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**NUCLEAR REGULATORY COMMISSION**

Title:                   Seabrook Station License Renewal  
                                  Public Meeting - Afternoon Session

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Location:                   Hampton, New Hampshire

Date:                    Thursday, September 15, 2011

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING TO DISCUSS  
PRELIMINARY SITE-SPECIFIC RESULTS OF THE  
LICENSE RENEWAL ENVIRONMENTAL REVIEW FOR  
SEABROOK STATION

+ + + + +

Upper Great Hall

One Liberty Lane

One Liberty Lane East

Hampton, New Hampshire 03842

+ + + + +

Thursday, September 15, 2011

1:30 p.m.

FACILITATOR:

BRIAN ANDERSON

NRC STAFF PRESENTING:

MICHAEL WENTZEL, Environmental Project Manager, Office  
of Nuclear Reactor Regulation

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

(1:32 p.m.)

1  
2  
3 BRIAN ANDERSON: Good afternoon. This is  
4 the Nuclear Regulatory Commission public meeting to  
5 discuss the Environmental Review related to the  
6 license renewal application for Seabrook Nuclear Power  
7 Station.

8 My name is Brian Anderson. I'll be the  
9 facilitator for today's meeting.

10 The purpose of this meeting is to discuss  
11 the staffs' Supplemental Environmental Impact  
12 Statement -- the Draft Supplemental Environmental  
13 Impact Statement for the license renewal at Seabrook  
14 Nuclear Power Station.

15 NRC staff will make a short presentation  
16 followed by a question and answer session, but the  
17 main purpose of today's meeting is to hear your  
18 comments. The NRC's review of the Seabrook license  
19 renewal application is not yet complete. The comments  
20 that are provided today and comments that are provided  
21 after this meeting will be considered by NRC staff as  
22 part of their issuance of the Final Supplemental  
23 Environmental Impact Statement, which is scheduled for  
24 next year.

25 I'd like to introduce some of the NRC

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1 staff members that are here today. I'll start with  
2 Mr. Mike Wentzel. Mike is the Environmental Project  
3 Manager for the Seabrook license renewal application.

4 Mr. Rick Plasse -- Rick is the Safety Project Manager  
5 for the NRC's license renewal review. And Mr. Dave  
6 Wrona -- Dave is Chief of the License Renewal Projects  
7 Branch Number 2. Mike, Rick and Dave all work at the  
8 NRC headquarters facility near Washington, DC.

9 I'd also like to introduce Diane Screnci -  
10 - Diane is a Public Affairs officer who works out of  
11 the NRC's Region 1 office near Philadelphia. Mr. Rich  
12 Conte is Chief of the Engineering Branch Number 1.  
13 Rich also works out of the NRC Region 1 office near  
14 Philadelphia. And I'm not sure if he's in the room or  
15 not -- Mr. Bill Raymond -- Bill --

16 BILL RAYMOND: Right here.

17 BRIAN ANDERSON: Right in front of me.  
18 Bill is the Senior Resident Inspector at Seabrook  
19 Nuclear Power Station.

20 For those that don't know, the NRC assigns  
21 at least two Resident Inspectors at every operating  
22 nuclear power plant in the United States. NRC  
23 Resident Inspectors live in the local community and  
24 they perform reactor safety inspections on a daily  
25 basis at every nuclear power plant in the country.

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1 I'd like to go through a few housekeeping  
2 items before we get into the meat of today's agenda.  
3 You might've seen as you came in that there are copies  
4 of the presentation material and other NRC brochures  
5 and information on the tables out in the lobby --  
6 please feel free to help yourself to copies of that  
7 information for use either during or after this  
8 meeting. Also, to help minimize distractions during  
9 the presentation and comment period -- I'd ask that  
10 everyone please silence your cell phones. Either turn  
11 them off or put them into vibrate mode -- whatever you  
12 prefer.

13 The agenda for today's meeting's going to  
14 begin with a presentation by the NRC staff. We are  
15 then going to have a short question-and-answer  
16 session. The bulk of today's meeting is to hear your  
17 comments. Because the main purpose of today's meeting  
18 is to listen to comments provided by the public, we've  
19 allotted 25-minutes for the NRC staff's presentation,  
20 25-minutes for the question-and-answer period and then  
21 the remaining two plus hours we'd like to dedicate to  
22 the comment period.

23 During the question-and-answer period, the  
24 NRC staff is prepared to talk about the review process  
25 and the preliminary results of the Environmental

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1 Review for the Seabrook license renewal application.  
2 There are a limited number of NRC staff technical  
3 experts that are here today, so it's possible that NRC  
4 staff won't be able to answer all questions that you  
5 have. They'll do the best that they can and if there  
6 are questions that they can't answer here today, NRC  
7 staff is happy to take your contact information and  
8 get back to you with an answer at some point after the  
9 meeting.

10 Also, because there is a limited number of  
11 NRC technical staff here during the comment period,  
12 the NRC staff doesn't intend to address or respond to  
13 comments at this meeting. NRC staff will provide  
14 written responses to all comments received during this  
15 meeting through the rest of the comment period after  
16 they've had a thoughtful review of all the comments  
17 that are provided.

18 Finally, before we get into the  
19 presentation, I'd just like to cover a few ground  
20 rules for the meeting. There's a relatively large  
21 number of people that have signed up to make comments  
22 today. So, to make sure that everybody has an equal  
23 amount of time and gets a chance to provide their  
24 comments here today, I'd like to ask that everybody  
25 please be concise in providing your comments. I'd

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1 like to limit the comments to five-minutes -- if you  
2 can keep your comment presentation to less than five-  
3 minutes -- I want to make sure that everybody has an  
4 equal chance to do that. If at the end, when  
5 everybody's had a chance to make comments, if there's  
6 anybody that needs more time, we'll certainly allow  
7 that based on the time left in the meeting. But it's  
8 important to us that everybody gets an equal chance to  
9 provide comments here today.

10 We are also transcribing today's meeting  
11 to make sure that we have a written record of what's  
12 said here today. The court transcriptionist in the  
13 back has some equipment set-up, so we want to make  
14 sure that anybody that wants to speak, please speak  
15 only into a microphone. When we get to the question-  
16 and-answer period and the comment period, I'll provide  
17 anybody that wants to speak with a microphone, but  
18 that's very important that we have a clear written  
19 record of what's said here today. It's also important  
20 to only speak into a microphone just to make sure that  
21 everybody in the room can hear what's being said.

22 For those same reasons, I'd also like to  
23 ask that we only have one person speaking at a time.  
24 I want to make sure that everybody can hear clearly  
25 what's being said and that we have a good clear

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1 written record of what's discussed here today.

2 The last thing that I will mention is that  
3 you might hear some opinions today that are different  
4 from your own. Please let's all treat each other with  
5 courtesy and respect.

6 So, just, I think to summarize what the  
7 ground rules I'd like to use here for the meeting --  
8 if we could just be concise and limit your comments to  
9 five-minutes -- we'll allow more time if there's more  
10 time left at the end; please use a microphone if you  
11 wish to talk; let's only have one person speak at any  
12 one time; and let's treat each other with courtesy and  
13 respect during this meeting. Those all sound like  
14 ground rules that we can live with?

15 Great -- thanks.

16 I will go ahead and let the NRC staff get  
17 into their presentation and I'll turn things over to  
18 Mike Wentzel.

19 MICHAEL WENTZEL: Good afternoon  
20 everybody. My name is Mike Wentzel. I am the Project  
21 Manager at the NRC responsible for coordinating all of  
22 the Environmental Review activities for the Seabrook  
23 Station license renewal application. I will say  
24 something just real quick -- I don't have a good view  
25 of the slides, so if what I'm saying seems out of sync

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1 with the slides -- if people would just let me know,  
2 I'll see if I can get that corrected.

3 On August 1st, the NRC published its Draft  
4 Supplemental Environmental Impact Statement -- also  
5 known as the Draft SEIS -- related to the Seabrook  
6 Station license renewal Environmental Review. The  
7 Draft SEIS documents the NRC's preliminary review of  
8 the environmental impacts associated with renewing the  
9 license for Seabrook Station for an additional 20-  
10 years and today I'm going to present to you those  
11 results.

12 I hope that the information provided will  
13 help you understand what we've done so far and the  
14 role that you can play in helping us to make sure that  
15 the Final Impact Statement is accurate and complete.

16 Here's the agenda for today's meeting. I  
17 will discuss the Agency's regulatory role; the  
18 preliminary findings of our Environmental Review  
19 including power generation alternatives that were  
20 considered; I will present the current schedule for  
21 the remainder of the Environmental Review and how you  
22 can submit your comments outside of this meeting.  
23 From there, I will take time to briefly discuss two  
24 topics that are not related to the Environmental  
25 Review, but are of some interest to those in

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1 attendance -- those are the concrete issues at  
2 Seabrook and the NRC's response to Fukushima.

3 At the end of the presentation, there will  
4 be time for questions and answers on the Environmental  
5 Review process and most importantly, time for you to  
6 present your comments on the Draft SEIS.

7 Now, the NRC was established to regulate  
8 civilian uses of nuclear material including facilities  
9 that produce electric power. The NRC conducts license  
10 renewal reviews for plants whose owners wish to  
11 operate them beyond their initial license period. The  
12 NRC license renewal reviews address safety issues  
13 related to managing the effects of aging and  
14 environmental issues related to an additional 20-years  
15 of operation. In all aspects of the NRC's regulation,  
16 the Agency's mission is threefold: to ensure adequate  
17 protection of public health and safety; to promote  
18 common defense and security; and to protect the  
19 environment.

20 Now, we're here today to discuss the  
21 potential site-specific impacts of license renewal for  
22 Seabrook Station. The Generic Environmental Impact --  
23 also referred to as the GEIS -- examines the possible  
24 environmental impacts that could occur as a result of  
25 renewing licenses of individual nuclear power plants

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1 under 10 CFR Part 54. The GEIS, to the extent  
2 possible, establishes the bounds and significance of  
3 these potential impacts. The analyses in the GEIS  
4 encompass all operating light-water power reactors.  
5 For each type of environmental impact, the GEIS  
6 attempts to establish generic findings covering as  
7 many plants as possible.

8 For some environmental issues, the GEIS  
9 found that a generic evaluation was not sufficient and  
10 that a plant specific analysis was required. The  
11 site-specific findings for Seabrook are contained in  
12 the Draft SEIS that we issued on August 1st of this  
13 year. This document contains analyses of all  
14 applicable site-specific issues, as well as a review  
15 of the issues covered by the GEIS to determine whether  
16 or not the conclusions in the GEIS are still valid for  
17 Seabrook Station.

18 In this process, the NRC staff also  
19 reviews the environmental impacts of potential power  
20 generation alternatives to license renewal to  
21 determine whether the impacts expected from license  
22 renewal are unreasonable.

23 For each environmental issue identified,  
24 an impact level is assigned. The NRC standard of  
25 significance for impacts was established using the

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1 White House Council on Environmental Quality  
2 terminology for 'significant'.

3 The NRC established three levels of  
4 significance for potential impacts: Small, Moderate  
5 and Large. They're defined here on the slide. For a  
6 Small impact -- the effects are not detectable or are  
7 so minor that they will neither destabilize nor  
8 noticeably alter any important attribute of a  
9 resource. For a Moderate impact -- the effects are  
10 sufficient to alter noticeably, but not to destabilize  
11 important attributes of the resource. And for a Large  
12 impact -- the effects are clearly noticeable and are  
13 sufficient to destabilize important aspects of a  
14 resource.

15 This slide lists the site-specific issues  
16 the NRC staff reviewed for the continued operation of  
17 Seabrook Station during the proposed license renewal  
18 period. As discussed in the previous slide, each  
19 issue is assigned a level of environmental impact of  
20 Small, Moderate or Large by the environmental  
21 reviewers. The staff's preliminary conclusion is that  
22 the site-specific impacts related to license renewal  
23 for aquatic resources is Small for most species and  
24 Large for winter flounder, rainbow smelt and some kelp  
25 species due to the impact of the operation of Seabrook

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1 Station's once-through cooling system.

2 Similarly, for protected species and  
3 habitats -- the staff's preliminary conclusion is that  
4 the impacts related to license renewal are Small for  
5 most species and Large for rainbow smelt -- a species  
6 identified by the National Marine Fishery Service as a  
7 species of concern. For all other resource areas, the  
8 impacts are Small.

9 Now, when reviewing the potential impacts  
10 of license renewal on the environment, the NRC staff  
11 also looks at the effects on the environment from  
12 other past, present and reasonably foreseeable future  
13 human actions. These effects, referred to as  
14 Cumulative Impacts, not only include the operation of  
15 Seabrook Station, but also impacts from activities  
16 unrelated to Seabrook -- such as the development of  
17 the East Coast Greenway, commercial fishing and  
18 climate change. Past actions are those related to the  
19 resources at the time of the power plant's licensing  
20 and construction. Present actions are those related  
21 to resources at the time of the current operation of  
22 the power plant. Future actions are considered to be  
23 those that are reasonably foreseeable through the end  
24 of the plant operation, including the period of  
25 extended operation.

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1                   Therefore, the analysis considers  
2 potential impacts through the end of the current  
3 license renewal term, as well as the 20-year renewal  
4 period. While the level of impacts due to direct and  
5 indirect impacts of Seabrook Station on aquatic  
6 resources is Small for most species and Large for  
7 winter flounder, rainbow smelt and some kelp species -  
8 - the cumulative impact when combined with all other  
9 sources, such as pressure from commercial fishing and  
10 effects from climate change, would be Moderate for  
11 most species and Large for winter flounder, rainbow  
12 smelt and other species that would be adversely  
13 affected by climate change. In the other areas the  
14 staff considered -- the staff's preliminary conclusion  
15 is that the cumulative impacts are Small.

16                   The National Environmental Policy Act --  
17 also known as NEPA -- mandates that each Environmental  
18 Impact Statement consider alternatives to any proposed  
19 major federal action. A major step in determining  
20 whether license renewal is reasonable or not is  
21 comparing the likely impacts of continued operation of  
22 the nuclear power plant with the likely impacts of  
23 alternative means of power generation. Alternatives  
24 must provide an option that allows for power  
25 generation capability beyond the term of current

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1 nuclear power plant operating license to meet future  
2 system generating needs. In the Draft Supplement, the  
3 NRC staff initially considered (16) different  
4 alternatives. After this initial consideration, the  
5 staff then chose the three most likely and analyzed  
6 those in depth.

7 Finally, the NRC staff considered what  
8 would happen if no action is taken and Seabrook  
9 Station shuts down at the end of its current license  
10 without a specific replacement alternative. This  
11 alternative would not provide power generation  
12 capacity nor meet the needs currently met by Seabrook  
13 Station.

14 The NRC's preliminary conclusion is that  
15 there is no clear environmentally preferred  
16 alternative to license renewal. All alternatives  
17 capable of meeting the needs currently served by  
18 Seabrook Station entail impacts greater than or equal  
19 to the proposed action of license renewal.

20 Based on the review of the likely  
21 environmental impacts from license renewal -- as well  
22 as potential environmental impacts of alternatives to  
23 license renewal -- the NRC staff's preliminary  
24 recommendation in the Draft SEIS is that the  
25 environmental impacts of license renewal for Seabrook

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1 Station are not great enough to deny the option of  
2 license renewal.

3 Now, I would like to emphasize that the  
4 Environmental Review is not yet complete. Your  
5 comments today and all written comments received by  
6 the end of the comment period on October 26th will be  
7 considered by the NRC staff as we develop the Final  
8 SEIS, which we currently plan to issue in March of  
9 2012. Those comments that are within the scope of the  
10 Environmental Review and provide new and significant  
11 information can help to change the staffs' findings.  
12 The Final SEIS will contain the staff's final  
13 recommendation on the acceptability of license renewal  
14 based on the work we've already performed and any new  
15 and significant information that we receive in the  
16 form of comments during the comment period.

17 Now, as we stated earlier, I'm the primary  
18 contact for the Environmental Review. My colleague,  
19 Rick Plasse, is the primary contact for the Safety  
20 Review. Hard copies of the Draft SEIS are available  
21 in the entryway -- where you came in -- as are copies  
22 on CD-ROM. In addition, the Seabrook and the Amesbury  
23 Public Libraries have agreed to make hard-copies  
24 available for your review. You can also find  
25 electronic copies of the Draft SEIS along with other

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1 information about the Seabrook Station license renewal  
2 review online at the address provided on the slide.

3 The NRC staff will address written  
4 comments in the same way we address spoken comments  
5 received today. You can submit written comments  
6 either online or via conventional mail. To submit  
7 written comments online, visit the web site --  
8 regulations.gov and search for Docket ID NRC-2010-  
9 0206. If you have written comments this evening, you  
10 may also give them to any NRC staff member.

11 Now, before we open up the meeting for  
12 questions and comments, I wanted to take some time to  
13 briefly discuss two topics that are of some interest  
14 to those in attendance -- that's the concrete  
15 degradation at Seabrook and the NRC's response to  
16 Fukushima. While these issues are not related to the  
17 Seabrook Station license renewal Environmental Review  
18 and are therefore not specifically addressed in the  
19 Draft SEIS, they are issues that are being actively  
20 addressed through other relevant Agency processes.

21 Now, for concrete degradation -- the  
22 alkali-silica reaction -- referred to as ASR -- is a  
23 process that could occur in some forms of concrete  
24 that have been exposed to water for long periods of  
25 time. ASR can cause expansion and cracking in

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1 concrete structures. During the course of the license  
2 renewal review, ASR related degradation was found at  
3 Seabrook. As discussed at the annual assessment  
4 public meeting on June 8th, there are no immediate  
5 safety concerns associated with ASR at Seabrook. NRC  
6 has found no problems with any electrical system,  
7 piping or any other component as a result of ASR and  
8 the concrete walls continue to perform within design  
9 specifications. Evaluation of ASR and its impact on  
10 license renewal is being addressed as part of the  
11 Safety Review.

12 Additionally, the NRC has requested  
13 NextEra explain how it intends to manage the effect of  
14 aging associated with ASR. The NRC has delayed the  
15 license renewal Safety Review until NextEra completes  
16 its evaluation and addresses the staffs' questions.  
17 The NRC will not make a decision on license renewal  
18 before it fully understands both the issues with ASR  
19 affected structures and NextEra's plan to address the  
20 issues.

21 Now, since the accident at Fukushima, the  
22 NRC has taken multiple steps to ensure the safe  
23 operation of nuclear power plants both now and in the  
24 future. As part of its initial response to the  
25 accident, the NRC issued temporary instructions to our

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1 inspectors directing specific inspections at nuclear  
2 power plants to assess disaster readiness and  
3 compliance with current regulations. The next step in  
4 the NRC's response was the report of the NRC Near-Term  
5 Task Force. The purpose of the Near-Term Task Force  
6 was to develop near-term recommendations and suggest a  
7 framework for us to move forward within the longer  
8 term.

9 The Near-Term Task Force issued its report  
10 on July 12th and discussed the results of their review  
11 at a public meeting on July 28th. As a result of its  
12 review, the Near-Term Task Force presented (12) over-  
13 arching recommendations for improvement. These  
14 recommendations are applicable to operating reactors  
15 regardless of license renewal status. Based on the  
16 results of the Near-Term Task Force, the Commission  
17 has directed the NRC staff to evaluate and outline  
18 which of the recommendations should be implemented.

19 The staff recently submitted a paper to  
20 the Commission on September 9th, providing the staffs'  
21 recommendation of which Task Force recommendations can  
22 and -- in the staffs' judgment -- should be initiated  
23 in part or in whole without delay. On October 3rd,  
24 the staff will submit another Commission paper on its  
25 prioritization of (11) of the (12) Task Force

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1 recommendations.

2 Recommendation number 1 -- the  
3 recommendation to reevaluate the NRC's regulatory  
4 framework will be evaluated over the next 18-months.  
5 To date, the NRC has not identified any issues as part  
6 of these activities that calls into question the  
7 safety of any nuclear facility. Additionally, the  
8 review process is going on independent of license  
9 renewal. Any changes that are identified as necessary  
10 will be implemented for all licensees regardless of  
11 license renewal status.

12 More information on the NRC's post-  
13 Fukushima activities -- including the results of the  
14 Near-Term Task Force -- can be found on the NRC's web  
15 site by clicking the link -- Japan nuclear accident's  
16 NRC actions -- or directly through the web address  
17 that's on this slide. Also, there are a limited  
18 number of copies of the Near-Term Task Force report  
19 that are available at the back of the room -- actually  
20 outside the door.

21 Additionally, there are question and  
22 answer sheets related to Fukushima and Seabrook for  
23 those that are interested.

24 So, that completes my presentation for  
25 today. I am going to turn the meeting back over to

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1 Brian for question and answer.

2 BRIAN ANDERSON: Thank you, Mike. Does  
3 anyone have any questions about the presentation or  
4 the preliminary results of the Seabrook license  
5 renewal Environmental Review?

6 Yes, sir. And if you could, would you  
7 please, for the record, give your name and ask your  
8 question.

9 BRUCE SKUD: Bruce Scud -- for Mr. Wentzel  
10 -- you were kind enough to provide information on your  
11 slide here about further information for NRC response  
12 to Fukushima -- do you have any further information  
13 site available for concrete degradation?

14 MICHAEL WENTZEL: We don't have a web site  
15 in particular set-up for that. We do have the  
16 inspection report that is available for reviewing  
17 online. It's through the Web-based ADAMS. Actually,  
18 anything that's going to be related to that that's  
19 found out later will be published on there.  
20 Additionally, anything that the staff -- for the issue  
21 of license renewal -- anything that's reviewed  
22 relating to ASR will also be available on web-based  
23 ADAMS. But we do not have a specific web site set-up  
24 for that.

25 BRIAN ANDERSON: Sir, if we took your

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1 contact information, we could provide you with  
2 specific numbers through the NRC web site that would  
3 allow you to access those reports and that  
4 information. Would that be useful to you?

5 BRUCE SKUD: Yes it would, thank you.

6 BRIAN ANDERSON: Okay.

7 RAYMOND SHADIS: Thank you. I may have  
8 missed this in your presentation, but is there a  
9 working group within NRC that is specifically tasked  
10 with lessons learned from Fukushima as it would apply  
11 to license renewal?

12 BRIAN ANDERSON: Sir, would you mind  
13 giving us your name -- just for the record.

14 RAYMOND SHADIS: Sure, my name is Raymond  
15 Shadis. I'm representing interveners in the Seabrook  
16 licensing renewal process -- Friends of the Coast from  
17 the state of Maine and also New England Coalition from  
18 the state of Vermont.

19 BRIAN ANDERSON: Thank you, Raymond.

20 NRC staff -- the question is -- is there a  
21 task force or an NRC group looking at Fukushima --  
22 future efforts, specifically as it relates to license  
23 renewal. Is that --

24 RAYMOND SHADIS: Lessons learned.

25 BRIAN ANDERSON: Lessons learned.

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1           MICHAEL WENTZEL: I would have to say I'm  
2 not aware of any task force that's specifically  
3 looking at lessons learned from Fukushima as it  
4 relates to license renewal. License renewal -- we  
5 look at managing the effects of aging. I think any  
6 lessons learned that are applicable that come out of  
7 the review will be applied to any licensee and I think  
8 if there was to be some sort of license renewal  
9 specific lesson learned that was identified, it would  
10 be applied as appropriate.

11           BRIAN ANDERSON: Yes, ma'am. If you could  
12 please give us your name.

13           DEBBIE GRINNELL: Debbie Grinnell -- I'm  
14 with the C-10 Foundation. After Fukushima, we have  
15 now added three more core melts that need to be  
16 factored into -- I think it's now up to five -- in  
17 evaluating or recalculating your mass and that  
18 pertains to the relicensing process. So, is anyone  
19 doing those calculations and they need to be done  
20 before you relicense any other plants post-Fukushima.

21           BRIAN ANDERSON: NRC staff -- any specific  
22 information as it relates to core melt frequency given  
23 the Fukushima events this year?

24           MICHAEL WENTZEL: I'm afraid I didn't  
25 really understand what the question was.

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1 DEBBIE GRINNELL: You use incidents in --

2 BRIAN ANDERSON: Debbie -- here's the  
3 microphone.

4 DEBBIE GRINNELL: You use incidents in  
5 evaluating and doing the mass in terms of predicting  
6 the risk, so I don't know who's doing that at the NRC,  
7 but I'm assuming that because now we have factual  
8 information -- we have three additional core melts --  
9 that that has to be factored into your evaluations and  
10 predictability of the risk.

11 BRIAN ANDERSON: Debbie -- we may need to  
12 get back to you with a better answer. Diane -- do you  
13 have anything that you can add or help out with here?

14 MICHAEL WENTZEL: I would say it almost  
15 sounds like a comment that's related to  
16 [indiscernible] --

17 BRIAN ANDERSON: Mike -- is your mic on?

18 MICHAEL WENTZEL: Okay -- there we go.  
19 I'd say that really sounds like a comment. I don't  
20 have a specific answer to that question, but it sounds  
21 like that may be a comment that would be worth  
22 submitting this evening or whenever you want.

23 DAVE WRONA: We can take it as a comment.

24 MICHAEL WENTZEL: Right -- absolutely.  
25 And actually, we can take -- and Dave's absolutely

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1 right -- you've already provided the comment. We can  
2 handle this as a comment and address it as part of the  
3 Final.

4 BRIAN ANDERSON: So, Debbie, the NRC staff  
5 is going to take your question as a comment, but also  
6 look into it and get back to you with information, if  
7 that's okay with you.

8 DEBBIE GRINNELL: When you re-draft the  
9 calculations, I'd like to see those.

10 BRIAN ANDERSON: Well, the NRC staff will  
11 also take that as a comment and follow-up on it. Does  
12 anybody else have any questions related to the  
13 presentation material or review process? Yes, sir.

14 THOMAS POPIK: Hello, my name is Thomas  
15 Popik. I'm with the Foundation for Resilient  
16 Societies. I'm looking at Table F.1 from the Draft  
17 EIS -- this is titled *Seabrook CDF for Internal and*  
18 *External Events*. I guess my first question is -- CDF,  
19 that stands for Core Damage Frequency -- is that  
20 correct?

21 BILL RAYMOND: Yes.

22 THOMAS POPIK: Okay, thank you. So  
23 there's a number of events here and the first one is:  
24 LOOP due to weather. I believe that stands for Loss  
25 Of Outside Power -- is that correct?

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1 MICHAEL WENTZEL: Yes, that is correct.

2 THOMAS POPIK: Okay. The CDF per year  
3 here is  $1.5 \times 10^{-6}$ . I also see: LOOP due to grid  
4 related events --  $9.0 \times 10^{-7}$  -- any place in this EIS is  
5 there the frequency for the initiating events?

6 MICHAEL WENTZEL: I'm not really sure.  
7 I'm not a PRA expert. I'm definitely not a SAMA  
8 expert, so I can't answer that question specifically.

9 I would be happy to -- I'm almost positive that we  
10 have that information either submitted through the  
11 applicant or in the EIS, but I can't point to it  
12 specifically. That's something that if you want to  
13 give me your contact information, I can find that out  
14 and let you know where that information can be found.

15 THOMAS POPIK: Okay, thank you. I have a  
16 follow-up. Seems to me that that would be critical  
17 information for the public to know, but I'll talk  
18 about that later on in my comment. I would ask -- as  
19 a follow-up question -- is the impact of a great  
20 geomagnetic storm -- similar to the Carrington event  
21 or other solar disturbances that we have had --  
22 incorporated in any of the initiating event  
23 frequencies?

24 MICHAEL WENTZEL: Again, I'm not an expert  
25 on that. That's something else I can look into and

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1 let you know.

2 THOMAS POPIK: Okay, thank you.

3 BRIAN ANDERSON: Sir, thank you for those  
4 questions. NRC staff will take those as comments, but  
5 also follow up with answers once they've had a chance  
6 to consult with technical experts back at NRC  
7 headquarters.

8 Sir, I'll come right back to you. I saw  
9 this hand here.

10 MAX ABRAMSON: My name is Max Abramson.  
11 I'm a member of the Seabrook Budget Committee speaking  
12 on my own behalf. I just have two questions that I  
13 think might require more in-depth follow-up. The  
14 first one is -- what types of natural disasters are  
15 likely at the Seabrook Station considering we're right  
16 on the Atlantic seaboard and what is being done in  
17 this regulatory environment to respond to that?

18 The second question is -- nearly all  
19 countries that I'm aware of that use nuclear fission  
20 recycle spent nuclear fuel. I think I saw a  
21 documentary on this and I think only the U.S. and  
22 Russia still bury it. The Seabrook Station is burying  
23 spent fuel on-site -- are there regulations being  
24 offered that will allow American reactors to recycle  
25 waste?

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BRIAN ANDERSON: Thank you for those questions. Were you looking to have answers to those questions now or are those like comments that you wanted to submit as part of this meeting?

MAX ABRAMSON: I'd be willing to have the answers come in later.

BRIAN ANDERSON: Okay. What I would suggest -- let the NRC staff take those questions as comments and provide written responses along with the rest of the comments. But, I'll look to the NRC staff if there's an answer that can be given now to either of the questions.

I believe the first question was about local disaster -- site-specific type natural disasters -- and the second question was related to reprocessing of fuel.

Bill -- would you --

BILL RAYMOND: So, in order to build a nuclear power plant at Seabrook or any other site in the country, there is a site characterization study that is done and that's a matter of public record. That's in a document called the Final Safety Analysis Report. So, it describes the type of events, features at the site, what sort of events are expected to occur

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1 during the course of the site's lifetime to include  
2 seismic event, rain events, storm events, etc. That  
3 information has been published and is available for  
4 review. If you need help on locating that, we can  
5 certainly help you get to that.

6 So at least that's the first of your two  
7 questions.

8 DENNIS MOREY: I'm Dennis Morey. I'm  
9 Chief of the Project Branch 1. Since I just moved  
10 over from NMSS I can answer your second question. I  
11 can tell you that the NRC has a rule-making effort  
12 underway for recycling, but I can't tell you any  
13 details. It was in a different division.

14 BILL RAYMOND: Let me take that back.  
15 Max, if I may too, in response to your second question  
16 -- you did indicate that the spent-fuel is being  
17 buried at the site -- so there's a key distinction.  
18 Spent-fuel at Seabrook is stored either wet storage in  
19 the spent-fuel pool -- that's a part of the seismic  
20 qualified buildings there. But a portion of the fuel  
21 that's been generated since the plant began to operate  
22 has also been moved from wet storage to dry storage  
23 sitting on concrete pads on the site property. I just  
24 want to make the -- but neither one of those are  
25 burial, if you will. So that's as it exists right now

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1 at Seabrook.

2 BRIAN ANDERSON: Max, thank you again for  
3 those questions. NRC staff will provide written  
4 responses to those as comments as well. Does anyone  
5 else have questions? Yes, ma'am.

6 LEE ROBERTS: As a simple citizen of New  
7 Hampshire within the 10-mile radius area -- which is  
8 the dangerous area -- I have to say, just as a  
9 preliminary comment, that I am concerned that there  
10 isn't a lot more coverage. We know after the  
11 Fukushima disaster that they've widened that range  
12 enormously. The question that I have is regarding how  
13 it is determined what natural disaster could happen  
14 here? That is something that one really finds very  
15 difficult. I don't imagine that in Japan they thought  
16 about what has happened there -- ever. I've spoken to  
17 many Japanese who are just horrified at what happened  
18 in their country and I want to say that I am horrified  
19 because I feel that we are in much greater danger than  
20 is being admitted by this regulatory agency. I feel  
21 that it's very hard to determine just what could  
22 happen and I wonder how you think you're going to do  
23 that? Thank you.

24 BRIAN ANDERSON: Thank you for your  
25 question. Can we have your name for the record

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1 please?

2 LEE ROBERTS: My name is Lee Roberts and  
3 I'm just Ms. New Hampshire citizen. Thank you.

4 BRIAN ANDERSON: Thank you, Lee. I want  
5 to look to the NRC staff -- I think maybe Bill you had  
6 just talked about the site characterization study  
7 that's part of the Final Safety Analysis Report.  
8 Maybe in responding to this question you can talk a  
9 little bit about how that addresses local natural  
10 disaster frequency and then also maybe in your role as  
11 Senior Resident Inspector, you can talk a little bit  
12 about how emergency planning zones are set-up and how  
13 the site characterization study is taken into account  
14 for emergency planning.

15 BILL RAYMOND: So, for Seabrook, as well  
16 as all plants -- the potential for seismic activity is  
17 studied. They do an evaluation to look at the worst-  
18 case seismic events that have been recorded in that  
19 specific area in the past. They then take that  
20 information and apply a conservative factor on top of  
21 that to establish what the seismic design basis for  
22 the plant will be to which they're going to build the  
23 structures. And that has been done for Seabrook --  
24 yes, ma'am.

25 LEE ROBERTS: Can I just add a comment to

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1 that? I don't know how one can exactly judge what's  
2 going to happen in the future. We --

3 BRIAN ANDERSON: Lee, if you can hold on  
4 just a second. I'll bring a microphone back to you.  
5 Thanks.

6 LEE ROBERTS: Sorry. I know I have a loud  
7 voice, but I guess not loud enough. I just wanted to  
8 say that I don't see how one can really just  
9 scientifically go back and decide that this is all  
10 that's going to happen. I don't think they would have  
11 come up with the answer in Japan and I don't think we  
12 can necessarily come up with an answer here. Because  
13 we have all sorts of environmental issues that no one  
14 expected. Nobody's expected the tornadoes we've had.  
15 Nobody's expected some of the hurricanes we've had.  
16 Nobody's been able to prophesize what would happen in  
17 terms of something like a tsunami. I don't expect  
18 that here, but we have had things happen in New York  
19 City, for instance, that have never happened before.  
20 It's possible. I think we're in great danger.

21 BRIAN ANDERSON: Thank you, Lee. I can  
22 tell that you're very passionate about this and that  
23 this is something that concerns you. What I'd like to  
24 do is ask the NRC staff to take your questions as  
25 comments to provide written responses for, but also

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1 look to Bill Raymond one more time to see if there's  
2 anything else that he can do to answer those  
3 questions.

4 LEE ROBERTS: I'm a mother and a  
5 grandmother and a neighbor and I know there are many,  
6 many people who are not here today speaking their  
7 minds because they think it won't do any good because  
8 we don't really get listened to. I'm here to try to  
9 make you understand that we are concerned -- very  
10 concerned about allowing a license to continue when we  
11 know there are so many problems at this place. We had  
12 those spent rods, among a zillion other things. I'm  
13 no scientist, but I just know that if one uses one's  
14 head, one knows we're in trouble. Thank you.

15 BRIAN ANDERSON: Thank you very much for  
16 those questions and comments and thank you for being  
17 here and sharing that with us. Thank you. Let me  
18 look back to Bill one more time to -- it's actually  
19 important that we speak into a microphone for the  
20 record.

21 BILL RAYMOND: Thank you again for your  
22 comments and I do appreciate your concerns and we are  
23 here to hear you. I don't want you to feel that it's  
24 falling on deaf ears. We are not clairvoyant and  
25 being able to look to the future, but we do use our

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1 technology and science to look backwards to see what  
2 has happened. But, having done that, we don't stop  
3 there.

4 When new information becomes available, we  
5 try to learn from that and what is happening in this  
6 country and elsewhere as a result of the events that  
7 have happened -- on the seismic events at Fukushima.  
8 We haven't mentioned it, but prior to the Fukushima  
9 event, there was a study that was in progress in this  
10 country looking at the seismic hazard within the  
11 continental United States. That's an effort that's in  
12 progress. We'll use the information from Fukushima to  
13 revalidate whether or not the design and licensing  
14 basis that have already been established -- which we  
15 believe have established an adequate basis for safe  
16 plant operation, so it won't hurt public health and  
17 safety -- is in place and remains adequate. If it's  
18 not adequate, we'll try to address it. So, there's  
19 processes in place for that.

20 I see other questions.

21 BRIAN ANDERSON: Yes, sir. I knew you had  
22 a question. Does anybody else have a question about  
23 the presentation from today or the process that the  
24 NRC's doing to review the rest of this? Yes, sir.

25 PAUL GUNTER: Do you mind if I -- so we

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1 can have a little bit of exchange, so you don't have  
2 to -- I'll save you some steps if I can come up here?

3 BRIAN ANDERSON: I'm happy to walk back  
4 and forth.

5 PAUL GUNTER: Okay.

6 BRIAN ANDERSON: It's part of the job  
7 description.

8 PAUL GUNTER: All right. And could I get  
9 your name, sir?

10 BILL RAYMOND: Bill.

11 PAUL GUNTER: Bill? Okay. My name's Paul  
12 Gunter. I'm with Beyond Nuclear and we're one of the  
13 interveners in the license renewal application that's  
14 before the U.S. Nuclear Regulatory Commission. And  
15 we've also been one of (23) organizations that have  
16 petitioned the NRC to put a pause in its review of  
17 this license extension and new license applications  
18 because there are so many questions with regards -- a  
19 lot of questions, but specifically to the seismic  
20 issue now. So, just for the record, the safety  
21 evaluation you're doing is Generic Safety Issue-199 --  
22 is that it? Is it GSI-199?

23 BILL RAYMOND: Yes.

24 PAUL GUNTER: Okay. So, I'll just, for  
25 the record, you're saying GSI-199 is the reevaluation

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1 of seismic activity for U.S. nuclear power stations.  
2 Now, we just had an earthquake on August 23rd.  
3 Actually, I live down in Washington, D.C. and I  
4 watched the salt and pepper shaker dance on my kitchen  
5 table. That was 90-miles away from the epicenter in  
6 Mineral, Virginia, which is where the North Anna  
7 Nuclear Power Station is located and just 11-miles  
8 from this earthquake -- an unprecedented, unexpected  
9 earthquake and very likely just a precursor event of  
10 something bigger or, perhaps, the same.

11 So, your Agency is now reevaluating the --  
12 and in this case at North Anna, in fact, the  
13 earthquake exceeded the design qualification for the  
14 plant. Now, I know that's a little like being 10-  
15 pounds overweight in an elevator -- it doesn't mean  
16 it's necessarily going to fall to the basement, but it  
17 did exceed a safety standard. And there are margins  
18 within that safety standard.

19 But, my question and my concern is that we  
20 don't know -- you don't know -- you have not even  
21 finished your evaluation and yet this proceeding goes  
22 forward. It's like watching something on a conveyor  
23 belt and when regulation and licensing processes  
24 operate on conveyor belts, it speaks more to your  
25 schedule and the industry's agenda than it does to

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1 public health and safety and environmental concerns.  
2 So, I would like you to justify why the Agency is  
3 proceeding with this conveyor belt kind of mentality  
4 for this proceeding -- your Environmental Impact  
5 Statement -- when you don't even have answers to  
6 inform your Environmental Impact Statement about  
7 seismic qualifications of this facility.

8 BRIAN ANDERSON: Sir, thank you for those  
9 comments and that question. Most of that, I think, is  
10 important for the NRC staff to capture as comments.

11 PAUL GUNTER: But, it's a part of the  
12 process. I'm talking specifically -- what I'm  
13 addressing here is specifically your process. The  
14 process by which you're more concerned about a  
15 schedule -- you're more concerned about an industry's  
16 production agenda than you are actually about  
17 qualifying your own Environmental Impact Statement.  
18 That's a schedule question. And so, I think that you  
19 should be accountable to address this body and other  
20 bodies as to why you're schedule driven, when we have  
21 such precedent as the North Anna earthquake and the  
22 Fukushima accident?

23 BRIAN ANDERSON: Thank you, for those  
24 comments and that question. Dave, I think at the  
25 heart of this the question is -- with ongoing reviews

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1 in other areas, how is it that the NRC process allows  
2 the license renewal review to continue forward with  
3 other pending reviews?

4 DAVE WRONA: I just wanted to mention that  
5 there is a petition in front of the NRC to halt  
6 license renewal and other reviews. We are in the  
7 process of reviewing that. The Agency is concerned  
8 with --

9 PAUL GUNTER: You denied it --

10 LEE ROBERTS: You denied it.

11 PAUL GUNTER: You denied it. Let's get  
12 current.

13 LEE ROBERTS: Come on.

14 DAVE WRONA: Okay. Let me get back to  
15 that in a second. And yes -- yes --

16 LEE ROBERTS: Just answer the question.

17 BRIAN ANDERSON: Ladies and gentlemen --

18 DAVE WRONA: No --

19 LEE ROBERTS: It's a processing concern.

20 BRIAN ANDERSON: Ladies and gentlemen --

21 LEE ROBERTS: It isn't being processed,  
22 it's been denied.

23 DAVE WRONA: Okay.

24 BRIAN ANDERSON: Ladies and gentlemen,  
25 thank you all for being here. We want to make sure

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1 that your voice is heard, but it's very important to  
2 us to have a clear record of what's said here today.

3 UNIDENTIFIED SPEAKER: Correct it then.

4 LEE ROBERTS: That was just  
5 [indiscernible] --

6 DAVE WRONA: I'm going to come back to  
7 that. I'm going to come back to that, please.

8 BRIAN ANDERSON: We want to make sure we  
9 have a clear written transcript of what's being said  
10 here today and in order to have that happen, I need to  
11 make sure that only one person speaks at a time. I  
12 very much appreciate your passion and being here to  
13 provide comments with us. Please work with the NRC  
14 staff to ensure that only one person's speaking at a  
15 time.

16 LEE ROBERTS: [indiscernible]

17 BRIAN ANDERSON: Thank you.

18 DAVE WRONA: The NRC is also concerned  
19 with seismic and flooding events due to Fukushima and  
20 what's happened in Mineral, Virginia. Our task force  
21 on the Fukushima event -- those are areas -- and  
22 including emergency preparedness -- are being  
23 specifically addressed during that report.

24 In terms of halting license renewal -- the  
25 Agency is determined that we have ongoing processes

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1 that are looking at these issues. When we go forward  
2 with that and determine if actions need to be taken or  
3 don't need to be taken -- they will be put in place  
4 irrespective of license renewal. Whether the plant  
5 has a renewed license, is currently being reviewed by  
6 us or has already been reviewed by us. So, our  
7 ongoing oversight is going to address those issues and  
8 as things come up and we need to take action, we're  
9 going to take it through that process, not the license  
10 renewal process.

11 BRIAN ANDERSON: Yes, sir, there's a new  
12 question in back. I'll come back to you.

13 STEVEN ATHEARN: Hi. My name is Stephen  
14 Athearn. I'm walking from Rockland to Boston to the  
15 Japanese consulate. This was initiated by my wife,  
16 who's from Fukushima prefecture. My question concerns  
17 a -- we're looking at natural disasters that we might  
18 not be able to perceive, but there's a very  
19 foreseeable factor that I don't see being talked about  
20 and that is the general fact that all of our main  
21 energy resources are finite and subject to permanent  
22 decline. I mean, they've been rising for all the time  
23 that we've been in our current model -- we have a  
24 model of continuous growth forever and these things  
25 have been rising for 150-years or 450 years, depending

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1 on how you look at it. But, they're all finite and  
2 subject to decline.

3 I just wonder if there's been any study of  
4 the impact -- we're not talking just about  
5 electricity, but of general energy decline -- on the  
6 ability to manage nuclear power? So, that's my  
7 question.

8 BRIAN ANDERSON: Sir, just to make sure I  
9 understand the question -- how does the NRC review  
10 process take into account -- when you say an energy  
11 decline, could you say more about that?

12 STEVEN ATHEARN: Yes. For example, the  
13 Middle East now, which in all the projections is  
14 supposed to supply our growing needs for oil -- I know  
15 oil is only 3% of electricity, but I'm talking about,  
16 in general -- this is a major, major thing that will  
17 impact our society. There was a report in 2005  
18 published by the Department of Energy, which used the  
19 word 'unprecedented' three times in its abstract. I  
20 think that usage of words is itself unprecedented in a  
21 government report, but we're talking about major  
22 impacts on society and we're planning as if we're just  
23 going to go on in this trajectory now.

24 So, my question is -- has the NRC done any  
25 study whatsoever on the impacts of declining resources

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1 that could permanently end economic growth and whether  
2 -- it's expensive to decommission plants now and it's  
3 almost bankrupting a rich country to -- we don't know  
4 if Japan can clean-up from this disaster that it's  
5 undergone. If that's the case now, when energy is  
6 available in the amounts that we're used to and that  
7 we need, in the sense that we've built our society to  
8 rely on them. We have to look at that question about  
9 what's going to happen -- our ability to manage these  
10 things. We talk about managing the waste of nuclear  
11 facilities. But that's a big question, whether we can  
12 do that. So, I want to know whether there's anybody  
13 here that has discussed -- not necessarily in this  
14 room, but whether the NRC has studied or is intending  
15 to study the general impacts of energy decline on our  
16 ability to manage nuclear power plants safety.  
17 Thanks.

18 BRIAN ANDERSON: I don't know if Mike --  
19 Dave -- either of you have an answer to energy  
20 resources future management?

21 DAVE WRONA: Well, as resources are needed  
22 to safely operate and decommissioning nuclear reactor  
23 plants, the NRC's mandate is exactly that. In terms  
24 of for the country -- our mission is limited to  
25 protecting the public health and safety for civilian

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1 use of nuclear materials. So, in terms of us looking  
2 forward for the need for power or for the need if  
3 oil's gone and the need if wind is being used -- it's  
4 not in our purview. We're limited to these nuclear  
5 power plants. We do make sure that our licensees are  
6 financially stable to operate and take that plant  
7 through decommissioning.

8 BRIAN ANDERSON: Sir, I'm going to come to  
9 you for the final question. I think that it's  
10 important that we move on to the comment period.  
11 Actually, sir, can I ask that since you were able to  
12 ask a question earlier, can I go to this gentleman  
13 please for a new question and I'd like to make that  
14 the final question. I don't want to take away any  
15 time from what's been allotted to provide comments.

16 RAYMOND SHADIS: I'll give my comment  
17 [indiscernible].

18 BRIAN STERN: Thank you. The Draft EIS in  
19 your presentation refers to the impact on aquatic  
20 resources as Large when looking at winter flounder,  
21 rainbow smelt and kelp -- and that's the impact from  
22 the Seabrook Nuclear Power Plant -- the impact on  
23 those species is Large. You then discuss the  
24 cumulative effect, apparently, looking at the  
25 influence on those species over time because of over-

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1 fishing or climate change or other stressors and say -  
2 - based upon those cumulative impacts the effect from  
3 Seabrook is Small. I've got a question -- that Large  
4 -- and ask you to explain that better because it  
5 sounds like since they're being killed anyway, we can  
6 kill them ourselves first. It doesn't seem to make  
7 sense to me. I was wondering if you could explain how  
8 that analysis of cumulative impact works?

9 BRIAN ANDERSON: Sir, thank you for the  
10 question. For the record, could we have your name  
11 please?

12 BRIAN STERN: I am Brian Stern.

13 BRIAN ANDERSON: Thank you, Brian. Mike -  
14 - could you address the impacts?

15 MICHAEL WENTZEL: I can. We did find that  
16 the impact on winter flounder, rainbow smelt and some  
17 kelp species was Large for aquatic resources because  
18 of the impact of Seabrook Station's once-through  
19 cooling system. We also found that for all other fish  
20 species that we were able to make a determination on,  
21 the impact was Small. That's based off of fairly  
22 extensive monitoring data from the time of the plant's  
23 initial licensing up and through recent times. So,  
24 we're able to statistically see where there's an  
25 impact that you can directly attribute to the

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1 operation of Seabrook Station. I won't get into the  
2 details of that -- that's actually available in the  
3 Draft SEIS.

4 As far as cumulative impacts go -- our  
5 finding was for aquatic resources that -- the way it  
6 works is you look at the direct impact of Seabrook  
7 Station and then you look at all other impacts that  
8 you can quantify. So, what we'd actually said was  
9 that Seabrook Station's -- at least the cumulative  
10 impact on aquatic resources was Moderate for most fish  
11 species and Large for rainbow smelt and other species  
12 that are affected by climate change. Seabrook  
13 Station's direct contribution to that cumulative  
14 impact was Small for most species and Large for  
15 rainbow smelt, winter flounder and some kelp species.

16 BRIAN ANDERSON: Thank you, Mike. Yes,  
17 ma'am. As a matter of timing for the meeting, we want  
18 to ensure that there's enough time for everybody that  
19 wants to speak to provide comments. I think it's very  
20 important to move to that portion of the meeting.

21 If you're registered to speak -- we're  
22 about to move to the portion that will allow you to  
23 make comments and I think that it's very important  
24 that we move to that phase of the meeting. That's the  
25 important part of the NRC staff being here to solicit

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1 comments today. So, if you have not already  
2 registered to speak, have not filled out a yellow card  
3 -- could you please do that and I'll make sure that  
4 you get the right time to speak.

5 LEE ROBERTS: We've got somebody here from  
6 the Fukushima area. If you'll let her speak  
7 [indiscernible]

8 MIE ATHEARN: I'm sorry, I didn't write --  
9 Thank you so much. Thank you so much. My name is Mie  
10 Athearn. I'm from Fukushima, Japan. I'm walking to  
11 Boston. I here today as -- I was thinking just join.

12 But, I want to just let you know we didn't know --  
13 earthquake. We didn't know -- tsunami. And then it  
14 happen -- accident of Fukushima Daiichi Nuclear Power  
15 Station. Then many Fukushima people now have to move.

16 We are losing our land. We have the evacuation.  
17 Many people are suffering now -- radioactive exposure.

18 So, just let you know our truths. So, thank you so  
19 much for giving me a chance to talk. Thank you.

20 Sir, may I -- so, I think it's a disaster  
21 happen. So it's my opinion, but nuclear power station  
22 I think why it exists in ours, I don't know why it  
23 exists. It shouldn't. Must not exist only ours, so  
24 please consider about this. I'd like to state about  
25 that. Thank you so much. Thank you.

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1                   BRIAN ANDERSON: Thank you very much for  
2 those comments. I think we're all in agreement that  
3 what happened in Japan is truly tragic and not just  
4 the nuclear events, but the earthquake and tsunami and  
5 the destruction that occurred there. So, I'm guessing  
6 that I can speak for everybody in the room to say that  
7 it's particularly moving to be reminded of what  
8 happened there and I want to personally thank you for  
9 sharing your personal story and providing those  
10 comments here today. Thank you very much. And thanks  
11 to all of you for those questions and comments.

12                   I think it is important for us to move on  
13 to the comment period. Like I mentioned earlier, to  
14 ensure that everybody has an equal amount of time to  
15 speak, I'd like to ask that everybody please try to be  
16 concise and limit your comments to five-minutes. What  
17 I'd like to do is call on people in sequence based on  
18 the yellow cards that you've registered with. When I  
19 call your name, if you could come up to the front  
20 podium and use the microphone that I'm holding in my  
21 hand to provide your comments. That I think will work  
22 well to make sure that everybody has a chance to  
23 speak.

24                   I did notice during the first part of the  
25 meeting that there were some people that came in after

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1 we had started -- some people might have come in  
2 through the stairway -- so if there's anybody that is  
3 here and wishes to speak and provide comments, but you  
4 have not yet filled out a yellow card, please do that  
5 so that we can have a record of who spoke and that I  
6 can have a sequence of who's going to speak.

7 So, having said that, the first speaker  
8 will be Don Tilbury, followed by Max Abramson and Jim  
9 Cotter will speak after Max.

10 DON TILBURY: Do I come up to the --

11 BRIAN ANDERSON: Mr. Tilbury -- yes, sir.

12 DON TILBURY: First of all, I'm against  
13 nuclear power. So, that's a bad start -- right? Then  
14 I'll make comments on the local situation.

15 But just simply -- how many people here  
16 like the power plant at Niagara Falls? How about the  
17 one -- the tidal one -- up in Canada? Well, this is a  
18 good way to understand that there are other ways to  
19 make electricity -- and safer ways. So, with that  
20 said, I'll just go on here --

21 I feel that nuclear came, has been tried  
22 and now the problems outweigh the benefits. First of  
23 all, I sold thickness gauges -- nuclear thickness  
24 gauges -- in my sales work. And I thought -- Boy,  
25 this is great. You get a little pellet that would fit

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1 into a drill and you'd be able to drill the rest of  
2 your life with that one pellet. And then all the  
3 other kind of possibilities -- that you could run some  
4 of these things with a little nuclear pellet. Well,  
5 it was okay for thickness gauges, but after hearing  
6 all of the problems with it and so forth, I gave it  
7 up. I didn't want to sell it anymore.

8 Okay -- now the issue that's already here.

9 The Seabrook Power Plant is here and whether I like  
10 nuclear power -- that doesn't matter. Whether it  
11 should continue to be licensed -- I am concerned about  
12 that. I definitely feel that it is not. I just don't  
13 understand -- my car that's sitting outside is 12-  
14 years old -- it's got 150,000 miles on it. Should I  
15 just figure it's going to go another 12-years? To me,  
16 that's a simple comparison perhaps, but I feel that  
17 with all the problems that have come up and all of the  
18 things that you're trying to do to keep it going -- it  
19 just doesn't make sense at all in my mind. Now, some  
20 of the things about this -- when the Seabrook Plant  
21 was built, the population density here was a lot less.

22 It's probably three times that it was 20-years ago.  
23 So, does the density enter into your equation now --  
24 as you work out this next 20-years? I should think it  
25 would.

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1           If it brings up evacuation, in the case of  
2 a problem at the plant, both local residents and beach  
3 population -- and if you go down to the beach on the  
4 weekend and try to think -- what would happen if there  
5 was some kind of nuclear problem? No way -- there  
6 would be 100,000 people that would die.

7           And how much electricity is generated --  
8 and here's another one of my questions. How much of  
9 the electricity is generated here, stays here and how  
10 much goes on to the grid? Now, the reason for asking  
11 that is that it seems that the locals are at risk to  
12 provide electricity to those elsewhere. Now, can I  
13 get an answer on that? What percentage of the  
14 electricity stays here and what percentage goes on the  
15 grid? Well, that's it. That's how I feel. And I do  
16 have a little drawing here that shows -- *Making*  
17 *Decisions*. One of them is the nuclear and all these  
18 others are various ways to make electricity -- wind,  
19 solar, geothermal, tidal, ocean, waste-to-energy --  
20 and that's what we should be looking at. I feel that  
21 nuclear has come and should be gone. Let's get on  
22 with the other sources.

23           BRIAN ANDERSON: Thank you, Don, for those  
24 comments. Max Abramson is the next speaker, followed  
25 by Jim Cotter and Thomas Popik.

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1           MAX ABRAMSON: I already gave my comment.  
2           I'm sorry, I thought that was the question period.

3           BRIAN ANDERSON: So, for the record --  
4           during the question-and-answer period, Max spoke the  
5           comments that he intended to provide here. Since we  
6           already have that on the record, we'll take his  
7           written comments and move on to the next speaker.

8           DON TILBURY: How much of the electricity  
9           stays here and how much goes to the grid?

10          BRIAN ANDERSON: Sir, for the comment  
11          period -- NRC staff doesn't have all of the technical  
12          experts here that would be able to answer all of the  
13          questions. So, for the comments, we're going to take  
14          all the comments -- all comments that are received  
15          here today and after this meeting are going to receive  
16          a written response.

17          Jim Cotter is the next speaker.

18          JIM COTTER: My name is Jim Cotter. I'm  
19          from Wakefield, Massachusetts. I have a consulting  
20          company -- energy consulting company. We're looking  
21          at oversights with respect to spent fuel rod pools.  
22          One of the documents we're using is (51) rulemaking  
23          petitions with respect to spent fuel rod pools that I  
24          think was put together by the Foundation for Resilient  
25          Scientists. I'm a managing partner in the

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1 consultancy.

2 My background -- I studied nuclear physics  
3 at Northeastern University; nuclear chemistry and  
4 geology at Boston College; I was a nuclear weapons  
5 crew chief during the Vietnam War; I'm the seismic  
6 technician, 1968-69; I worked on Seabrook, Vernon,  
7 Wiscasset, Pilgrim, Millstone, Nine-Mile, North Anna -  
8 - where they just had the 5.8 earthquake; I did the  
9 bore-hole studies for the reactor siting at Seabrook;  
10 I went on to go for a doctorate in geo-physics at  
11 Umass/Amherst, changed my mind and did a BA/MBA  
12 Finance.

13 My concerns -- we're facing a potential  
14 6.0 earthquake within our lifetimes. In the last  
15 1000-years -- in 1050 we had a 7.2 estimated in the  
16 St. Lawrence River Valley; 1638, estimated 6.8 between  
17 Manchester and Concord; 1725, 1727, 5.6 plus for  
18 Portsmouth; 1755, 6.4 estimated off Cape Ann. There  
19 was a periodicity of approximately 250-years -- so  
20 that's why they say the 6.0 is coming.

21 One of the concerns with respect to spent  
22 fuel rods -- inadequate offsite power generation. In  
23 the event of an extended loss of power for the  
24 electrical grid, collapse in excess of seven-days --  
25 which is one of the scenarios of the power generation

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1 from diesel. Will the pool withstand a 6.0  
2 earthquake?

3 Issues of corrosive piping at various  
4 nuclear power plants -- including leaking tritium in  
5 the Vernon, Vermont plant. How many other power  
6 plants are leaking tritium? It's probably estimated  
7 at 20 or more.

8 Petition for rulemaking -- I mentioned.  
9 We are working on five-petitions for rulemaking to  
10 address what we see as serious oversights -- or lack.

11 One may have been addressed is weather. Weather  
12 moves west to east. Has anyone considered a  
13 nor'easter storm with the spent fuel rod pool?

14 Fukushima -- I'll address that. It's what  
15 is called a black swan event. It could not be  
16 predicted -- approximately every 10,000 years. We  
17 have a potential black swan here that's been  
18 overlooked. One is a 6.0 in coincidence with a  
19 volcano in the Canary Islands splitting up the middle.

20 In the last 50,000 years, it's put three escarpments  
21 into the ocean creating a 100 to 150 foot tsunami  
22 wave. There's documentation of sediments in Scotland  
23 about 250-years ago of at least a 25-meter wave.

24 That's just my comments.

25 BRIAN ANDERSON: Jim -- thank you for

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1 those comments.

2 JIM COTTER: One more. I was stationed at  
3 Misawa Air Force Base, about 150-miles north of  
4 Fukushima in 1965 in the Air Force -- and we had at  
5 least 10-20 earthquakes a day. The whole place just  
6 shook.

7 BRIAN ANDERSON: Thank you, sir, for those  
8 comments. The next speaker will be Thomas Popik  
9 followed by Debbie Grinnell.

10 Before Mr. Popik speaks, I wanted to take  
11 the time to recognize two members of Senator Ayotte's  
12 staff that are here today -- Simon Thomson and Mike  
13 Scala -- in the back row. I wanted to make everybody  
14 aware that they're here today. Thank you gentlemen  
15 for joining us.

16 THOMAS POPIK: Hello. My name is Thomas  
17 Popik. I'm with the Foundation for Resilient  
18 Societies. I come here today with the concern of  
19 long-term loss of outside power to nuclear power  
20 plants. Many of you already know that nuclear power  
21 plants -- almost all of them -- require connection to  
22 a functioning electric grid to maintain operations.  
23 If they lose that connection, there are backup diesel  
24 generators, but they only have a seven-day -- in most  
25 cases -- supply of fuel on site.

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1           For many of us, this is a major concern  
2 should we experience a power outage in excess of  
3 seven-days accompanied by difficulties in re-supplying  
4 diesel fuel. So, these type of issues have been  
5 examined at very high levels and I'm here today to  
6 read some excerpts from a letter written by Dr. Bill  
7 Graham, who was Chairman of the Electromagnetic Pulse  
8 Commission -- that's a Congressionally charged  
9 Commission -- as well as, previously, science adviser  
10 to the President. So, I'm going to read some of this  
11 letter, which was addressed to the Chairman of the NRC  
12 --

13           Dear Chairman Jaczko, I am writing you as  
14 the Chairman of the Congressionally mandated  
15 Commission to assess the threat to the United States  
16 from electromagnetic pulse attack, as well as the  
17 former science adviser to the President and director  
18 to the Office of Science and Technology Policy in the  
19 Executive Office of the President from 1986 to 1989.  
20 This letter is to urge you as you form plans to  
21 protect nuclear reactors from Fukushima-type disasters  
22 where electric power to support nuclear plant  
23 operations is lost for a protracted period to take  
24 account of the very real threats from a great  
25 geomagnetic storm and from a nuclear EMP attack.

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1           An EMP can be generated naturally by a  
2 solar flare or coronal mass ejection from the sun,  
3 which can produce a great geomagnetic storm on the  
4 earth, similar to some aspects of an EMP attack from a  
5 high-yield nuclear weapon with similar catastrophic  
6 consequences. A great geomagnetic storm can cause  
7 collapse of the electric grid and other critical  
8 infrastructures -- transportation, communications,  
9 banking and finance, food and water -- for a  
10 protracted period of months or years.

11           Now, this is an important part here --

12           A study by the National Academy of  
13 Sciences independently confirmed the EMP Commission's  
14 assessment that if a great geomagnetic storm like the  
15 1859 Carrington event recurred today, recovery of the  
16 national electric power grid could take four to ten-  
17 years. Such an event could also cause operators of  
18 the (108) nuclear plants in the United States to lose  
19 the ability to perform a safe controlled shutdown of  
20 their power reactors producing a Fukushima-like  
21 disaster on a large-scale. Although great geomagnetic  
22 storms are rare, estimated to occur about once a  
23 century, most experts assess that we are probably  
24 overdue.

25           Now, this isn't some fringe group that's

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1 coming up with a speculative scenario. These kind of  
2 events have already occurred in recorded history.  
3 There was another great geomagnetic storm in 1921.  
4 This is a former science adviser. This letter is  
5 copied to the current science adviser to the current  
6 President, who also has written an extensive editorial  
7 in the *New York Times* warning of this kind of  
8 potential event.

9 Now, I'm speaking mostly to the NRC staff  
10 here today. I urge you -- go back to your offices and  
11 please talk about this. This is not speculative.  
12 This is a real danger. When the probability of these  
13 kind of events is not included in Environmental Impact  
14 Statements, it affects the credibility of the NRC and  
15 it puts all of us at risk. These kind of events can  
16 be protected against, but not if we don't address them  
17 in the regulatory process. Thank you.

18 BRIAN ANDERSON: Thomas -- thank you for  
19 those comments. The next speaker is Debbie Grinnell  
20 followed by Brian Stern and then Marcia Bowen.

21 DEBBIE GRINNELL: I'm Debbie Grinnell. I  
22 live in West Newbury, Massachusetts within the 10-mile  
23 EPC of Seabrook. I work for the C-10 Foundation. We  
24 do the real-time radiation monitoring for the state of  
25 Massachusetts. And I'm a founding Board member.

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1           The C-10 Foundation requests the NRC  
2 suspend any decision on Seabrook Station's relicensing  
3 until:

4           The NRC required Supplement 4 to GL-88-  
5 20/*Individual Plant Examination of External Events for*  
6 *Severe Accident Vulnerabilities* is completed and  
7 submitted by NextEra and approved by the NRC.

8           Secondly -- the NRC's license renewal  
9 process completes a formal review of Seabrook's design  
10 and licensing basis against current NRC requirements  
11 and guidance. This has not been done yet.

12           Thirdly -- all NRC required seismic  
13 upgrades for Seabrook Station are completed and those  
14 reports made public.

15           Four -- in-depth engineering analysis to  
16 determine the extent and structural weakness imposed  
17 by Seabrook Station's ASR concrete degradation is  
18 completed and all reports are made public. Seabrook's  
19 ASR concrete degradation has been characterized as  
20 Moderate and Severe in NRC inspection reports. The  
21 extent of the structural damage and its impact to the  
22 structural integrity of four safety related building  
23 foundations is currently unknown. Seabrook's seismic  
24 vulnerability cannot be determined until the  
25 structural weakness imposed by the ASR concrete

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1 degradation of these safety related foundations and  
2 other plant areas susceptible to ASR degradation is  
3 determined and integrated into Seabrook's updated  
4 Seismic Risk Analysis.

5 Due to the unknown degree of structural  
6 weakness imposed by the concrete, NextEra cannot  
7 provide reasonable assurance that they are operating  
8 within their current license. Therefore, the NRC must  
9 suspend NextEra's application for a license extension  
10 until: both in-depth assessments are completed;  
11 upgrades are done; and the structural integrity of all  
12 buildings is determined and assured for 40-years.

13 The NRC must aggressively undertake staff  
14 requests for additional information concerning the  
15 Severe Accident Mitigation Alternatives review of  
16 Seabrook Station.

17 So, I would like to know when all of that  
18 is completed and there's resolution to the seismic  
19 risk -- Seabrook's vulnerability -- and the concrete -  
20 - the extent of the concrete issue. That I know we  
21 have a suspension at the moment, but somehow the  
22 Safety suspension does not seem to stop the process of  
23 this Environmental Impact. It seems to be considered  
24 a separate issue. They're integrated.

25 After the tragic events at Fukushima in

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1 Japan and the recent earthquake in Virginia -- on  
2 September 1, 2011, the NRC has requested operators of  
3 all (104) commercial reactors to conduct new  
4 assessments of their facility's vulnerability to  
5 earthquake damage. Plants have been given up to two-  
6 years to complete these assessments. Until these  
7 assessments are done, individual plant risk will be  
8 unknown and the NRC will not know what upgrades to  
9 require. According to the U.S. geological survey  
10 maps, Seabrook's seismic risk level is described as  
11 Moderate.

12           Unfortunately, the NRC's application to  
13 renew the license of an existing reactor does not  
14 entail a formal review of the reactor's design and  
15 licensing basis against current NRC requirements and  
16 guidance. Therefore, shortcomings are not identified  
17 that would have required upgrades. However, now --  
18 post-Fukushima and the earthquake in Virginia -- the  
19 NRC Task Force has recommended upgrading seismic and  
20 flooding design basis for every nuclear plant in this  
21 country. But here's the sad history of the NRC  
22 concerning this issue -- as early as 1996, the NRC  
23 established new seismic regulations for new site  
24 application, but these regulations were not applied to  
25 existing sites.

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1           Since 1996, the NRC has also established  
2 interim staff guidance, but only for the new reactor  
3 reviews. In 2005, the NRC requested applications for  
4 new reactors -- often proposed for the same sites as  
5 existing reactors -- include earthquake risk  
6 assessments that were worse than previously understood  
7 in several cases and suggested some existing plants  
8 could be in jeopardy -- that was 2005. In 2007, the  
9 NRC staff established interim guidance in three areas  
10 related to seismic issues: high frequency ground  
11 motion; winter precipitation loads on the roof of  
12 structures; and seismic margin analysis based on  
13 probabilistic risk assessment. Again, these pertained  
14 only to new sites.

15           For nearly a decade, the NRC has known  
16 that the seismic risk to nuclear plants in the eastern  
17 two-thirds of the U.S. was greater and existing plants  
18 had outdated protection against seismic and flooding  
19 hazards, but took no action.

20           It is our understanding that the NRC  
21 establishes renewal regulations based on its  
22 determination that existing regulatory processes are  
23 adequate to ensure that the licensing basis of  
24 currently operating U.S. nuclear power plants provides  
25 and maintains an adequate level of safety. Renewal of

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1 Seabrook's license must be suspended as the NRC has  
2 known the seismic risks were greater for existing  
3 plants for a decade. Valuable time has been lost as  
4 the NRC has known for years that existing regulatory  
5 processes were inadequate to assure an adequate level  
6 of safety and has taken no action.

7 That ends my comment.

8 BRIAN ANDERSON: Thank you for those  
9 comments, Debbie. The next speaker will be Brian  
10 Stern followed by Marcia Bowen and then Steven  
11 Athearn.

12 BRIAN STERN: My name is Brian Stern. In  
13 your introductory remarks, you state that the public  
14 comment is very important. I believe that it is and I  
15 appreciate it, but I also think that the process is  
16 flawed for the lack of public comment on the safety  
17 portion. I understand that this meeting is limited to  
18 the environmental issues and that the Safety  
19 Evaluation Plan is not going to be subjected to this  
20 type of local hearing.

21 I think that the process is also flawed in  
22 that the topic is mired in technological issues and  
23 regulatory issues that are beyond the public's  
24 abilities to address. If we were dealing with a  
25 hazardous waste site -- which of course are of great

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1 environmental concern, but may pale compared to  
2 radiological issues -- the public could receive a  
3 technical assistance grant to be able to hire  
4 technical assistance to help them through the  
5 technological issues. In the nuclear field, there is  
6 -- in the NRC issues -- there is no similar TAG grant  
7 available, so you're relying upon the good graces of  
8 people to wade through hundreds of pages of technical  
9 documents to try to participate in this process. I've  
10 done my best, but I think it's a difficult process and  
11 I think it's flawed in those regards.

12 In reading through the documents, I have  
13 come across the phrase used by the NRC of 'unavoidable  
14 adverse impacts'. I'm shocked to hear that. This  
15 phrase is used in terms of "emissions and release of  
16 chemical and radiological constituents from the  
17 plant". There are chemical and radiological  
18 constituents released from the plant. That's  
19 acknowledged. That's 100% true. There's no question  
20 about it. And they are termed to be unavoidable  
21 adverse impacts. They're accepted. That's what comes  
22 along with it -- comes along with the plant. That  
23 turns the entire issue on its head. The matter is a  
24 question of licensing. That does not make it  
25 unavoidable. It's completely avoidable. How can you

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1 take the issue as to whether or not it's safe and say  
2 -- Well, these just come along with the plants, so  
3 it's unavoidable. The issue is -- it should not be  
4 licensed if these are avoidable adverse impacts, which  
5 they are. The alternative is to not extend the  
6 license.

7 We can look at these adverse impacts in a  
8 number of areas. In the groundwater, there is an  
9 acknowledged tritium leak. There is tritium in the  
10 groundwater. The EIS states that in order to control  
11 the tritium in the groundwater, there is water being  
12 pumped from the ground to the rate of 32,000 gallons a  
13 day for tritium plume control. That water, of course,  
14 would have an effect on the local groundwater and  
15 there is nothing in the report that I saw -- but  
16 again, I'm skimming through hundreds of pages -- that  
17 addresses the effect on local groundwater supplies.  
18 Nor does it predict the effect on local groundwater  
19 supplies as we go out 40-years.

20 Water becomes one of the key limited  
21 resources we're going to face in the future. That's  
22 pretty accepted wisdom. Water is gold and it will be  
23 gold in the future and 32,000 gallons a day now -- the  
24 plant was not designed to leak tritium. What are the  
25 predictions for an increase in the rate of tritium

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1 being leaked? The plant has already been increased in  
2 its Megawatts thermal and net electrical capacity -- I  
3 think by about 12%. And what is the increase going to  
4 potentially be in the future or not? The plant is  
5 running hotter than it was initially licensed for.  
6 What is the corroding material or something that's  
7 happening for the tritium release and these are not  
8 going to be linear degradations in plants.

9 So, I've not seen in the report the  
10 projection of what the tritium release will be in the  
11 future. What the rate of groundwater pumping will be  
12 in the future. How long will that groundwater need to  
13 be pumped after decommissioning? So, I think there's  
14 a big failure in the report in that regard.

15 The groundwater -- 32,000 gallons a day --  
16 that's being pumped from the plant is being put into  
17 the water discharged out to the ocean. I was shocked  
18 to hear that. I don't think most of the public knows  
19 that. Nor do I think that the fishermen or  
20 recreational people know that either. We have an  
21 enormous aquatic resource here that also does not stay  
22 local. Fish, shellfish -- whatever it may be -- move  
23 and water moves. There's dilution, but I did not see  
24 in the report what's being done to warn the public of  
25 the discharge of tritium in that area and

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1 concentrations.

2 I've not seen anything that assesses a  
3 bioaccumulation or long-term effect of tritium. I've  
4 not seen anything in the report talking about warning  
5 people -- warning fishermen. I have not seen anything  
6 where the fishermen that concentrate in that area --  
7 or lobster traps in that area -- to test what's caught  
8 in that area or to test that the health of people that  
9 are regularly consuming resources from that area of  
10 the discharge of the pipe. So, I think that there are  
11 flaws or gaps or omissions in the Draft SEIS with  
12 regards to the tritium and the groundwater leak.

13 BRIAN ANDERSON: Brian, I'll ask that you  
14 take just one more minute to finish up your comments.

15 BRIAN STERN: I would ask for more time to  
16 speak. I'm trying to be concise. Each of my topics  
17 have a number of -- I'd like to move on now to air  
18 quality.

19 BRIAN ANDERSON: Brian, there are a lot of  
20 other people that have signed up to speak. I want to  
21 make sure that everybody has equal time. At the end,  
22 if you're not able to finish in the next minute, I'm  
23 happy to let you finish if there's more time left in  
24 the meeting.

25 BRIAN STERN: If you prefer that I will --

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1 you're asking me to limit my remarks to another minute  
2 -- I'll do so, but I'll ask then a chance to speak  
3 again at the end and have an opportunity to say my  
4 remarks.

5 BRIAN ANDERSON: That's fine, thank you.

6 BRIAN STERN: With regard to air quality -  
7 - again, they're treated as unavoidable adverse  
8 impacts. There is a radiological environmental  
9 monitoring plan that I think is not adequate or if it  
10 is adequate it does not meet its objectives. The air  
11 quality is determined to be within limits based upon  
12 limited monitoring on-site and the off-site monitoring  
13 is not with regards to radiological components. I do  
14 not think that the air quality is adequately tested.  
15 I think that it is a very reasonable cost to have  
16 real-time monitoring in a number of areas within New  
17 Hampshire. I know that the C-10 group is doing it out  
18 of their own budget. You would assume that NextEra  
19 could handle it in their budget and that the NRC would  
20 require it as part of the Radiological Environmental  
21 Monitoring Program that's imposed on the licensee.

22 Without that data, I don't see how the  
23 Draft SEIS can pass off on the air quality as not  
24 impacted, when the data is not collected sufficiently.

25 And then to the extent that it is collected and they

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1 do find radiological releases in the air, they're  
2 called unavoidable adverse impacts.

3 I'd like to just finish before I turn the  
4 mic over -- if I'm going to go over a minute -- to  
5 just finish on the air quality issue, then I can pick  
6 it up later on other issues.

7 I understand that radiological releases  
8 into the air are considered acceptable based upon the  
9 nature of the gases that are emitted, but I also  
10 understand that those gases then further breakdown to  
11 Strontium and Cesium. I did not see in the Draft SEIS  
12 any discussion of that fact and the acknowledgment or  
13 evaluation of the air releases -- what they break down  
14 into further components and if that's done, I think it  
15 will find that the components that they further  
16 breakdown into -- the Strontium and Cesium -- have  
17 higher health risks than are acknowledged in the  
18 report.

19 And I would like an opportunity after this  
20 to continue, since I'm being stopped at this point.

21 BRIAN ANDERSON: Brian, thank you for  
22 those comments. Just as a reminder to everybody --  
23 this meeting is not the only avenue to provide  
24 comments. NRC staff will certainly take spoken  
25 comments at this meeting and a session again tonight,

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1 but today is not your only chance and this meeting is  
2 not your only chance. As the staff discussed earlier,  
3 there are ways to provide written comments  
4 electronically or by conventional mail.

5 So, if there's more to say than you're  
6 able to get in during the comment period of these  
7 meetings, NRC staff will continue to take comments  
8 outside of this meeting and for other times.

9 The next speaker is Marcia Bowen --

10 MARCIA BOWEN: I'm Marcia Bowen and I  
11 [indiscernible] --

12 BRIAN ANDERSON: Okay. Thank you, Marcia.

13 The next speaker is Steven Athearn -- am I saying  
14 that right?

15 STEVEN ATHEARN: You're saying it  
16 correctly.

17 BRIAN ANDERSON: And Mary Ross will be  
18 after Steven.

19 STEVEN ATHEARN: Hi. I'm, as I mentioned  
20 earlier, walking to Boston to the Japanese consulate  
21 with my wife who's from Fukushima. She spoke earlier  
22 at the end. She would like to share with you what her  
23 immediate family and her nephews and nieces, who are  
24 young people, are going through. They're living with  
25 concern that they're breathing everyday and eating and

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1 drinking radioactive isotopes to be incorporated into  
2 their bodies. I know that you understand the issue  
3 between internal/external exposure, but I think that  
4 the internal exposure has not been -- as I understand  
5 it -- focused on in the general models of radiation  
6 exposure and public health.

7           Doing this walk -- I'm just so busy  
8 organizing it, I haven't had a lot of time to read --  
9 but there's one aspect that I think I am fairly  
10 knowledgeable about and that is the energy situation  
11 in general, which I studied for about three or four  
12 hours a day for about four-years up until about two-  
13 years ago. Somebody said that this is outside the  
14 scope and I'm not sure if that's because it's  
15 considered a Safety issue, but the general finite  
16 nature of the energy resources that we depend upon  
17 cannot be outside the scope of the safety of nuclear  
18 power plants. This may not be an issue of the impact  
19 of a plant on the environment, but of the impact of  
20 the environment on the plant. Which is in the same  
21 category as the natural disasters that can happen.

22           But, if you look at the Middle East, for  
23 example, which is supposed to contain 60% of the  
24 world's oil -- I think it's more like 45% if you drop  
25 that by at least 300-million barrels as the highest

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1 Saudi expert on their production says that we should  
2 reduce that -- he's talking about the OPEC-5 because  
3 he doesn't want to -- he tends to avoid talking about  
4 Saudi Arabia specifically. But, there were some  
5 WikiLeaks documents that recently surfaced describing  
6 what he had told U.S. intelligence and it was said  
7 that no U.S. official had commented on this. That  
8 isn't true. George Bush -- when he visited Saudi  
9 Arabia in January 2008 -- said that basically we  
10 really can't ask them to raise their production  
11 because they're already producing as much as they can.

12 Don Evans said the same thing in 2006. That was not  
13 the thing that remained, after he went to Saudi  
14 Arabia, in the media -- it doesn't matter what part of  
15 the spectrum you were on, you didn't hear that part  
16 unless you were concerned specifically about energy.

17 But these resources are finite. The oil  
18 resource is going into decline now. We're evidently  
19 at a bumpy plateau, but we could expect -- the only  
20 thing we can expect rationally, if the Middle East can  
21 no longer raise its production, is that the world is  
22 at peak oil. And world production will be declining  
23 just as the production of many countries already has,  
24 such as the United States, which began in 1970. The  
25 rate at which the world production declines is not the

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1 rate at which our ability to import oil will decline.

2 That will decrease faster because countries that are  
3 able to export tend to meet their own needs first and  
4 those are growing, especially when oil is expensive  
5 and the wealth of those countries is going up. But if  
6 you look at the other resources -- the situation is  
7 not so great either.

8 Natural gas recently was viewed as going  
9 into decline. In fact, conventional natural gas  
10 production has peaked in 1973. We surprisingly  
11 discovered shale gas and we've had the shale gas  
12 revolution and all of a sudden there's no problem in  
13 sight. It's just that our shortsightedness in energy,  
14 which you're probably familiar with.

15 But in the case of coal, which supplies  
16 most of our electric generation -- it takes (3) mile-  
17 and-a-half long train cars every day to supply Plant  
18 Scherer in Georgia and that's sub-bituminous coal.  
19 We're already in decline of the good coal -- the coal  
20 that has high energy density. The gentleman over here  
21 talked about the loss of external power -- we've got  
22 to consider the situation when we think about that  
23 issue and we've got to consider the impact on the  
24 economy. Almost all of us are -- we've lived in a  
25 situation where all of these things are growing.

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1 I looked at one of these oil production  
2 curves -- of course, the future is a little bit  
3 uncertain, but in general terms it's pretty clear.  
4 But, I realized that I was born in 1966 and if I live  
5 another 10 or 15-years -- more than half of the total  
6 oil resource that will ever be consumed -- ever --  
7 will have been consumed in my lifetime. That's the  
8 lifetime of one individual, which shows how short --  
9 we think of 20 or 30-years as a long time just because  
10 we're people, but the situation is -- it's very --  
11 it's incredibly short. If you look at it over a scale  
12 of 1000-years, it would just be a spike that went  
13 straight up and straight down and that's it.

14 And our financial system is geared towards  
15 growth -- we need to have growth in order to prevent  
16 collapse. But if our society collapses, we cannot  
17 guarantee the safety of nuclear reactors. We tend to  
18 think only in terms of our needs -- what we need. We  
19 project that we need this much energy or this much  
20 electricity, but if we want to be the least bit  
21 realistic, we've got to think about what we can  
22 actually expect to happen.

23 So, I would urge you to -- it absolutely  
24 cannot be outside the scope. Maybe it's outside of  
25 the scope of a narrowly defined environmental effect,

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1 but in terms of the safety of operating nuclear power  
2 plants after 2030 -- if oil declines at 5% a year,  
3 it's going to be half in 14-years, which is before  
4 2030. We could be in a very different society by that  
5 time. We might even be in a collapsed society. To  
6 not discuss this risk -- this is not something that's  
7 going to happen once in a thousand years. This is  
8 going to happen.

9 Oh, by the way, uranium is also finite and  
10 nuclear plants are using -- the uranium mines are  
11 supplying only 78% of the need of nuclear plants  
12 worldwide. That's up from about 50% since Kazakhstan  
13 came online. But uranium supply is also finite.

14 BRIAN ANDERSON: Steven, I'll ask that you  
15 finish up your comment.

16 STEVEN ATHEARN: I'll wrap it up. Okay.

17 BRIAN ANDERSON: Thank you.

18 STEVEN ATHEARN: So, we need to look at  
19 the contingencies for what can happen to our society  
20 when energy declines. That is a real risk and it does  
21 impact -- it has obvious implications for our ability  
22 to run nuclear power plants for sure -- the most  
23 complex thing around.

24 I think wind has its clear limitations. I  
25 think offshore wind in the Gulf of Maine does have

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1 some hopeful possibilities. But if that program  
2 fails, you don't get the same consequences as you do  
3 if a nuclear power plant explodes. So, thank you very  
4 much.

5 BRIAN ANDERSON: Steven, thank you for  
6 those comments. The next speaker is Mary Ross and  
7 after Mary, William Harris will speak.

8 MARY ROSS: Thank you. I will be very  
9 brief. I have some questions. How can NextEra  
10 justify the Seabrook Station 10-mile Emergency  
11 Planning Zone or the 50-mile ingestion pathway when we  
12 know how widespread contamination can and would be  
13 given an accidental release of radioactivity?

14 We know that weapons testing in Nevada  
15 contaminated our entire country. We know that we have  
16 received and continue to receive fallout from  
17 Fukushima. How can NextEra say that protective  
18 measures are adequate for the immediate and greater  
19 communities? How can they justify the continued  
20 operation of an aging plant that has met its design  
21 age limit?

22 BRIAN ANDERSON: Mary -- thank you for  
23 those questions and comments. William --

24 WILLIAM HARRIS: Good afternoon. My name  
25 is William R. Harris. I'm speaking today as an

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1 individual. I live within the 10-mile evacuation zone  
2 in Newburyport, Massachusetts. But I expect to do  
3 joint comments together with Thomas Popik for the  
4 Foundation for Resilient Societies before your October  
5 26th deadline.

6 What Tom Popik covered in his remarks were  
7 the general problems from geomagnetic storms, which  
8 are natural occurring events involving the weather of  
9 the sun. So, it's not exempted from your duty to  
10 consider under your enemy-of-the-state doctrine, which  
11 is probably obsolete -- that's a 1967 doctrine that  
12 the NRC applies. It turns out the same mitigation  
13 measures for the natural occurring solar weather will  
14 protect against nuclear explosions -- man-made nuclear  
15 explosions, which the press suggests could be in the  
16 offing if we have additional proliferation to Iran,  
17 etc.

18 So, I'm just going to summarize briefly a  
19 table I prepared -- a two-page table. But, before I  
20 go issue by issue, I'd like to point out that although  
21 there's a generic rulemaking that Mr. Popik presented  
22 on March 14th -- I commented -- its docket 50-96 --  
23 because of his very careful PRA Level 3 analysis, we  
24 actually have a site-specific analysis of the risks  
25 from geomagnetic storms -- plant by plant -- for all

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1 (104) nuclear plants. (35) of those plants have  
2 higher risks than Seabrook, but I believe it is a  
3 fundamental flaw of the Draft Supplemental  
4 Environmental Impact Statement to not do the site-  
5 specific analysis of this risk for Seabrook because we  
6 have modeling that shows effects that are special and  
7 site-specific for Seabrook that increase the risks and  
8 therefore changed the cost-benefit analysis for SAMA  
9 analysis -- whether you have a cost effective remedy.

10 In particular, Seabrook is pretty far  
11 north -- latitude matters. If you're near the North  
12 Pole -- you have higher risks of geomagnetic storms  
13 with high surges -- what are called E-3 surges. If  
14 you're near the South Pole you have that. We've had  
15 major outages in South Africa in 2003. In addition to  
16 latitude, we have three other specific effects because  
17 of Seabrook being where it is and the transmission  
18 grid being the way it is. In particular, we have an  
19 east/west transmission grid -- one of the 345kV lines  
20 is east/west. It turns out that magnifies the effects  
21 of solar storms.

22 We have a second effect -- that Seabrook  
23 is at the end of the line. When the line ends, you  
24 get a bigger surge.

25 Third effect -- we have the ocean right

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1 next to Seabrook. The modeling that was done at Oak  
2 Ridge National Laboratory and that Tom Popik has done  
3 shows that's another important effect.

4 Then we also have the effect of the rock  
5 that transmits current below the surface of the  
6 ground. We have the granite of New Hampshire also  
7 compounds and exasperates these effects. So we have  
8 site-specific impacts. They have not been analyzed in  
9 this draft SEIS. They are significant.

10 I believe -- and Mr. Popik's analysis  
11 shows in a PRA Model 3 analysis where there could be  
12 roughly an expected loss of 2000 people -- that we  
13 have the highest risk for the Seabrook plant, which is  
14 an above-average risk compared to the average of the  
15 (104) plants, from the effects of geomagnetic storms.

16 The risk is two orders of magnitude greater than any  
17 other risk analyzed in this Draft Supplemental EIS.  
18 So to leave out the overwhelmingly largest risk would  
19 be irresponsible.

20 In addition, it appears that almost all  
21 these risks can be mitigated at very low-cost by cost  
22 effective mitigation measures. If you don't analyze  
23 those measures you will not mitigate those measures.  
24 Then we will have the needless kind of common fault  
25 failure that the Miller Task Force has told us all the

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1 NRC's trying to avoid in the future.

2 So, it's not a tsunami that causes a loss  
3 of backup power. It would be a solar storm that takes  
4 out much of the grid -- the large transformers  
5 especially vulnerable -- and then you have the loss of  
6 diesel power on-site because you're not sheltering the  
7 diesel engines -- the pumps. If you go to off-site  
8 gas stations -- those pumps may be out. But at  
9 relatively low cost these can be sheltered.

10 So, let me run through briefly the (9)  
11 issues that I propose and will comment on detail. So  
12 the first is to provide on-site backup power that's  
13 designed to cope with electromagnetic events. Mr.  
14 Popik suggests an organic Rankine cycle engine. It  
15 could use the waste heat from the power plants. You  
16 can get 4kW for \$80,000. This is cheap in terms of --  
17 the benefit cost analysis shows it's a benefit of  
18 (110) -- if you take the NRC's value for loss of life  
19 -- that's extraordinary.

20 So, if you don't take the Oak Ridge  
21 National Lab estimate, which is new and significant  
22 information you should consider from 2010, which is a  
23 1% chance per year -- the expected large magnitude  
24 event every 100-years, let's say it's every 200-years  
25 -- and don't take Tom Popik's modeling, which is a 50%

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1 likelihood of restoration of power after loss of  
2 outside power. If it's 90%, you still have a positive  
3 return of (11). These are mitigation measures that  
4 really need to be done.

5 I'd like also to say that Mr. Popik -- the  
6 Oak Ridge analysis was criticized in a July 20 filing  
7 by the Nuclear Energy Institute -- a trade institute -  
8 - they said that Mr. Popik didn't really understand  
9 what they did. But they utilized two national experts  
10 on electromagnetic pulse -- a Mr. Kappenman of  
11 Minnesota and a William Rudasky of California, who are  
12 national experts on these issues. He had them review  
13 his modeling as well. So, it's inexcusable not to  
14 consider this significant risk that is magnified at  
15 the Seabrook site. Second, there's a possibility --

16 BRIAN ANDERSON: Excuse me, William -- I'm  
17 sorry to interrupt. If you could wrap up in the next  
18 minute. I'll allow you the same --

19 WILLIAM HARRIS: Okay.

20 BRIAN ANDERSON: -- if there's time at the  
21 end of the meeting.

22 WILLIAM HARRIS: There are other backup  
23 measures -- basically backup batteries. If you have  
24 battery chargers it's important to shelter them. The  
25 switches are vulnerable. These are very low-cost

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1 measures. So, I've identified the measures and some  
2 references to what can be done.

3 To summarize the site-specific risk for  
4 Seabrook with Mr. Popik's analysis -- the risk for the  
5 next 19-years of licensure of long-term loss of  
6 outside power -- 2011 to 2030 -- is 17.4%; the  
7 probability of water boil-off -- 8.7% for the spent  
8 fuel pool; probability of zirconium fire -- 4.3%.  
9 When you extend the license 20-years, you end up with  
10 roughly a 1 in 12 chance of a zirconium fire at  
11 Seabrook. And this is avoidable at very low cost by  
12 just the appropriate backup power -- some of which is  
13 recommended in the Miller report.

14 So, it's very important that you include  
15 this significant risk because it's site-specific and  
16 it's new information and there're low-cost measures to  
17 remediate it. Thank you.

18 BRIAN ANDERSON: Thank you for those  
19 comments. The next speaker is Raymond Shadis. After  
20 Raymond will be -- I believe it's Connie Wilkins and  
21 Doug Bogen after that.

22 RAYMOND SHADIS: I just have a few brief  
23 comments and they largely have to do with process and  
24 approach. First -- taking off from what Mr. Paul  
25 Gunter said about the schedule -- investigation of the

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1 lessons learned from Fukushima and so on and how they  
2 might apply in license renewal. I'd like to comment  
3 on one aspect of that asymmetrical approach where the  
4 process goes forward at a set pace, but the  
5 investigation on safety related and environmentally  
6 related issues -- it doesn't keep pace with the  
7 process.

8 That is the effect that -- if you go ahead  
9 at a careful methodical pace to investigate the  
10 Fukushima issues and I really think that's  
11 appropriate, then your findings -- your insights --  
12 will not be available until after the proceeding is  
13 closed. I've heard it from NRC on the national level  
14 and also at our local annual site assessment meetings  
15 that -- We're studying this and we're going to put  
16 into effect whatever measures are necessary to address  
17 the lessons learned from Fukushima. Well, all well  
18 and good, except for its effect on the hearing rights  
19 of the citizens and the states.

20 Well, if the opportunity for a hearing has  
21 expired and the hearing itself is completed -- You can  
22 always bring your concerns to us via the 2.206 process  
23 or if it's a regulation that is at issue -- the 2.802  
24 where you can do a rulemaking, whatever. The problem  
25 with the 2.206 process is that there are no standards

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1 for judgment or decision. The director's decision can  
2 be arbitrary and capricious. It is not reviewable.  
3 You cannot appeal a 2.206 decision. You have no  
4 rights of discovery. You have really no right to  
5 rebut. You cannot examine witnesses. There are none  
6 of the trappings of a real adjudicatory process.

7 So, what you're doing -- if you delay  
8 decisions that would affect the material issues in a  
9 hearing until after the hearing is over -- is you take  
10 away those hearing rights. And in effect, I guess the  
11 solution would be to grant the petitions that have  
12 been filed to say -- Please suspend the hearing  
13 process until these considerations are processed --  
14 the Fukushima lessons learned.

15 Or offer a second opportunity for hearing  
16 after those things are registered. I'm hoping that  
17 I'm communicating the asymmetry here. You really are  
18 running two different time schedules.

19 The second part of my comments is  
20 specifically on the nature of the environmental study  
21 that you provided. And again the topic is time --  
22 time and trending. I'm going to take an example out  
23 of the study. It would be section 8.4, which has to  
24 do with Alternatives. Within that section there're --  
25 all the considerations of alternatives are

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1 contemporary to 2010. That's the last date of any  
2 number that's put in there. For example, in 2010  
3 there were 35,000 Megawatts of wind capacity. Of  
4 which, I've personal knowledge about -- 30,000 of that  
5 was installed in the last 20-years, during which time,  
6 of course, there were 0 Megawatts of new nuclear  
7 installed. But, that's a comparison. That comparison  
8 should be in there because it speaks to the viability  
9 of wind and the lack of viability for new nuclear.  
10 Now, I know you're promising you're going to build  
11 some plants, but I haven't seen them yet. But we have  
12 seen the wind come in.

13           The other part of this -- the part that's  
14 missing because you can draw a progression -- in 2009  
15 there were 9,000 some-odd Megawatts of new wind  
16 installed -- wind capacity. That was up 40% from  
17 2008. Okay? You can also almost start to build a  
18 trend from that, but what's missing here is the trend  
19 from 20-years ago for new wind capacity. Not only  
20 that, you've got that motion -- the hand goes up. You  
21 know, Bob Dylan said -- The times they are a-changing.  
22       But he should've said -- The times they are a-  
23 changing and the rate at which the changes are taking  
24 place is also increasing. This is true across the  
25 board for alternatives. Your report doesn't consider

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1 any of it. The other thing that's missing, which you  
2 have in the SAMA considerations -- you've got a price  
3 on human life -- a cost-benefit analysis. That's  
4 there.

5 But, in your analysis of Alternatives --  
6 there is little or no cost benefit analysis included.

7 And further, in terms of cost, there's no trending.  
8 The price of installed solar has been going down. The  
9 price of installed wind power has been going down.  
10 There's no acknowledgment of that nor is there any  
11 acknowledgement of the rate of change in the decline  
12 of cost in these. And it's important because by doing  
13 an early license renewal, you're put in the  
14 preposterous position of trying to project out 20-  
15 years on this stuff. You know? If you went back 20-  
16 years -- and I have -- looking at all the DOE  
17 projections and everything for Alternatives 20-years  
18 ago -- in no way did they reflect the reality of  
19 what's happening in the marketplace today.

20 And you're trying to analyze for the  
21 period of extended operation -- you're forced to be  
22 looking 20-years ahead. Without including some  
23 trending. Without including trending on available  
24 capacity, on construction of transmission lines, on  
25 the cost of it. You've got nothing. I think the

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1 failure to include these completely invalidates your  
2 entire section on Alternatives. You really need to go  
3 back and talk to -- if you don't have the expertise at  
4 the Agency -- by the way, I am disappointed that you  
5 didn't bring experts to this meeting so that you could  
6 have answered the questions that were asked earlier --  
7 you might anticipate those. But if you don't have  
8 experts in the Agency to go and get on and Google the  
9 numbers, then go to your sister agencies -- go to DOE  
10 or whoever and get the numbers. But they're not in  
11 your report. So that's my criticism on that.

12 The other thing is that when the Fukushima  
13 thing happened, we went right to the question -- the  
14 NRC nationally and locally has been saying -- Well,  
15 yes, but what are the chances that we're going to have  
16 an earthquake and a tsunami on the East Coast of the  
17 United States -- zero. Well, what we did is we went  
18 to the computer and if you do it and you go to the  
19 Maine Geodetic Survey at the state of Maine web site,  
20 you will find that in the early part of the last  
21 century -- I think it was 1924 -- there was a 4.2  
22 earthquake and a consequent landslide on the Grand  
23 Banks and it resulted in a tsunami that when it hit  
24 the shores of Newfoundland and was driven up into the  
25 bays -- narrowed in the bays -- put up waves in excess

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1 of 95 feet. It's no joke and in geologic time, which  
2 you're supposed to be working in, it's a wink of an  
3 eye to yesterday.

4 So these are events that are now. Your  
5 report really should be and I guess this is part of it  
6 -- the comments -- but it should be a living document  
7 and you should be updating it. We shouldn't be  
8 looking at data from 2009 and data from 2010. And  
9 certainly sterling events like the Fukushima event  
10 should be a signal to go back to the drawing board and  
11 revamp the document. Thank you very much.

12 BRIAN ANDERSON: Raymond -- thank you for  
13 those comments. The next speaker is Connie Wilkins,  
14 who will be followed by Doug Bogen and then Lee  
15 Roberts.

16 CONNIE WILLIAMS: I'm Connie Williams from  
17 -- sorry --

18 BRIAN ANDERSON: I'm sorry, Connie.

19 CONNIE WILLIAMS: -- from Kittery, Maine  
20 and my concerns are around safety and the evacuation  
21 process in the case there is an event. On summer  
22 weekends, I avoid as much as possible getting into my  
23 car in the Kittery, Maine area. One Saturday this  
24 summer coming home from just a 10-minute trip to the  
25 grocery store over to Portsmouth, it took me 45-

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1 minutes to come home. Any of you who will drive  
2 around Route 95 in the summertime and you can see cars  
3 stationary for long periods of time.

4 I'm concerned about the safety plans that  
5 have been made and -- are they updated and what are  
6 they? I used to live in Newbury, Massachusetts and  
7 after Seabrook was built, regulations came out about  
8 safety plans and evacuation.

9 Faculty at a private boarding school were  
10 listed as being in charge of evacuating all the  
11 students in the school. This was the first time the  
12 faculty heard about that. No one was consulted. No  
13 one was trained. I asked faculty how they responded  
14 to this and what they would do. They said they would  
15 do the natural thing -- they would go for their  
16 families and get their families out of there. Not  
17 only that, there is absolutely no means of  
18 transportation to get the students out of there. So,  
19 what I'm asking is -- what is the plan for evacuation?

20 In this area, the population has increased by 62%.  
21 So, what is the written plan? Who is being trained to  
22 help in this? Who is working the roadways for a  
23 decent evacuation? Thank you.

24 BRIAN ANDERSON: Thank you, Connie. I'm  
25 sorry that I said your name wrong three times in a

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1 row. That's my reading problem. Doug Bogen and then  
2 Lee Roberts.

3 DOUG BOGEN: For the record, my name is  
4 Doug Bogen. I'm executive director of the Seacoast  
5 Anti-Pollution League based near here in Exeter, New  
6 Hampshire. We are one of the interveners on the  
7 relicensing renewal. I was at the scoping session  
8 about a year ago and I do have quite a few different  
9 points to make. I may make more general comments  
10 later, perhaps in the evening session.

11 But I do want to mention a few specific  
12 things that didn't look right in reading -- my initial  
13 reading of -- the SEIS. Just one general comment as I  
14 think others have alluded to before -- the world has  
15 really changed in the last year and it's changing  
16 rapidly. I think probably too quickly for many of us.

17 I'm not just speaking of Fukushima. Obviously that  
18 was a huge event on the world scene -- but regarding  
19 renewable energy, the development of new sources, a  
20 new approach to our energy development in this  
21 country, but even more so in other countries -- in  
22 Europe, China, you name it, perhaps more so than in  
23 the U.S.

24 But we are facing very different  
25 circumstances both in the risks that we face through

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1 natural and unnatural disasters and also in the  
2 opportunities for changing our energy system -- our  
3 infrastructure -- and providing more safe, clean,  
4 affordable power in the future. I may have more to  
5 say on that later.

6 But I did want to speak to a number of key  
7 points. In my comments in the scoping session, I did  
8 say a lot about the effect of the environment on the  
9 plant and in particular climate change impacts. I am  
10 glad to see that you certainly have done some  
11 research. There is quite a few words -- a number of  
12 pages -- referring to climate impacts and the general  
13 scene of climate change. But I did feel that it was  
14 really kind of vague about the specific impacts on the  
15 Seabrook plant.

16 You refer to the critical structures at  
17 the plant being 20-feet above the mean tide and that  
18 doesn't really square with the overall site -- at  
19 least as far as U.S.G.S. is concerned -- it's much  
20 lower than that. I'm glad to know perhaps that you  
21 have your emergency generators and other things above  
22 the water level, which of course, wasn't the case at  
23 Fukushima.

24 But certainly it would be useful to know  
25 regarding the rest of the site -- how high are the sea

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1 walls, the waste storage height, the dry cask storage?

2 How high is that above sea level? The power lines --  
3 the transformers -- as we saw the plants in the upper  
4 Midwest -- on the Missouri River -- they were running  
5 into great difficulties because their power lines  
6 transformers were becoming inundated from water. It  
7 would be better to have more than one sentence about  
8 this because this is increasingly a greater concern  
9 regarding future climate impacts.

10 Another point there is -- you do refer to  
11 the U.N. IPCC estimates, which are now four to five-  
12 years old. The research on them was even older. It  
13 should be noted that the IPCC is a consensus document.

14 It's very conservative. The most recent and I think  
15 a growing consensus among climate scientists is that  
16 the figures they are looking at -- projected with the  
17 business as usual approach and our energy system --  
18 leads to a doubling in sea level rise over their  
19 initial estimates of 1 to 3 feet. It's now they're  
20 talking 4 to 5 to even 6 feet of elevation change by  
21 the end of this century. That's a huge difference and  
22 I know there was a major report in May released in  
23 Copenhagen -- I'm sure you can look up the references.

24 It got a lot of attention and it seems that it  
25 behooves you to include that in your report. That's

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1 certainly the most recent science and it's been  
2 discussed for several years now. So, again, if you go  
3 4 or 5-years back, you're way in the past.

4 Just moving on to other air issues, I  
5 guess. The atmosphere -- I noticed on the chart in  
6 the copy I had that I had gotten online -- on page 4-  
7 46 you list a number of emission estimates and it  
8 appears that there's a typo actually repeated  
9 throughout the page of not using negative exponents.  
10 I found this rather amazing. I don't do a lot of  
11 scientific notation, but as far as I know, the figure  
12 you give of  $1.1 \times 10^5$  millisieverts, I believe that  
13 works out to 10 sieverts, which as far as I understand  
14 that's a lethal dose. I think you meant to the  
15 negative fifth. So, I hope you go back and correct  
16 those. That would get a lot of people very concerned,  
17 I think. So, just one specific item.

18 Moving on to waste management. I was very  
19 distressed that there didn't seem to be any discussion  
20 about the increase -- I believe it would be about a  
21 50% increase -- in total spent fuel that you would be  
22 dealing with if you renew the license. Is there  
23 enough room onsite? How much longer is that waste  
24 going to be there? It's my understanding that, you're  
25 looking at 2060/2070 -- obviously the country does not

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1 have a plan for the long-term final disposal of  
2 storage of that waste. I understand you referred to  
3 the Generic EIS on this, but it would be good to have  
4 more than one line explaining what the story is there.

5 It's really pretty unclear when you say that --  
6 excepting for off-site radioactive collection impacts.

7 Well, that's a pretty big deal.

8 A lot of us in this country would like to  
9 know what those might be. It is our concern -- we are  
10 all downwind and there should be some discussion of  
11 how that waste gets off-site. My understanding is the  
12 rail connection there is pretty much dead. It's  
13 being, perhaps, converted into a rails to trails --  
14 are you going to be taking it out on the highways? I  
15 realize these are all issues that need to be addressed  
16 anyway and they probably are generically, but it seems  
17 like it's worth mentioning in the EIS itself.

18 Just moving on to tritium. There was some  
19 mention earlier about this, but I would like to say  
20 there's much more information in the SEIS than was  
21 previously reported in news reports and anything else  
22 I'd seen. I understand the industry is not required  
23 to report this. It's a voluntary program. But, it  
24 does appear to be worse than what was originally  
25 presented. This is a problem that has been going on

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1 for over a decade now. I believe it was 1999 when the  
2 initial -- when it was determined that there was a  
3 leak. We don't know whether it happened sooner than  
4 that because they weren't reporting it. Perhaps the  
5 plant owners can tell us that, but it does appear that  
6 there is more widespread contamination. In one point  
7 on page 4-59, you say that -- the off-site  
8 contamination wasn't observed. Well, I know most of  
9 the off-site is the salt marsh -- if you're looking  
10 down gradient -- so are you saying we didn't see it in  
11 the seawater, we couldn't measure it in the seawater?

12 In general, it appears that your solution  
13 --certainly the way you dispose of this or the plant  
14 is disposing of this contaminated water -- is to send  
15 it out the out-fall pipe and I understand that's the  
16 regulatory approach that we use, but we need to accept  
17 that the solution you're applying is dilution -- Well,  
18 let's just put it out into a larger body of water and  
19 it'll sort of go away. I understand that's the  
20 regulatory regime you're under, but there's real  
21 questions about whether that makes sense given that  
22 there's no safe level of radiation. We really need to  
23 be keeping in mind -- I'm sure you all are very aware  
24 of the BEIR VII report that there's no safe levels of  
25 radiation. However small you may say the air

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1 emissions, the water emissions are, the fact is they  
2 do stay in the environment -- the half-life of tritium  
3 is over 12-years. These other elements that are  
4 coming out, which are not very specified in the report  
5 -- we'd like to know more about the disposition of  
6 them. Not just that -- Oh, you couldn't measure them  
7 in the fish or the water or the soil. We need a much  
8 more thorough explanation of that.

9 I suspect my time is almost up. But I do  
10 hope you will be able to make some of these changes  
11 and I probably will have written comments later. But  
12 we do think that there are a number of ways that this  
13 report can be improved. That the information should  
14 be more tight and that we have a better sense of what  
15 you're really talking about here because it's our  
16 future. We have to live with it and when we're  
17 looking 20, 30, 40-years down the road -- we want good  
18 projections not just reliance on past performance. We  
19 need to be able to know what the impact will be. So,  
20 I think I'll leave it at that. Thank you.

21 BRIAN ANDERSON: Doug -- thank you for  
22 those comments. The next speaker is Lee Roberts and  
23 we will then have Paul Gunter speak.

24 PAUL GUNTER: I'm speaking tonight. I  
25 didn't request to speak this afternoon.

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1                   BRIAN ANDERSON: I see that now, Paul.  
2 Thank you. I'll save this card for tonight.

3                   LEE ROBERTS: Thanks. Hi, I've already  
4 spoken my piece, I realize. So, I will be very brief.

5 I just want to say, as a layman, that I feel like  
6 what I've heard today tells me not only should we even  
7 consider this extension of the license -- as far as I  
8 feel, after hearing all that I heard today and I came  
9 in here concerned, but now I'm multi-concerned --  
10 many, many worries. I feel as if everything should  
11 stop. That we're in danger now -- far more than any  
12 of us had thought. Never mind with an extension.  
13 There are just so many problems we've heard about  
14 today. It just doesn't seem that it makes any sense  
15 for us to have this even operating until all of these  
16 issues have been resolved. Thanks.

17                   BRIAN ANDERSON: Thank you, Lee. The next  
18 speaker is Sandra Koski. Did I get any of that right,  
19 Sandra?

20                   SANDRA KOSKI: Yes. Sandra Koski from  
21 Newton, New Hampshire. I've been in the area for most  
22 of my life and 35-years ago was involved in some of  
23 the civil disobedience -- even under the threat of  
24 having our children taken away from us because we were  
25 trying to protect their environment. The one thing

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1 that I have always focused on and all I really needed  
2 to know is there is no place for the radioactive  
3 waste. It's now being stored at Seabrook, which they  
4 said was never going to happen. It's a nuclear waste  
5 dump. That's all I have to say. Thank you.

6 BRIAN ANDERSON: Thank you. Thank you,  
7 Sandra. Sandra was the last speaker that I had a  
8 registration card for. I'd like to double-check and  
9 make sure that there's no one in the room that filled  
10 out a card to speak this afternoon that I might have  
11 missed? If you indicated on your card that you would  
12 either like to speak this evening or if you wanted to  
13 speak in both sessions, you do not need to fill out a  
14 second card when you come back this evening. We'll  
15 keep those cards and have you on the list for speakers  
16 tonight. Yes, Sir.

17 PAUL GUNTER: I'd like to defer the spot  
18 that you gave me to Mr. Brian Stern.

19 BRIAN ANDERSON: Thank you for that  
20 perfect segue. There is extra time left in the  
21 meeting. I know that Brian had asked for additional  
22 time to finish some comments. And I had one other  
23 gentleman that also asked for an extra two-minutes to  
24 provide his extra comments. Since the meeting agenda  
25 can accommodate that, what I'd like to do is have Mr.

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1 Tilbury get two-minutes to provide his last comments  
2 and then we'll finish with five more minutes to Brian  
3 Stern.

4 Mr. Tilbury --

5 DON TILBURY: Thank you very much. This  
6 had nothing to do with just your nuclear power plant.

7 Just in listening to everything, it occurred to me  
8 that at our men's meeting at our church, most of the  
9 men were in their 80's. We had a seventh grader that  
10 came and talked to us. All he said, very briefly --  
11 as I look around -- he said -- I see that when you  
12 were my age, there was no nuclear power. There was no  
13 TV. There was no cell phone. None of that. I can  
14 only imagine that when I'm your age, I don't know what  
15 it's going to be, but it will be all different. And I  
16 thought that was very, very deep. So, even what we do  
17 here might be all different -- there may be a whole  
18 new way to have energy later on -- who knows? Nobody  
19 knows. Thank you.

20 BRIAN ANDERSON: Thank you for those  
21 comments. Brian --

22 BRIAN STERN: Thank you. I'm Brian Stern.  
23 I'd like to pick up on the issue of aquatic resources  
24 -- the acknowledged impact on winter flounder, rainbow  
25 smelt and kelp is Large. As I read the Draft SEIS, it

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1 talks about mitigation of the impact to those. And as  
2 I read it, the mitigation is that NextEra would  
3 monitor the effect on the species of concern in other  
4 locations, such as the transmission lines. I know  
5 that doesn't make sense, but that's how I read it.  
6 Certainly, correct me if I'm wrong on that. But it  
7 seems to be that there's actually no mitigation itself  
8 for the impact on rainbow smelt, winter flounder and  
9 kelp.

10 As I read again the Cumulative Impact on  
11 these -- it then concludes that the Cumulative Impact  
12 from all of the other factors, including Seabrook,  
13 then makes it a Small impact rather than a Large  
14 impact. I reject the premise that a species of  
15 concern can absorb the additional impact of the power  
16 plant since it already is stressed by these other  
17 factors and that looking at the cumulative factors is  
18 a poor excuse for accepting the impact. The Draft EIS  
19 recognizes that the species are very important to the  
20 area. They're very big in the area and impacted  
21 greatly. There's letters from state and federal  
22 agencies talking about the importance of the fishery  
23 in this area and they expressed great concern for the  
24 impact. So, you have the agencies charged with  
25 monitoring the marine fisheries expressing concern,

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1 yet in the NRC's conclusion, over those experts, are  
2 that it's -- I guess -- another unavoidable adverse  
3 impact.

4 I'd like to address wind as the  
5 alternative and it's dismissed as an alternative based  
6 upon it being intermittent. Yet, the report's  
7 discussion of wind says -- that wind has a relatively  
8 high reliability. It says that -- there are strategic  
9 and tactical options under development, currently.  
10 The conclusions that the NRC reaches concerning wind  
11 does not match its finding concerning wind. And it  
12 relies upon a finding that there's no combination of  
13 wind and compressed air storage that's yet been  
14 proposed and it's relying upon a 2008 study. A lot  
15 has happened in four-years.

16 The report notes that concern with  
17 intermittent wind can be addressed by combinations of  
18 onshore and offshore wind where offshore wind is  
19 blowing most all the time and the development of  
20 onshore wind -- I'm sorry -- of offshore wind is where  
21 a lot of the development is taking place in wind power  
22 because of the reliability of wind offshore. So, I  
23 think the report is in error to simply dismiss wind  
24 based on its intermittent nature when that can be  
25 addressed by the combination of onshore/offshore by

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1 variable locations and developments that have taken  
2 place in storage of energy capacity -- whether it's  
3 pumped hydro where water is pumped up the tanks for  
4 later disbursement or to reservoirs, batteries and  
5 compressed air storage.

6 I'd like to address the issue of spent  
7 fuel. The facility was not designed for on-site  
8 storage. It was not intended as a licensed storage  
9 facility. It's not designed for storage. It's not  
10 designed for long-term storage and the storage  
11 facility is not secured from the types of natural  
12 disasters we've discussed or from terrorist acts. The  
13 storage is not that. The stored fuel is expected to  
14 be kept on-site for 60-years after closure. I don't  
15 think that you can assume that you will have 60-years  
16 of management from NextEra going to 2110. I think  
17 that would be an erroneous assumption to expect some  
18 corporate entity to exist and remain responsible for  
19 safe storage that long into the future.

20 The entire premise of safe operation is  
21 having to do with the spent fuel. I don't think that  
22 anyone can assume that the federal government will  
23 take this over. I think that the current assumption  
24 is that the federal government will not establish a  
25 repository sufficient for Seabrook. People talk about

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1 Yucca and even if Yucca was built, it would not have  
2 sufficient capacity for Seabrook.

3 I'd like to talk about the concrete issue.

4 I don't know how you separate out safety issues from  
5 environmental issues because if there's a safety issue  
6 from concrete, it's obviously going to affect the  
7 environment. Your power plant cannot manage the  
8 effects of aging on the concrete. It will worsen. I  
9 don't think that the process is accurate when it  
10 assumes based upon a 20-year history we can predict  
11 the next 20-years of the existing license and another  
12 20-year beyond that. There's not necessarily a linear  
13 degradation of the plant.

14 The licensing processes concerns the  
15 ability of the licensee to manage the aging plant  
16 components. When it comes to the concrete, it cannot  
17 do that. I think that the integrity of the company on  
18 this issue also has to be raised. NextEra was asked,  
19 I think up to 15-years ago, to assess the concrete and  
20 it failed to do so and failed to report to the NRC on  
21 that until it came up through this renewal process  
22 where it finally disclosed the problems with the  
23 concrete, which are significant.

24 There's also the question of the integrity  
25 in the building process. This goes to the heart of

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1 the matter. At the time that the plant was built, we  
2 all knew and heard the stories about all the crap that  
3 was dumped in the concrete. And it's coming back to  
4 haunt you. We heard all during the building process  
5 from our local neighbors about welds -- the x-raying  
6 and testing of welds -- being forged and fraudulently  
7 documented. So there is a question with regards to  
8 the integrity of the licensee to be able to manage  
9 this process and I don't know how the assumptions can  
10 be made for 60-years out from now -- I'm sorry -- 40-  
11 years out from now on the concrete. And the licensee  
12 has the burden of proof, has the obligation to prove  
13 the plant safe for this time period through -- I'm  
14 losing track now what years we're talking about --  
15 through 2050. I don't think that can be done. The  
16 concrete raises such a high level of uncertainty that  
17 I don't think the burden of the applicant to prove the  
18 plant safe for this renewal period can be met.

19 I'd like to make one last comment. Each  
20 one of these issues seem to be taken in isolation.  
21 And there seems to be no analysis in the Draft EIS of  
22 the cumulative effect of these flaws. So, you can  
23 piecemeal this little issue, that little issue and  
24 this little issue and say --

25 Well, the air release is minimum. The

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1 tritium is a minimum issue. Spent fuel will be dealt  
2 with -- they'll design and build one as necessary.  
3 Well, earthquakes, you know, they're remote -- they  
4 could happen, but not likely.

5           You know, and you add up all of these  
6 factors -- there's no analysis of the cumulative  
7 effect of these factors. There must be a way to do  
8 that and there should be a way to do it, otherwise I  
9 don't think the plant is taken in its totality and it  
10 exists as a total entity and the effects are a  
11 cumulative total effect on the residents of the area.

12 Thank you.

13           BRIAN ANDERSON: Thank you, Brian, for  
14 those comments. And thank you again to everybody else  
15 that took time to be here today and provide comments.

16           Dave -- did you want to make some final  
17 remarks or is there anything else that you wanted to  
18 say before we close the meeting?

19           DAVE WRONA: Just that [indiscernible] --

20           BRIAN ANDERSON: Okay.

21           BILL RAYMOND: I'll be available  
22 afterwards for anybody who wants to go over anything.

23           BRIAN ANDERSON: Okay. Bill Raymond, the  
24 Senior Resident Inspector at Seabrook, just said that  
25 he would be available afterwards for anybody that has

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1 any additional questions or follow-up discussion with  
2 the NRC.

3 On behalf of the NRC, I want to thank  
4 everybody for taking the time to be here today and  
5 provide comments. Public participation is an  
6 important part of the NRC's safety mission and we  
7 certainly appreciate everybody taking time out of  
8 their personal lives to come and provide comments.

9 Thank you again for being here. Please  
10 travel home safely. Have a great day.

11 This meeting is adjourned.

12 (Whereupon, at 4:10 p.m., the public  
13 meeting was closed )  
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