significant impacts that are identified.

20 Alternatives, including the no-action  
21 alternative to the proposed action, to the proposed  
22 are also to be considered. The National Environmental  
23 Policy Act is a disclosure tool and has specific  
24 provisions that provide for public participation in  
25 our process.

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1           Our NRC regulations require that an  
2 environmental impact statement for license renewal  
3 actions. We have drafted an environmental impact  
4 statement, we have published it for comment. This  
5 meeting tonight is just one means that we are  
6 providing you to provide us with your comments on the  
7 draft.

8           Our decision standard is, stated simply,  
9 are the environmental impacts of the proposed action  
10 great enough that maintaining the license renewal  
11 option for Peach Bottom units 2 and 3 all of a sudden  
12 becomes unreasonable?

13           Please note that we do not decide whether  
14 or not the plant will actually operate during the  
15 license renewal period. That decision is made by  
16 other regulatory agencies, and the licensee.

17           Regarding the environmental review  
18 process, which a few moments ago you saw Raj's slide  
19 up there that had an environmental review going along  
20 the bottom of the slide, this is just a little bit of  
21 an expansion of that line.

22           Exelon submitted their application to us  
23 in July of last year. And in September the NRC  
24 published, in the Federal Register Notice, and also  
25 publicized a notice of intent to do an environmental

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1 review, develop an environmental impact statement, and  
2 conduct scoping.

3 As a part of the scoping process we had a  
4 public meeting, here at the Peach Bottom Inn, on  
5 November the 7th, to receive comments on particular  
6 interests that we might want to be aware of as we are  
7 conducting our environmental assessment.

8 In conjunction with that activity, on the  
9 next day, on November the 8th, our team of experts  
10 performed a site audit, actually went on site, walked  
11 the ground, interacted with federal, state, and local  
12 officials, licensee representatives, and so forth, to  
13 gather additional information to help them in  
14 developing the draft of the environmental impact  
15 statement.

16 We did have one request for additional  
17 information, related to severe accident mitigation  
18 alternatives, we issued that request on December the  
19 20th of 2001. And we got our answer back, it gave us  
20 the information we needed, and we've now completed the  
21 draft.

22 The draft was published toward the end of  
23 June, we now have a public comment period. It is  
24 going to run 75 days, and I will talk later on about  
25 what the specific schedule is for the public comment

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1 period.

2           Once we receive public comments, give them  
3 their proper consideration, we will publish a final  
4 environmental impact statement for the license  
5 renewal.

6           Now, you see the term GEIS, that is a  
7 generic environmental impact statement for license  
8 renewal of nuclear power plants. And each specific  
9 power plant that submits an application, the  
10 environmental impact statement for that plant is just  
11 basically a supplement to this generic environmental  
12 impact statement.

13           For Peach Bottom this will be supplement  
14 number 10, supplements 9, 8, 7 and so forth, are for  
15 other plants that were earlier in the process.

16           During the development of the draft  
17 environmental impact statement, as I noted, we did  
18 interact with a lot of people, particularly federal,  
19 state, and local officials, and local service  
20 agencies.

21           We also considered the comments that were  
22 received during the scoping period. And on April 19th  
23 I issued a scoping summary report. The portions of  
24 that summary report that are applicable to the  
25 environmental review are included in the draft

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1 environmental impact statement as appendix A.

2 As I noted, we had a team of experts in  
3 various environmental disciplines. These disciplines  
4 include atmospheric sciences, radiation protection,  
5 socioeconomics and environmental justice, terrestrial  
6 ecology, land use, archeology, and cultural resources,  
7 nuclear safety, regulatory compliance, aquatic  
8 ecology, and hydrology.

9 Now, this concludes my comments, for the  
10 moment. As Chip noted, I will come back a little bit  
11 later to give you some additional information on  
12 communicating with us.

13 If there are no questions on my comments  
14 to this point, what I would like to do is turn the  
15 mike back to Chip Cameron, who will introduce the next  
16 speaker.

17 FACILITATOR CAMERON: Let's see if there  
18 is any questions on the environmental review process,  
19 generally, before we get into the specifics?

20 (No response.)

21 FACILITATOR CAMERON: Now we are going to  
22 get to Bruce to talk about the findings in the draft  
23 environmental impact statement. Bruce?

24 MR. MCDOWELL: Good evening. As Chip  
25 said, my name is not Bruce McDonald, it is Bruce

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1 McDowell. I work at the Lawrence Livermore  
2 Laboratory, and I'm the task leader for the team that  
3 prepared the supplemental EIS for the Peach Bottom  
4 Power Plant.

5 I would like to start by describing the  
6 analysis approach that we used, to determine whether  
7 the impacts associated with the continued operation of  
8 Peach Bottom, or the alternatives, are small, moderate  
9 or large.

10 The generic environmental impact  
11 statement, NUREG 1437, which we call the GEIS,  
12 identifies 92 environmental issues that are evaluated  
13 for license renewal.

14 Sixty nine of these issues are considered  
15 generic, or category one, which means that the impacts  
16 are the same for all reactors, or the same for all  
17 reactors with the same features, such as plants that  
18 have cooling towers.

19 For the other 23 issues, referred to as  
20 category 2, the NRC found that the impacts were not  
21 the same at all sites, and therefore a site-specific  
22 analysis was needed.

23 Only certain issues addressed in the GEIS  
24 are applicable to Peach Bottom. For those generic  
25 issues that are applicable to Peach Bottom, we

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1 assessed if there was any new information related to  
2 the issue that might change the conclusions in the  
3 GEIS, which is the new and significant information on  
4 the slide.

5 If there is no new information, then the  
6 conclusions of the GEIS are adopted. If new  
7 information is identified, and determined to be  
8 significant, then a site-specific analysis would be  
9 performed.

10 For the site-specific issues related to  
11 Peach Bottom, a site-specific analysis was performed.  
12 And, finally, during the scoping period, the public  
13 was invited to provide information on potential new  
14 issues, and the team during their review looked to see  
15 if there were any new issues that needed evaluation.

16 For each issue identified in the GEIS, an  
17 impact level is assigned. These impact levels are  
18 consistent with the Council on Environmental Quality  
19 Guidance for NEPA analysis.

20 For a small impact the effect is not  
21 detectable, or too small to destabilize, or noticeably  
22 alter any important attribute of the resource.

23 For example, the plant may cause the loss  
24 of adult and juvenile fish at the intake structure.  
25 If the loss of fish is so small that it cannot be

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1 detected in relation to the total population of the  
2 river, the impact would be small.

3 For a moderate impact the effect is  
4 sufficient to alter noticeably, but not destabilize  
5 important attributes of the resource. Using the fish  
6 example, again, if losses at the intake cause the  
7 population to decline, but then stabilize at a lower  
8 level, the impact would be moderate.

9 And, finally, for an impact to be  
10 considered large the effect must be clearly noticeable  
11 and sufficient to destabilize important attributes of  
12 the resource.

13 So if losses at the intake at Peach  
14 Bottom, cause the fish population to decline to the  
15 point where it cannot stabilize, and continually  
16 declines, that impact would be large.

17 In Chapter 2 of the draft supplemental EIS  
18 we discuss the plant and the environment around the  
19 plant. In Chapter 4 we then looked at the potential  
20 impacts for an additional 20 years of operation at the  
21 Peach Bottom Nuclear Power Station.

22 The issues that the team looked at are  
23 issues related to the cooling system, the transmission  
24 lines, radiological impacts, socioeconomic impacts,  
25 groundwater use and quality, and threatened and

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1 endangered species.

2 I'm going to take a few minutes to discuss  
3 the highlights of our analysis. If you have any  
4 questions on anything in particular, feel free to ask.

5 One of the issues we looked at, closely,  
6 is the cooling system for the Peach Bottom station.  
7 This is the ladder, the cooling intake, and the  
8 canals.

9 Although there are a number of category 1  
10 issues related to the cooling system, and remember  
11 that we said that category 1 issues are those that  
12 have been determined to have the same significance for  
13 all plants, no new and significant information was  
14 identified, either during scoping, by the Applicant,  
15 or by our staff during the review of the issues.

16 The issues that the team looked at on a  
17 site-specific basis include water use conflicts,  
18 entrainment, and impingement of fish and shellfish,  
19 heat shock, and enhancement of microbiological  
20 organisms.

21 We found that the potential impacts in  
22 these areas were small and additional mitigation  
23 measures were not warranted.

24 Radiological impacts are a category 1  
25 issue, because it is often a common concern to the

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1 public I want to take a minute to describe our  
2 analysis.

3 We looked at the effluent release and  
4 monitoring program during our site visit. We looked  
5 at how the gaseous and liquid effluents were treated  
6 and released, as well as how the solid wastes were  
7 treated, packaged, and shipped.

8 We also looked at how the Applicant  
9 determines and demonstrates that they are in  
10 compliance with the regulations for release of  
11 radiological effluents.

12 This slide shows you the near site, or on-  
13 site location the Applicant monitors for atmospheric  
14 releases and direct radiation. There are a number of  
15 other monitoring stations beyond the site boundary,  
16 including locations where water, milk, fish, and food  
17 products are sampled.

18 Our review of the releases, and the  
19 resulting dose calculations, found that the doses to  
20 the maximally exposed individuals in the Peach Bottom  
21 vicinity, were small fractions of the EPA  
22 environmental radiation standards.

23 In addition we found no new and  
24 significant information relating to this issue. The  
25 releases from the plant and the resulting off-site

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1 potential doses are not expected to increase on a year  
2 to year basis, during the 20 year license renewal  
3 term.

4 During scoping comments were received with  
5 claims of elevated childhood cancer resulting from  
6 releases of strontium 90. And there is significant  
7 discussion in the draft environmental impact statement  
8 on this issue, in section 4.7.

9 But to summarize the findings in Section  
10 4.7, doses to the public from routine Peach Bottom  
11 emissions were specifically evaluated in the 1996  
12 generic EIS for license renewal, and were found to be  
13 within regulatory limits.

14 In-plant monitoring of effluent streams  
15 establishes that there have been no significant  
16 releases of strontium 90 from the Peach Bottom plant.  
17 In addition no causal relationship has been  
18 established between levels of strontium 90 reported in  
19 deciduous teeth, and childhood cancer.

20 Lastly there is a unanimous consensus, in  
21 the scientific community, that current radiation  
22 protection standards are protective of public health.  
23 Therefore the team concluded that the information  
24 provided during the scoping period, regarding  
25 strontium 90 releases is not new and significant, and

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1 does not change the conclusion in the 1996 GEIS, that  
2 the radiological impacts are small.

3 The last issue I would like to discuss  
4 from chapter 4 is that of threatened and endangered  
5 species. There are no federally listed aquatic  
6 species that occur, currently occur, within the  
7 vicinity of Peach Bottom and the Conowingo pond.

8 There are a number of terrestrial species  
9 listed as threatened or endangered that may occur in  
10 the range of the Peach Bottom Power Station and the  
11 transmission lines.

12 The lower Susquehanna river is an  
13 important bald eagle area in Pennsylvania, and one of  
14 the areas in the state where bald eagles can be  
15 observed nesting year round.

16 There are ten active bald eagle nests near  
17 the Conowingo pond, and recent surveys indicate that  
18 as many as 10 to 15 eagles over-winter in the vicinity  
19 of the Peach Bottom site. In cold weather eagles have  
20 been observed near the discharge canal, which may be  
21 the only part of the river that is not frozen.

22 Bog turtles are known to occur in the  
23 vicinity of the transmission line, but a survey  
24 performed on the line did not find any suitable areas  
25 in the corridor.

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1 Peregrine falcons are very rare in the  
2 Peach Bottom area, although the area is within their  
3 range. There is a plant species called the swamp  
4 pink, could occur in the area, but it was not observed  
5 during surveys of the transmission line corridor.

6 The team also looked at the uranium fuel  
7 cycle and solid waste management, and decommissioning.  
8 All issues for the uranium fuel cycle and solid waste  
9 management, as well as decommissioning, are considered  
10 category 1.

11 For our analysis we did not find any new  
12 or significant information related to these issues,  
13 and so we adopted the conclusions in the 1996 GEIS.

14 The team evaluated the potential  
15 environmental impacts associated with the Peach Bottom  
16 power station not continuing operation. The team  
17 looked at no-action, new generation from coal-fired,  
18 gas-fired, and new nuclear, purchased power,  
19 alternative technologies such as wind, solar, and  
20 hydropower, and then a combination of these  
21 alternatives.

22 For each alternative we looked at, we  
23 looked at the same type of issues. For example, we  
24 looked at land use, terrestrial ecology, aquatic  
25 ecology, socioeconomics that we looked at during the

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1 license renewal term.

2 Our preliminary conclusion for the  
3 alternatives, and this includes the no-action  
4 alternatives, is that these alternatives may have  
5 environmental impacts that at least in some impact  
6 categories, reach moderate or large significance.

7 And that is the highlight of our analysis.  
8 Now I would like to turn this back over to Chip.

9 FACILITATOR CAMERON: Thanks, Bruce. That  
10 is an overview of the findings in the draft  
11 environmental impact statement. Are there questions  
12 for Bruce on this?

13 Yes, sir? And why don't you come up to  
14 the mike, so we can -- well, we have to get it on the  
15 transcript. I know we can hear you without the mike,  
16 but we do need to get it on the transcript.

17 And if you could just tell us your name,  
18 sir?

19 MR. GUYLL: My name is Ernie Gyll. My  
20 question is, what is a new issue? You referred to new  
21 issues, and old issues. Like what is a new issue that  
22 you studied, or what makes something an old issue that  
23 you don't respond to?

24 MR. MCDOWELL: I'm sorry, I think what I  
25 was referring was new and significant information

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1 regarding the issues that were looked at in the 1996  
2 generic impact study.

3 MR. GUYLL: At your local sampling  
4 stations that are around the plant, what is used to  
5 monitor the radiation at those sampling stations, what  
6 item or device is used?

7 FACILITATOR CAMERON: Mohammed, did you  
8 want to talking about what types of equipment are used  
9 for monitoring? If you are the right person, I don't  
10 know if I have the right person, or not.

11 MR. SHANBAKY: My name is Mohammed  
12 Shanbaky, I'm the branch chief for the inspection  
13 program at Peach Bottom.

14 Part of the requirements is an  
15 environmental monitoring program that involves  
16 sampling air samples, direct measurements of  
17 radiation, background radiation, and any potential  
18 radiation from the plant.

19 The air sampling stations usually are  
20 equipped with filter, air filter, to collect  
21 particulate, and also charcoal cartridges for iodine  
22 sampling.

23 In addition they have also a TLD  
24 monitoring, direct radiation measurements devices.  
25 Thermal luminescent dosimeters. Essentially it get

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1 activated with heat, after you expose it to radiation,  
2 and it will give you a dose.

3 FACILITATOR CAMERON: Thank you, Mr.  
4 Guyll, thanks Mohammed. Any other questions for Bruce  
5 about the draft environmental impact statement?

6 (No response.)

7 FACILITATOR CAMERON: Okay, well let's --  
8 thank you Bruce. Let's go on to a specific portion of  
9 the draft environmental impact statement, and this is  
10 severe accident mitigation alternatives. And Bob  
11 Palla is going to explain that to us.

12 MR. PALLA: Good evening. My name is Bob  
13 Palla, and I'm with the probabilistic safety  
14 assessment branch of NRC.

15 I will be discussing the severe accident  
16 mitigation alternative analysis done for Peach Bottom,  
17 also referred to as the SAMAs.

18 The license renewal rule requires a  
19 licensee, a license renewal applicant to consider  
20 alternatives to mitigate severe accidents if the Staff  
21 has not previously evaluated SAMAs for that plant.

22 Now, since SAMAs had not been previously  
23 assessed for Peach Bottom, they were assessed as part  
24 of the environmental review. The Staff's review of  
25 SAMAs is discussed in section 5.2 of the environmental

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1 impact statement supplement for Peach Bottom, and is  
2 the subject of my presentation.

3 As background, the purpose of the SAMA  
4 evaluation is to ensure that plant changes with the  
5 potential to substantially improve severe accident  
6 safety performance are identified and evaluated.

7 The potential plant improvements  
8 considered include hardware modifications, procedure  
9 changes, training program improvements, changes of  
10 that sort.

11 The scope of the SAMAs includes SAMAs that  
12 may either prevent core damage, which we termed  
13 preventive SAMAs, or improve containment performance,  
14 given that core damage would occur. And we term  
15 those SAMAs mitigative SAMAs.

16 The SAMA evaluation process consists of a  
17 multi-step process, and I'm going to briefly describe  
18 the major steps, so that you have a sense as to how  
19 this analysis was conducted.

20 The first step is to characterize the  
21 overall plant risk and the leading contributors to  
22 risk. This involves extensive use of the plant-  
23 specific probabilistic risk assessment study, also  
24 known as the PRA.

25 The PRA effectively identifies the

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1 different combinations of system failures, or human  
2 errors, that would be necessary for an accident to  
3 proceed to core damage, or to containment failure.

4 The second step is to identify potential  
5 improvements that can further reduce risk. The  
6 information from the PRA, such as dominant accident  
7 sequences, is used to help identify potential plant  
8 improvements that would have the greatest impact in  
9 reducing risk.

10 Improvements identified in other NRC and  
11 industry studies are also considered. This includes  
12 the severe accident mitigation design alternative  
13 evaluations performed for the Limerick plant, and the  
14 Hatch plants, both of which are boiling water reactors  
15 similar to the Peach Bottom plant.

16 We also looked at improvements that were  
17 identified in PRAs for other plants. The next step  
18 would be to quantify the risk reduction potential and  
19 the implementation costs for each improvement.

20 The risk reduction and implementation  
21 costs are, typically, estimated in a bounding fashion.  
22 The risk reduction is generally overestimated by  
23 assuming that the plant improvement is completely  
24 effective in eliminating the accident sequences that  
25 it is intended to address.

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1           And the implementation costs are,  
2 generally, underestimated by neglecting certain cost  
3 factors, such as maintenance costs, and surveillance  
4 cost. In conjunction this leads one to a more  
5 conservative assessment, which would tend to include  
6 more of the potential SAMAs for further evaluation.

7           The risk reduction and the cost estimates  
8 are used in the final step to determine whether  
9 implementation of any of the improvements can be  
10 justified.

11           And in determining whether an improvement  
12 is justified, we looked at three factors. The first  
13 is whether the improvement is cost beneficial. That  
14 is, are the estimated benefits greater than the  
15 estimated implementation costs?

16           The second factor is whether the  
17 improvement provides a significant reduction in total  
18 risk. For example, does it eliminate a sequence, or  
19 a containment failure mode that contributes a large  
20 fraction of the plant risk?

21           And the third factor is to look at whether  
22 the risk reduction is associated with aging effects  
23 during the period of extended operation.

24           The preliminary results of the SAMA  
25 evaluation are summarized on this slide. 204

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1 candidate improvements were identified for Peach  
2 Bottom based on review of the plant-specific PRA,  
3 relevant industry and NRC studies on severe accidents,  
4 and SAMA analyses performed for other plants.

5 So 174 SAMAs were eliminated during an  
6 initial qualitative screening. The factors considered  
7 during this initial screening included whether the  
8 SAMA has already been implemented at Peach Bottom, is  
9 not applicable to Peach Bottom due to design  
10 differences; addresses sequences or failure modes that  
11 are not risk significant at Peach Bottom, or has an  
12 expected implementation cost that is far in excess of  
13 the expected risk reduction benefit.

14 The cost benefit analysis was performed  
15 for the remaining 30 SAMAs. The group of 30 was  
16 further reduced to 5 candidate SAMAs based on  
17 quantitative comparisons of implementation costs, with  
18 a maximum benefit, if all of the risk were eliminated.

19 And plant-specific risk, or operational  
20 considerations, were also factored in to this final  
21 screening. A more detailed conceptual design and cost  
22 estimate was developed for each of the five remaining  
23 SAMAs.

24 None of these five SAMAs were found to be  
25 cost beneficial when evaluated in accordance with NRC

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1 guidance for performing regulatory analyses. And  
2 based on our review of Exelon SAMA analysis, we  
3 conclude that none of the SAMAs evaluated are cost  
4 beneficial.

5 In conclusion we believe that additional  
6 plant improvements to further mitigate severe  
7 accidents are not required at Peach Bottom Units 2 and  
8 3.

9 So if there is any questions on that I can  
10 try to address it here.

11 FACILITATOR CAMERON: Thanks, Bob.  
12 Anybody have any questions on the severe accident  
13 analysis? I mean, it is described in the draft  
14 environmental impact statement. But if there is  
15 something that you don't understand about it, please  
16 ask, and we will get Bob to explain it.

17 MS. REITZER: Could you give us a page  
18 where we can find --

19 FACILITATOR CAMERON: And the question is  
20 the page where the severe accident mitigation --

21 MR. PALLA: Well, actually it is on page  
22 5-3, section 5.1.2. Page 5-4, section 5.2

23 FACILITATOR CAMERON: Rebecca, do you have  
24 any other questions?

25 (No response.)

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1 FACILITATOR CAMERON: Anybody else?

2 (No response.)

3 FACILITATOR CAMERON: Okay, thanks Bob,  
4 and let's go to Duke for a sort of summing up on this  
5 for us. Duke Wheeler.

6 MR. WHEELER: Then to basically summarize  
7 our conclusions, we did determine in our draft  
8 environmental impact statement that the impacts of  
9 license renewal are small for all the impact areas.

10 And we have further determined, in the  
11 draft, that the impacts of alternatives to license  
12 renewal range all the way from small to large. Our  
13 preliminary recommendation in the draft is that any  
14 adverse environmental impacts of license renewal for  
15 Peach Bottom 2 and 3, are not so great that retaining  
16 the license renewal option is unreasonable.

17 Now, where to from here? As I noted in my  
18 earlier comments, we published the draft environmental  
19 impact statement last month, and we have a public  
20 comment period which began on July the 5th. It will  
21 run for 75 days. The last day of the public comment  
22 period is September the 17th.

23 Then after we receive the public comments,  
24 give them their proper evaluation, make any  
25 appropriate revisions to the draft, that we are then

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1 scheduled to issue the final environmental impact  
2 statement for the Peach Bottom license renewal in  
3 February of next year.

4 Now, I would like to take a moment and  
5 tell you a little bit more how to -- correction, wrong  
6 slide.

7 As I was saying, how to communicate with  
8 the NRC. The easiest thing for you to do is just to  
9 take my name and phone number. There is a toll free  
10 number on the slide for you, and if you do have  
11 interests that perhaps should rightfully be referred  
12 to other parts of the NRC organization, I can be the  
13 one to identify that particular resource for you, and  
14 hook you up with them.

15 So just take my name and number as an NRC  
16 point of contact. To facilitate the availability of  
17 the draft environmental impact statement to you, I've  
18 placed it in three local public libraries.

19 One is the Collinsville public library up  
20 the road in Brogue. And if you speak with Martha  
21 Gunder, or Essiey Day, they will be happy to take you  
22 right to it. They have a couple of copies that are  
23 reference copies for the library.

24 I don't have enough that I could just send  
25 up boxes for everybody to take theirs home. However,

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1 if you want a copy of this, since it is a draft of an  
2 environmental impact statement, let me know, give me  
3 your address, and I will get you one.

4 Similarly, I've placed a few copies for  
5 reference purposes in the Quarryville public Library.  
6 Catrina Anderson is the director over there, and she  
7 will be happy to steer you to where she is keeping it  
8 on her shelves.

9 And also just down the road in Whiteford,  
10 George Mind, at the Whiteford branch library of the  
11 Hartford County library system, will be happy to help  
12 you.

13 Now, the draft environmental impact  
14 statement can also be viewed at our website given on  
15 the slide, [www@nrc.gov](http://www@nrc.gov). And there is a specific  
16 address, the last line on the slide. I won't bother  
17 to read the whole thing, but it is in your handout.

18 And I've tried it on both Netscape and  
19 Internet Explorer, and it really does work. But if  
20 you have trouble, again, you've got my phone number,  
21 and we will sit down and we will go through it  
22 keystroke by keystroke, if this is the way you would  
23 like to have access to the draft environmental impact  
24 statement.

25 Other ways that you can communicate with

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1 us in addition to giving us your comments at this  
2 meeting, you can send your comments in by mail to the  
3 chief of our rules and directives branch at the  
4 address shown on the slide.

5 Or given the proximity of Peach Bottom to  
6 our offices down in Rockville, Maryland, it is not  
7 unreasonable to think that someone might want to  
8 physically come down, and sit down in our office and  
9 discuss this. And you certainly may do that.

10 Our office is located on Rockville Pike,  
11 at the address you see. We are about halfway between  
12 the beltway and downtown Rockville, if you are  
13 familiar with the D.C. area.

14 You may also provide comments by email.  
15 I opened up a specific NRC email address for the  
16 purpose of receiving public comments on the Peach  
17 Bottom environmental impact statement,  
18 peachbottomeis@nrc.gov.

19 I'm the one who opens that mail, and so it  
20 is certainly available to you to give your comments to  
21 us via that channel, if you choose to do so.

22 And I mentioned that the environmental  
23 impact statement is available online. If you choose  
24 to access it online, when you do that, you will also  
25 see a link to a comment form. And if you wish to make

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1 comments just click on that link, and follow it on  
2 through.

3 And, again, if you have any problems give  
4 me a call, and we will work through them. That  
5 concludes my prepared remarks. What I would like to  
6 do is to turn the mike back over to Chip, who I think  
7 will then open the mike. Chip?

8 FACILITATOR CAMERON: All right. Thanks,  
9 Duke. Before we go to hearing from you, is there any  
10 -- I just wanted to make sure if there is any  
11 questions on any of the items that you've heard so far  
12 tonight, before we move on?

13 (No response.)

14 FACILITATOR CAMERON: And the NRC staff,  
15 our expert consultants, will be here after the  
16 meeting. So take the opportunity to talk with them if  
17 you care to about various issues.

18 We are now going to go to formal comment  
19 from all of you, and we have some people signed up who  
20 wanted to make comments tonight.

21 And first I would like to ask Mr. Norm  
22 Wurzbach to come up. Norm? Come up here if that is  
23 comfortable for you, or you can go right here. Thank  
24 you.

25 MR. WURZBACH: Norm Wurzbach, I live about

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1 ten miles north of here, I run a beef farm operation.  
2 I appreciate having electric power into my farm, it  
3 supplies me with water, at night lights. I think it  
4 is a great benefit.

5 I feel that Peach Bottom probably produces  
6 the electricity I use. I have no problem with it, and  
7 I think it should be extended for another 20 years,  
8 because it is an attribute to the whole neighborhood,  
9 because a lot of people in the area do work at Peach  
10 Bottom, also.

11 As long as it keeps our electric rates  
12 down I think it is a good move, because it doesn't use  
13 fuel oil, it doesn't use gas. I use these items  
14 myself, and I also use coal, which it doesn't use.

15 So I'm not competing. So it keeps things  
16 cheaper, and we are importing too much oil right now,  
17 and that would be one of the alternatives, I think,  
18 and that is not good. Thank you.

19 FACILITATOR CAMERON: Thank you very much,  
20 Mr. Wurzbach. Next we are going to go to Nicki Roth.  
21 Is Nicki still here?

22 We will go back to Nicki if he or she  
23 comes in. Let's go to Alan Nelson, Nuclear Energy  
24 Institute. Alan? He is out there too. Okay. Sandy  
25 Smith?

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1 MS. SMITH: Did you call me before?

2 FACILITATOR CAMERON: No, I didn't. And,  
3 Sandy, take your time to -- whatever you need to say.

4 MS. SMITH: Good evening. Even the grim  
5 reaper needs glasses. I just realized, earlier today,  
6 when I was standing here as the grim reaper, my  
7 daughter made this outfit for me really, quick, in  
8 about a half an hour.

9 But I was pregnant with her in '79 almost  
10 had the meltdown, minus 30 minutes. So perhaps this  
11 is a very apropos outfit to be wearing to get the  
12 message across.

13 Thank you for letting me speak. Although  
14 I'm very angered that this old nuclear plant is even  
15 being up for license renewal, the NRC's own standards  
16 stated Peach Bottom was supposed to be closed 20 plus  
17 years ago.

18 What has changed? Has anyone from the NRC  
19 personally inspected every piece of rusty metal, worn  
20 parts, fractured cement. This is no way that Peach  
21 Bottom can operate safely or economically, and should  
22 be shut down, according to the Nuclear Regulatory  
23 Commission's own figures.

24 When death, health, and environmental  
25 desolation are added up, Peach Bottom definitely is

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1 not cheap. Who is going to pay in York County, or in  
2 the surrounding areas if, perhaps, this corporation  
3 goes into bankruptcy down the road?

4 Who has a bond, what kind of insurance do  
5 we have with the spent fuel, with everything else? We  
6 don't. According to the Federal Register notice, each  
7 relicensing is expected to be responsible for the  
8 release of 14,800 person Rem of radiation during the  
9 20 year life extension.

10 This figure includes releases from the  
11 nuclear fuel radiation release, spread over the  
12 population, and will cause 12 cancer deaths per unit.  
13 That would be 24 for Peach Bottom, they have two  
14 units.

15 There was a person who spoke this  
16 afternoon that said, is this really worthwhile, if we  
17 know for pretty much a fact, that at least 24 people  
18 will die in the next 20 years, because of this  
19 radiation?

20 If someone came in right now and shot 24  
21 people, would that be all right, would anyone here  
22 like to volunteer for it? I don't think I know of  
23 anybody in York County that would like to volunteer  
24 for that sort of thing.

25 This figure does not include accidents

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1 that can happen along the way, other casualties. This  
2 is only calculated. There are not 12 people, there  
3 are not 24 people.

4 TMI is also close by. The NRC has said it  
5 expects as many as 100 reactors to apply for  
6 relicensing extensions. This would result, and I had  
7 figured it wrong, over 2,000 cancer deaths among the  
8 United States population.

9 Pennsylvania has the second highest number  
10 of nuclear reactors, with the second highest nuclear  
11 waste. And because of that our government is telling  
12 us we should have a nuclear dump. They are right, we  
13 made it, we might as well keep it here.

14 But we shouldn't have to have a nuclear  
15 dump. We don't need to be producing more, it can't  
16 all go to Yucca Mountain. Even if we are for Yucca  
17 Mountain it can't go there, because we would still be  
18 making too much if we keep relicensing these nuclear  
19 facilities.

20 Nuclear power is not an admission free  
21 technology. The entire nuclear fuel chain, the  
22 uranium, primary mines on the lands remaining to  
23 indigenous people, uranium conversion, enrichment,  
24 fuel fabrication, each step exposes workers and  
25 communities to radioactivity, and each step generates

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1 radioactive waste.

2 Radio curies defy the concept of disposal,  
3 they don't go away, we just move them around. There  
4 is no such thing as a nuclear dump that won't  
5 eventually leak.

6 The NRC acknowledges that the allowable  
7 limit, 100 milli rems a year for radiation exposure  
8 via air, from any nuclear reactor, to the general  
9 public, will cause a fatal cancer in 1 out of 286  
10 people.

11 This is very high when compared to the  
12 standard of 1 in one million considered an acceptable  
13 level for human sacrifice for another industrial  
14 activity.

15 The 1986 catastrophe of Chernobyl has  
16 seriously affected the health and welfare of the  
17 bByelorussian people. I know, I was there. I saw it.  
18 I don't want to hear that our nuclear facilities are  
19 built different, it won't happen.

20 It almost did happen at TMI, I was there  
21 when it almost happened at TMI, too, that morning.  
22 But in Byelorussia it happened, I have seen the  
23 children, I have seen the children go back and forth  
24 to be detoxed in Kiev, and in Israel, and the parents  
25 not getting to see their children for maybe as long as

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1 six months.

2 Then they come back home again and it is  
3 all over again, radiation. The only thing good is  
4 that it sure grows mushrooms big. But that is it.  
5 The land, the everything is very desolate, very sad.

6 The average life expectancy of women has  
7 declined by five years, over there. Only ten percent  
8 of the children are completely healthy. Cancer among  
9 adults and children have increased in Ukraine and  
10 Moldova, as well.

11 Two-thirds of the Ukraine is contaminated  
12 and 70 percent of the food. The watershed of the Kiev  
13 basin has been so contaminated that it would take 200  
14 billion dollars to just purify the water, which they  
15 don't have. Forty million people have to drink it,  
16 and they do.

17 TMI was 30 minutes from a meltdown. How  
18 much disaster insurance does Peach Bottom carry for  
19 York County? We have a right to know. They don't  
20 carry it.

21 Our tax dollars are paying for some  
22 peripheral. Who is going to pay for the Susquehanna  
23 if it is polluted like that? Where is this money  
24 coming from? I will tell you what is going to happen,  
25 they are going to go into bankruptcy, just like all

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1 the other corporations, because they can't do it, and  
2 we will be stuck possibly with useless land that  
3 absolutely no one wants.

4 And then where do we go, where do we live?  
5 The NRC has offered to pay the cost of two day's  
6 supply of potassium iodine pills for people living  
7 within ten miles of a nuclear power plant.

8 Thyroid cancer is a major result of  
9 reactor accidents. The exposure can continue for  
10 days, even after one leaves the area, it is in your  
11 blood, it continues.

12 If a nuclear accident occurred during a  
13 natural disaster, earthquakes, hurricanes, blizzards,  
14 ice storms, or an attack, evacuation would be  
15 difficult, time consuming, and maybe impossible.

16 And people would need at least 10 days to  
17 30 days supply. Even the EPA manual states that these  
18 pills should be given within 3 to 4 hours after the  
19 accident, if it is going to do a tremendous amount of  
20 good.

21 So that means that even if you have them  
22 at home, if your children are at school, or at day  
23 care center, those centers have to have them too.  
24 They need to be stockpiled there, they need to be  
25 stockpiled at work.

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1           Soaring rates of thyroid cancer are still  
2           appearing in the children over in the former Soviet  
3           Union countries, who were exposed to Chernobyl,  
4           because they received too little, too late, of iodine.

5           There is no way that this seemingly simple  
6           protection could be carried out, even here, in York  
7           County or surrounding area. Why do all of our tax  
8           dollars have to go to pay for Peach Bottom, a private  
9           company's hazardous operation?

10          In the past three years old and worn out  
11          equipment have caused dozens of incidents requiring  
12          plants to shut down. On May and August 2000, Peach  
13          Bottom unit 3 was forced into an emergency shutdown  
14          when an instrument valve failed and caused a leak of  
15          contaminated coolant.

16          The coolants are worse probably than the  
17          reactors, as far as the radiation. The NRC has just  
18          estimated that with a spill, within 50 miles, people  
19          will be affected. We know people will be affected.

20          Ten miles is a joke, this is affecting  
21          everybody, we must find another way. We must asses  
22          the nuclear age itself, in the wake of Chernobyl.  
23          There are more than 450 reactors in operation on the  
24          planet today.

25          Each generates radioactive waste that will

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1 be a threat to human life for hundreds of thousands of  
2 years. Each routinely releases radioactivity into the  
3 air and water.

4 Poland was the only country that protected  
5 their children with iodine tablets when Chernobyl  
6 erupted, and that is not a polish joke. As far right  
7 now, today, as Scotland they are still feeling the  
8 effects of Chernobyl with their sheep, they may not be  
9 able to be sold, and a lot of their land.

10 This is serious, it is lasting, it is not  
11 something that we can just put a band-aid on. There  
12 is no safe place. We saw the forest fires from  
13 Canada, that is exactly the way the radiation goes, by  
14 the air.

15 If nukes are so safe why do we have our  
16 phonebooks with evacuation routes? Why is the  
17 industry trying to figure out where to dump this  
18 deadly waste? And why is 46,000 dollars of our hard  
19 earned money in York County, being allotted every year  
20 for the radiation emergency response?

21 That is why it is so cheap, the nuclear  
22 plants don't have to pay for anything, hardly. We are  
23 paying for them. They are buying these cheap worn out  
24 plants that are ready to die, anyway. They are going  
25 to make as much money as they can on them, and go.

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1           And that is exactly what is happening, and  
2 we are footing the bill for everything. The NRC, that  
3 is us. Those are our tax dollars, we are paying them,  
4 they are paying for the tablets that very few people  
5 will get.

6           If most people want them, and their  
7 protection, we are going to have to pay for them. We  
8 are paying for all these things, and we shouldn't be.  
9 The NRC does not close down, if they don't close down  
10 Peach Bottom we don't have to worry about the  
11 terrorism, because our government is terrorizing us  
12 enough by keeping these open.

13           And I hope you all check out the calendar  
14 that is out there. In case of an emergency at Peach  
15 Bottom, and they've got cute little pictures by  
16 children that have drawn them, and things to do, going  
17 into their basement, and everything.

18           These are little kids' pictures, and that  
19 is what that calendar is telling them about. We've  
20 got to grow up, we shouldn't have anything that is  
21 going to cause an emergency, that is going to cause an  
22 accident on this magnitude.

23           There are plenty of other ways we can make  
24 money, we don't need to make money this way. We all  
25 have a responsibility, if not to ourselves, to our

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1 children. And we don't need to do this to earn money  
2 for their education.

3 What good will their education be if they  
4 don't have a place to use it? Thank you, good night.

5 FACILITATOR CAMERON: Thank you, Sandy.  
6 We did hear, this afternoon, and this evening, from  
7 Sandy. But a statement that was in the draft  
8 environmental impact statement about 12 deaths. And  
9 we thought it was important enough to try to at least  
10 explain what the -- what that was supposed to mean.

11 And Patricia Milligan, who is a health  
12 physicist with the NRC is going to try to give us an  
13 explanation on that.

14 MS. MILLIGAN: Good evening, I'm Trish  
15 Milligan, I'm a certified health physicist, I work for  
16 the NRC. I'm also a pharmacist, I've spent a lot of  
17 years in the practice of pharmacy, and also nuclear  
18 pharmacy, so I have a wide spectrum background, and  
19 I've spent a number of years working for a nuclear  
20 power stations.

21 The 12 deaths that you are talking about,  
22 those aren't real deaths. It is not like we walk in  
23 and say, one, two, three, four, five, too bad for you  
24 guys.

25 What we do is we calculate, statistically

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1 we calculate, based on a lot of assumptions, and a lot  
2 of models, what would happen if this person, or this  
3 large population received X amount of dose for a  
4 period of time.

5 Now, there are several theories that are  
6 in considerable debate in the scientific community.  
7 And the theory that we use, and the model that we use  
8 to come up with these statistically calculated deaths,  
9 if you will, is something that is known as linear no  
10 threshold.

11 We assume that any dose, no matter how  
12 small, has some impact. And we assume that it is more  
13 or less a straight line, higher dose, higher impact.  
14 And that is the model that we use.

15 If you look at other work that is out  
16 there, in fact there was a statement put out by the  
17 Health Physics Society, which is a large collection of  
18 scientists in the field of radiation protection and  
19 physics, and only a very small percentage of those are  
20 involved in reactor health physics.

21 They believe, based on evidence that is in  
22 the world today that there is, in fact, a threshold.  
23 And they would suggest, from their position statement,  
24 that any dose below 10 rem is considered  
25 inconsequential, because there is no body of evidence,

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1 hard evidence, to suggest that anything less than 10  
2 rem is deleterious to health.

3 At the NRC we have adopted the most  
4 conservative model, which is any dose would have some  
5 impact. Based on that, and based on the assumptions  
6 of human behavior, and this infinitely large  
7 population, we calculated if you believe A, B, C, D,  
8 E, then over a population, over a lifetime, you may  
9 expect to see 12 additional cancers in this area.

10 Now, if you look at the, what I guess I  
11 would call the background cancer rate in this country,  
12 there is approximately 1.3 to 1.5 million new cancers  
13 that are diagnosed each year.

14 So what we would be talking about would be  
15 a statistical number 12, or 2000 over 20 years, so  
16 that would be -- yes, so that would be, essentially,  
17 100 additional cancers if you will, over an infinitely  
18 large population surrounding all the power plants.

19 Now, people always get uncomfortable when  
20 we are talking about statistically calculated deaths.  
21 Because, after all, we are more than statistics. And  
22 I understand that.

23 Having had cancer myself, and having lost  
24 a younger brother to cancer, I understand very much  
25 what statistics are all about, and none of us like to

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1 feel like we are statistically insignificant.

2 But when we look at these kind of models  
3 we make some very broad, very conservative, very  
4 protective assumptions. So that when we say 12  
5 additional deaths, or 2000 additional deaths over 20  
6 years, those aren't real people, it is not like 12  
7 people put up your hands and you are out of here.

8 These are just statistical models that are  
9 done, much like what the EPA does when they do the  
10 risk analysis, where they decide there is an  
11 acceptable risk of 1 in 10,000 cancers. It doesn't  
12 mean that 1 in 10,000 of us is going to get a cancer  
13 from this particular toxin.

14 It is just meaning based on these models,  
15 and these assumptions, this is the conclusion that we  
16 have come to, in order to affect a very wide margin of  
17 safety for the public.

18 So it is not like there is 12, or 2000  
19 people equals 20 years are going to fall over, and  
20 that is from reactor emissions. That is just part of  
21 the modeling that we use, and it is a very, very  
22 conservative model, for which is under tremendous  
23 debate in the scientific community at this point.

24 Do you have any questions?

25 FACILITATOR CAMERON: Yes, I think there

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1 might be. Do you want to ask a question, Sandy?

2 MS. SMITH: Well, on the risk assessment,  
3 I don't think any -- the risk is always, it is a risk.  
4 And we shouldn't be, I don't think you would have a  
5 risk with how many people are going to die from  
6 windmills.

7 So maybe we ought to work on some other  
8 energy things, here. We had Dr. ~~Manago~~ Manganano was  
9 here, and I'm not going to go on with his credentials,  
10 maybe some of you are familiar, maybe not.

11 But he is very well known in the field.  
12 He doesn't work for the NRC, or he doesn't own a  
13 nuclear facility, so he has nothing to gain, one way  
14 or the other. And he has done a lot of independent  
15 studies.

16 One of them is the famous tooth fairy  
17 study, where what he has done is that the body doesn't  
18 know the difference between strontium 90 and calcium.  
19 So strontium 90 being radiation. So the body will  
20 take in whatever is available.

21 If there is a lot of radiation in the  
22 area, and I'm making this simple, the body will take  
23 in more radiation than calcium. If you are in an  
24 area, maybe if you took more calcium, you would be all  
25 right.

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1           At any rate is the idea is, the government  
2           has done these studies in the past, and the idea is,  
3           they are taking teeth from children that were born  
4           after 1970, across the United States, checking the  
5           teeth for strontium 90, and trying to see if there is  
6           hot spots, if there is any kind of correlation, or  
7           whatever.

8           And very interesting that here in  
9           Lancaster, York, and Chester County it is very high,  
10          it is 26 percent higher with the children. And he had  
11          some very good studies, and statistics, which he  
12          handed in before.

13          So it basically depends who you hear from.  
14          And I always like to hear from someone who has nothing  
15          to gain, politically, or money, or anything, rather  
16          than the fox watching the henhouse. Thank you.

17          FACILITATOR CAMERON: If anybody wants to  
18          see the full text of Joe Mangano's presentation today,  
19          it will be on the transcript that will be available.  
20          Thank you, Sandy, and thanks Trish, for trying to  
21          clarify that, clarifying that for us.

22          Mr. Gyll, are you ready? And I think  
23          this microphone is fixed now, isn't it? This is Mr.  
24          Ernest Gyll.

25          MR. GUYLL: I prepared some written

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1 comments, I will just read from them, so I won't go  
2 too long.

3 I received the draft report for comment of  
4 the generic environmental impact statement for the  
5 license renewal of nuclear powers, regarding Peach  
6 Bottom atomic power station Units 2 and 3.

7 And this is not really a reader friendly  
8 document, and I had some trouble locating points of  
9 interest. I was here on November 7th, and made some  
10 comments there.

11 There was no mention of my question  
12 regarding an evacuation plan for the Amish in the  
13 event of a nuclear accident. And I made this question  
14 in the past at other NRC meetings. I've never seen  
15 any evacuation plan for the Amish.

16 I found no mention of my request that past  
17 performance of the plant be taken into account,  
18 including control room operators sleeping on the job.  
19 Perhaps that is not a new issue.

20 There was no mention of my concern of the  
21 danger of spent radioactive fuel being stored on site.  
22 There was no mention of my comments about the problems  
23 with the emergency warning sirens.

24 In an NRC document dated August 15th,  
25 2001, it is noted, and I'm quoting here from the NRC

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1 document: "Two former contract technicians  
2 deliberately falsified siren testing maintenance  
3 records, and performed inadequate siren tests while  
4 professing that all activities on siren records were  
5 properly done.

6 And, two, one of these technicians  
7 knowingly installed jumper wires to bypass failure  
8 detection circuitry on at least 10 siren boxes, which  
9 would demonstrate that the sirens were working  
10 properly, even if they were not."

11 And that might be an old issue, too, that  
12 might not be a new issue.

13 It is my opinion that the NRC had already  
14 decided to renew the license of the Peach Bottom power  
15 plant when they received the application. The only  
16 reason meetings are held is to meet a requirement.

17 Sam Gejdenson, the former Chairman of the  
18 House Interior Subcommittee on Oversight said about  
19 the NRC: On a number of occasions the -- I'm sorry,  
20 I'm quoting here.

21 "On a number of occasions the Commission  
22 has acted as if it were the advocate for, and not the  
23 regulator of the nuclear industry."

24 I continue to be concerned about an  
25 earthquake, given the proximity of the martic fault

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1 line. And, by the way, that is spelled M-A-R-T-I-C,  
2 not M-A-R-T-I-C-K, as erroneously recorded in the  
3 report.

4 According to a Lancaster New Era article,  
5 on July 1st, 1994, corrosive cracks found inside a  
6 Peach Bottom reactor "could cause a meltdown during an  
7 accident or earthquake, the Nuclear Regulatory  
8 Commission said today. Cracks in the York County  
9 nuclear reactor are expected to grow, and will have to  
10 be monitored, the NRC said.

11 NRC officials also warned that the cracks  
12 could lead to a meltdown if they shift during an  
13 accident, or a natural disaster."

14 And I could find no mention of this in the  
15 draft report for comment. And that also might not be  
16 a new issue, that was seven years ago.

17 I would still like to know how many  
18 accidental releases of radiation have occurred at  
19 Peach Bottom since it began operations. I would like  
20 to know the type of radiation, the amount of each  
21 release. The draft report does not address this in  
22 detail.

23 I would like to have data on cancer cases,  
24 birth defects, and stillbirths in a ten mile radius of  
25 the plant, and compare this information to the

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1 national average.

2 The draft report does not address this in  
3 detail. I would like to know the type of radioactive  
4 isotopes at the plant, and the half life of these  
5 isotopes. Are strontium 90 and strontium 89 the only  
6 radioactive isotopes at the plant? Because I think  
7 those are the only two mentioned in the report.

8 The draft report notes the socioeconomic  
9 problems associated with the shutdown and  
10 decommissioning of Peach Bottom. However, if a power  
11 plant were to operate around the same area, using  
12 renewable resources, such a plant would need a large  
13 number of employees who would probably be just as  
14 involved in the community as the current Peach Bottom  
15 employees.

16 And I do not agree with the conclusion of  
17 the draft report which notes that the impact of  
18 renewing the license at Peach Bottom would have a  
19 small impact on land use, ecology, water use, and  
20 quality, air quality and waste.

21 I do not agree the use of renewable  
22 resources at the same site have a greater impact on  
23 the environment than the current plan.

24 Since the Peach Bottom plant is located on  
25 the edge of the great east coast megalopolis, an

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1 accident could have a devastating effect on millions  
2 of people.

3 We need to shut down and decommission the  
4 Peach Bottom atomic power plant before a horrible  
5 accident occurs.

6 FACILITATOR CAMERON: Thank you very much,  
7 Mr. Gyll. Duke, did you have something to add?

8 MR. WHEELER: Excuse me, Ernie, you are in  
9 our mailing list for correspondence related to our  
10 environmental review, and I'm wondering, do you recall  
11 receiving a copy of our environmental scoping summary  
12 report, back in April? I have a copy of it here that  
13 I will share with you.

14 I will let you see what it is. And if you  
15 did not receive a copy, when I get back to the office  
16 I will put a copy in the mail to you, and it does  
17 identify, it addresses various things that you brought  
18 up here, at least the great majority of them.

19 I don't have them all in my head. But,  
20 for example, your interest in the provisions for  
21 evacuation of the Amish, and where that fits into our  
22 license renewal. That is in our scoping summary  
23 report.

24 If you will see me after the meeting, I've  
25 got my copy of it, and I will make sure that you get

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1 a copy.

2 FACILITATOR CAMERON: That is correct, and  
3 I think that what Duke is saying is that we did try to  
4 be responsive to your comments. And, Duke, if you  
5 could talk to Mr. Gyll offline?

6 MR. WHEELER: And also the librarians are  
7 on my list. I will call the libraries and see if they  
8 got this particular document. I may need to mail it  
9 out again.

10 FACILITATOR CAMERON: Thanks, Mr. Gyll,  
11 and thanks Duke. We are next going to go to Mr. Alan  
12 Brinson, from the Emergency Management Agency of the  
13 Commonwealth of Pennsylvania.

14 MR. BRINSON: Good evening, everyone. My  
15 name is Alan Brinson, thank you. I appreciate and  
16 thank you all for coming out here.

17 This type of meeting is doing exactly what  
18 it is supposed to do; provide information, give you  
19 opportunities to discuss things, to learn some things,  
20 and perhaps to provide some clarification.

21 Today I heard a number of things mentioned  
22 that I would like to expound upon, a little bit.  
23 First of all I'm the lead emergency off-site planner  
24 for this state, for Peach Bottom atomic power plant.

25 And while I profess to be no expert, I

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1 have immersed myself in the emergency preparedness of  
2 this community, and am quite familiar with a number of  
3 facets associated with that.

4 The comments regarding the Amish  
5 community, it is very important. There are a number  
6 of provisions that have been set forth for the Amish  
7 community. This is not a new issue, it is something  
8 that comes up on a fairly routine basis, and  
9 particularly an important one at this time.

10 So that we can clarify exactly what is  
11 being done with the Amish community, let me go ahead  
12 and speak on it.

13 The easiest way to do this is to start off  
14 with the siren system, and the EAS. It was  
15 particularly troubling to us, the State of  
16 Pennsylvania, as well as the NRC, when Peach Bottom  
17 and the siren system indicated the problems that the  
18 gentleman just spoke about.

19 The utility, to their merit, actually  
20 self-reported that event. So it was the utility who  
21 took the first response, and many subsequent reports,  
22 to satisfy the Commonwealth, and the NRC, that the  
23 siren problem was addressed, and that any future  
24 problems with the siren would become certainly not the  
25 issue that was presented when falsification took

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1 place.

2 But the utility did the right thing in  
3 reporting, and I think you will find that in the  
4 supplemental reports that were filed with the NRC.

5 Now, the siren system is the primary  
6 method for communicating with the public. Following  
7 that, an emergency alert system, turning to radios,  
8 and television. But there are also other methods for  
9 communicating across the Commonwealth.

10 If the sirens fail we immediately go into  
11 a route alerting. Much of this is done at the county  
12 level, and plans are in place for each county to  
13 respond to a siren failure and provide route alerting  
14 teams.

15 Now, against popular myth, the Amish do  
16 have radios. The Amish, from what I gather, are  
17 certainly tapped into the national oceanographic, or  
18 NOAA, through the national weather service radios.  
19 They certainly have the ability to get information,  
20 and we have the ability to put information through the  
21 National Weather Service, so that they have emergency  
22 information relative to Peach Bottom, through that  
23 delivery system.

24 As I said before, the counties have the  
25 predominant responsibility for including provisions in

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1 their plans for the treatment of not only the Amish,  
2 but all publics in the community area.

3 Lancaster and York specifically address,  
4 in their plans, a set of procedures on how to address  
5 the Amish population. Chester county, they have one  
6 municipality in this EPZ, emergency planning zone,  
7 that is West Nottingham township.

8 And, frankly, they have four families.  
9 Those families are part of the police of West  
10 Nottingham, to be notified by the police in West  
11 Nottingham Township.

12 Much has to be said about the Amish way of  
13 communicating. The plans that the counties have are  
14 to notify the bishops. The bishops then have various  
15 methods to contact members of their community.

16 And for many of us who are not familiar  
17 with the Amish, it seems to be something of a mystery.  
18 But for those of us who live in and amongst the Amish  
19 community, as I do, they have quite an efficient, and  
20 effective way for getting information out to each  
21 other, I can assure you of that.

22 Now, they also have the same access to  
23 what is called a special needs survey that is  
24 conducted annually. The special needs surveys are  
25 sent out in mailings to every household in the EPZ.

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1           Those people who have special conditions,  
2           whether they need notification, whether they are  
3           hearing impaired, or whether they are unable to walk,  
4           or be transported, they go into a special needs form  
5           that is then placed with the county.

6           So there is a data base in the county for  
7           people with special needs. Now, there has been an  
8           enhancement to that, because this Amish question is so  
9           important to us. The counties have now requested that  
10          their annual survey for special needs include a  
11          questionnaire.

12          And you will be seeing this in the York  
13          area, I believe, in the near future. This survey  
14          question is going to be asking the question, do you  
15          have access to a phone or a radio?

16          If the respondents to that survey indicate  
17          no, they will be placed in the special needs group.  
18          And as such the county, or the municipality, whatever  
19          jurisdiction is responsible, for communicating with  
20          those people, will then be -- they will be putting  
21          messages out to them through this special needs  
22          program.

23          So there are many methods to communicating  
24          with the Amish. Any questions? Thank you very much.

25          FACILITATOR CAMERON: Thank you, Al, for

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1 providing that information from the state for us,  
2 thank you.

3 I would like to ask Dr. Shirley Liebman to  
4 come up and talk to us. Dr. Liebman?

5 DR. LIEBMAN: I'm going to read my  
6 comments. I usually don't read in some of these  
7 presentations, but I will at this time.

8 Our family has resided in Lancaster County  
9 since the '60s, and for the past 20 years or so, right  
10 in Holtwood, just ten miles or so north of here.

11 My attendance at the first public scoping  
12 meeting last fall, for the license renewal, gave me a  
13 first-hand knowledge of the process that was discussed  
14 in detail, in numerous handouts, with much relevant  
15 data.

16 Unfortunately the negative comments by the  
17 anti-nuclear activists were amplified by the media,  
18 rather than the overall supportive input by our local  
19 residents, such as myself, and most other interested  
20 attendees.

21 Basically we feel that our national energy  
22 needs have been outlined, over these past decades.  
23 And the vital role that nuclear energy plays now, and  
24 should play in the future, is clear to us.

25 The Peach Bottom facility has had an

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1 outstanding performance record, overall. The draft  
2 report, that we've just heard about, and we are here  
3 to discuss, prepared for this renewal of the specific  
4 nuclear plant, addressed all required regulatory  
5 issues in a clear and comprehensive manner.

6 Many questions posed by the interested  
7 citizens, at the meeting that I was at, were  
8 addressed, and gave essentially a basic conclusion.

9 There has been, and will be, minimal  
10 negative environmental impact. You all have used the  
11 word small as your category of comment. Indeed, it is  
12 acknowledged by all reasonable persons that no human  
13 actions are totally risk-free.

14 Not in our homes, not in our community,  
15 and certainly not throughout the environment. The  
16 risk assessment studies that we've just heard  
17 explained by the gentleman, helped to put the  
18 environmental issues into perspective, as conducted by  
19 the NRC and other capable people.

20 I believe that the stated plans given in  
21 the draft provide for the highest level of safety and  
22 efficiency that is reasonable, that reflect the  
23 concerns, and the expertise of those directly  
24 responsible for the management and operations of the  
25 Peach Bottom plant.

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1           Indeed, it is imperative that we are  
2 supposed to be continuing in all our nuclear plant  
3 facilities, and the waste transportation actions, to  
4 improve in this new era of our homeland security  
5 concerns.

6           So in summary the projected license  
7 renewal of the Peach Bottom nuclear plant is a vital  
8 path in meeting our nation's immediate and future  
9 energy needs.

10           So as local residents, and concerned  
11 citizens, our family strongly supports the proposed  
12 NRC actions. And just to throw a comment in, since  
13 some of these other persons have raised some questions  
14 as to some technical capabilities, and what have you,  
15 that they felt were in question.

16           I'm retired from industrial research and  
17 development with about 40 years working in the  
18 materials and environmental sciences. And my  
19 colleagues in the industrial research community, the  
20 universities, and with the EPA researchers, have made  
21 it quite a direct connection to this area of  
22 environmental concerns.

23           My work with the EPA people, as an  
24 industrial researcher, was in the '70s and '80s. And  
25 together, all of us in industry and government, really

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1 worked to put together the so-called master analytical  
2 scheme, our areas in analytical research and services,  
3 and in the environmental sciences, for the methods and  
4 instrumentation that are now fundamental throughout  
5 the country, and the world, in environmental trace  
6 analysis.

7           So the results of my research,  
8 specifically if any of you wish to find out which kind  
9 of detectors are used, and you are concerned that the  
10 ability of the NRC to monitor properly the air, water,  
11 and solids materials, my colleagues and I have  
12 documented our work in over 200 publications, and  
13 presentations in about two or three dozen technical  
14 journals, many articles, book chapters, and books, and  
15 so forth.

16           So there is lot of documented information  
17 that you can follow, for those who feel it necessary.  
18 Thank you.

19           FACILITATOR CAMERON: Thank you very much,  
20 Dr. Liebman.

21           Is Nicki~~y~~ Roth here? Okay, that is all  
22 the speakers we had for tonight. And is there anybody  
23 that I missed?

24           (No response.)

25           FACILITATOR CAMERON: Well, the NRC staff,

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1 our experts, archaeologists, and other disciplines are  
2 here. Please feel free to talk to them after the  
3 meeting.

4 We are going to adjourn now, and thank you  
5 all for coming out and sharing your comments with us.  
6 Goodnight.

7 (Whereupon, at 9:00 p.m. the above-  
8 entitled matter was concluded.)

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