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**NUCLEAR REGULATORY COMMISSION**

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                              Reaction (ASR) License Amendment Request  
                              and License Renewal Application

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NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING ON THE SEABROOK ALKALI-SILICA  
REACTION (ASR) LICENSE AMENDMENT REQUEST AND LICENSE  
RENEWAL APPLICATION

+ + + + +

WEDNESDAY,

FEBRUARY 13, 2019

+ + + + +

The meeting was convened at Best Western  
Plus: The Inn at Hampton, 815 Lafayette Road, Hampton,  
New Hampshire, at 6:00 p.m., Brett Klukan,  
Facilitator, presiding.

PRESENT:

BRETT KLUKAN, Facilitator

JOSEPH DONOGHUE, Acting Director, Division of  
Materials and License Renewal, NRR

JUSTIN POOLE, Project Manager, Division of Operating  
Reactor Licensing

ANGIE BUFORD, Division of Engineering

ERIC OESTERLE, Branch Chief, Division of Materials

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and License Renewal, NRR

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T-A-B-L-E O-F C-O-N-T-E-N-T-S

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

2 6:01 p.m.

3 MR. KLUKAN: All right, everyone, we're  
4 going to get started. Thank you all for coming this  
5 evening. And welcome to the meeting hosted by the  
6 U.S. Nuclear Regulatory Commission.

7 The purpose of this meeting tonight is to  
8 discuss the NRC's plans related to the schedule for  
9 issuing the license amendment associated with ASR,  
10 and the renewal of the Seabrook license.

11 My name again is Brett Klukan. I'm,  
12 normally by day I'm the regional counsel for Region  
13 I. However, tonight I'll be serving as a facilitator  
14 for this meeting.

15 The meeting tonight is divided into two  
16 parts. During the first half, or for the first part  
17 of the meeting, which shouldn't last more than roughly  
18 30 minutes, the NRC staff will provide a short  
19 overview of the NRC's actions related to the two  
20 applications I just mentioned.

21 After that, members of the audience will  
22 be invited to provide comments and ask questions to  
23 the NRC staff.

24 The order of public speakers will be

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1 determined in the order in which the yellow comment  
2 cards are received. So, if you'd like to speak  
3 tonight, please complete and return one of those  
4 yellow cards, which you can find at the table outside  
5 of the meeting room, to the table.

6 And again, first come first serve. The  
7 order in which I receive them is the order in which  
8 I will call people to speak tonight. In order to  
9 encourage a broad array of speakers tonight,  
10 individuals will be limited to a three minute speaking  
11 period.

12 If we exhaust the list of people who would  
13 like to speak tonight, then we'll allow people to  
14 speak for a second time. I don't have the final  
15 number of people that are signed up to speak. So, I  
16 don't have a great sense. But I'm going to stick  
17 with three minutes, which is the usual time I give  
18 for people to speak at such a meeting. And again,  
19 if we have extra time at the end, then people can go  
20 round through a second time.

21 I recognize, I would like to ask that we  
22 keep the area in this front row clear. If you have  
23 something that you would like to give to the NRC  
24 staff, please hand it to me, and I will bring it up

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1 to them. We'd like to keep, again, this space open.  
2 Okay.

3 I recognize that many of you here tonight  
4 likely have strongly held views concerning the  
5 matters to be discussed. As well we stated in the  
6 opening NRC presentation, the NRC concedes that it  
7 could have done a better job communicating about these  
8 matters to the public.

9 Nonetheless, my duty is to ask you to  
10 adhere to basic standards of civil decorum, if only  
11 out of respect for everyone else in the audience  
12 tonight. Please respect each other. Please don't  
13 disrupt each other. And just as you wouldn't want  
14 to be interrupted during your time at the microphone,  
15 please respect the speaking time of others.

16 Let me make this patently clear.  
17 Threatening gestures or statements under no  
18 circumstances will be tolerated, and will be cause  
19 for immediate ejection from the meeting tonight. If  
20 you feel that you've been threatened in any way,  
21 please let me know so that I can take appropriate  
22 action.

23 A few minor housekeeping matters. The  
24 bathrooms are just around the corner. The exits are

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1 just through the doors in the back. While cameras  
2 are permitted, please try not to obstruct the view of  
3 other audience members. Be judicious with flash.  
4 And if you'd be so kind at this time to silence all  
5 of your cell phones or other mobile devices.

6 At this point I would like to announce  
7 that we have representatives from several elected, of  
8 from several offices tonight. We have  
9 representatives from Senator Jeanne Shaheen's office,  
10 Senator Maggie Hassan's office, Congressman Chris  
11 Pappas' office, Senator Ed Markey's office, Senator  
12 Elizabeth Warren's officer, and Congressman Seth  
13 Moulton.

14 Are there any other elected officials or  
15 representatives of elected officials, or other  
16 elected offices who would like to stand and be  
17 recognized at this time? Know that after the NRC's  
18 presentation there will be an opportunity to give  
19 prepared remarks. If you would like to stand and be  
20 rec -- Oh, excuse me. Yes. Let me bring you the  
21 microphone.

22 MR. ELLMS: Oh, it's just I represent  
23 Governor Chris Sununu's office.

24 MR. KLUKAN: This is Chris Ellms of

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1 Governor Sununu's office. I apologize. I added your  
2 name to the lower part of my list, but not the upper  
3 part. Any other elected officials? Speaking into  
4 two microphones right now. Any -- Oh, one sec.

5 MR. JANVRIN: Jason Janvrin,  
6 Representative of Rockingham District 37, almost said  
7 20. Seabrook, Hampton Falls, Hampton, to the New  
8 Hampshire House of Representatives.

9 MR. KLUKAN: Thank you.

10 MR. KHAN: Aboul Khan, Member, Seabrook  
11 Board of Selectmen. And I also represent Seabrook  
12 and Hampton 12th District.

13 MR. KLUKAN: Thank you very much. Any  
14 other elected officials or representative of elected  
15 officials? Going once, going twice. All right.  
16 Thank you. All right. With that said I will now  
17 turn it over to Joe Donoghue for the NRC's  
18 presentation. Thank you.

19 MR. DONOGHUE: Thanks, Brett. Good  
20 evening and welcome. I'm glad to see all of you here  
21 tonight. I'll get out of the way. Sorry. Glad to  
22 see you all here tonight. And I hope that we can  
23 have an informative and productive discussion.

24 As Brett said we have a short

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1 presentation. I'll kick off here in a second. But  
2 the reason we're here is to communicate with you, and  
3 then to listen to you. Hopefully we'll have a good  
4 dialogue, as much as time we have to do that.

5 All right. Again, my name's Joe  
6 Donoghue. My job is the, right now the Acting  
7 Director of the Division of Materials and License  
8 Renewal at the NRC. So, my division is lead for the  
9 license renewal review that's been going on at the  
10 NRC for Seabrook.

11 Another group in our office, which is the  
12 Division of Operating Reactor Licensing, and we have  
13 representatives from that office here too. They had  
14 the leave for reviewing the license amendment related  
15 to ASR that you've all heard about.

16 We also have people from the Division of  
17 Engineering to help with the review. And we also  
18 have people here from the Region I office, including  
19 the Resident Inspectors from the plant.

20 So, the reason for tonight's meeting is  
21 to make sure that we discuss the plan for our actions,  
22 these licensing actions. Those being the license  
23 amendment and the license renewal.

24 And as Brett said, you know, the reason

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1 we're having this meeting is to communicate. Because  
2 we realized that we had not adequately communicated  
3 our plans to issue these things in January, which is  
4 well ahead of the contemplated hearing on ASR later  
5 this year.

6 So, we made a decision to do that. And  
7 we were moving forward. And we had correspondence  
8 from your Congressional representatives that  
9 convinced us that we needed to do a better job of  
10 communicating. Again, that's why we're here.

11 All right. So, the NRC staff completed  
12 its safety review of both of these actions at the end  
13 of last year. Now, originally, as I said, we had  
14 planned to issue these after the hearing. That's  
15 what we expected to do.

16 The ASR review was a long, complicated  
17 review. Compared to other reviews, and I've been at  
18 the Agency more than 20 years. And this is definitely  
19 one of the more complicated reviews you'd find. And  
20 we expected that this review would take us past the  
21 hearing. But that didn't happen.

22 We were able to get answers to the staff's  
23 questions. And we were able to wrap up the review  
24 at the end of the year. And we made our safety

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1 conclusions, and don't see any safety concerns with  
2 issuing the amendment and the renewed license.

3 Now, by promptly issuing these actions  
4 we're going to be able to establish requirements in  
5 Seabrook's license for ASR. They have programs in  
6 place. They've been implementing programs to monitor  
7 and to manage ASR at the plant.

8 Our inspectors have been inspecting those  
9 programs. So, the plant's been operated safely. But  
10 by taking the step of issuing the amendment, and then  
11 the renewed license, it puts requirements in their  
12 license related to those ASR monitoring programs.

13 All right. So during this, our meeting,  
14 during our discussion tonight keep in mind that  
15 issuing these actions won't prevent the NRC from  
16 making any changes to the license that the hearing  
17 outcome may require, you know.

18 So, the hearing is not undermined by our  
19 actions issuing the amendment and the renewed  
20 license. The hearing is independent. The ASLB, the  
21 Board that reviews the contention is independent of  
22 the staff. They do their job after, and we can, you  
23 know, they'll do their job after we have done our  
24 job.

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1           And if there's new information that needs  
2 to be considered, anything out, you know, an outcome  
3 from that hearing that we need to consider, we shall.  
4 And if there's action that needs to be taken on the  
5 license, that action will be taken.

6           All right. So, the staff throughout this  
7 process has continued to have reasonable assurance  
8 that the plant can be operated safely. I alluded to  
9 that a second ago. So, the staff at the moment, you  
10 know, before this meeting, and unless we hear new  
11 information still plans to issue the renewed license,  
12 the license amendment and the renewed license after  
13 the hearing.

14           So again, I just want to repeat that, you  
15 know, we recognize that this change in the plan caught  
16 many people by surprise. And we should have done a  
17 better job communicating this to you. And that's why  
18 we're here tonight. Next slide, please. Can you get  
19 to the next slide? Okay.

20           So, here's the agenda for tonight's  
21 meeting. So, first we're going to talk about the  
22 license amendment and the license renewal application  
23 at a high level. Okay. We'll give you an overview  
24 of those things.

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1           We'll talk about the highlights of the  
2 conclusions for the staff's technical review and the  
3 safety findings that are in the safety evaluations  
4 related to the license amendment and the renewed  
5 license, the license renewal that we plan to issue.

6           Then we'll turn the floor over to you for  
7 your questions and concerns, and your comments on  
8 what we're talking about tonight.

9           Now, I want to point out that due to the  
10 pending hearing, so, the contention is on some  
11 specific aspects, technical aspects related to ASR.  
12 So, that's an adjudicatory hearing. And we have  
13 rules that we have to follow to maintain separation.

14           We can talk about the safety evaluation,  
15 and our conclusions in the safety evaluations. But  
16 any new information that one might want to present  
17 tonight really has to be done in the context of that  
18 hearing. So, we won't be able to discuss it  
19 ourselves. We can't discuss that here.

20           We can, again, we'll talk about the  
21 safety evaluation, but not any new information. And  
22 we're not going to be able to speculate on what the  
23 Board may or may not conclude, based on any  
24 information that has been or will be presented to the

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1 Board. That's a separate activity from our safety  
2 review.

3 All right. So, unless you have any  
4 questions for me I'm going to turn the mic over to  
5 Eric Oesterle, our Branch Chief for License Renewal  
6 Projects.

7 MR. OESTERLE: Thank you, Joe. And as  
8 Joe mentioned, my name is Eric. I'm the Chief of the  
9 License Renewal Projects Branch. And I want to  
10 welcome you all for coming out to the meeting tonight.  
11 I'm sure you'll agree that tonight is a much better  
12 night than it was last night for such a meeting. We  
13 certainly had our fun out on the roads last night.

14 So, what I'm going to do is provide a  
15 brief overview of the NRC staff's completed and  
16 planned actions with respect to the ASR license  
17 amendment, as well as the license renewal  
18 application.

19 And as you'll see on the slide we have a  
20 timeline that illustrates milestones related to the  
21 license renewal application. And those are shown  
22 along the top of the arrow. And milestones related  
23 to the ASR license amendment, which are shown along  
24 the bottom of the arrow.

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1           As you can see, in 2010 NextEra submitted  
2           the license renewal application to the NRC for review.  
3           But at that time ASR had not yet been identified at  
4           Seabrook.

5           In June 2012, when the NRC completed its  
6           initial safety review for the license renewal  
7           application there was an open item that remained in  
8           that safety evaluation report, that still needed to  
9           be resolved. And that was associated with the  
10          Alkali-Silica Reaction.

11          In August 2016 NextEra decided to address  
12          the ASR issue by submitting a license amendment  
13          request to include ASR into its licensing basis. And  
14          also by updating the license renewal application to  
15          account for the information that it included in its  
16          license amendment request.

17          In September 2018 the NRC staff completed  
18          its draft safety evaluation of the license amendment  
19          request, which found that the amendment would meet  
20          the NRC's safety requirements for the current  
21          license.

22          Also in September 2018 the NRC staff  
23          completed its safety evaluation report for the  
24          license renewal application, which found that with

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1 the information from the ASR license amendment  
2 request, the license renewal application will now  
3 meet all of the NRC safety requirements for the  
4 proposed renewed license.

5 The NRC staff submitted the safety  
6 evaluations to our independent Advisory Committee on  
7 Reactor Safeguards, which held three public meetings  
8 on these safety evaluations.

9 In December 2018 the Committee agreed  
10 with the NRC staff that the ASR license amendment  
11 request and the license renewal application satisfied  
12 the NRC's safety requirement.

13 Throughout its reviews of the license  
14 amendment request and the license renewal application  
15 the NRC staff held numerous public meetings. Now,  
16 because the NRC staff has completed its safety reviews  
17 for these licensing actions, and has not identified  
18 any safety concerns with issuing the amendment and  
19 the renewed license prior to the completion of the  
20 hearing, the NRC staff announced plans to issue these  
21 two licensing actions in early 2019.

22 This will not impact the upcoming hearing  
23 on the license amendment request. We anticipate that  
24 the hearing on the ASR license amendment will occur

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1 in mid to late 2019, several months after the final  
2 safety evaluation for the ASR license amendment is  
3 issued.

4 The Atomic Safety and Licensing Board  
5 will issue its decision following the hearing. And  
6 the NRC staff will adopt any required changes that  
7 result from that hearing process.

8 So now I will turn over the presentation  
9 to Angie Buford, the NRC's lead structural engineer  
10 for these reviews, to provide a short presentation on  
11 ASR and the NRC staff's findings on these  
12 applications. Angie.

13 MS. BUFORD: Thanks, Eric. My name is  
14 Angie Buford. If you will just bear with me, I'm  
15 getting over a cold. So, I'm a little bit hoarse.  
16 So, just bear with me there.

17 Alkali-Silica Reaction, or ASR, is a slow  
18 chemical reaction that can occur in some forms of  
19 concrete that have been exposed to water for long  
20 periods of time. ASR can cause expansion and  
21 cracking in concrete structures. Next slide, please.

22 Since 2010 micro-cracking due to ASR has  
23 been identified in multiple Seabrook concrete  
24 structures. Additionally, the cumulative impact of

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1 ASR expansion has led to instances of deformation of  
2 some Seabrook structures.

3 Since that time the NRC has continued to  
4 verify that Seabrook is operating safely through ASR  
5 specific inspections every six months, as well as  
6 through our normal reactor oversight process.

7 Because the original Seabrook licensing  
8 and design bases did not include the effect of ASR,  
9 and ASR could not be eliminated from the site, NextEra  
10 submitted a license amendment request to address ASR  
11 for the current license period, and also submitted a  
12 supplement to its license renewal application to  
13 address ASR for the renewed license period. Next  
14 slide, please.

15 The license request would update the  
16 Seabrook license to require NextEra to regularly  
17 monitor ASR affected concrete structures against  
18 specific acceptance criteria. The acceptance  
19 criteria are based in part on a large scale testing  
20 program that NextEra conducted at the University of  
21 Texas.

22 Generally speaking, the acceptance  
23 criteria represent a level of expansion in Seabrook  
24 concrete structures that would not negatively affect

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1 the intended function of the structures. NextEra  
2 would compare the condition of Seabrook's concrete  
3 structures to these acceptance criteria every six  
4 months to three years, with the exact time period  
5 dependent on the severity of the ASR.

6 The NRC staff determined that this  
7 process would identify any condition that may  
8 negatively affect the intended function of Seabrook  
9 structures before there would be any actual negative  
10 effects. The NRC staff also determined that ASR at  
11 Seabrook had continued to progress slowly.

12 Finally, NextEra will be required to  
13 verify the effectiveness of the monitoring program in  
14 the future as a condition of the license amendment.  
15 Based on these considerations the NRC staff  
16 determined that the license amendment was protective  
17 of the public health and safety. Next slide, please.

18 In reviewing the license renewal  
19 application the NRC staff found that NextEra would  
20 adequately and appropriately address ASR for the  
21 period of extended operation from 40 to 60 years of  
22 plant life.

23 NextEra developed two plant specific  
24 aging management programs, or AMPS, for one,

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1 monitoring ASR, and two, monitoring ASR effects on  
2 site structures. These are called the ASR monitoring  
3 AMP, and the Building Deformation AMP. And they're  
4 sufficient to manage ASR degradation for the period  
5 of extended operation.

6 The NRC staff's findings, including the  
7 basis for those findings, are articulated in the  
8 license renewal safety evaluation report, which  
9 discusses the monitoring parameters, the inspection  
10 methods and intervals, acceptance criteria, and  
11 evaluation of future operating experience.

12 Based on this comprehensive technical  
13 review the NRC staff finds that NextEra will  
14 effectively manage ASR degradation effects, and  
15 maintain intended structural functions through the  
16 period of extended operation.

17 Because of its positive safety findings  
18 on both the ASR license amendment request and the  
19 license renewal application, the NRC staff has  
20 announced its intent to issue the amendment and the  
21 renewed license.

22 I'm now going to turn the presentation  
23 over to Justin Poole, the project manager for the  
24 Seabrook ASR review, who will discuss the timing of

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1 these issuances. Justin.

2 MR. POOLE: Thanks, Angie. As Joe  
3 mentioned, and Eric as well in his opening remarks,  
4 there's a hearing scheduled before the Atomic Safety  
5 and Licensing Board on the ASR license amendment.

6 When the hearing on the license amendment  
7 was granted the NRC staff initially planned to issue  
8 the license amendment and the renewed license after  
9 the completion of the hearing on the license  
10 amendment. And this decision had been communicated  
11 to the public.

12 As Andy discussed, the NRC staff safety  
13 reviews ultimately found that both the ASR license  
14 amendment and the license renewal application  
15 satisfied the NRC safety requirements, or  
16 regulations.

17 When the NRC staff presented these  
18 findings to the independent Advisory Committee on  
19 Reactor Safeguards in late 2018 the Committee agreed  
20 with the staff's findings.

21 After receiving the Committee's  
22 conclusion the NRC staff reevaluated the question of  
23 when to issue the license amendment and the renewed  
24 license. The NRC staff determined that issuance

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1 before the hearing was appropriate because, one, the  
2 NRC staff had completed its safety review for the  
3 amendment and the license renewal, and had not  
4 identified any concerns or safety concerns with  
5 issuing the amendment and the renewed license prior  
6 to the completion of the hearing.

7 Two, prompt issuance of the amendment and  
8 the renewed license would establish requirements in  
9 the Seabrook license for monitoring and managing ASR.  
10 And three, the issuance of the amendment and the  
11 renewed license would not prevent the NRC staff from  
12 making any changes to the Seabrook license that may  
13 be required as a result of the hearing process.

14 For these reasons the NRC staff's current  
15 plan is to issue the ASR license amendment and the  
16 renewed license in early 2019. And then have the  
17 hearing on the ASR license amendment in mid to late  
18 2019, several months after the safety evaluation is  
19 issued.

20 If changes to the Seabrook license are  
21 required as a result of the hearing process then the  
22 NRC staff will implement those changes at the  
23 conclusion of the hearing process. I'll now turn the  
24 presentation back over to Joe Donoghue.

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1 MR. DONOGHUE: Thanks, Justin. Getting  
2 me again, and I'll be brief. Thanks again for all  
3 of you being here. As Justin said, you know, the  
4 outcome of the hearing was not affected by our  
5 decision to go forward with the licensing actions.

6 What we're going to do now is I'm going  
7 to turn the microphone over to Brett. And he's going  
8 to run the rest of the meeting. And I'm looking  
9 forward to -- Oops. Yes, I forgot about the slide.

10 Before I turn it over to Brett I'll  
11 remind you that on this slide are links to the  
12 information related to the reviews that we've  
13 conducted, the license renewal and the amendment  
14 request itself, and other information on concreted  
15 degradation.

16 And I'll tell you, that concrete  
17 degradation site, people put a lot of good work into  
18 that, and it's very informative. Okay. Thank you.  
19 So, I'm going to turn the meeting over to Brett for  
20 the discussion part of our meeting. Thanks for your  
21 attention. Brett.

22 MR. KLUKAN: Thanks, Joe. Joe, thank  
23 you. So, just want to remind people before we get  
24 started again. I'm going to move this closer to

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1 myself here. That there are still a couple of seats  
2 in the front.

3 If you would like to sit we have a couple  
4 right here, and a couple there. I feel bad that  
5 people are standing for the entire duration of the  
6 meeting. Though you did help me win a bet. I thought  
7 we were going to sell out the venue tonight, and we  
8 have. So, there we go.

9 So, you see me holding these yellow  
10 cards. Again, I brought this up at the beginning of  
11 the meeting. This is how you let me know that you  
12 would like to speak. I have 20 of these so far.

13 If you have not already registered to  
14 speak, please go outside and do so now. That's the  
15 only way I know of your interest in speaking this  
16 evening. And also, so I can gauge how much time I  
17 have left, or should allot for the meeting. All  
18 right.

19 Now, again, as I noted we're going to  
20 have each person go -- I'm going to try to attach  
21 this to myself again. All right. Can everyone hear  
22 me okay? We're still good? Okay. All right.

23 We are going to have a three minute time  
24 limit on speakers. The reason I do that is to make

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1 sure we accommodate everyone who expressed a desire  
2 to speak tonight.

3 You see before you a countdown clock. We  
4 will have public speakers come to this microphone  
5 when called. Once they start speaking I will start  
6 the clock. Let me make this very clear. The clock  
7 does not stop until those three minutes are up. So,  
8 we're not going to do back and forth.

9 The problem with that is, and I recognize  
10 that a lot of you would like to have that kind of  
11 dialogue with the NRC staff here. However, time at  
12 this meeting does not permit that. So, ask all your  
13 questions at once. And then, the NRC staff will  
14 respond as appropriate. And we'll move on to the  
15 next speaker. Okay.

16 Again, I'm not trying to squelch dialogue  
17 here. It's just if we do a lot of that back and  
18 forth it cuts down on the amount of time we have for  
19 other people to speak this evening. So, out of  
20 fairness, everybody gets three minutes. You're  
21 motioning towards me.

22 PARTICIPANT: Is there a possibility of  
23 having speakers speak there for purpose of the video?

24 MR. KLUKAN: No. I'm sorry. But you're

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1 going to, members of the public and elected officials  
2 will be speaking from that microphone right there.  
3 Okay.

4 PARTICIPANT: Why is that? Why is that?  
5 Why can't we, we can't, we want to see. We can't see  
6 our audience. I mean, if we speak from here --

7 MR. KLUKAN: Because, let me make this  
8 clear. The purpose of this meeting tonight is for  
9 you to have a dialogue with the NRC staff. If you  
10 would like to host a meeting with the public, you're  
11 free to do so.

12 (Off-microphone comment.)

13 MR. KLUKAN: And I'm not trying to be  
14 curt with you. I'm just saying here is that this,  
15 the purpose of this meeting is for you to ask  
16 questions of these individuals.

17 If you want to have a conversation with  
18 the public, you're welcome to do so. But tonight the  
19 time I have allotted, or devoted to, the next two and  
20 a half hours is for members of the public to speak  
21 with them. Thank you.

22 Okay. For, one last thing before we  
23 start. For your awareness, the meeting tonight is  
24 being transcribed. Because of that, I would ask two

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1 things. One, again, not to speak over each other.

2 And then two, that you please announce  
3 your name at the beginning of your speaking session,  
4 for the benefit of our court reporter, so that the  
5 court reporter has a sense of your name. Okay. So  
6 that way you can be, your name can be captured as  
7 part of the transcript for the meeting. Okay.

8 Now, before we begin with public  
9 speakers, we have a number of representatives from  
10 elected office who would like to give prepared remarks  
11 this evening. First up is Peter Clark, on behalf of  
12 Senator Shaheen's office.

13 MR. CLARK: Good evening. My name's  
14 Peter Clark, from Senator Jeanne Shaheen's office.  
15 The Senator is in D.C. tonight, but she asked that I  
16 read this statement.

17 Dear friends, I appreciate the Nuclear  
18 Regulatory Commission's response to the New Hampshire  
19 Congressional Delegation's concerns about how this  
20 important decision could affect New Hampshire's  
21 seacoast community.

22 And I thank the NRC for agreeing to  
23 tonight's public forum. This public hearing will  
24 provide residents with the important opportunity to

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1 make their voices heard publicly.

2 The safe operation of Seabrook is in the  
3 interest of the public and the skilled workforce who  
4 work tirelessly to maintain the safety of the plant.

5 I also appreciate the willingness of  
6 NextEra Energy to attend today's meeting to address  
7 any concerns the public may have regarding the safe  
8 operation of Seabrook Station. Sincerely, Jeanne  
9 Shaheen, United States Senator. Thank you.

10 MR. KLUKAN: Thank you very much. Next  
11 up we have Kerry Holmes on behalf of Senator Hassan's  
12 office.

13 MS. HOLMES: Hello. I have a message to  
14 read from Senator Hassan. I thank the Nuclear  
15 Regulatory Commission for convening today's public  
16 meeting to discuss the Seabrook ASR license amendment  
17 request, and the license renewal application, and  
18 offering members of the public and other stakeholders  
19 the opportunity to voice their concerns related to  
20 Seabrook's license amendment request and license  
21 renewal application.

22 I also express my appreciation to the  
23 employees at Seabrook who live in our seacoast  
24 communities, and work tirelessly to ensure its safe

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1 operations.

2 A robust and transparent public process  
3 is critical to ensuring that community members and  
4 stakeholders are able to understand the NRC's review  
5 process for Seabrook, and share their concerns  
6 directly with NRC staff.

7 I would encourage NRC staff to listen  
8 closely to the concerns that are raised today, and  
9 work to address them prior to issuing a decision on  
10 Seabrook's license amendment request and license  
11 renewal. Thank you.

12 PARTICIPANT: Did you say your name?

13 MS. HOLMES: I'm Kerry Holmes with  
14 Senator Hassan's office.

15 MR. KLUKAN: Thank you very much. Next  
16 we have Mr. Patrick Carroll, on behalf of Congressman  
17 Pappas.

18 MR. CARROLL: Good evening, everybody.  
19 Thank you for allowing me to speak on behalf of the  
20 Congressman, who is also in D.C. NRC, welcome to the  
21 1st District. We're happy to have you. And to the  
22 public, thank you for coming out.

23 From the Congressman. I want to thank  
24 NRC for hosting this public meeting. Opportunities

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1 for the public to contribute comments to the  
2 Commission before a final determination is made are  
3 important.

4 The safety and continued operation of  
5 Seabrook Station is a mutual goal of ours, from the  
6 skilled workforce responsible for maintaining  
7 functional plant, and ensuring secure operations.

8 To the members of the community here  
9 offering their comment, I know we all share the  
10 opinion that an open and transparent process is a  
11 critical step in moving us forward. Thank you again  
12 for holding this meeting. Best wishes, Chris Pappas,  
13 Member of Congress. Thank you.

14 MR. KLUKAN: Thank you very much. And  
15 again, that was Patrick Carroll. Next we have Claire  
16 Taylooney, on behalf of Senator Markey.

17 MS. TAYLOONEY: Thank you. My name's  
18 Claire Taylooney, from Senator Markey's office. This  
19 public meeting on the Seabrook Nuclear Plant provides  
20 an invaluable and necessary chance for local  
21 stakeholders to weigh in on issues related to the  
22 safety of the plant.

23 Yet, another opportunity will also occur  
24 when the Nuclear Regulatory Commission's Atomic

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1 Safety and Licensing Board holds an evidentiary  
2 hearing on concerns over whether NextEra is using  
3 adequate testing to determine their monitoring,  
4 acceptance criteria, inspections intervals at  
5 Seabrook.

6 These questions are important because  
7 both Seabrook's license renewal and amendment should  
8 be evaluated using the highest scientific standards,  
9 and with vital input from local communities.

10 Only after a fully transparent process  
11 will communities be able to trust they will not be  
12 exposed to danger from a fracturing, unsafe facility  
13 over the next few decades.

14 I'm still concerned about the possibility  
15 that the NRC will approve Seabrook's license  
16 amendment before the hearing takes place this summer.  
17 This would prevent a subversion, excuse me, this would  
18 present a subversion of the public input process, and  
19 would be unnecessarily premature.

20 This license will not expire for another  
21 11 years, and the hearing is set for this summer.  
22 All the parties involved can afford to wait, to hear  
23 out the concerns raised by local residents.

24 I strongly urge the Atomic Safety and

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1 Licensing Board to hold the evidentiary hearing  
2 before moving forward on the license amendment.  
3 Thank you.

4 MR. KLUKAN: Thank you. Next we have  
5 Chris Ellms, of Governor Sununu's office.

6 MR. ELLMS: Hello. I'm Chris Ellms,  
7 reading a letter from Governor Sununu. I am writing  
8 in support of the re-licensing of Seabrook Station.  
9 This matter has undergone extensive deliberation for  
10 more than 15 public hearings related to Seabrook's  
11 license renewal and the Alkali-Silica Reaction in  
12 sections of the plant's concrete, commonly referred  
13 to as ASR.

14 In December 2018 the ACRS, which advises  
15 the Nuclear Regulatory Commission, endorsed NextEra's  
16 ASR monitoring programs on a scientific basis, and  
17 recommended that Seabrook be issued a renewed  
18 operating license.

19 The concerns cited by the federal  
20 delegation neglect to note that this process began in  
21 2010, and has provided open stakeholder engagement  
22 throughout, as required by NRC's guidelines.

23 As determined by the Reactor Safeguard  
24 Advisory Committee, Seabrook Station remains in good

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1 operating condition.

2           Seabrook, one of only two nuclear  
3 stations without plans to retire in New England, is  
4 capable of delivering more than a gigawatt of clean  
5 emission free energy. This carbon free electricity  
6 offsets approximately four million tons of carbon  
7 dioxide emissions each year.

8           Seabrook Station is an important source  
9 of economic activity for New Hampshire, stimulating  
10 more than \$535 million dollars in economic growth.  
11 Seabrook Station creates more than 650 direct jobs,  
12 while supporting more than 2,600 jobs across all  
13 sectors of the state and regional economy. This is  
14 in addition to tax revenues paid by the plant, further  
15 benefitting all Granite Staters.

16           To the extent that Seabrook is able to  
17 remain competitive in wholesale markets, without  
18 RAPAR (phonetic) funded subsidies that would increase  
19 the cost of electricity, New Hampshire stands to  
20 continue to benefit from an extension to Seabrook's  
21 operating license.

22           Any additional requests for delay in this  
23 already lengthy and extensive public review process  
24 is without merit, and put the future of this critical

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1 resource in jeopardy. Sincerely, Christopher T.  
2 Sununu, Governor.

3 MR. KLUKAN: Thank you very much. Next  
4 we have Jeb Bradley of the New Hampshire State Senate,  
5 District 3.

6 MR. BRADLEY: Good evening, everyone.  
7 Thank you very much. It's a pleasure to be here and  
8 speak in support of the extension of the license.

9 To those of you who don't know me, I have  
10 served as a Member of Congress from 2002 to 2004, and  
11 currently serve in the New Hampshire Senate, where I  
12 have led efforts on electric utility restructuring,  
13 divestiture, and decommissioning. So, I have some  
14 background into energy in New England, and in New  
15 Hampshire.

16 I think first and foremost what needs to  
17 be thought about is the capacity situation in New  
18 England right now. Over 1,000 megawatts are  
19 represented by Seabrook at a time that it's vitally  
20 important in order to maintain a reliable electric  
21 grid that this power, especially as it is safely  
22 generated, remains on line.

23 I have fought for other sources of power.  
24 But, in order to have a wise energy plan for not only

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1 New Hampshire, but New England, we need to maintain  
2 existing sources of power.

3 The independent system grid operator is  
4 warning of potential shortages of power at peak demand  
5 times in the 2024 timeframe. Maintaining the  
6 certainty of Seabrook I think is vitally important  
7 for New England's future.

8 Obviously I think the fact that this room  
9 is full of so many people talks to the economic  
10 importance of Seabrook. There are over 500 direct  
11 jobs, and a couple of thousand more jobs that Seabrook  
12 represents. This is a very important component for  
13 the seacoast area of New Hampshire. And I think that  
14 is a consideration, hopefully you will take into  
15 account.

16 As I indicated before, Seabrook's safety  
17 record has been good. Clearly there are concrete  
18 type issues. But certainly, to the best of my  
19 knowledge is the Advisory Committee on Reactor  
20 Safeguards has recommended that the plan that NextEra  
21 has put forward is sufficient to assure the safety of  
22 the unit if it is re-authorized in the future.

23 There's been an 18 month period with no  
24 outages recently. Seabrook has a good safety record.

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1 And certainly they have, under both the prior  
2 ownership, and now NextEra, been a good corporate  
3 citizen, and a good environmental citizen here on the  
4 seacoast.

5 And lastly, I just want to thank you for  
6 holding this meeting. I'm told that this is the 15th  
7 meeting like this, where you've taken input from the  
8 public. It's a very transparent process. And you're  
9 to be commended for that. So, thank you very much.  
10 A pleasure to be here.

11 MR. KLUKAN: Thank you very much. Next  
12 we have Representative Peter Schmidt of the New  
13 Hampshire House.

14 MR. SCHMIDT: Good evening. My name is  
15 Peter Schmidt. I represent over Wards 1 and 2 for  
16 the past 16 years. I speak to you this evening in  
17 general opposition to the extension of the license at  
18 this particular time, since I regard it as premature.

19 But I am concerned about the ASR issue.  
20 I understand that you have a belief that it can be  
21 safely managed. But I wish to express my concern.

22 However, my major point of contention at  
23 this time is a concern with the regard to the  
24 possibility of safely and timely evacuating the

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1 seacoast, this area, in case of any kind of an  
2 emergency at Seabrook.

3 While I realize that that is not your  
4 primary concern, and I have addressed letters to  
5 Massachusetts Attorney General Maura Healey on  
6 several occasions expressing my concern.

7 And believing that it is very important  
8 for the first responders in this area to have an  
9 opportunity for a public hearing to address the issue  
10 of whether it's possible for the Seabrook region to  
11 be safely evacuated in the event of a nuclear  
12 emergency. Thank you very much.

13 MR. KLUKAN: Thank you very much. Next  
14 we have Aboul Khan, a Selectman from the town of  
15 Seabrook.

16 MR. KHAN: Good evening. My name is  
17 Aboul Khan. I represent Seabrook Board of Selectmen  
18 in my capacity as a Selectman, as well as a  
19 Representative of Seabrook and Hampton Falls at the  
20 New Hampshire State House.

21 Selectwoman Theresa Kyle is in the  
22 audience. And our Board Chairman is out of town.  
23 So, she could not make it.

24 I come before you today to speak in favor

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1 of the NRC granting a license amendment to Seabrook  
2 Station, as well as asking favorable consideration of  
3 the 20 year license extension sought by Seabrook  
4 Station.

5 As a representative of the host community  
6 I can assure you that we strongly support the safe  
7 operation of Seabrook Station. Like many people we  
8 were concerned about the issue of concrete  
9 degradation, as also called ASR. And eager to  
10 understand how that issue would be, impact the safe  
11 operation of Seabrook Station.

12 We very much appreciate the comprehensive  
13 approach to this issue taken by NRC and NextEra, who  
14 have worked jointly since 2010 to study the  
15 ramification of ASR on the plant.

16 The work done on this issue has been  
17 extensive, with the results showing that Seabrook  
18 Station can be operated safely, as it has been for  
19 many years.

20 I am not a scientist, but I can satisfy,  
21 I am satisfied that the long years of work on ASR,  
22 and the letter issued by the Advisory Committee on  
23 Reactor Safeguard should lead to the license  
24 amendment sought by NextEra.

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1 I would also like to express our strong  
2 support for the license extension of 20 years sought  
3 by NextEra. This process began with the presentation  
4 to the Seabrook Board of Selectmen back in 2010  
5 timeframe, with consistent communication between  
6 NextEra and the Town of Seabrook, and the Town  
7 Manager's Office since then.

8 Our support for this extension comes  
9 principally not, but not exclusively for the same  
10 reason we support the license amendment. We believe  
11 Seabrook Station can be operated safely for entirety  
12 of the extension period.

13 It is our strong belief that nuclear  
14 power has a vital role to play in U.S. energy market,  
15 with carbon free generation helping us to meet  
16 important element goals. Seabrook Station has  
17 achieved a great safety record due to superior  
18 management, as well as willingness to make necessary  
19 investment to the operate the plant safety and  
20 profitability.

21 They have also been terrific corporate  
22 citizen, partnering with the Town of Seabrook on the  
23 host of issues that Town considers to be important.

24 In light of our understanding of our

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1 citizens' record complied by the Seabrook Station  
2 over the years, we, the Seabrook Board of Selectmen,  
3 fully endorse to support the 20 year license extension  
4 sought by NextEra. And I think you for hearing me  
5 today. And I'd like to present this letter to the  
6 NRC, please.

7 MR. KLUKAN: You can just --

8 MR. KHAN: Where I --

9 MR. KLUKAN: Thank you very much. Okay.  
10 Next up we have Michael Ossing, the Marlborough City  
11 Councilor at Large.

12 MR. OSSING: Again, Michael Ossing, O-S-  
13 S-I-N-G. Hello and good evening to the Members of  
14 the NRC. And thank you for allowing me to express  
15 my views on the license amendment associated with  
16 ASR, and the renewed Seabrook license.

17 Again, my name is Mike Ossing. I reside  
18 in Marlborough, Massachusetts. I have worked in  
19 nuclear power industry for over 35 years. I'm  
20 currently in my 20th year as a public servant, as an  
21 elected official, as a Councilor at Large for the  
22 City of Marlborough.

23 I have three points I would like to make  
24 to reinforce why the license amendment for ASR and

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1 license renewal should be issued now.

2 First, technical competence of the  
3 individuals involved in this complex issue. From the  
4 utility side the industry's brightest and most  
5 technically competent in the nuclear industry, as  
6 well as academia, have reviewed the ASR issue, and  
7 all have concluded that the issue is not a safety  
8 threat, and can be managed.

9 Additionally, the NRC Region I staff, NRR  
10 staff engineers, and the ACRS, an independent Board  
11 made up of some of the most competent minds in various  
12 technical industries and academia, have all reached  
13 similar conclusions.

14 Second, nine years of review. The issue  
15 has been studied since 2010, nine years. There have  
16 been tens of millions of dollars spent on testing,  
17 studies, and evaluations. The NRC has conducted  
18 numerous technical reviews, audits, and inspections.  
19 And all have indicated that this is not a safety  
20 issue, and can be managed.

21 Third, monitoring program. The strength  
22 and backbone of the nuclear industry is defense in  
23 depth. The ASR monitoring program is another example  
24 of defense in depth. The ASR monitoring programs

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1 that are part of the license renewal all have  
2 acceptance criteria that, should movement in concrete  
3 be observed, there are actions to take.

4 And I remind everyone, for nine years  
5 there's been monitoring of concrete issues. Concrete  
6 does not move fast. And should it move, it moves  
7 very slow. The monitoring and walk down programs in  
8 place now have shown that there's been no appreciable  
9 movement over the time period.

10 One could conclude that this issue has  
11 plateaued. The proof will be in the monitoring  
12 program that will be reported to, and evaluated by  
13 the NRC. The monitoring program is part of the  
14 renewed Seabrook license.

15 So, to conclude, I urge the NRC to follow  
16 its process, and not succumb to political pressures  
17 by individuals that are trying to further their  
18 political careers or agendas. The NRC should issue  
19 the license amendment, and issue the Seabrook license  
20 renewal application now. Thank you for listening.

21 MR. KLUKAN: Thank you very much. All  
22 right. At this time that exhausts the list of  
23 individuals, or elected officials or their  
24 representatives, who notified me prior to the meeting

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1 that they would like to speak. However, are there  
2 any other elected officials or representatives  
3 thereof who would like to give a prepared statement  
4 at this time? Going once, twice, okay.

5 Just for the record, again, there are  
6 one, two, three, four, five, there are five seats,  
7 five seats up here. This is not a bad area. It's  
8 pretty good real estate. I'm nice. I just, I feel  
9 bad that so many of you are standing when there are  
10 perfectly good chairs. Just saying.

11 Okay. Just to remind you, we're now  
12 going to move into the public comment portion. I'm  
13 going to go through the comment cards in the order in  
14 which I received them. That's going to determine our  
15 order of speakers.

16 You will see here, vision. So, hopefully  
17 you can see it from where you are standing, a comment  
18 clock, or a countdown clock. This starts at three  
19 minutes. Going to make a noise once it starts.  
20 Don't be alarmed. It's going to make another noise  
21 when you have ten second left. Again, don't be  
22 alarmed.

23 And then, at that final time, when your  
24 time is up, it will click again. Don't be alarmed.

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1       However, I would ask that you please politely conclude  
2       your remarks, so that we can move on to the NRC's  
3       response, and then to the next speaker.

4               Okay. We now have by my count 26. So,  
5       if everyone gets three minutes, that's -- I shouldn't  
6       have said that before I did the math in my head. All  
7       right. Time, it's time. I'm an attorney, not an  
8       engineer, for the record.

9               So, we're going to get started with our  
10       first speaker, who is Mr. Comley of We The People.  
11       I'm going to ask him to approach the microphone. And  
12       then once you're, again, once you get to the  
13       microphone, please state your name for the record.  
14       And then once you begin your remarks I'll start the  
15       clock. Thank you very much. Thank you.

16               MR. COMLEY: Well, I appreciate -- My  
17       name is Steven Comley. I'm the founder of We The  
18       People. It's a national whistleblower protection  
19       organization I founded in 1987.

20               And I founded it because my family's in  
21       the nursing home profession. And I was told by the  
22       former Executive Director of the Nuclear Regulatory  
23       Commission to leave a paralyzed resident behind in  
24       our nursing home, and give her a bottle of potassium

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1 iodide to drink if we couldn't move her. So, that  
2 meant special needs people are expandable. And that  
3 came from the Executive Director of the NRC.

4 And I have tapes here. I hired a  
5 licensed drone operator to fly his plane over the  
6 beaches July 4th of 2017 and '18. And you couldn't  
7 get a crab out of there that day. So, the cart's  
8 before the horse. I have, I'm a farmer too.

9 And I'll tell you, I'm concerned about  
10 everyone on the panel, and all the NRC people.  
11 Because, you know, tomorrow's Valentine's Day. How  
12 can you take the chance of not being home? You're  
13 going to be in big trouble. Anyway, you know, I got  
14 a sense of humor.

15 Let's see. I'm also the person that the  
16 Nuclear Regulatory Commission hired the Department of  
17 Justice, and had me in Court, Massachusetts Federal  
18 Court for six years with a charge of conspiracy to  
19 topple their agency. One of their top investigators,  
20 Roger Fortuna, who is a deputy director of the NRC's  
21 Office of Investigations.

22 And they charged us with conspiracy. And  
23 they're after tape recordings that they say I made  
24 then. And I never confirmed or denied ever doing a

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1 tape recording. But if you're in Washington, or in  
2 New York, ask Giuliani. It's legal. That's what  
3 come out of Watergate.

4 Now I'm releasing, and the panel has it,  
5 I'm releasing one of the tape recordings, well, a  
6 tape recording of an NRC informant. The name's  
7 redacted, because they don't give up names without  
8 permission. And I'm going to read you some of it.

9 And if anyone wants a copy of the  
10 transcript they can. And I have 100 of the tape, of  
11 the audio, DVD tape of what you see when you're on  
12 the beaches in July 4th.

13 And I want to say this. And I've met  
14 Joe. And I've met the other panel members here  
15 before, because I testified last year. And I have  
16 to tell you that I really appreciate you transcribing  
17 this meeting. Because last time you didn't do it.  
18 And I think that doing this has respect for the public  
19 comment.

20 Now, this transcript says this. And I  
21 don't know if Mr. Markey did this or not. But this  
22 is part of it. But you say you amass because they  
23 are a bunch of fence sitters. So, you came to D.C.  
24 The next step is to try and get some D.C. politicians

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1 that are interested.

2 MR. KLUKAN: Thank you very much, Mr.  
3 Comley. I'm sorry, but your time has expired.

4 MR. COMLEY: I'm done?

5 MR. KLUKAN: You're done.

6 MR. COMLEY: Okay. Well, anyone who  
7 wants a copy of the packets that the panel has,  
8 they're out here. And Joe told me that it's okay to  
9 give it to the staff. So, anyone who wants the video,  
10 in all due respect, I think you ought to do it for  
11 your kids' future. And I --

12 MR. KLUKAN: Thank you very much, Mr.  
13 Comley. Thank you.

14 MR. COMLEY: Okay. Thank you.

15 MR. KLUKAN: Next up we have Mr. Brian  
16 Campbell.

17 MR. CAMPBELL: Thank you. My name is  
18 Brian Campbell. I am a U.S. Navy vet who studied  
19 utility and renewable energy at UMass Lowell.

20 In 1991, as an engineering student I  
21 toured Seabrook Nuclear on a UML bus trip, before  
22 working for a utility lithium battery storage  
23 manufacturer, A123 Systems.

24 I did not fully appreciate the benefits

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1 of nuclear power compared to renewables with battery  
2 storage. At A123 Systems we built and tested 53 foot  
3 trailers filled with 900,000 battery cells, with a  
4 capacity of one half megawatt hour.

5 This means it would take 2,500 trailers,  
6 at \$1.5 million dollars each, to store one half hour  
7 of Seabrook's reliable 24/7 power. Grid reliability  
8 is important in my current position at Hitachi Cable  
9 Manchester, as our cable business runs 24/7.

10 The Boston Globe recently published an  
11 editorial, Retiring More Nuclear Plants Could Hurt  
12 Mass Climate Goals. This newspaper is known for many  
13 anti-nuclear power editorials.

14 The editor, Ryan, suggests Massachusetts'  
15 new clean energy standard, which currently applies to  
16 operating electrical generators built after 2010, be  
17 backdated to 1990, the year that Seabrook opened.

18 That would allow the plant to make money  
19 by selling those credits. It would also allow the  
20 plant to be fairly compensated for its zero emission  
21 energy, like other low carbon technologies in the  
22 region.

23 The proposed energy, Clear River Energy  
24 Center in northern Rhode Island, is the replacement

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1 for Pilgrim Nuclear Plant, which provides reliable  
2 power, but is being prematurely closed in 2019. To  
3 be clear, this is a natural gas plant.

4 Massachusetts taxpayer funded C-10, who  
5 advocates for the closure of Seabrook Station,  
6 ignores that gas, not renewables, would be Seabrook's  
7 replacement.

8 Remember the 2018 Merrimack Valley gas  
9 explosions? More gas powered plants, pipelines, and  
10 emissions. The safest way to power New England?  
11 This is what C-10 and similar groups are really  
12 advocating.

13 If reducing emissions with the safest and  
14 most cost effective technology is important, then New  
15 England needs to extend Seabrook's NRC license, in  
16 order to keep 57 percent of New Hampshire's electrical  
17 power reliably flowing, and develop plans to build  
18 more nuclear generation. thank you.

19 MR. KLUKAN: Thank you very much.

20 (Applause.)

21 MR. KLUKAN: That was impressive.  
22 Rarely do people hit it right on the mark. So, and  
23 again, all joking aside, I don't want to cut off  
24 anyone tonight. That's not my ambition here. It's

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1 really, I have one primary duty. And that's to make  
2 sure whoever came here with a desire to speak tonight  
3 gets an opportunity to do so.

4 So, to the extent we have extra time left  
5 over at the end of the night, again, we'll cycle back  
6 through people who have more to say. Okay. All  
7 right. Next up we have Mr. Herman Bautzmann.  
8 Please.

9 MR. BAUTZMANN: Good evening. My name  
10 is Herman Bautzmann. I served on two nuclear powered  
11 submarines in the U.S. Navy, have a bachelor's degree  
12 in electrical engineering, and I'm a retired Chief  
13 Engineer from Raytheon, currently residing in  
14 Portsmouth, New Hampshire.

15 As a citizen of the planet earth I am  
16 very concerned about the threat of climate change  
17 poses to our children and grandchildren. If we New  
18 Englanders are serious about addressing this issue we  
19 would be extremely foolish to close one of New  
20 England's largest suppliers of clean energy, and 80  
21 percent of New Hampshire's clean energy.

22 We cannot afford to throw this 80 percent  
23 of clean energy away. We need to reduce emissions  
24 and continue to provide the safest, most cost

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1 effective clean technology by extending Seabrook's  
2 NRC license.

3 We need to avoid a repeat of 2015, when  
4 New England emissions rose by three percent, due to  
5 the premature closure of Vermont Yankee Nuclear  
6 Plant, whose electrical capacity was replaced with  
7 natural gas.

8 This is exactly what will happen to an  
9 even greater extent if Seabrook is closed. Fossil  
10 fuel plants, not renewables, will be Seabrook's  
11 replacement. I cannot ignore this fact, which has  
12 repeated globally in every instance of a nuclear plant  
13 shutdown.

14 We do not have the luxury of cherry  
15 picking which clean energy solution we want to employ.  
16 We need to use all available technologies to avoid  
17 this disaster. Let us agree that the enemy is fossil  
18 fuel usage.

19 I hope to see New England use clean,  
20 proven nuclear energy from Seabrook Station. Let's  
21 continue its safe operation to 2050 and beyond.  
22 Let's not make the same mistake of shutting down  
23 nuclear in favor of fossil fuels, which caused climate  
24 change in the first place. I have a copy of this if

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1 --

2 MR. KLUKAN: Yes, I'll take it from you.  
3 Thank you. Next up we have Mr. Dennis Beaudoin.

4 MR. BEAUDOIN: Thank you. Good evening,  
5 NRC Staff. Thank you for the opportunity to speak  
6 tonight. My name is Dennis Beaudoin. I'm a lifelong  
7 resident of New Hampshire. I'm also the proud  
8 business manager of IBEW Local 490.

9 I'm here to speak in favor of renewing  
10 Seabrook Station license. I feel very strongly about  
11 this topic, because it's been a major part of my  
12 career.

13 I started at Seabrook Station 35 years  
14 ago as an apprentice. And it has given me an  
15 opportunity to feed my family, and give help, support  
16 to my community financially through a decent living  
17 wage and benefits.

18 The IBEW have members doing maintenance  
19 work there year round. Every 18 months we send close  
20 to 100 IBEW members to the site for a planned  
21 shutdown, refueling. I brought some of them here  
22 tonight with me.

23 That's just the electrical workers. I  
24 don't know the numbers off the top of my head, but

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1 every 18 months the maintenance of the plant generates  
2 millions upon millions of dollars for the local  
3 economy through New Hampshire construction workers.

4 It's my understanding that there have  
5 been several meetings on this topic already, with no  
6 pertinent information that would constitute renewal  
7 being denied. I hope tonight's meeting is just to  
8 cross the Ts and dot the Is. Thank you all for your  
9 due diligence.

10 MR. KLUKAN: Thank you. All right.  
11 Next we have Philip, and again I apologize if I  
12 mispronounce names, Woyenberg. Please.

13 MR. WOYENBERG: Hello. My name is Phil  
14 Woyenberg. And I'm a retired painting contractor  
15 from South Portland, Maine. I used to be anti-  
16 nuclear, and was an active member of the Green Party.

17 I was very concerned about climate  
18 change, and did a deep study into the alternatives to  
19 fossil fuels. What I found was that nuclear has zero  
20 carbon emissions.

21 But what was really surprising was that  
22 statistics show that worldwide, nuclear is one of the  
23 safest forms of energy. And it's dependable. It  
24 runs all day, every day. And needs only a small

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1 amount of fuel every year and a half. Nuclear should  
2 be a big part of the world getting to zero carbon  
3 emissions.

4 Seabrook Power Plant is an incredible  
5 machine, and the single largest source of energy in  
6 New England. On a small footprint it provides 650  
7 high paying jobs, and a half a billion dollars to the  
8 local economy.

9 For New England it is a huge source of  
10 clean electricity. History shows that if a nuclear  
11 plant closes, like Vermont Yankee, it is replaced  
12 with dirty natural gas.

13 I support the license extension for  
14 Seabrook, in order to maintain this clean electricity  
15 source working for the local community, and all of  
16 New England. Thank you.

17 MR. KLUKAN: Thank you very much. Next  
18 we have Meredith Angwin, A-N-G-W-I-N.

19 MS. ANGIN: Okay. I have a copy of this  
20 afterwards for you.

21 MR. KLUKAN: Okay. Thank you.

22 MS. ANGIN: Okay. My name is Meredith  
23 Angwin. I'm a chemist who has worked in many aspects  
24 of the power industry. I performed and supervised

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1 research on reducing pollution from gas turbines,  
2 from coal power plants, and from geothermal plants,  
3 as well as research on reducing corrosion in gas  
4 pipelines, hydropower penstocks, and nuclear plants.

5 I was one of the first women project  
6 managers hired at the Electric Power Research  
7 Institute. And I'm the inventor on several patents.

8 I urge you to keep our air clear, clean  
9 by extending the licenses to Seabrook Station. It  
10 produces clean power. And if it were to close it  
11 would be replaced by gas fired plants. That is what  
12 happened in Vermont where I live.

13 Some renewables were built. But Vermont  
14 Yankee's output kilowatt hour for kilowatt hour was  
15 mainly replaced by gas fired generation. The amount  
16 of carbon dioxide emitted by the New England grid  
17 went up three percent. Seabrook is twice as large  
18 as Vermont Yankee.

19 There are two problems with gas fired  
20 power. One problem is carbon dioxide formation. The  
21 other major problem is the formation of an acid gas  
22 NOX. That's a mixture of NO2 and NO3.

23 And it's usually described as NOX, N-O-  
24 X, which is the precursor to photochemical smog, and

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1 directly forms acid rain. It is impossible to  
2 prevent NOX formation in a high temperature combustor  
3 such as a gas turbine. And it cannot be entirely  
4 cleaned up.

5 I have two patents in NOX prevention.  
6 But they are only partially successful. NOX is an  
7 intractable problem. Please keep Seabrook operating,  
8 and keep the air clean of NOX.

9 Nuclear opponents are fond of saying what  
10 might happen. We might build lots of renewables. We  
11 might have some kind of problem at Seabrook. I'm  
12 here to say what will happen if the plant closes.

13 We will have more gas fired systems  
14 operating. We will have an increase of five to six  
15 percent in the amount of carbon dioxide released by  
16 our electric grid. We will have a similar increase  
17 in NOX pollution, though the number is harder to  
18 quantify.

19 Without Seabrook we will have dirtier  
20 air, which leads to more acid rain, and more cases of  
21 asthma. Please keep New Hampshire air clean by  
22 extending Seabrook's operating license. Thank you.

23 MR. KLUKAN: Thank you very much. Next  
24 we will have Christopher Nord. Christopher Nord.

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1 MR. NORD: I'm Chris Nord. I'm a Board  
2 Member of the C-10 Research and Education Foundation,  
3 and the Chair of the Committee that's working on the  
4 opposition to the license amendment request that  
5 Seabrook has filed.

6 We could debate the merits of nuclear  
7 here tonight. And by the way, nuclear is not zero  
8 carbon. But I don't have time for that, because I  
9 only have two minutes and 40 seconds left.

10 So, let me say that the issue, the primary  
11 issue here is no significant hazards. The  
12 determination of no significant hazards is key as an  
13 issue of small D democracy and fairness.

14 Way back in 2016 the NRC Regional Office  
15 sent assurances to municipalities in the State of  
16 Massachusetts concerning the ASR problem, Alkali-  
17 Silica Reaction problem at Seabrook.

18 And to quote, NRC will ensure that  
19 Seabrook structure's monitoring program properly  
20 assesses the condition of the structures affected by  
21 ASR, and ensure they will continue to perform as  
22 intended.

23 NRC Commission upheld the admissibility  
24 of C-10's five contentions refigured to one in 2018.

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1 In this ruling NRC staff argued in support of the  
2 admissibility of C-10 contentions.

3 NRC regulations require that the  
4 adjudicatory hearings must be completed before  
5 licensing action is taken. However, staff can move  
6 to issue a license amendment before completion of an  
7 adjudicatory hearing if it would pose no significant  
8 hazards.

9 This determination is made by NRC staff,  
10 and is not reviewable by the Atomic Safety and  
11 Licensing Board, who we are going in front of sometime  
12 in the next six months.

13 Now NRC staff has moved to pass the  
14 license amendment request in order to pass on license  
15 renewal, which is inappropriate, since C-10's case  
16 calls into question the legitimacy of the license  
17 amendment request from top to bottom. And because  
18 of that fact calls into question the legitimacy of  
19 the license renewal application.

20 Because of all of this, as of tonight we  
21 have filed an emergency petition with the Nuclear  
22 Regulatory Commissioners to hold the license  
23 amendment request in abeyance, and by extension the  
24 license renewal application, until there is a proper

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1 review of NRC's determination of no significant  
2 hazards to ensure that licensing actions do not take  
3 place while reviewing the no significant hazards,  
4 give due recognition to the significance, complexity,  
5 and lack of adequately rigorous study of ASR, which  
6 is reflected in the license amendment request from  
7 NextEra, and provide guidance and instruction to  
8 staff for establishment of significantly more  
9 rigorous and sophisticated state of the art methods.

10 I will only say that one of the two papers  
11 I gave to the panel here tonight is from our expert  
12 witness, Victor Saouma, who is one of the world's  
13 leading experts on ASR, and has called into question  
14 the entire legitimacy of the license amendment  
15 request. We are only seeking our chance to have our  
16 day in court. And for NRC to move to do anything --

17 MR. KLUKAN: Thank you, Mr. Nord.

18 MR. NORD: -- on license renewal before  
19 that is done is grossly unfair and undemocratic.

20 MR. KLUKAN: Thank you.

21 MR. NORD: Thank you.

22 (Applause.)

23 MR. KLUKAN: Thank you. Okay. Next we  
24 have Darrin -- and if I'm mispronouncing your name,

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1 I apologize -- Degon.

2 MR. DEGON: Degon.

3 MR. KLUKAN: Degon. Please.

4 MR. DEGON: Good evening. My name is  
5 Darrin Degon. I'm also a Navy veteran. I served as  
6 a reactor operator on submarines, and from '85 to  
7 '91. When I got out of the Navy I got to work for a  
8 company called Kent (phonetic) Nuclear, down south in  
9 South Carolina, which was a nuclear waste depository,  
10 where all the nuclear waste from the United States  
11 went to.

12 Qualified as a reactor, as radcon tech,  
13 and then a senior health physics tech while I was  
14 there. I also got the opportunity to work at many  
15 Department of Energy sites. I got to work at many  
16 superfund sites as a health physics technician,  
17 senior health physics technician.

18 I currently work right now at the  
19 Portsmouth Naval Shipyard, in the Radiological  
20 Control Division. I'm here to tell folks that I've  
21 worked from the operations side, all the way through  
22 the deposition side, decontamination, decommission.

23 Nothing in nuclear power is taken  
24 lightly. Everything is taken very, very seriously.

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1 I appreciate the Nuclear Regulatory Commission,  
2 because they keep us in check. Department of Energy  
3 keeps their people in check. There's always checks  
4 and balances. The ASR issue, nine years' worth of  
5 study, I think it's fair to say that that's a pretty  
6 good study.

7 I'm not here to go over, I originally  
8 wanted to go over the ten year energy study, and talk  
9 about renewables, and how inefficient they are at  
10 this point, compared to nuclear power, and how  
11 efficient nuclear power is. But I think that was a  
12 waste of time. It's already been talked about.  
13 We've already gone over that.

14 But just going from my experience from,  
15 like I said, operations, all the way through the  
16 deposition, nothing here is taken lightly. And I  
17 appreciate the studies that have been put forth. I  
18 am 100 percent for the license renewal for Seabrook.  
19 Thank you.

20 MR. KLUKAN: Thank you.

21 (Applause.)

22 MR. KLUKAN: All right. Just to give  
23 you a status update, I have 16 people who would still  
24 like to speak this evening. Assuming we go through

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1       them at the pace we are, there will be some time at  
2       the end.

3               So again, people who would like to say  
4       more may well have an opportunity to do so.  Again,  
5       my goal here is not to cut people off.  I want people  
6       to have an opportunity to have their say.

7               But again, I need to make sure first that  
8       everyone has, once they have an opportunity to speak,  
9       took their time out of their normal routine to come  
10      here to this meeting tonight, has an opportunity to  
11      do so.

12              So next up we have Grace Pearson.  Grace  
13      Pearson?

14              MS. PEARSON:  My name is, I have it as  
15      Gay Pearson, but Grace is my official name in New  
16      Hampshire, my legal name.  I live on farmland in  
17      Seabrook.

18              Before and when I moved the end of May  
19      2018 into just the house I was looking for, thanks to  
20      my realtors, I did not concern myself with living so  
21      close to the plant, given that my top priority was  
22      being within walking distance to water for swimming  
23      and boating.

24              But soon after I settled in, I walked to

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1 the launch at least one a day, paying attention to  
2 the plant, listening, and looking for venting,  
3 wondering what was being emitted and how often, and  
4 if there were any adverse impacts to the water at the  
5 launch area.

6 But most importantly, I am very concerned  
7 about the concrete cracking due to the ASR. And I've  
8 read enough of C-10.org's contentions to realize the  
9 need for in situ testing of concrete as being the  
10 only way to completely learn of its integrity.

11 In addition to the C-10's continuous  
12 radiation monitoring system, and because of my 12  
13 years air quality dispersion modeling experience at  
14 New Jersey Department of Environmental Protection, I  
15 am particularly interested in and concerned about the  
16 possible use of radiation models for predicting  
17 maximum ground level impacts for the beta and gamma  
18 radiation under the different atmospheric condition=s  
19 relapse rate, each of which is associated with a  
20 different plume behavior.

21 I found five of these models online, each  
22 have their own advantages and limitations. And if  
23 EPA Region I has access to any of them, I would think  
24 New Hampshire DEP should as well.

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1 I=am particularly concerned about any  
2 predicted ground level impacts during inversion  
3 conditions and calms, both of which reflect poor  
4 dispersion.

5 Also having read, on C-10.org, about fish  
6 kills from the resulting heated ocean water used to  
7 cool the reactor core, I would like to know why there  
8 is no cooling tower.

9 During my 12 years employment at New  
10 Jersey DEP in the Bureau of Air Quality Evaluation,  
11 we occasionally reviewed computer modeling results  
12 for cooling towers. The one for which I still have  
13 the impact analysis is Oyster Creek in Forked River,  
14 New Jersey, which was retired September 18th, 2018,  
15 almost ten years ahead of schedule due to New Jersey=s  
16 revised water rules that required new cooling towers  
17 at a prohibitive cost. The plant had been operating  
18 commercially since December 1st, >69.

19 The atmospheric cooling of water can be  
20 achieved either with wet or dry cooling methods, each  
21 with its pros and cons for plume visibility and ice  
22 formation from droplet deposition.

23 Plume abatement was the most effective  
24 using a hybrid, wet/dry cooling system such that when

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1 the resultant mixture left the tower, it was not  
2 saturated with water vapor as would be the case with  
3 wet cooling only.

4 Finally, permitting renewal for the  
5 Seabrook Plant, I feel, should not be considered until  
6 the full range of petrographic testing for concrete  
7 is completed. Thank you very much.

8 MR. KLUKAN: Thank you. Okay, next up  
9 we have Mr. Ron Thurlow, Ron Thurlow.

10 Could someone shut just those two door  
11 right there? We're getting a lot of noise from  
12 outside. Thank you. I apologize.

13 MR. THURLOW: Sure. Good evening, my  
14 name is Ron Thurlow, and I'm a resident of  
15 Newburyport, Massachusetts, just south of the plant.  
16 Except for a few years that I was a captain in the US  
17 Air Force, I have lived my whole life in Newburyport  
18 which included raising our children in this beautiful  
19 area.

20 I think I have a unique perspective on  
21 Seabrook Station. I have a bachelor=s degree in  
22 health physics and a master=s in radiological  
23 sciences. I became a certified health physicist back  
24 in 1992.

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1 I also worked at the Seabrook Plant for  
2 more than 30 years. I know the people there, the  
3 processes, the programs, and the culture at the  
4 station. Since last May, I have retired, and I'm no  
5 longer at the plant, no longer working for Seabrook  
6 Station.

7 I strongly believe in the value the  
8 station has for the local community, the region, and  
9 our nation. It safely produces a great benefit for  
10 all of us. I also believe in the commitment to  
11 excellence the station has and the independent and  
12 effective oversight the NRC provides for the safe use  
13 of this technology.

14 Some technical concepts of license  
15 renewal can be challenging and significant to go  
16 through. I would like to thank though for the  
17 significant time the station and the regulator have  
18 invested into the research to understand and address  
19 the issues. This effort is noteworthy and very much  
20 appreciated.

21 As a resident of Newburyport, I hope the  
22 Seabrook Station can continue to operate for many  
23 more years, and I support prompt license renewal.  
24 Thank you for the opportunity to speak tonight.

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1 MR. KLUKAN: Thank you.

2 (Applause.)

3 MR. KLUKAN: Okay, next we have Colby  
4 McNeil. Colby McNeil?

5 MR. MCNEIL: Hello. My name is Colby  
6 Kurk McNeil, and I'm speaking on behalf of the other  
7 supportive members of my community to relicense  
8 Seabrook.

9 The future of our civilization is at  
10 stake when it comes to climate change, air pollution  
11 and energy security. My field of study covers these  
12 subjects, as I model decarbonization strategies for  
13 energy grids using real world data.

14 The scientific consensus for climate  
15 change is overwhelming and so is our need to support  
16 nuclear energy. There is not a single hopeful  
17 scenario by the IPCC that does not include a major  
18 share of nuclear energy.

19 NASA published a study pleading with the  
20 public to understand this necessity stating, AWE  
21 conclude that nuclear energy needs to be retained and  
22 significantly expanded in order to avoid or minimize  
23 the devastating impacts of unabated climate change.@

24 After reviewing the data myself, and

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1 modeling dozens of grid scenarios, I can confirm these  
2 statements are accurate, especially when it comes to  
3 our local grid here in New England.

4 There is no feasible decarbonization  
5 pathway that does not include a major role for nuclear  
6 energy. The environmental and human risk of nuclear  
7 are magnitudes lower than the risks of fossil fuels  
8 that would replace Seabrook.

9 On average, Seabrook Station produces  
10 roughly ten terawatt hours of clean electricity every  
11 year which is roughly the electrical consumption of  
12 the entire state of New Hampshire. Losing Seabrook  
13 would be losing an entire states-worth of clean  
14 electricity which would worsen air pollution, climate  
15 change, and devastate local communities.

16 A study by WPI examining the closure of  
17 Maine Yankee found that 85 percent of town revenue  
18 was gone after four years. These losses hit school  
19 budgets, infrastructure, and social services with  
20 similar severity. For local residents, property  
21 values dropped while property taxes increased  
22 tenfold.

23 An article in the Boston Globe 17 years  
24 later quoted Lori Smith, the town manager, saying, AI

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1 have yet to meet anyone happy that Maine Yankee is  
2 gone.@ All these years later, we're still feeling  
3 the loss of jobs, the economic downturn, and the huge  
4 tax increases.

5 For clean air, a stable climate, and safe  
6 jobs in our community, please relicense Seabrook  
7 Station. Thank you.

8 MR. KLUKAN: Thank you very much.

9 (Applause.)

10 MR. KLUKAN: Next we have Daniel Duarte.

11 MR. DUARTE: Thank you very much. My  
12 name is Daniel Duarte. I just came over here tonight  
13 to show my concern about the power plant. My major  
14 concern is about the location. And I have a question.

15 I wanted to know if the location is in  
16 danger for a flood in the next 10, 20 years, and also  
17 if there's a flood in the location, if we have waste,  
18 nuclear waste storage, and if it will be a problem  
19 for the environment.

20 And my other concern is if there's and  
21 EMP  
22 attack or a power grid loss, if the nuclear reactor  
23 will be in danger.

24 I have a few questions, yes or no. I'd

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1 like to give one of you each. If you possible can  
2 answer and give it back to me, I appreciate it.

3 MR. DONOGHUE: Okay, sir. I think we have  
4 time for a few more questions. Let me try to answer  
5 the first couple of questions I heard.

6 MR. DUARTE: Thank you very much.

7 MR. DONOGHUE: We didn=t bring the  
8 experts here related to flooding hazards or EMP, but  
9 I do know that that=s considered as part of the review  
10 of the safe operation of the plant. And this had to  
11 be evaluated and is part of the license now.

12 So I=m not sure if we have anybody in the  
13 audience that could talk, you know, in any detail about  
14 those issues. But flooding hazards are evaluated for  
15 plants.

16 What were your other yes or no questions?

17 MR. DUARTE: I have just a few questions,  
18 just concerns about is it true that the nuclear  
19 reactor will likely to melt down without electricity  
20 to cool them? Yes, or no, sir, please.

21 MR. DONOGHUE: The plants are designed  
22 with safety systems to address a loss of electricity  
23 to cool them down.

24 MR. DUARTE: Thank you. If we have a EMP

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1 attack, how long can we cool down the facility?

2 MR. DONOGHUE: I don=t think we -- I  
3 don=t have expertise in there. I don=t have an expert  
4 here on that. But I think that anything that causes  
5 a loss of electrical supply to the plant has systems  
6 to provide electricity to replace any lost sources  
7 that allow cool down.

8 MR. DUARTE: Do you know for how long?

9 MR. DONOGHUE: Off hand, I don=t know.

10 MR. DUARTE: Thank you. Have the nuclear  
11 power plants been working together with the people to  
12 inform the danger and to support the community about  
13 the flood and about EMP attack?

14 MR. DONOGHUE: I don=t know if this has  
15 come up in other meetings that I haven=t been a party  
16 to. So I, myself, can=t answer that question. I  
17 wonder if this came up in any of the annual assessment  
18 meetings maybe. No.

19 MR. DUARTE: Thank you.

20 MR. DONOGHUE: I don=t think so.

21 MR. DUARTE: Has anybody provided a  
22 readiness and awareness plan to the seacoasts that  
23 surround the community for a nuclear disaster?

24 MR. DONOGHUE: I believe the evacuation

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1 plan is provided. But --

2 MR. DUARTE: Thank you, sir.

3 MR. DONOGHUE: -- I'm not sure of  
4 anything more than that.

5 MR. DUARTE: I appreciate it. Is the  
6 facility responsible to support the affected area  
7 zone by having ready food, water, transportation, and  
8 shelter in place for everyone that might be or will  
9 be affected if anything happened?

10 MR. DONOGHUE: Again, this is part of the  
11 emergency plan. I don't know the details of that  
12 myself. And that subject is, **you know**, outside the  
13 scope of what we want to talk about tonight.

14 MR. DUARTE: Thank you. And I'm just  
15 going to ask again, one more time, if the facilities  
16 are located in a high risk of flood, yes or no?

17 MR. DONOGHUE: I don't know the risk  
18 level, but all plants are evaluated for flood hazards  
19 wherever they happen to be located.

20 MR. DUARTE: Thank you, sir, very much.  
21 I appreciate your time.

22 MR. DONOGHUE: Thank you.

23 MR. KLUKAN: So just to clarify, you  
24 heard Joe talk about this. I'll echo Joe. The

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1 purpose of the meeting tonight is to discuss  
2 specifically ASR in the license amendment process.

3 So the experts we have here, particularly  
4 Angie, not that I'm discounting anyone else in the  
5 room, is to discuss ASR, okay. Because that=s what  
6 we thought the bulk of our questions would be on.

7 We are having a meeting in April, our  
8 Annual Assessment Meeting. What we=ll do is take  
9 this back to the region, the preparers. We do want  
10 the preparers for those annual assessment meetings to  
11 make sure that we address these issues that you just  
12 raised at that meeting which is generally the more  
13 broad, overall plant performance for the year.

14 Again, the purpose of the meeting  
15 tonight, and I bring that up just because it=s who we  
16 have in the room with us, we thought the questions  
17 would be primarily focused on the licensing process  
18 and questions specifically on ASR. So that=s who we  
19 have experts on in the room, so hence, our answers to  
20 those questions.

21 So again, we will write those down,  
22 Justin is writing those down right now. We=re going  
23 to take those back, give those to the region, and  
24 we=ll make sure that they=re addressed preemptively,

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1 if you will, at the annual Assessment Meeting which  
2 will be scheduled late in April.

3 Okay, next. We have Doug Bogen. Doug  
4 Bogen or Bogen? I apologize again for name  
5 pronunciation.

6 MR. BOGEN: Good evening. My name is  
7 Doug Bogen. I'm the executive director of the  
8 Seacoast Anti-pollution League based in Exeter. I  
9 have attended many of these meetings. We've heard  
10 all about how many public meetings we've had, a dozen  
11 or more. I think one count it was 23 of them. I've  
12 attended a lot of them, not all.

13 But I would submit that, while we've had  
14 many public meetings, we have had zero formal public  
15 hearings. And I say this as one of the former  
16 interveners. To this time, in over the last eight,  
17 nine years, there have been three different  
18 petitions, five different organizations that have  
19 attempted to intervene.

20 We were originally given approval,  
21 standing by the ASLB. But the Nuclear Regulatory  
22 Commission overruled that and denied us a hearing.  
23 And so you can imagine we're dismayed to hear that  
24 now you want to issue the new license before we have

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1 a hearing with the remaining intervenors that are  
2 still looking to represent the public interest in a  
3 formal hearing.

4 So I submit that that doesn't make sense.  
5 I understand you can do that under your rules. But  
6 it just doesn't make sense, it doesn't pass the smell  
7 test from a public interest point of view, from common  
8 sense.

9 And it's not surprising that our  
10 Congressional delegation would intervene in this  
11 process to say the public deserves more input. But  
12 I would also submit that this meeting here tonight  
13 does not represent, does not take the place of a  
14 formal public hearing.

15 And so I would think that we should listen  
16 to what all they are saying and move forward with a  
17 formal hearing before you issue the license.

18 Now, there's been a lot of talk about  
19 nuclear being carbon-free, a lot about climate  
20 action, it's great to hear there are so many climate  
21 activists in this group. I would hope we could make  
22 much better progress on climate with so much interest.

23 But I would mention that nuclear is not  
24 carbon-free. There have been studies shown, when you

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1 look at the total life cycle of nuclear, particularly  
2 the fuel fabrication, the fuel production, it does  
3 require a lot of energy to produce that. And most  
4 of that comes from fossil fuels.

5 There's one study, a study of studies,  
6 found that renewable energy, wind and solar, is many  
7 times less carbon-intensive than nuclear, five to  
8 seven times less in the case of wind power.

9 And we intervened on this issue of  
10 whether we could replace nuclear with wind. And sure  
11 enough, we are finding that is the case. There are  
12 thousands of megawatts of offshore wind power being  
13 contracted for south of the cape right now, in the  
14 next few months, the next few years. And we should  
15 be looking at that rather than debating about other  
16 issues that aren't relevant.

17 I just want to ask what is the hurry, why  
18 does this B- what makes a difference whether this is  
19 issued next week versus nine months from now? Why  
20 can't you wait until the hearing? And I'm not just  
21 saying that rhetorically. I would like an answer on  
22 that. Because we've gotten very precious few answers  
23 from this body here. Thank you.

24 (Applause.)

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1 MR. DONOGHUE: Doug, right?

2 MR. BOGEN: Yeah.

3 MR. DONOGHUE: So it=s a good question.  
4 Because, as I said in my opening remarks, originally  
5 we planned to issue it after the hearing. Besides,  
6 you know the regulations allow it.

7 The staff=s work=s done in the safety  
8 review. So we have letters from the ACRS that  
9 independently reviewed the safety evaluations and  
10 agreed with the conclusions. They didn=t have any  
11 other additional technical questions for us to  
12 pursue.

13 By issuing the amendment in the renewal,  
14 we are able to put any of the requirements related to  
15 the ASR Monitoring and Management Program into the  
16 license. So that makes it solid in their license  
17 now. And it does not undermine the hearing.

18 The hearing will B- that process is  
19 independent of our work. The Board has documents to  
20 review. They=ll get more information from the  
21 hearing process that they evaluate.

22 As I said earlier, the outcome of the  
23 hearing could result in the staff having to go back  
24 and take action to change the license further. If

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1 there=s information that=s presented to the Board,  
2 and the Board makes a finding, and we have to  
3 implement something, we=ll do that. We can go as far  
4 as issuing an order to the plant to do that.

5 So back to, you know, back to it being a  
6 rush, our perspective is that it=s not been a rush to  
7 review. It=s been many years since the staff had an  
8 initial draft safety evaluation, a license renewal.

9 And one of the open items, the major open  
10 items, we related to ASR. And our position was that  
11 we were not going to renew the license until we got  
12 satisfactory answers to questions that are now  
13 answered by the license amendment and our review of  
14 that.

15 So we don=t feel like we=ve rushed that.  
16 The amendment review took more than two years. And  
17 we think with our work done we can promptly issue the  
18 license, we=re not undermining the hearing, and by  
19 issuing these actions, we get those requirements into  
20 the license.

21 MR. BOGEN: It still doesn=t answer my  
22 question of what difference it would make whether you  
23 waited six months. After nine years, you=d think you  
24 could wait another six months.

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1           Again, it=s 11 years before the license  
2           renewal runs out, the existing license runs out. We  
3           are not going to freeze in the dark, the lights aren=t  
4           going to go out, you aren=t going to lose your jobs  
5           any time soon. We have another decade of plant  
6           operations.

7           I understand you want to get it done ahead  
8           of time, and you evidently have nothing better to do  
9           than issue the license. But we demand a better say  
10          in what is going into that license renewal. Thank  
11          you.

12          MR. KLUKAN: Thank you.

13          MR. DONOGHUE: I=m going to respond to  
14          you then. Because I think that, again, we=re not  
15          rushing to judgement at all. I want to tell you that  
16          we have other work for our staff to do. We have to  
17          -B one of our key principles is to be as efficient as  
18          we can. So we have people who worked on this. And  
19          we continue to track and report on it. And so by  
20          issuing it, we can complete that work, move on to  
21          other work.

22          If required, you know, as an outcome of  
23          this hearing, if need be, we have to assign people  
24          back to redo the safety evaluation and put other

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1 requirements into place, we'll do that. But we're  
2 trying to be as efficient as we can.

3 I'm not going to stand here and tell you  
4 that there's an urgency to it. No, we don't have an  
5 urgency except to be as efficient as we can. And if  
6 it appears urgent, I just point to the perspective  
7 that we have of doing a long and complex review on  
8 the renewal itself and on this amendment.

9 MR. BOGEN: Well, again, it wouldn't have  
10 -- it would have been done already if you B-

11 MR. KLUKAN: There will be B- I  
12 appreciate you have ongoing questions and comments  
13 you'd like to raise. But out of fairness to everyone  
14 else in the room who would like to speak, there will  
15 probably be an opportunity for you to speak later on.

16 MR. BOGEN: Okay. Thank you.

17 MR. KLUKAN: Thank you. All right, next  
18 up we have John Nyhan. John Nyhan?

19 MR. NYHAN: Good evening, John Nyhan, and  
20 I'm president of the Hampton Area Chamber of Commerce.  
21 And just for the record, the Hampton Area Chamber of  
22 Commerce includes the communities of Seabrook,  
23 Hampton Falls, Hampton, Northampton, and Rye.

24 I speak here tonight representing the

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1 Chamber in support of the renewal of the license. My  
2 experience with Seabrook Station, believe it or not,  
3 goes back over 35 years. I was actually the  
4 employment manager from 1982 to 1988. So I saw it  
5 through construction into the operations of the  
6 plant.

7 I also served in one of the first  
8 evacuation plans that the old plant back in the >80s.  
9 So I'm somewhat aware of not only the power plant  
10 itself but the many, many hard and dedicated workers,  
11 and talented workers, at the power plant.

12 Seabrook Station belongs to the Chamber.  
13 We have over 450 members of our Chamber of Commerce.  
14 Seabrook Station represents one of our largest  
15 members. And therefore, it represents over 500 of  
16 their employees that we consider members of our  
17 Chamber of Commerce.

18 I think one of the two things that I'd  
19 like to speak on very quickly, first is economic  
20 development. One of the commitments that the Chamber  
21 has here in the seacoast area is to continue economic  
22 development, to grow businesses.

23 It would be very difficult for us to lose  
24 Seabrook Station and continue to convince businesses

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1 and companies all around the country why it would be  
2 a good reason to move to the seacoast. So we need  
3 not only Seabrook Station, but we need electricity  
4 behind Seabrook Station.

5 The other thing that I think is critical,  
6 and I've been working at both the federal, state, and  
7 local level, is workforce development. When we talk  
8 about a possibility of employment going into 2050, we  
9 are now, in fact, looking at our young children who  
10 will be looking for positions in the trades, the  
11 mechanical engineering, electrical engineering, et  
12 cetera.

13 I think this is a critical, critical  
14 turning point of having our employees of the future  
15 be considered as possible candidates for employment  
16 at the power plant.

17 So I'm not an engineer, I can't speak to  
18 the technical part of this hearing, but I can tell  
19 you that the power plant has been a very effective  
20 member of our community and one that we're proud of.  
21 Thank you.

22 MR. KLUKAN: Thank you.

23 (Applause.)

24 MR. KLUKAN: Next we have Patricia

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1       Torkildson. Torkildson. Sorry, again I apologize.

2                   MS.       TORKILDSON:           I=m       Patricia  
3       Torkildson, and I=m a resident of Newburyport.  
4       NextEra=s nuclear power plant in Seabrook is an  
5       important source of energy for our area, and I  
6       appreciate that it=s a cleaner source of energy than  
7       coal. But the plant also needs to be a source of  
8       energy that is safe for the surrounding communities.

9                   I came here tonight not to oppose the  
10       license extension for Seabrook but to ask that the  
11       license extension not be granted at this time.

12                   Wait until after the issues with the  
13       concrete are fully vetted with the public. Hold the  
14       public hearing with the Atomic Safety and Licensing  
15       Board that was promised for this coming summer.  
16       Allow the issue of the degraded concrete to be fully  
17       discussed with the public at that meeting and allow  
18       time for the public to digest and respond to what we  
19       learn.

20                   When it comes to nuclear power, safety  
21       needs to be a major concern for the government. When  
22       a nuclear power plant is deteriorating due to ASR,  
23       the government=s concern should be even greater.  
24       This concern is not shown when the government appears

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1 to be rushing to extend the license of a plant that  
2 is already degraded. With 11 years left on the  
3 license, on the plant=s license, what=s the rush?

4 I know that some scientists agree with  
5 the company that the degrading concrete is being  
6 properly monitored and controlled, but others have  
7 raised concerns that will be brought forth at the  
8 summer hearing. Let them be heard before a license  
9 extension is granted.

10 It is important for the residents of this  
11 area that we feel our safety is a primary concern  
12 that has been fully addressed. Remember, Seabrook  
13 is not just a nuclear power plant. It=s a nuclear  
14 power plant with ASR.

15 MR. KLUKAN: Thank you.

16 (Applause.)

17 MR. KLUKAN: Next we have Kinsey Boehl.  
18 Kinsey Boehl?

19 MR. BOEHL: Good evening, and thank you  
20 for the opportunity to speak tonight. Nuclear power  
21 is an important part of environment, excuse me,  
22 environmental stewardship in the nation. Carbon  
23 emissions are a global problem. Seabrook Station  
24 powers more than 1.4 million homes and businesses and

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1 reduces carbon emissions by four million tons a year.

2 Seabrook also provides a large economic  
3 incentive to the region. It provides good jobs and  
4 highly trained and well educated employees that live  
5 in and around the seacoast.

6 All the employees at Seabrook Station  
7 have a responsibility to our communities and provide  
8 safe, carbon-free electricity. Our livelihood and  
9 the safety of our families and communities relies on  
10 it. Safety is Seabrook=s highest priority.

11 Seabrook Station has a long history of  
12 safe operations. Since the Alkali-Silica Reaction  
13 affecting the concrete at Seabrook was discovered,  
14 Seabrook has answered regulatory concerns with robust  
15 analytical methods, testing, and monitoring programs  
16 to ensure that safety related equipment remains  
17 protected and we continue to operate it safely.

18 For these reasons, I recommend that the  
19 Commission approve Seabrook Station, Unit 1 operating  
20 license renewal and amendment.

21 Again, Kinsey Boehl, and I live in  
22 Amesbury, Massachusetts. Thank you.

23 MR. KLUKAN: Thank you very much.

24 (Applause.)

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1 MR. KLUKAN: Next we have Herb Moyer.  
2 Herb Moyer, M-O-Y-E-R. That=s you? Okay. Do you  
3 need someone to operate your camera for you? Okay.

4 MR. DONOGHUE: While Mr. Moyer comes up,  
5 I=ll just let you know there=s seats opening up within  
6 the audience here for any of those people standing in  
7 the back. I=m sure you=re legs are getting tired.

8 MR. MOYER: My name is Herb Moyer. I=m  
9 a 47-year resident of Exeter, New Hampshire. I  
10 taught at Winnacunnet High School, biology, ecology,  
11 and botany, from 1969 to 1990, worked for IBM for  
12 four years, et cetera. So I=ve been around.

13 And I=ve been involved in the Seabrook  
14 nuclear plant issues since 1972. I=m the president  
15 of the Seacoast Anti-Pollution League, one of two  
16 citizen organizations that have been following this  
17 issue since the very beginning.

18 Not only does the Seabrook nuclear plant  
19 have concrete credibility, the NRC has lack of  
20 credibility on its own merits, because they have taken  
21 positions that are anathema to safety of the public.  
22 I cite an Atomic Safety and Licensing Board, Helen  
23 Hoyt comment in response to the failure of the then  
24 utility to implement a security measure, a safety

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1 measure on backup security systems.

2 Her comment was, "The utility's  
3 commitment to comply is evidence of compliance." And  
4 I don't know if you view that as a legitimate  
5 scientific statement, but it's certainly bogus. A  
6 commitment to comply to something does not prove that  
7 you've done the compliance. And that's the way this  
8 issue has been slanted by the NRC against public  
9 safety and public interest.

10 Long history. I had probably 15 or 20  
11 students of mine who worked at the plant, came back  
12 to me, teaching at Winnacunnet, telling me stories.  
13 Now, these are anecdotal, but these are students who  
14 worked at the plant, took their time to come back to  
15 me, because they knew I was working with the Seacoast  
16 Anti-Pollution League back in the '70s, '80s.

17 And they indicated that there are people  
18 that are throwing beer bottles and pouring baby lotion  
19 into the concrete pores. So there are voids in the  
20 concrete. And I know that from the veracity of the  
21 students who told me these things.

22 If you will check the Hampton Falls  
23 Police Records, you will find some 300 DWI arrests  
24 for plant workers going to the plant and coming from

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1 the plant. So there was a lot of drinking onsite at  
2 the plant. That's a matter of public record.

3 So, you know, those of you have a role in  
4 nuclear power today, I'm not casting aspersions on  
5 you, but there are clearly some issues that haven't  
6 been addressed.

7 So we have fought long and hard. I'll  
8 bet SAPL, over the years, has spent nearly a million  
9 dollars in legal fees to oppose the licensing. And  
10 it's terrible that the NRC, who studied the Fukushima  
11 accidents, listed a whole bunch of quick fixes, none  
12 of which, virtually none of which they've implemented  
13 in anything but a voluntary way through plants  
14 throughout the US.

15 MR. KLUKAN: Thank you very much.

16 MR. MOYER: Thank you.

17 (Applause.)

18 MR. KLUKAN: Next we have Cathryn Capra.  
19 Cathryn Capra?

20 MS. CAPRA: Hi, I'm Cathryn Capra. I'm  
21 from Georgetown, Massachusetts. And I'm very  
22 concerned about the safety of the plant. I heard  
23 many words that were alarming to me and saw some on  
24 the slide and from the engineer, progressive, it's

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1 causing cracking, it cannot be reversed, causing  
2 degradation.

3 And then I read that it can be managed or  
4 corrected. And I don=t know how you can do that with  
5 something that is irreversible and progressive, what  
6 you mean by that and what you would do.

7 MR. DONOGHUE: So I=ll take that as a  
8 question.

9 MS. CAPRA: Yeah.

10 MR. DONOGHUE: Okay. So I=m not the  
11 expert on the concrete, so I=m going to ask Angie to  
12 be ready here in a second. But the ASR degradation  
13 is slow. So it=s possible to monitor it and see how  
14 far it does progress. It is progressive, so you can  
15 see how far it progresses in other places in the plant  
16 where it may present itself, right.

17 I know that the plant has conducted some  
18 repairs where necessary on structures that are  
19 affected by ASR. So there=s a monitoring program,  
20 and there=s the ability to make repairs as needed to  
21 maintain the structural capability of the safety  
22 related structures.

23 Correcting or reversing is not B- it=s  
24 the kind of phenomena you can=t do that. So this

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1 monitoring has to stay in place. And as I said  
2 earlier, that=s why this monitoring program is so  
3 important and why it should be part -- and we think  
4 it will be put into the license, okay.

5 Is there anything you can add to that,  
6 Angie?

7 MS. BUFORD: Sorry, I haven=t talked in  
8 a while, so my throat=s hoarse again. But I just  
9 wanted to say that ASR is indeed a degradation  
10 mechanism. It=s an aging effect along with concrete.

11 I would say there are a multitude of aging  
12 effects that affect concrete that are factored into  
13 the concrete design codes when concrete=s designed.  
14 The American Concrete Institute applied for safety  
15 factors that account for all types of degradation.  
16 Cracking occurs in all concrete over time as it ages.

17 ASR, the whole reason that the plant  
18 pursued a license amendment was to look at the effect  
19 of ASR as another aging effect and to incorporate it  
20 into structural analyses that can show that, even  
21 with ASR, that the structures are able to perform  
22 their function, their structural functions, and that  
23 there is enough margin in those calculations so that  
24 ASR can be considered under the licensing basis for

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1 the plant.

2 MS. CAPRA: I'm sorry. I have limited  
3 time, right. I wanted to --

4 MR. KLUKAN: I stopped the clock.  
5 Normally I --

6 MS. CAPRA: Oh, okay.

7 MR. KLUKAN: -- don't do this, but --

8 MS. CAPRA: Okay.

9 MR. KLUKAN: Your question, I thought,  
10 was likely one other people -- anyway, go on. Go,  
11 go.

12 MS. CAPRA: Okay, thank you. Did you  
13 have something else to --

14 MS. BUFORD: No. I just wanted to say  
15 that that=s the whole basis of the license amendment,  
16 was to incorporate the effects of ASR into the  
17 structural calculations that already exist for the  
18 plant.

19 MS. CAPRA: Okay. So if it were to  
20 progress to the point where it affected the  
21 functioning of the structures, what would you do?

22 MS. BUFORD: So part of our safety  
23 evaluation in the license amendment request was to  
24 look at their monitoring program to determine, for

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1 each structure, what are they monitoring, and what  
2 are the acceptance criteria, and how did they come to  
3 those?

4 So their monitor B-

5 MS. CAPRA: I'm sorry, could you stop the  
6 clock while she's answering?

7 MR. KLUKAN: Sure.

8 MS. CAPRA: Thank you.

9 MS. BUFORD: So they did an analysis for  
10 every structure and determined, by mathematical  
11 analysis, how much ASR. And they measure, microcrack  
12 measurements and actual physical measurements are  
13 taken at the plant.

14 And each structure, each area has what  
15 they call a threshold for ASR expansion. And this  
16 license amendment puts in a requirement that ASR  
17 cannot progress past the established acceptance  
18 limit.

19 So as the staff, we looked at those limits  
20 specifically, and also cross-referenced that with  
21 calculations to determine whether we felt that they  
22 could safely get to those limits.

23 If they got to those limits, they would  
24 need to, just like any other issue that would come

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1 up, they would need to assess the issue and determine  
2 -B and the NRC would concurrently, through our  
3 oversight process, determine whether they could  
4 continue to be safely operated.

5 So we would, you know, if they got to those  
6 limits, then they would need to do further  
7 assessments. And the NRC would intervene under our  
8 oversight.

9 MS. CAPRA: So would they take it offline  
10 if they found it reached the threshold, like, to do  
11 the assessments? You know, I'm concerned that they  
12 would continue to operate when it might be B-

13 MS. BUFORD: The NRC has the authority  
14 to do that if necessary.

15 MS. CAPRA: Okay, because I'm concerned  
16 about that. And then somebody already addressed  
17 about the license, why you're wanting to extend the  
18 license before the current one expires. And I'm  
19 really -B you've already answered this, but I just  
20 have to say I'm really anxious about that. I wish  
21 that, you know, it could just -B that could be delayed  
22 so that more monitoring could be done.

23 And also, was the testing that was done,  
24 was it done on actual pieces of concrete from the

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1 plant when it was evaluated for ASR?

2 MS. BUFORD: In the testing program, the  
3 specimens that were used were constructed from  
4 different constituents that were similar and  
5 representative of the concrete at the plant,  
6 including aggregate partially taken from a quarry  
7 here in New England. Some of the constituents were  
8 a little bit different, because they needed to  
9 accelerate ASR.

10 ASR at Seabrook is a very slow  
11 progressing B-

12 MS. CAPRA: Right, right.

13 MS. BUFORD: -- reaction. It=s come to  
14 this point over, you know, 40 years or however long  
15 the concrete=s been in place. So the testing program  
16 needed to come to accelerated levels of ASR  
17 degradation in a short time.

18 So the only real differences between that  
19 concrete was really the constituents that were used  
20 to accelerate the ASR so that you could test to limits  
21 that would bound the plant.

22 MS. CAPRA: Okay, thank you.

23 So basically, the bottom line though is  
24 it was not actual concrete taken from the actual

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1 plant. It used accelerants, and it was from a similar  
2 area. Is that correct?

3 MS. BUFORD: That=s correct.

4 MS. CAPRA: Okay, thank you so much.

5 MR. KLUKAN: Thank you.

6 Okay, next up we have Meo Young. Meo  
7 Young?

8 MS. YOUNG: Hi, I=m Meo Young. I=m from  
9 Newburyport, Mass. I=m a concerned citizen. I=m  
10 very concerned about the safety of the plant. I=m  
11 also concerned about the public input tonight. And  
12 I just came here to hear everything you have to say.

13 But I=m afraid that it might be skewed by  
14 either NextEra or the Seabrook town coordinating  
15 plant speak, you know, people that are in favor of  
16 the plant speaking here. And many of them don=t even  
17 live in the area. But that was a trigger for me when  
18 I heard people from way outside the area here  
19 speaking.

20 I have several questions. One is are you  
21 saying that NextEra will be monitoring the ASR itself?  
22 If so, this is of great concern. I think there should  
23 be independent monitoring of the ASR. It=s kind of  
24 like the fox guarding the hen house.

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1           It also sounds like you've already made  
2 a decision, so I'm wondering whether our input tonight  
3 will have any effect on the licensing. And can you  
4 better explain who actually makes the final decision  
5 on the license? Is it the results of the hearing,  
6 or your conclusion. I was a little confused about  
7 that tonight.

8           And then why does the license extension  
9 have to be so long for an old plant? So many things  
10 can change in 20 years. It seems that the management  
11 can become lax over such a long period. The fear of  
12 renewal would keep the plants on their toes.

13           And I'm also concerned about what the  
14 gentleman raised earlier, flooding, and global  
15 warming, and the plan for that, and how that would  
16 impact the plant over a 20-year period. Those are  
17 my questions.

18           MR. KLUKAN: Thank you.

19           MR. DONOGHUE: All right, thanks. I'll  
20 try to get to all of them. The program in place,  
21 that's already in place to monitor ASR is inspected  
22 by the NRC. So we're watching, we have been, and we  
23 continue to do inspections. We have residents on  
24 site who watch and inspect all of the activities of

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1 the plant. And this will be another inspection  
2 activity that will be included.

3 MS. YOUNG: And they=ll be there going  
4 forward as well?

5 MR. DONOGHUE: Yes, yes. So, you know,  
6 I=m trying to alleviate your concern there, is that  
7 it=s not NextEra on their own. It=s NextEra, like  
8 anything else, all their other programs are inspected  
9 by the NRC. And they have to do, especially once  
10 it=s in their license, but even now they=re putting  
11 programs in place, and we=re inspecting them, okay.

12 I think the final decision, the  
13 Commission delegated the license renewal to the  
14 Office of Nuclear Reactor Regulation, so it=s  
15 management at the office level, not the Commission  
16 itself.

17 Now, we inform the Commission of our  
18 intent to issue the license and, in this case, also  
19 there=ll be notification of the license amendment.  
20 Because it=s subject to a hearing. But the decision  
21 to do those things is at the office level.

22 MS. YOUNG: Well, that=s meaning you guys  
23 or somebody else?

24 MR. DONOGHUE: Actually, my boss. But -

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1 B

2 MS. YOUNG: Your boss?

3 MR. DONOGHUE: Yeah, yeah.

4 MS. YOUNG: And is that part of the  
5 hearing? Is the hearing totally separate then?

6 MR. DONOGHUE: Right, right, right. The  
7 hearing, yeah, the hearing process is separate from  
8 the licensing process. And as I said before, there  
9 could be an outcome from the hearing that requires us  
10 to go back into licensing to do something. But those  
11 are intentionally kept separate, okay.

12 Input tonight, so I think Brett said  
13 there=s a transcript being kept. There=s material  
14 that=s been handed to us so there=ll be a meeting  
15 summary that will include reference to the  
16 transcript. It will include all the information  
17 that=s been submitted to us tonight. We=re going to  
18 review that and see if there=s anything new that would  
19 affect our decision.

20 Link to the B- of the extension. So in  
21 the regulations, the NRC regulations for renewed  
22 licenses were put in place. And there=s a lot of  
23 background to those where the Commission considered  
24 what made sense. And what made sense was an extension

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1 no longer than 20 years. That seemed reasonable.

2 I think it touches on the things you  
3 talked about. Things could change over some time.  
4 So some practical things, without getting into a lot  
5 of technical detail are that, you know, the original  
6 license made some assumptions that went out to 40  
7 years.

8 To go beyond those 40 years, there=s new  
9 information that=s needed. There=s aging mechanisms,  
10 besides concrete, that affect other things besides  
11 concrete that have to be accounted for. And the  
12 plant has to demonstrate that they can put programs  
13 in place to support that 20-year interval. And we  
14 won=t re-license beyond that interval.

15 So, you know, and there are some plants  
16 now that are coming in for a subsequent license  
17 renewal. But we won=t go, you know, that 20 years is  
18 the most we=ll extend at any one time, all right.

19 So all those things that a plant has to  
20 do to be able to B- besides concrete, there=s other  
21 things that a plant has to do to be able to prove to  
22 us that they can operate safely when they get their  
23 license extension.

24 Those are all subject to inspection,

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1 they=re all part of their license. If they don=t do  
2 them, Angie already said, for concrete or other  
3 things, we could issue orders. Those orders could be  
4 to the extent of shutting down until they can correct  
5 the problem, okay.

6 Did I touch on B- I think -- I tried to  
7 keep notes on what you=re asking. I think I got them  
8 all.

9 MS. YOUNG: You got everything, yes.

10 MR. DONOGHUE: Okay.

11 MR. KLUKAN: Thank you very much.

12 Okay, next we have Linda Cooper. Linda  
13 Cooper?

14 MS. COOPER: My name=s Linda Cooper. I  
15 live in Newburyport. I=m an engineer. Now, you  
16 mentioned earlier in the meeting that the ASR only  
17 occurs in certain types of concrete. So how can you  
18 guarantee that the concrete used in testing in Texas  
19 is the same as what was used to build Seabrook, thus  
20 coming to the conclusion that it=s safe?

21 And secondly, is there a chance of the  
22 rebar breaking down because of the ASR, and is that  
23 part of the monitoring?

24 MR. DONOGHUE: Okay, so thanks for your

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1 questions. Just to make sure I got them, the  
2 similarity of the test specimens that are concrete,  
3 I think Angie addressed that, but she can give you a  
4 little bit more detail. But the other new question,  
5 I think, for tonight --

6 MS. COOPER: The rebar?

7 MR. DONOGHUE: -- yeah, yeah. There=s  
8 ASR --

9 MS. COOPER: Yeah B-

10 MR. DONOGHUE: Does ASR affect the  
11 rebar?

12 MS. COOPER: It=s going to affect the  
13 rebar. And is that part of the monitoring?

14 MR. DONOGHUE: Right. And I don=t know  
15 the answer to that. And I=m wondering if Angie can  
16 shed light on it.

17 MS. BUFORD: Okay, so I wanted to speak  
18 high level to the representativeness that the staff  
19 found between the test specimens and Seabrook.  
20 Because that=s a key component of the hearing that=s  
21 going to be taking place. And so what we can say is,  
22 it really needs to be limited to what=s available in  
23 the safety evaluation.

24 But I will just say that the staff found

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1 that the concrete was built to the same specs as  
2 Seabrook in terms of reinforcement and size. And it  
3 was tested to loadings that are part of the Seabrook  
4 design.

5 You know, we independently audited, and  
6 inspected, and determined that the testing was  
7 consistent with testing that was used to develop ACI  
8 318 code. So it was in line with sound engineering  
9 science. And we determined that the testing was  
10 applicable to be used as a basis for the Seabrook  
11 monitoring.

12 And that=s actually really well detailed  
13 in the safety evaluation for the license amendment  
14 request if you=re interested in getting more detail.

15 (Off-microphone comments.)

16 MS. BUFORD: Yeah, actually it=s in  
17 Section 3.2.1 of the license amendment, safety  
18 evaluation. And the link to that is in the slides.

19 The second question about rebar breaking  
20 down, so there=s two issues. And I=ll be brief. But  
21 the one issue could, you know, would be the concern  
22 maybe that there would be corrosion of rebar.

23 There were multiple cores taken at  
24 Seabrook that showed that there was no corrosion issue

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1 for rebar in multiple cores, on the order of dozens,  
2 on different areas of the site. And that makes sense,  
3 because of the alkaline nature of the reaction would  
4 actually cause it to be a higher pH area which would  
5 be less likely to have corrosion.

6 MS. COOPER: But that=s right now though.  
7 What about in the future?

8 MS. BUFORD: So in the future, if there  
9 was ever to be rebar corrosion because of water  
10 infiltration caused by any aging effect, that would  
11 come to the surface of the concrete. And the  
12 concrete=s inspected, like I think I mentioned, every  
13 six months to three years, depending on the area.  
14 And so that would be identified and addressed prior  
15 to any sort of structural issue.

16 And as far as ASR breaking down rebar,  
17 that=s not known to occur.

18 MS. COOPER: But how would you address if  
19 something did happen to rebar?

20 MS. BUFORD: So if something -B I=m  
21 trying to think of what something might happen with  
22 rebar. So what I can say is that what -- part of the  
23 testing was to look at was rebar anchorage to make  
24 sure that the specimens in the testing program were

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1 able to maintain the reinforcement length between the  
2 rebar. And so when they tested the  
3 specimens, they found that the rebar didn't, so to  
4 speak, break apart which is something that you would  
5 look at in the testing.

6 So when they tested the rebar to the  
7 tested limits, which were beyond what the design basis  
8 for Seabrook were, the reinforcing bars for all of  
9 the specimens held intact with the required anchorage  
10 length. So they found that there wasn't a rebar  
11 slippage issue. That is not projected to occur.

12 MS. COOPER: But that testing was only  
13 done on, like, a certain amount of time. We don't  
14 know what 20 years from now would be.

15 MS. BUFORD: The testing, well, the  
16 testing was to limits of ASR expansion that are well  
17 beyond anticipated at the site. And so those limits  
18 were are used. Then those feed into the monitoring  
19 with a large cushion of margin that the site monitors  
20 to. So actually, those levels of ASR were well beyond  
21 what is expected through the life of the plant, even  
22 the expended life.

23 MS. COOPER: Okay. All right, thank you  
24 very much.

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1 MR. KLUKAN: Thank you.

2 Next up we have Jay Gustaferro,  
3 Gustaferro, from the Massachusetts Lobstermen=  
4 Association.

5 MR. GUSTAFERRO: Thanks, Jay Gustaferro.  
6 I want to use this moment here, I=m going to beg your  
7 forgiveness to move off from ASR for a quick moment  
8 and make this kind of a teaching moment from my  
9 friends and neighbors in the seacoast here.

10 And have you all asked yourself, those of  
11 you who=ve been lobbied to come down here and speak,  
12 you know, in favor of relicensing this thing, why  
13 they=re in such a rush to do it? Why is that?

14 Because, you know, there=s not going to be  
15 a problem getting it through the NRC. They=re not  
16 really a nuclear regulatory agency, they=re more of  
17 a lobbying agency.

18 So why has, you know, the industry put out  
19 so much pressure to bring so many of us down here to  
20 speak in favor of this thing with ten years out before  
21 it=s even up.

22 It=s so that they can borrow more money  
23 on that decrepit electric tea kettle out here. They  
24 want to borrow as much money as they can as quickly

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1 as they can, because they know, the people with the  
2 money, what a piece of crap it is. And I'm sure that  
3 all the regulators know that also. But that=s for  
4 another thing.

5 So I just wanted to, you know, those of  
6 you who live in this community, don=t be too quick to  
7 be supporting this industry and these guys. And ask  
8 yourself why, why has there been such a push to  
9 support it? What=s the rush? That=s the rush, so  
10 they can get as much out of that thing as they can,  
11 and then get the hell out of Dodge with their money.

12 So the ASR question. You know, I think  
13 Mark Twain may have said it best, that there=s three  
14 kinds of lies. There=s lies, there=s damn lies, and  
15 then there=s where you=re all at, which is statics.  
16 It=s turned into sand, guys, yo, sand. It=s breaking  
17 down. It should have never been licensed to begin  
18 with.

19 And maybe just a little plea of humanity  
20 for you guys, since I=ve spent the last two minutes  
21 yelling at you or around you, there was a gentleman  
22 from my community. I think his name was McLinnan  
23 (phonetic), he was the only NRC commissioner up to  
24 that point who ever voted against a power plant.

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1                   And go back and read some of his testimony  
2                   for why he objected to Seabrook. It was kind of a  
3                   land mark thing that he actually objected. And of  
4                   course, you know what happened to him. They ran him  
5                   out of town on a rail. But I got to know him many  
6                   decades ago. And he always told me slept better.

7                   I guess that=s all for this evening.  
8                   Thank you all, and don=t be so quick to believe it.  
9                   You know, common sense is uncommon. Think about the  
10                  why.

11                 MR. KLUKAN: Thank you.

12                   (Applause.)

13                 MR. KLUKAN: Next up we have William  
14                 Woodward.

15                 MR. WOODWARD: Woodward.

16                 MR. KLUKAN: Woodward, Woodward.

17                 MR. WOODWARD: I am William Woodward. I  
18                 teach psychology at the University of New Hampshire.  
19                 I=m a professor, I=m a historian of science, in terms  
20                 of my PhD. I=d like to just interject the long view  
21                 here.

22                 The long view takes us back to the  
23                 resistance to situating a nuclear power plant right  
24                 here. One of the objections was you don=t have an

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1 answer to what you're going to do with the spent fuel.  
2 I still haven't heard the answer.

3 Why aren't we talking about that tonight.  
4 There's a national program to ship it to Native  
5 American lands in New Mexico and Texas. But that's  
6 very, very dangerous. So that would be something to  
7 look into with NISC, which is an organization pointing  
8 out the flaws in getting rid of nuclear waste.

9 Another long view perspective would be to  
10 look at Germany. Germany, after they watched  
11 Fukushima, said we're going off of nuclear for public  
12 safety reasons. It's not a safe energy.

13 Another thing we could look at in the big  
14 picture would be the state of Maine. Until Governor  
15 LePage came along, there was a pilot program to have  
16 offshore wind replace all of the nuclears on the east  
17 coast. It's actually doable. They were set back by  
18 LePage. And now Massachusetts has caught up, and I  
19 understand they have several plants going now.  
20 Investors believe that this is the future.

21 My university is going to 50 percent  
22 renewables by 2030 and 100 percent renewables by 2050.  
23 Why don't we have scientists here talking about,  
24 climate scientists, talking about what we need to do

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1 over the next 30 to 50 years.

2 I'm disappointed by the quality of the  
3 panel here, frankly, you know. I mean, where are the  
4 scientists? This is not very persuasive. Why are  
5 we going to rush ahead without having a hearing from  
6 not only the public but from the scientists? What is  
7 the rush?

8 And unfortunately, this is what I've been  
9 hearing for 44 years. I've been living in Durham.  
10 I get the NRC doing a whitewash instead of answering  
11 our questions. And I think they must be staffed by  
12 insiders.

13 Because it's not -- and right now we're  
14 trying to get monitors in the state of New Hampshire,  
15 independent monitors, and they're telling us we don't  
16 need them. Well, what do you think? Massachusetts  
17 thinks we need them. They have state funded  
18 monitors. But I heard a hearing Concord last week.  
19 The industry was saying, no, we don't need them. It's  
20 all taken care of right here. At Seabrook, they're  
21 doing all the monitoring that's needed.

22 We've got pediatric cancer, not only here  
23 on the seacoast but around every reactor in the  
24 country. There's data on that. Why don't we have

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1 that data? Why don=t we discuss how many kids have  
2 to get cancer to support this industry?

3 Thank you for your time.

4 MR. KLUKAN: Thank you.

5 (Applause.)

6 MR. KLUKAN: Okay. Next we have Joe  
7 Casey, Joe Casey.

8 (Off-microphone comments)

9 MR. KLUKAN: Okay, we will move on then  
10 to Mindi Messmer. Mindi Messmer?

11 MS. MESSMER: Hello, I am Mindi Messmer,  
12 a representative, former representative for the State  
13 House for Rye, Environmental Scientist with a  
14 master=s degree in public health.

15 I have a few questions, actually a lot of  
16 questions, so I=m not sure if you want me to go  
17 through them first and then B-

18 MR. KLUKAN: Go through them and then -B

19 MS. MESSMER: Why can you not decouple  
20 the license amendment from the license extension?

21 Why is the rush? I echo Senator Markey=s  
22 concerns about that and some of the other people that  
23 have spoken tonight.

24 I would like to know if you say, Angie,

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1 that there were cores taken from the concrete, dozens  
2 of them, why were not those cores or some similar  
3 cores used to do the ASR evaluation?

4 I=d like to know what the stage of  
5 degradation of all the concrete structures are at the  
6 plant. And how was that modeled if you didn=t take  
7 concrete from the plant itself to do that?

8 I=d like to know why the second structure  
9 that was never turned into a reactor -- we only have.  
10 There are two structures there, one was used, why you  
11 weren=t testing that structure instead, because it  
12 has the same kind of concrete.

13 When you say slowly, I keep hearing  
14 slowly, what does that mean? What is slowly? I want  
15 to know the B- did you use that -B what kind of  
16 calculations were made to assess whether or not the  
17 concrete would be stable enough to be safe over the  
18 license extension period?

19 We also talked a little bit, some people  
20 here, about sea water intrusion. I=m concerned about  
21 that, whether calculations of sea water intrusion,  
22 that we know provides additional alkali for the ASR  
23 reaction, was taken into account. Because we know  
24 that there will be chronic inundation of the seacoast

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1 over time due to sea level rise.

2 I also want to know if -B somebody  
3 mentioned the dry cask storage area. We do have  
4 spent nuclear fuel rods being stored on the facility.  
5 I want to know if that has been taken into account  
6 when we talk about sea level rise, whether our first  
7 responders and fire fighters are being specially  
8 trained to respond to an emergency situation at the  
9 plant, assuming they=ll be exposed to some sort of  
10 radiation.

11 And after serving on Governor Hassan=s  
12 task force to investigate the pediatric cancer  
13 cluster, Mr. Woodward=s correct, we have a pediatric  
14 cancer cluster on the seacoast, we also were told by  
15 the CDC that we have the highest rates of pediatric  
16 cancer in the nation here. We also have the highest  
17 rates of bladder cancer in New Hampshire in the  
18 nation, along with breast, and esophageal cancer, and  
19 bladder cancer.

20 So one of the things that we=ve been  
21 trying to do is to know what our exposure is. We  
22 know that there is some radiation release during  
23 regular maintenance activities. We wonder about the  
24 ASR and whether or not there=s additional radiation

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1 being released as a result of the ASR.

2 And we would like to know, in our  
3 communities, what our real time exposure is to  
4 radiation. We would like to have real time radiation  
5 monitors in the seacoast outside of the plant so the  
6 communities know what their exposure is.

7 MR. KLUKAN: Thank you.

8 MR. DONOGHUE: Thanks. A lot of  
9 questions, we'll try to get them all. You saw I was  
10 taking notes.

11 MS. MESSMER: I tried to put them all in  
12 once.

13 MR. DONOGHUE: Huh?

14 MS. MESSMER: I got them all at once.

15 MR. DONOGHUE: Yeah, yeah, yeah. Good.  
16 But when we get through, let me know if we didn't  
17 touch on something B

18 MS. MESSMER: Okay.

19 MR. DONOGHUE: -- you want to hear about.  
20 So on decoupling the license renewal and the license  
21 amendment, so I'll start. And then I think Eric's  
22 going to fill in gaps that I'll probably leave on the  
23 answer.

24 In order to relicense the plant, the

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1 licensing basis of the plant needs to include the  
2 programs B-

3 MS. MESSMER: I understand.

4 MR. DONOGHUE: -- to, okay, to address  
5 ASR.

6 And, you know, right now, the way that the  
7 safety evaluations are structured is the technical  
8 review for ASR is largely in the license amendment.  
9 So that gets, you know, the plan would be to issue  
10 that. Once that=s issued, the license renewal would  
11 follow.

12  
13 MS. MESSMER: So why can=t you decouple  
14 that and just do the amendment that has to do with  
15 the ASR --

16 MR. DONOGHUE: Oh, I see, okay.

17 MS. MESSMER: -- evaluation, so that we  
18 get that in place and then, you know, why rush to  
19 extend the license?

20 MR. DONOGHUE: Okay, okay. Well, again,  
21 my perspective is that we=re not rushing to issue.  
22 The license amendment, once that=s in place, we don=t  
23 see a need to hold up the license renewal.

24 Issuing the license amendment, that=s

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1 what the contention is on, the subject of the hearing  
2 is the license amendment. So, you know, we=d still  
3 be having a similar question, right, we=d still be  
4 taking an action before the hearing. So the renewal  
5 B-

6 MS. MESSMER: Actually, that was my other  
7 question.

8 (Simultaneous speaking)

9 MR. DONOGHUE: Go ahead.

10 MS. MESSMER: Whether the April B- why  
11 you=re doing this before April, and whether or not  
12 the April meeting is going to be public, and why  
13 you=re doing it ahead of the April meeting.

14 MR. DONOGHUE: The April meeting. So the  
15 hearing, the ASLB hearing, that was going to be even  
16 later in the year. I think on our slide there it=s  
17 mid to late 2019. So maybe you=re thinking about a  
18 different B-

19 MS. MESSMER: Somebody mentioned an April  
20 assessment meeting.

21 MR. KLUKAN: Yeah, that=s the annual -B

22 MR. DONOGHUE: Oh, the annual assessment  
23 meeting for the plant, the Region I. So again, I=m  
24 going to say again, the safety evaluation is complete.

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1 It=s been a long review, both the license renewal  
2 itself and the license amendment, relatively long  
3 compared to other similar actions.

4 And we find there=s no safety concern  
5 from what we=ve looked at. So we=re ready to issue  
6 the actions. Those don=t undermine the hearing. So  
7 the hearing can progress. And any outcome of that  
8 hearing, if need be, we could go back and change the  
9 license in this area, including up to ordering the  
10 plant to do something.

11 Did you have something to add?

12 MR. CESTERLE: So, Joe, you did a great  
13 job of covering everything. I=m just going to add  
14 some specifics. For the license amendment, that  
15 includes the methodology which the NRC will approve  
16 for NextEra to evaluate the impact of ASR degradation  
17 on concrete structures and also the monitoring  
18 programs for ASR.

19 Now, that evaluation methodology in those  
20 monitoring programs form the basis for the aging  
21 management programs that are being credited in the  
22 license renewal application. So there=s the  
23 connection right there. And so they cannot be  
24 decoupled.

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1           So the license amendment has to be  
2 approved to get those things into the licensing basis  
3 for the plant and update the licensing basis so that  
4 that new licensing basis, updated licensing basis,  
5 can be renewed for the plant.

6           MS. MESSMER: So there=s no mechanism by  
7 which you can amend the license to address the ASR  
8 without extending the license?

9           MR. OESTERLE: No. It goes the other way  
10 around. We have to amend the license first to include  
11 the analysis methodology for ASR -B

12          MS. MESSMER: That=s what I=m asking.

13          MR. OESTERLE: -- before we can renew the  
14 license.

15          MS. MESSMER: I know. But I=m saying,  
16 why can=t you just amend the license to address the  
17 ASR through the regular process of allowing us to  
18 have a public comment period and then address the  
19 license extension later on?

20          MR. OESTERLE: That could be done. But  
21 we are following our normal process where we evaluate  
22 what was requested of us, come to our safety  
23 conclusion and, in addition, this is not part of the  
24 normal process, but because ASR was such an important

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1 issue for Seabrook, and for the NRC, and for the  
2 Advisory Committee on Reactor Safeguards, they also  
3 wanted to look at what was done by the Applicant and  
4 the staff=s review.

5 And so they confirmed the staff=s  
6 conclusions through their peer review. So now we=ve  
7 got independent verification, from a very highly  
8 technical and independent review body, of the NRC  
9 staff=s conclusions.

10 And based on those conclusions, safety  
11 conclusions, the expectation of the staff is that we  
12 issue the licensing action promptly. And the hearing  
13 is independent of that licensing action.

14 And like Joe said, the specific issues  
15 that are under contention in that hearing will be  
16 adjudicated by the Board. And if there are any  
17 actions that come out of the Board=s decision, the  
18 staff will take those actions that are necessary out  
19 of that hearing process.

20 MR. DONOGHUE: So the next, I think,  
21 three or four questions you had, and I=m going to try  
22 to, in shorthand, repeat them back to make sure we=re  
23 getting them all. I warned her ahead of time I=m  
24 tossing them to Angie, because they=re more

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1 technical.

2 The concrete cores that were taken at the  
3 plant and how they were considered in evaluating the  
4 effects of ASR, what stage of degradation various  
5 structures are in, just from listening, I know a  
6 little bit about that. But I'm not going to waste  
7 time, so I'll let Angie try to address that one.

8 Not treating all the structures, and  
9 again, I think, you know, definitely safety related  
10 structures, I don't know what structure you're  
11 specifically referring to but B-

12 MS. MESSMER: Are you talking about the  
13 second? So there were two concrete structures built.  
14 Only one was used actively for the plant. The other  
15 on is sitting there --

16 MR. DONOGHUE: Oh, the --

17 MS. MESSMER: -- unfinished.

18 MR. DONOGHUE: Okay, I --

19 MS. MESSMER: And that is the same  
20 concrete as the first one --

21 MR. DONOGHUE: Okay, okay.

22 MS. MESSMER: -- theoretically,  
23 hopefully, probably is. Why wouldn't you have tested  
24 the concrete on site in that second reactor vessel

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1 that was never employed instead of taking concrete  
2 from some other place and trying to model it?

3 MR. DONOGHUE: Okay. I'm not going to  
4 hazard a guess at an answer. I'm going to see if  
5 Angie knows. But if not, I'll try to answer it as  
6 best I can.

7 And then the slow progression that's been  
8 observed --

9 MS. MESSMER: And whether it's been  
10 calculated out.

11 MR. DONOGHUE: Through PEO. I think the  
12 answer to that is yes, but I'll let Angie give you a  
13 little more detailed answer than just yes.

14 MS. BUFORD: Okay, so the first question  
15 was when you say why weren't cores used to do the ASR  
16 evaluation, you're talking about when I mentioned  
17 that when they took cores, and they looked at the  
18 rebar, into the condition of that.

19 Those cores were taken as a part of a  
20 process to install through-wall extensometers which  
21 are measuring devices that measure through-wall  
22 expansion.

23 MS. MESSMER: Right.

24 MS. BUFORD: So are you asking why didn't

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1 they do, like, a petrographic analysis of those or B-

2 MS. MESSMER: Yes, any of the analysis  
3 that you used to determine the degradation of the  
4 ASR, why didn't you just use the cores or some other  
5 B- you have cores already B- you know, or you could  
6 take cores, so why didn't you just use real cores?

7 MS. BUFORD: The purpose of taking cores  
8 is to assess whether there is ASR and then from there,  
9 you know, determine how to monitor it. And so it=s  
10 my understanding that, you know, these cores that they  
11 took, they were already in areas where the ASR was at  
12 a point where they were measuring through-wall  
13 thickness.

14 So I don't think that it made sense to test  
15 whether there is ASR or isn't, because they've already  
16 identified ASR in those areas where the cores were  
17 taken. Those were the B- they are called staged, or  
18 excuse me, Tier 3 areas where the ASR, just from  
19 looking at the face of the wall, there was enough  
20 cracking where they needed to install through-wall  
21 extensometers.

22 You know, there=s really not a lot of  
23 value added. And then doing a petrographic to then  
24 confirm the presence of ASR when it was already

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1 evident, from just visual observation, there=s no  
2 strength-type characteristics that can be obtained  
3 through a petrographic examination. That=s just to  
4 determine presence of or lack of ASR.

5 MS. MESSMER: Okay. So let me rephrase  
6 that then.

7 MS. BUFORD: Okay.

8 MS. MESSMER: You have samples of the  
9 concrete. Why didn=t you use the samples of  
10 concrete, or did you retrieve samples of the concrete  
11 on the site to do your modeling, of the exact  
12 concrete? Because you say it was aggregate from  
13 other New England quarries or something.

14 MS. BUFORD: So the samples of concrete  
15 that were taken in cores, the problem with doing core  
16 testing is that it=s an unreinforced concrete  
17 material. And there=s really no way to accurately  
18 model the behavior of a structural system by doing a  
19 compressive strength test of a core. It=s not  
20 analogous to how the structure would behave when  
21 called upon to perform their intended functions.

22 So any data that you get from that, from  
23 the material testing, it=s really not applicable to  
24 structural behavior for actual in situ structures.

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1                   And that wouldn't have been, well, I  
2                   don't know that, **you know**, that was an initial pushback  
3                   that staff had that, **you know**, we questioned. How are  
4                   you going to address ASR for the inner structural  
5                   capacity.

6                   And so that is really why they opted to  
7                   go the large scale testing route, because that was  
8                   consistent with the concrete, **you know**, governing  
9                   bodies, the American Concrete Institute, for  
10                  evaluating concrete structures. And that was found  
11                  to be a more realistic way to assess than to, **you**  
12                  **know**, look at a compressive strength test or triaxial  
13                  tension test in a vacuum.

14                  MR. DONOGHUE: So purely layman, because  
15                  I'm not the concrete expert here, okay, I'm not going  
16                  to pretend to be. But I think I had a similar  
17                  question to yours when I was first having this  
18                  explained to me, the difference between testing the  
19                  material versus testing the structure, right.

20                  So a piece of concrete by itself, a core,  
21                  is going to behave a certain way if it experiences  
22                  ASR, or it gets loaded, that is shown to be different  
23                  than a wall, or a floor, or something. And that's  
24                  why large scale testing, those words large scale are

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1 important where it=s the material interacting with  
2 the other components that make a structure that=s  
3 important to evaluate. Does that make --

4 MS. MESSMER: So when you say large  
5 scale, are you talking about, like, when you actually  
6 test it, is it granular concrete, or an aggregate, or  
7 is it -- it=s not a core, evidently, from what you  
8 just said.

9 MS. BUFORD: No. So they=re large scale  
10 beams. And I think the dimensions are proprietary.  
11 But they are modeled as actual Seabrook walls. You  
12 know, and what I failed to mention before is that  
13 when we=re looking at -- when the NRC is looking at  
14 structures to be able to perform their intended  
15 functions, first it=s safety, it=s the interaction  
16 between the concrete and the rebar that=s actually  
17 the important action for the concrete.

18 So the fact that the concrete is adhered  
19 to rebar, that allows for tensile strength and sheer  
20 strength. And so when you take the concrete out of  
21 its structural context, i.e., it=s not reinforced,  
22 and then you test it, the results of that, there=s  
23 really not a good way to directly apply that to how  
24 the structure would behave, you know, given X number

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1 of, you know, however inch thick rebars.

2 And so that=s why, you know, they could  
3 have taken more petrographic analysis, but I think  
4 that the reason they didn=t is because they had  
5 already identified that ASR was to a point in those  
6 areas that they needed to do through-wall expansion  
7 measurements.

8 So the second question here is what=s the  
9 current state of the structures?

10 MS. MESSMER: Yeah, and percentage-wise,  
11 how many are Stage 3 or Tier 3?

12 MS. BUFORD: It is in the SE. And I  
13 don=t want to misspeak, so I would, and maybe I  
14 couldn=t even find the exact number. There=s a fair  
15 amount of each. I think that, you know what, I=m going  
16 to ask you to go back to the SE, because I don=t --

17 MS. MESSMER: Can you just give us a  
18 ballpark?

19 MS. BUFORD: So ballpark, 10 to 20, Stage  
20 3, about the same in Stage 2. There=s a lot that are  
21 Stage 1. And Stage 1 is the lowest ASR levels.

22 MS. MESSMER: Yeah.

23 MS. BUFORD: Stage 3 are the more  
24 advanced.

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1 MS. MESSMER: Any Stage 4?

2 MS. BUFORD: There=s no Stage 4. It=s  
3 just Stage 3. And the stages have to do with  
4 monitoring frequencies, or no, intervals, monitoring  
5 intervals.

6 And the amount of rigorous analysis that  
7 was done, all the Stage 3s have very, very rigorous,  
8 you know, volumes of analysis, and computered  
9 modeling, and that. And as the ASR is less severe,  
10 the analyses are a little bit, you know, they were  
11 able to be a little bit B- they didn=t have to do a  
12 full ANSI model for every structure.

13 MS. MESSMER: Yes.

14 MS. BUFORD: And the NRC reviewed almost  
15 all of these analyses for the different stages. We  
16 looked at the monitoring for each stage. We looked  
17 at the results and also, you know, did an independent  
18 review, actually with two different independent  
19 groups of the NRC to look and verify.

20 So that, let=s see, the third question I  
21 had was why was Unit 2 not used, the concrete. So I  
22 understand, at least from what I was told from the  
23 licensee, that Unit 2 was not kept in the condition.  
24 You know, I think it was abandoned even before they

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1 were able to finish the dome of the concrete.

2 So it was concrete that was not, you know,  
3 it=s degraded in so many other ways that it=s not a  
4 representative condition to compare with the Unit 1  
5 concrete that has been, you know, up kept. And I  
6 think there were also a lot of accessibility issues.

7 You know, as the NRC, we reviewed, you  
8 know, we have our oversight process, and we reviewed  
9 the license amendment and the license renewal request  
10 as it was presented to us. And they opted to use  
11 large scale testing. And we reviewed that testing to  
12 make our safety conclusion.

13 And, okay, and slow progression, yes.  
14 What does slow mean? So just in the general  
15 understanding of alkali silica reaction, when you say  
16 slow, you know, you=re talking about the expansion of  
17 microcracks that are, you know, barely inches, very,  
18 very, very small cracks.

19 So the cracks have to be large enough to  
20 even start measuring them, right. Because you can  
21 only, you know, even with the best optical magnifying  
22 glass, you can only detect cracks of a certain size.

23 So at the site, we verified that Seabrook  
24 is monitoring all, I=ll say, you know, cracking that

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1 is able to be monitored and at frequencies that are  
2 applicable to the severity of the ASR.

3 And I personally have reviewed six month  
4 monitoring data for the past six years, literally  
5 every six months. And there are some -- most of the  
6 areas have not, over the past five years, even seen  
7 any appreciable increase in the cracking at all.

8 The method they do it, we've detailed it  
9 more in the SER, and we can talk after this is you=d  
10 like. But the way that they measure it, **you know**, the  
11 data that we reviewed, some areas it doesn=t appear  
12 that it=s moving at all. And I think that in the  
13 maximum it=s, **you know**, it=s hundredths of an inch.

14 MS. MESSMER: Even in the Tier 3?

15 MS. BUFORD: Yes, even in the Tier 3.

16 MS. MESSMER: So have you projected that  
17 out to be safe over, even the Tier 3, over the life  
18 of the license extension?

19 MS. BUFORD: It=s within the bounds of  
20 the testing. So the testing program went above what,  
21 **you know**, I think that they looked at what is the  
22 wildest, **you know**, not wildest, but what=s a  
23 projection that made sense through the life of the  
24 plant and considering a possible life extension,

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1 tested limits beyond that and then added margin. And  
2 then those limits are based there on that margin.

3 MR. DONOGHUE: Okay. Thanks.

4 MS. BUFORD: And then the next one about  
5 seawater.

6 MR. DONOGHUE: Yeah, yeah, yeah. So  
7 seawater intrusion, I think, was your next question.  
8 And my high level understanding is that there are  
9 programs, dewatering programs, that are place at the  
10 plant. I think that water intrusion is known, and  
11 observed, and they put programs in place. I don't  
12 know the details of those programs, but I know that  
13 there are programs in place that are inspected.

14 The other issues that you brought up,  
15 spent fuel storage, including flooding effects, the  
16 cancer data that you referenced, and real time  
17 monitoring, I'm just going to say that that's not a  
18 subject of tonight's meeting. We've taken a lot of  
19 time to answer your questions related to the amendment  
20 for the ASR. So I'm going to --

21 MS. MESSMER: So when is the next time I  
22 will probably hear those answers? Is there another  
23 point at which we are going hear back from --

24 MR. DONOGHUE: Right. So there were

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1 previous questions where, I think, Brett said that  
2 we'll ask. The Region=s been taking notes, and at  
3 the annual assessment meeting, which is -- it is  
4 scheduled for April.

5 MR. GRAY: Mel Gray, branch chief out of  
6 NRC Region I office outside of Philadelphia. We are  
7 having, I think it=s April B-

8 PARTICIPANT: April 24th.

9 MR. GRAY: -- 24th. It is an annual  
10 assessment meeting. That=s broader than ASR,  
11 although it=s been ASR-centric in discussions for the  
12 past many years. And we bring enough folks that are  
13 versant in what we know of the issues, and concerns,  
14 and focus of the folks around here. So we would be  
15 able to answer that.

16 I would say that our annual -- we do have  
17 requirements for monitoring, and they=re very robust  
18 requirements. And they=re put out annually every  
19 year as to what the releases are from every nuclear  
20 power plant. And that=s available on our web page.  
21 We could get that for you. I think that --

22 MS. BESSMER: No, I=m familiar with that.  
23 I=m talking about in the communities themselves.

24 MR. GRAY: Right. We are -- our mission

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1 is focused on the plant and safe operation of the  
2 plant. And we make requirements to them to monitor  
3 it. I'm aware that other states have chosen to do  
4 something beyond that. That just isn't part of our  
5 mission or our oversight. We oversee what's done in  
6 the plant and not outside the fence.

7 MS. MESSMER: And then the last thing I'm  
8 very concerned about is the first responders and  
9 whether that sort of training has happened and how  
10 that's going to be handled.

11 MR. GRAY: You know, we would be able to  
12 answer that in April.

13 MS. MESSMER: Okay.

14 MR. GRAY: And it's not my expert area,  
15 but that sounds like it would be a -- and I'm looking  
16 at Justin, probably a FEMA, our sister agency. We  
17 focus on emergency preparedness and capability in the  
18 plant. And we work with our sister agency, FEMA, who  
19 focuses on readiness outside the plant. And we reach  
20 overall conclusions in coordination with them based  
21 on drills. And so that would be where that -- that's  
22 a FEMA role.

23 MS. MESSMER: So in April then, April  
24 24th we'll hear about that?

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1 MR. GRAY: April 24th, I'm taking notes.  
2 I'll try to be able to answer that very shortly.

3 MS. BISSMER: Thank you very much. Yeah.

4 MR. DONOGHUE: Thank you, Mel. Thank you  
5 for your questions.

6 MR. KLUKAN: Thank you. Next  
7 up we have Philip Hurzder.

8 MR. HURZDER: My name is Phil Hurzder, I  
9 live in Newburyport. I am a concerned citizen. I  
10 have never derived any income or worked with any part  
11 of the nuclear industry. So I think you can sort of  
12 tell where I'm going to go from here.

13 I am very concerned about the safety  
14 issues that C-10 has raised. For me though, the big,  
15 I think, as one of the earlier speakers has mentioned,  
16 I think that the disposal problem is, the long term  
17 disposal problem is one in which I've yet to hear any  
18 kind of a hope or a glimmer of a realistic solution  
19 nationwide, including this issue.

20 And I've forgotten what the other point  
21 was I was going to make. Thank you for your time.

22 MR. KLUKAN: Thank you.

23 So our last scheduled speaker, and we'll  
24 talk about how we proceed with the rest of the meeting

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1 after this, but our last speaker is Jack Van Loan,  
2 last ticketed speaker. Jack Van Loan.

3 MR. VAN LOAN: It=s not hard, Van Loan.

4 MR. KLUKAN: Van Loan. My last name is  
5 Klukan. Let me explain to you how I often -- so I  
6 have some sympathy as well. My name is constantly  
7 mispronounce as Klukan. But any, it=s like the sound  
8 of a chicken. But anyway, go on, sorry.

9 MR. VAN LOAN: My name is Jack Van Loan,  
10 I live at 4 F Street, Plum Island, Newburyport. I=m  
11 also a Board member of C-10.

12 My original question was going to be on  
13 Slide 6 and what the corrective actions are. But you  
14 have touched on that. So I=d like to go to what=s  
15 always been in the back of my mind is, driving up  
16 Route 1, a massive double dome containment building.

17 At the assessment hearing three years  
18 ago, >16 I think, I was told that the bedrock  
19 foundation of the containment building was 21 feet  
20 below mean sea level. If you add the other half of  
21 the sea level, it=s about five feet up to ground  
22 level, you=re approximately 30 feet down. And I  
23 don=t know how wide it is, but in my mind that=s a  
24 massive quantity of concrete, a lot of cubic yards.

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1                   And is there any testing of all that  
2 concrete or how many spots in the containment inside  
3 and out are being monitored or observed? Or have you  
4 recognized ASR?

5                   MR. DONOGHUE: So your question is you  
6 wanted to focus on the below grade concrete, and how  
7 that=s monitored?

8                   MR. VAN LOAN: Well --

9                   MR. DONOGHUE: I just want to make sure  
10 I got it.

11                   MR. VAN LOAN: I want to go back to Willie  
12 Sutton. He robbed banks, because that=s where the  
13 money is. At Seabrook Station, where most of the  
14 concrete is, it=s in and below the containment  
15 building.

16  
17                   MR. DONOGHUE: Right, so how is that  
18 monitored?

19                   MR. VAN LOAN: Right.

20                   MR. DONOGHUE: Okay. I don=t know the  
21 answer. I=m going to ask the guys from the SER.

22                   MS. BUFORD: So the actual bedrock is not  
23 accessible. It=s underneath the foundation of the  
24 containment, right. But there are accessible areas

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1 that are below grade that have experienced ASR and  
2 that are being monitored.

3 Those areas are not containment. They  
4 are, you know, there are areas where there has been  
5 water infiltration and areas where there hasn't been  
6 water infiltration. To be honest, it doesn't seem to  
7 make that big of a difference. There's really ASR  
8 kind of everywhere.

9 As to the containment, you asked if it's  
10 monitored or if there's been ASR identified. There  
11 are a small handful of areas at containment that are  
12 monitored, I want to say on the order of two to three  
13 areas that are monitored under Tier 2 of the  
14 monitoring where NextEra is monitoring those areas as  
15 potentially suspect areas.

16 But, you know, in the years since they've  
17 been looking to see if there's been any ASR movement  
18 or additional cracking, to my understanding, they  
19 haven't found any expansion in the containment area  
20 or additional signs of ASR.

21 MR. VAN LOAN: Okay. One of my concerns  
22 is that you have a very heavy dead load the farther  
23 down you go down to bedrock.

24 MS. BUFORD: Yes.

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1 MR. VAN LOAN: So you've got a lot of  
2 stress on the concrete. And if you've got ASR down  
3 there, and you can't access it, you seemingly haven't  
4 done any excavations down to bedrock on the outside  
5 and looked for symptoms.

6 MS. BUFORD: So to your point, there is  
7 quite a large dead load on that concrete. And what  
8 that load actually serves to do is to tighten the  
9 cracks completely. You know, when you've got a  
10 really B- so there's really not a lot of ability for  
11 that below grade concrete to expand and crack because  
12 of the loading. It's on it in all directions.

13 So we would be much less likely to find  
14 ASR cracking in those heavily loaded below grade areas  
15 than we would on areas that are more free to expand.  
16 So, you know, in our review, that was acceptable on  
17 the safety basis, because we think that the areas  
18 that are able to freely expand are really bounding.

19 MR. VAN LOAN: So the higher the dead  
20 load on a piece of concrete, the less possibility  
21 there is for ASR? Or is there less possibility that  
22 it'll show up?

23 MS. BUFORD: It's less possible for there  
24 to be the cracking because of the ASR. But that's

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1 really -B if there=s no cracking, then there=s not an  
2 issue with the structure to be able to perform its  
3 function, right.

4 So really, the expansion is the concern.  
5 So if there=s no expansion -- there may be alkalis,  
6 and silicas, and water, so there=s the environment  
7 for ASR to occur. But there=s less of a concern for  
8 that to affect structural functionality, because the  
9 cracking is really restrained by the dead load on top  
10 and then by the loads up the hoop, you know, restraints  
11 on the side. Because it is bedrock.

12 MR. VAN LOAN: But I=m not scientist, I=m  
13 not an engineer, but if you have ASR expansion gels,  
14 and your containing it because of dead weight, that  
15 doesn=t mean that there=s not ASR there. It=s just  
16 that you can=t see it.

17 MS. BUFORD: Right. But the concern is  
18 not B- it=s not the ASR itself rather than the  
19 structural functionality. So if the ASR doesn=t have  
20 an opportunity to manifest itself in cracking and  
21 expansion, then the concern for impact to the function  
22 is low, right.

23 Because you=re not causing rebar stresses  
24 that, you know -- and you=re not causing a lack of

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1 adherence between the concrete and the steel, you  
2 know. So the expansion is just not able to B-

3 MR. VAN LOAN: At Ferguson, was there any  
4 simulation of a high dead load on ASR concrete?

5 MS. BUFORD: Was there any simulation on  
6 a high dead load on concrete?

7 MR. VAN LOAN: With ASR in it.

8 MS. BUFORD: Well, yes. And actually,  
9 the simulation was large scale testing. Well, there  
10 was actual load testing on the dead, and live, and  
11 all of the loads that the Seabrook structures are  
12 designed to.

13 And then also in some of the structural  
14 analytical analyses, in all of the analytical  
15 analyses, the loading combinations that are part of  
16 the, including high dead loads, were applied to  
17 buildings that received a full scale structural  
18 analysis such as the containment enclosure building.  
19 That=s a good example of one.

20 MR. VAN LOAN: Okay.

21 MS. BUFORD: So yes. That was a long  
22 answer to say yes.

23 MR. VAN LOAN: Okay. I won=t go into my  
24 theories, because it=s to say I don=t have any

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1 education or PhDs behind me. Thank you.

2 MR. KLUKAN: Thank you very much.

3 Okay, so as I just noted, and I apologize  
4 again if I mispronounced your name, Mr. Van Loan. I  
5 hope I didn't just do it again.

6 We've now exhausted the pool of people  
7 who pre-registered to speak. So I'm going have to do  
8 two surveys. One, is there anyone who has not  
9 previously spoken tonight who would like to speak  
10 this evening, please raise your hand?

11 MR. KLUKAN: Okay, we have 15 minutes.  
12 Oh, we have one person. Please.

13 MR. DONOGHUE: As you come to the mic,  
14 ma'am, don't forget to state your name, okay?

15 MS. SKIBBEE: Oh, my name is Patricia  
16 Skibbee, and I serve on the Board of C-10. I just  
17 want to make sure everybody is aware that the testing  
18 that this nice person has been talking about was  
19 testing that's done at the Ferguson Structural  
20 Engineering Labs at the University of Texas.

21 So these pieces of concrete that she's  
22 been talking about that were tested are not part of  
23 Seabrook. They are made up samples in Texas. And  
24 further, who's doing this testing? It's not the NRC.

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1 It=s two engineering firms that NextEra chose and  
2 paid for. So I think, here again, we have a fox  
3 guarding the hen house problem. And I think that  
4 that should not be happening.

5 MR. KLUKAN: Thank you.

6 (Applause.)

7 MR. KLUKAN: Okay. Anyone else who has  
8 not, can ask for more time, anyone else who has not  
9 previously spoken and would like to speak tonight?

10 (No response.)

11 MR. KLUKAN: Okay. Next question. Who  
12 here who has previously spoken would like to speak  
13 again?

14 Okay, we=re going to go in the order in  
15 which you signed up. So Mr. Blanch (phonetic) first.  
16 Or no, Comley, excuse me. I apologize. And then we  
17 have 11 minutes. We=ll see what we can get through,  
18 and then go from there, okay. So I=m going to give  
19 you each three minutes apiece again.

20 MR. COMLEY: Well, first of all, I wish  
21 I had known that, you know, the time stops when you  
22 ask a question. Because I had some pretty important  
23 questions I wanted to ask.

24 And one of them, I spoke with you B- is

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1 it okay if I call you Joe?

2 MR. DONOGHUE: Absolutely, yes.

3 MR. COMLEY: Okay. I told you about  
4 right now there=s gag orders on the Massachusetts  
5 state police and on New Hampshire National Guard that  
6 they can have no opinion on whether the plant can be  
7 evacuated during the summer months.

8 And I=ve gone to a lot of work with these  
9 packets, you know, to save you time. Because I didn=t  
10 want to bring up a lot of things. But how do you  
11 feel about gag orders on first responders?

12 MR. DONOGHUE: I=m not in a position to  
13 comment on that. I=m learning about this really for  
14 the first time since I=ve met you. So I=m not in a  
15 position to comment on that.

16 MR. COMLEY: Well, there is. And we=ve  
17 got -B there=s six towns in Massachusetts within the  
18 ten mile radius of the plant. And five of those  
19 towns have asked the NRC and FEMA to hold a hearing  
20 for first responders so they can testify whether they  
21 believe the plant can be evacuated.

22 And that video tape, you know, I really  
23 want all three of you, all four of you, to look at  
24 that video tape. And I=d like to have comments on

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1 what you think.

2 Because, you know, I=ve been a business  
3 person pretty much all my life. And we=ve got a  
4 double standard for the Seabrook plant. Because  
5 every hospital, nursing home, and business has to  
6 obey the laws 365 days a year.

7 Now, if you find out, after you=ve looked  
8 at this video tape, if you find out it=s in question  
9 whether they can evacuate that place safely, and if  
10 you look at -- the traffic is at a standstill,  
11 hundreds of thousands of cars out there.

12 And we=ve asked Maura Healey, she=s  
13 looking into it. She=s the Massachusetts Attorney  
14 General. And so right now -- and by the way, all the  
15 schools within the ten mile radius, I=ve talked to  
16 the students and talked to teachers, they have not  
17 had legitimate nuclear drills. They=ve had paper  
18 drills which are dog and pony shows.

19 I=ve talked to 200,000 first B- 200 first  
20 responders. And they want this hearing. You  
21 certainly wouldn=t object to having a B- to be in  
22 favor of a first responder hearing. Because those  
23 families have B- they have families too.

24 And I=ve worked on this for four years.

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1 And we=ve got these towns, and we=ve got also Hampton  
2 Falls now. And we need that hearing. And, I mean,  
3 I want to prove that democracy still works in this  
4 country. And we need your help to do that.

5 And I=ve been investigating the NRC for  
6 a long time. And my own opinion is if you license  
7 that -B if you give them that license, you know what  
8 you=re going to prove, what I=ve been saying a long  
9 time. The Agency is nothing more than a rubber stamp  
10 for the issues of the nuclear industry.

11 Here we are, what do we do with a school  
12 bus when it fully depreciates? The owners of the  
13 plant, the construction B- the architects of the plant  
14 said shut it down after 2030. Now we=re extending  
15 the license, even considering it to 2050? We don=t  
16 let school buses take our kids around when they=re  
17 fully depreciated.

18 MR. DONOGHUE: So Mr. --

19 MR. Comley: And I=ll tell you, when you  
20 look at those packets, I want you to look at every  
21 one of the. And I want responses from you, because  
22 I brought this up about the gag orders last year.  
23 And every one of the panel has told me they were going  
24 to get to me. They never did. I want to know why.

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1 MR. DONOGHUE: Okay.

2 MR. KLUKAN: Thank you very much.

3 MR. DONOGHUE: I can't answer that.  
4 Thanks, thanks for your concern. Are the requests  
5 for hearing part of your packet? You said there have  
6 been requests sent to the NRC?

7 MR. COMLEY: Oh, yeah, five out of six of  
8 the towns within the ten, FEMA too.

9 MR. DONOGHUE: So the requests are in  
10 here?

11 MR. COMLEY: Yeah.

12 MR. DONOGHUE: I haven't looked at this,  
13 I haven't had any opportunity.

14 MR. COMLEY: Yeah, the towns are in  
15 there.

16 MR. DONOGHUE: Okay, okay. The other  
17 thing I want to just address that you said was, you  
18 know, the re-licensing of the plant, the original  
19 license of the plant, based on 40 years, was based on  
20 whatever information that the NRC required at that  
21 time.

22 Now, when ASR was discovered, I think I  
23 mentioned this earlier, that was at the beginning of  
24 the license renewal review. The license renewal

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1 review, except for ASR, the ASR issue, was complete  
2 back in 2012.

3 So really, if the Agency was to be, as  
4 you put it, a rubber stamp, we may have found a way,  
5 but we did not. We did not come up with a way to re-  
6 license the plant without the ASR issue resolved. So  
7 since 2012, we have not given them a renewed license  
8 until we were satisfied, and that was last year, that  
9 they've addressed ASR.

10 MR. COMLEY: But the evacuation plan has  
11 got to be legitimate. And if they can't evacuate the  
12 people in time and safely, that's a violation.

13 (Off-microphone comments.)

14 MR. DONOGHUE: We have other people that,  
15 I think, wanted to be able to come to the mic as well.

16 MR. COMLEY: So I'd like you to look at  
17 the material and get back to me. I really appreciate  
18 it. I want your own opinion after you've looked at  
19 this video. And I don't know if anyone in this room  
20 would, you know, if you want a copy of the video, I  
21 got it here.

22 MR. KLUKAN: Thank you very much.

23 MR. COMLEY: Thank you.

24 MR. DONOGHUE: Who was next?

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1 MR. KLUKAN: What was your name again?

2 MR. MCNEIL: Colby.

3 MR. KLUKAN: We'll do it in the order in  
4 which they were received. Mr. Nord, Nord?

5 MR. NORD: Yes.

6 MR. KLUKAN: You are up next.

7 MR. NORD: All right. Well, I would have  
8 appreciated knowing that if I had asked a question I  
9 could have taken ten minutes instead of three.

10 MR. KLUKAN: Well, let me stop you right  
11 there.

12 MR. NORD: No, you've done plenty of  
13 talking. I will take my time.

14 MR. KLUKAN: I think it's important B-  
15 (Simultaneous speaking)

16 MR. KLUKAN: I will give you your three  
17 minutes.

18 MR. NORD: This has been a very unfair  
19 use of facilitation, I have to say. Because I  
20 represent the organization that caused this meeting  
21 to happen. And I did not have a chance to actually  
22 finish my presentation.

23 You know, it's not fair if you're going  
24 to tell people that it's only three minutes. And

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1 then you know what, you end up letting people stand  
2 and speak for more than six minutes on issues that  
3 don=t even pertain to the cause of this meeting. Can  
4 I get on with my comments, please?

5 MR. KLUKAN: I think it=s important to  
6 address that. And then I will give you B- we will go  
7 over in time out of fairness to everyone involved.  
8 Normally, I said at the beginning of my instructions,  
9 I don=t usually allow back and forth. Because it  
10 does then expand out.

11 However, because there=s only so much I  
12 can do as facilitator when people are posing questions  
13 relevant to the meeting at hand. Most of the  
14 questions, example, a member of your own group posed  
15 questions relevant to degradation of concrete next to  
16 the base rock.

17 I thought that was relevant to this  
18 meeting, so I allowed him, a member of C-10, to  
19 continue those questions even though he was, in terms  
20 of how much he was speaking, past his three minute  
21 mark.

22 I appreciate that you wanted to give a  
23 presentation. And I=ll give you that opportunity  
24 now. I just wanted to explain to you my methodology

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1 out of fairness to everyone in this room.

2 So, to try to complete -- I think a huge  
3 point that needs to be understood at this meeting is  
4 that the reason C-10 has filed its contingency that  
5 we're accepted by the Nuclear Regulatory Commission  
6 for litigation is because the License Amendment  
7 Request upon which the License Renewal Application  
8 depends is not robust. It is not going to result in  
9 good monitoring of the degradation of concreted  
10 Seabrook. And we have experts -- world class experts  
11 in concrete structural scientists -- concrete  
12 structural science to back up that assertion, a number  
13 of them. So that's the first point.

14 The second point, these concrete  
15 scientists that we're bringing represent the only  
16 independent peer review that the License Amendment  
17 Request is going to receive. Because the Nuclear  
18 Regulatory Commission allowed NextEra to call their  
19 new unprecedented system for testing proprietary.  
20 That has meant that no other scientists that are  
21 outside the industry or the Nuclear Regulatory  
22 Commission have had a chance to actually check the  
23 methodology. The methodology is not good. Just  
24 because NRC staff says it's good, does not mean that

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1 it has been properly and fairly and independently  
2 reviewed, second point.

3 Third point, just because you all have  
4 the power to make this rule -- to make this ruling,  
5 I should say on licensed renewal -- license amendment  
6 from within your own system and then license renewal,  
7 which depends on license amendment -- Just because  
8 you can do that, does not mean that you should do  
9 that. Because doing that is a violation of the  
10 democratic process. And in New England, we stand  
11 firmly in favor of the democratic process.

12 It is irrational in fact, and that's why  
13 it's been so difficult for you to explain it -- It's  
14 irrational that there is some system in place by which  
15 even though there are standing contentions before the  
16 NRC Atomic Safety and Licensing Board, somehow the  
17 Nuclear Regulatory Commission feels they have the  
18 authority to issue a ruling on that same license  
19 amendment upon which license renewal depends in order  
20 to grant the license of the license renewal.

21 There's no reason that NRC needs to do  
22 that because you have 11 years left on your license.  
23 The reason that, that system was set in place is  
24 because of the Three Mile Island accident and the

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1 fact that after TMI -- and I hope you'll give me a  
2 chance to finish this concept -- after the Three Mile  
3 Island accident, there was a challenge to venting  
4 steam -- radioactive steam from the reactor  
5 containment. And that challenge ended up impeding  
6 the license renewal for Three Mile Island. And so  
7 NRC put in place this rule that means that you can  
8 take this step without dealing with citizens founded  
9 contentions that affect -- that may affect that  
10 license.

11 But in this case, you have 11 years before  
12 the license renewal. There is no reason for you to  
13 take that action independent of the Atomic Safety and  
14 Licensing Board's decision to grant contentions to C-  
15 10. So we're asking you in terms of fairness and in  
16 terms of the democratic process for this area, that  
17 you don't do the thing that you can do. And instead,  
18 do the thing that ethically you should do. Thank  
19 you.

20 MR. KLUKAN: So there were one or two --  
21 Well wait, it's 9 o'clock, which is the scheduled end  
22 of the meeting. So who else wanted to make secondary  
23 comments?

24 MR. DUARTE: I just want to give that to

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1 him please.

2 MR. KLUKAN: Sure, of course. All right,  
3 so --

4 PARTICIPANT: I'm just going to be really  
5 quick.

6 MR. KLUKAN: Sure.

7 PARTICIPANT: I'd like to really thank  
8 the NRC. I really value your patience. I don't know  
9 how I would ever put up with this. It's just an  
10 incredible organization. And I feel like our  
11 politicians that have done this are faulty because  
12 why don't they question the CDC? Why don't they  
13 question the FAA? It's just the NRC. It is. It's  
14 just the NRC. They should -- maybe the vaccine people  
15 should start saying don't vaccinate. There's really  
16 something wrong with all the vaccines. You know?  
17 But anyways, I really thank you.

18 MR. KLUKAN: Thank you. Okay, so out of  
19 fairness because I did let C-10 talk longer, who else  
20 would like to speak? Raise your hand right now. So  
21 I have one, two, three, four. And then that's it.  
22 Okay? So if you didn't raise your hand right now,  
23 we're going to -- once those four have spoken again,  
24 line up in the order -- it doesn't really matter

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1 because you're all going to get a chance to speak.  
2 So line up at the mic or you know, amongst yourselves.  
3 And then after that, we're going to close the meeting.

4 MR. KURK: Thank you. And I really do  
5 have to appreciate the NRC and everything you do. I  
6 have read your reports. I have looked at this issue  
7 in depthly. I understand the complexities of the  
8 engineering. I understand the complexities of the  
9 procedures that you are bound by and what works. And  
10 I'm also a human being. I'm not paid to be here. I  
11 am here because I'm very concerned about the future  
12 of the planet. I've come here on my own dollar --  
13 on my own dime. And when you sort of make comments  
14 that imply that anyone that has a different view than  
15 yours is paid here, that's rather dehumanizing.

16 And there are solutions. There's  
17 solutions to all the claims that the Anti-Nuclear  
18 Movement comes up with. And you just have to get out  
19 of your echo chamber to learn about them as I did --  
20 breeder reactors. Thank you.

21 MR. KLUKAN: Thank you very much. Could  
22 you state your name one more time just for the  
23 transcript?

24 MR. KURK: Colby Kurk.

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1 MR. KLUKAN: Thank you very much.

2 PARTICIPANT: Current resident of  
3 Ipswich, Massachusetts, served by Seabrook Power  
4 Plant. I've looked up the numbers. The electricity  
5 coming into my house comes from -- or a portion of it  
6 comes from Seabrook. And I would not be afraid to  
7 live right next to this plant because I understand  
8 how safe it is.

9 MR. KLUKAN: Thank you very much.

10 MR. BOGEN: I'm Doug Bogen with Seacoast  
11 Anti-Pollution League. Since the law was asked or  
12 mentioned about flooding, I'd like to point out that  
13 I have been to several meetings in the past including  
14 the first one that was held on the scoping of the ASR  
15 issue. And I raised the issues of sea level rise and  
16 changes in ground water. We were told at the time  
17 by from the NRC that the water was fresh water then.  
18 I don't know eight years later, is it becoming more  
19 brackish -- will it become brackish or more saline in  
20 the next 10, 20, 30 years? We haven't heard any  
21 response on these issues.

22 There was a study done after Fukushima of  
23 course. There was a lot of emphasis certainly on the  
24 issues of flooding, extreme weather, storm surge, et

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1 cetera. And I had an opportunity to peruse that  
2 study to some degree, which was issued last year, I  
3 believe. And yes, the plant is not within the design  
4 basis, I believe is how you put it, for this extreme  
5 weather. The worst impacts of climate change and sea  
6 level rise and so forth. And the recommended  
7 solutions were some doorstops and issuing of  
8 sandbags.

9 I really wonder whether you think you can  
10 hold back the ocean and sea level rise and climate  
11 disruption with sandbags. So I would encourage you  
12 to look again at that. We should have a public  
13 hearing on that issue because it's a serious issue  
14 here on the seacoast. Every other seacoast community  
15 is looking very hard at the impacts of climate change.  
16 And we should know what affect it's going to have on  
17 the plant and its operations. And on the chemistry  
18 that affects ASR. So that would be one question.

19 I guess just since I don't have much time  
20 and we're getting done here, I just ask given what  
21 you know now from the monitoring that's been done;  
22 eight years of research and so forth, can you assure  
23 the public that in 20, 30 years' time, this plant  
24 will continue to be safe to operate? And if you

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1 can't do that, 100 percent, why are you issuing a re-  
2 license? And won't we just be re-visiting this in  
3 ten or 20 years?

4 I feel like it's been Groundhog Day. I  
5 know it was a couple weeks ago. But I get the sense  
6 we keep asking the same questions. And we either get  
7 the same answer or no answer at all. And I think the  
8 public would really like to know some of these  
9 answers, which I understand you can't answer here.  
10 But somebody should be here in April to answer those  
11 questions.

12 MR. DONOGHUE: Okay, on the -- on the  
13 safety evaluation for ASR and for the license renewal,  
14 I'm going to tell you that the staff's come to the  
15 conclusion that the plant can be operated safety based  
16 on what we know. And what the monitoring programs  
17 intend to do. And as I said before, we'll be  
18 inspecting those programs over the life of the plant.  
19 Okay?

20 The other issues yes, I'm not going to  
21 try to address those now, but you should have  
22 assurance that the Agency's done a thorough review  
23 here. There's programs that are going to be in place.  
24 And when the license is renewed, those requirements

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1 will be in the license.

2 MR. BOGEN: Well again, on the issue of  
3 flooding, I don't have assurance on that. We haven't  
4 gotten the answers. And I really encourage you to  
5 hold a more intensive public meeting on that whenever  
6 you can, hopefully before the license is reissued.  
7 Thank you.

8 MR. KLUKAN: Thank you.

9 MR. DONOGHUE: There were two more  
10 people, right?

11 MR. KLUKAN: Two more people. You can  
12 decide amongst yourselves.

13 MS. CAPRA: Hi, Cathryn Capra from  
14 Georgetown again. Thank you so much. This has been  
15 very informative and I've enjoyed being here.

16 (Off-microphone comment.)

17 MS. CAPRA: Oh, sure. I did have a  
18 follow-up question when we talked about ASR that you  
19 know, it can't be corrected or reversed, but that  
20 repairs had been done, I think you mentioned -- and  
21 I was curious -- you said in one or more of the  
22 structures, what those repairs were and why they were  
23 made? Was that correct? Did I hear you correctly?

24 MS. BUFORD: Yes, so the monitoring

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1 program that we reviewed and approved -- Oh, I'm  
2 sorry, it includes if there is an area where, you  
3 know, the program requires corrective actions. Then  
4 there have been at least one instance that I can pull  
5 from the top of my head where the ASR had caused some  
6 movement between buildings that caused like an  
7 elastomeric joint seal to need to be replaced. You  
8 know, the requirement was for there to be a joint  
9 seal there.

10 PARTICIPANT: Like a rubber joint.

11 MS. BUFORD: Like a rubber joint seal  
12 between, you know --

13 MS. CAPRA: Oh, okay.

14 MS. BUFORD: For seismic reasons in some  
15 areas, there are elastomeric joints.

16 MS. CAPRA: Okay.

17 MS. BUFORD: And because of the ASR issue  
18 -- And I recall in one area that the joint had come  
19 apart. That needed to get repaired. That was all  
20 just part of, you know, carrying out the program. So  
21 we've seen that the program not only monitors, but  
22 performs corrective actions in a timely and safe  
23 manner. That's an example.

24 MS. CAPRA: Thank you and I just had one

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1 more question. I'd love to communicate with you guys  
2 more, but I'm just -- when you talked about monitoring  
3 and the safety monitor -- it was like NextEra or  
4 somebody would do an inspection every three to six  
5 months for safety, I didn't hear that right.

6 MS. BUFORD: So the monitoring programs  
7 -- Well safety is an underlying basis for all of this.

8 MS. CAPRA: Right, right. I just got  
9 confused.

10 MS. BUFORD: Yes, so -- And I apologize  
11 if I was the one that caused that confusion. But the  
12 areas are monitored as often as every six months up  
13 to three years, depending on the -- what has been  
14 observed -- the ASR symptoms that have been observed  
15 to date. And those monitoring frequencies are  
16 subject to change if and when ASR becomes more severe  
17 in an area, it will be monitored more frequently.  
18 And we've verified that those monitoring frequencies  
19 are adequate to detect any sort of expansion that  
20 would cause the need for a corrective action. And  
21 you know six months is a really short frequency.

22 MS. CAPRA: I was going to say three  
23 years sounds like a long time.

24 MS. BUFORD: Well so three years is for

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1 the areas that are -- that the ASR severity is very  
2 low.

3 MS. CAPRA: Okay, okay.

4 MS. BUFORD: And it's the maximum time  
5 for any area where ASR's been detected. So those are  
6 areas where, you know, whether it's barely  
7 recognizable up to, you know --

8 MS. CAPRA: Right, like a Tier 1 or Stage  
9 1.

10 MS. BUFORD: Like a Tier 1, that's  
11 exactly right.

12 MS. CAPRA: Oh, okay. So a Tier 3 would  
13 be more like the six months?

14 MS. BUFORD: The six months. Tier 3--

15 MS. CAPRA: Got you.

16 MS. BUFORD: -- is every six months.

17 MS. CAPRA: Okay.

18 MS. BUFORD: Yes and Tier 2 is every 18  
19 months.

20 MS. CAPRA: Okay. Thank you for  
21 clarifying that. And who would be doing that  
22 monitoring, the NRC or NextEra:?

23 MS. BUFORD: NextEra is responsible for  
24 carrying out their program. That's why we're --

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1 That's a part of their license amendment. That's going  
2 to be a requirement for the remainder of the license.  
3 But the NRC does focused inspections on the program,  
4 so we'll continue to do those to make sure that there  
5 is an independent verification that the licensee is  
6 carrying out the program in accordance with their  
7 license.

8 MS. CAPRA: Okay. But those will be two  
9 separate things?

10 MS. BUFORD: Yes. Yes, us inspecting  
11 the program as they're carrying it out. We're doing  
12 it -- We're inspecting to make sure they're doing  
13 what their license requires.

14 MS. CAPRA: Okay. Okay, great.

15 MS. BUFORD: Yes.

16 MS. CAPRA: Thank you.

17 MR. KLUKAN: Thank you. All right, our  
18 last speaker. And if you would, just start with your  
19 name again. I'm sorry.

20 MR. WOODWARD: William Woodard, Durham,  
21 New Hampshire. I just had a follow-up question.  
22 What is -- well, what have we learned from Indian  
23 Head? The state of New York brought a law suit --

24 PARTICIPANT: Indian Point.

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1 MR. WOODWARD: Indian Point, excuse me.  
2 Indian Point, because there was a suspicion that the  
3 bolts were degraded. And so I know this is not  
4 related -- or maybe it is related to concrete. But  
5 I want to know what you've learned from the fact that  
6 a high percentage of the bolts were so degraded that  
7 they had to shut down Indian Point and repair them?  
8 But it took a lawsuit by the state of New York to get  
9 them to do that. So have we learned anything from  
10 that for New Hampshire?

11 MR. DONOGHUE: So I think you're  
12 referring to the baffle-former bolts. Right? Okay.  
13 I'll say something and then I'm going to hand the mic  
14 over. That issue is something that's now well enough  
15 known that the industry has taken some steps. The  
16 Indian Point specifics I don't recall. I wasn't part  
17 of that activity. But I mean as far as what we've  
18 learned as you know, how to address and correct  
19 material problems -- Is that -- I just want to make  
20 sure we're clear on the question.

21 PARTICIPANT: Maybe regular servicing of  
22 the bolts to see if there's a problem.

23 MR. DONOGHUE: Okay, so I know there's  
24 inspections that are conducted and service

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1 inspections that are conducted to make sure that those  
2 bolts -- the integrity of those bolts are  
3 satisfactory. Is there anything that you can add to  
4 that?

5 (Off-microphone comment.)

6 PARTICIPANT: Indian Point, my  
7 inspectors did -- we also inspected Indian Point.  
8 And you're referring to baffle-former bolts. They  
9 are bolts that hold these plates around the core.  
10 And we have -- we have requirements and commitments  
11 from the industry that they must examine the internals  
12 around the reactor. And indeed because of our  
13 oversight, these bolts were found at Indian Point and  
14 another plant to have more than expected head cracks.  
15 But that is the reason we have a program, that they  
16 need to examine these bolts. And when we found more  
17 that were cracked than expected, we expected the  
18 licensees to adjust their programs and to replace  
19 them.

20 So the state of New York, I think they  
21 did enter with an agreement, but that's not because  
22 of -- We have our requirements and I'm aware that  
23 there was an agreement with the state, but that's  
24 neither here nor there for us. And so what we've

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1 learned is that we need to ensure that our oversight  
2 continues and that are our requirements are met.  
3 That's probably our -- that's what we've learned.

4 MR. DONOGHE: Thank you. Thank you very  
5 much, Mel.

6 MR. WOODWARD:: I have one more question.  
7 What's Plan B? What's Plan B for ASR if in the future  
8 with the monitoring -- over the next 20 some years if  
9 we discover more ASR problems?

10 MR. DONOGHUE: Okay, so for Seabrook,  
11 part of the monitoring program is to monitor the other  
12 structures in the plant. And to monitor the  
13 progression and the existing ASR and if there's  
14 appearance of ASR in other parts of the plant. That's  
15 my understanding.

16 As far as the industry, I think -- Well  
17 an information notice was issued when this first came  
18 to light at Seabrook to tell the whole industry about  
19 it. So they have to be monitoring their plants. And  
20 if they -- if they find ASR, they're going to have to  
21 take some steps. But this is the only plant in the  
22 country that has ASR effect in its structures.

23 PARTICIPANT: Have we remediated? Is it  
24 possible to remediate?

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1 MR. DONOGHUE: Well I think Angie pointed  
2 out that there can be repairs that might be required  
3 to maintain the structural integrity and the ability  
4 for plants to perform their functions. So that's the  
5 extent of it. You can do repairs to make sure that  
6 the structures can do what they're intended to do.  
7 There's no magic potion that I'm aware of that, you  
8 know, you can use to get rid of the ASR. You just  
9 have to learn how to monitor it and deal with it.

10 MS. BUFORD: And I'll just add that you  
11 know, they're going to need to monitor ASR just like  
12 they're going to need to monitor every other aging  
13 effect through the extended operating period. And  
14 if there's something that they come across, whether  
15 it be ASR or anything else that is -- that challenges  
16 the ability for any structure or component to perform  
17 its function, they're required to act. You know, so  
18 it's one of, you know, a lot of lot things they need  
19 to look for. And this is just, you know, one more  
20 thing that Seabrook needs to look for that other  
21 plants don't.

22 PARTICIPANT: Thank you. That's  
23 reassuring.

24 MR. DONOGHUE: Thank you. Before Brett

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1 closes the meeting, I just want to say a few words.  
2 First of all, those of you who are still here, thank  
3 you for your perseverance. And for all of you that  
4 commented -- provided your comments, we really  
5 appreciate it. That's why we're here.

6 At the onset of the meeting, I said as  
7 clearly as I could, that we don't think we  
8 communicated our decision on when to issue these  
9 licensing actions clearly enough. So that's why  
10 we're here is to address that and to hear your  
11 concerns. I think we heard a wide range of concerns.  
12 We heard opinions, certainly on both sides, whether  
13 for or against the plant. But we heard concerns  
14 about the licensing actions that are before us that  
15 are the subject of the meeting.

16 We heard about other issues that were  
17 brought up. And we've accepted material. We've  
18 taken notes from the concerns that we've heard about.  
19 And the Agency is committed to address your concerns.  
20 We're committed to the safe operation of this and all  
21 facilities and the handling of all radioactive  
22 material across the country. And you know, that's  
23 our job. That's our central mission. So we're doing  
24 that. We're trying our best to communicate how we're

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1 doing that and to assure you as much as we can that  
2 we've achieving that mission. We'll answer your  
3 questions in other forums just like this as much as  
4 we can to alleviate your concerns.

5 Besides thanking you who participated in  
6 the meeting, that was the bulk of the meeting. That's  
7 why we're here. I do want to thank the law  
8 enforcement officials that are still here. Thank you  
9 very much for being here. I appreciate your  
10 attention. Maybe you learned about concrete because  
11 I certainly have in the last two years, a lot more  
12 than I did when I poured some in my backyard.

13 Okay, so there's going to be a transcript  
14 of the meeting. There's going to be a meeting  
15 summary. I think there was a slide up here that I  
16 almost blew by, but Justin stopped me, that had some  
17 links on it -- the documents that you can reference.  
18 And again, thank you for your participation. Brett.

19 MR. KLUKAN: So I don't have much more  
20 to add to that other than I would also like to  
21 specifically mention Andrea. She was the one manning  
22 the registration desk. Without her assistance, this  
23 meeting -- or her -- I shouldn't say assistance --  
24 without her hard work in planning for this meeting,

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1 this meeting would not have happened. So I just  
2 wanted to especially thank her while I have the  
3 microphone on.

4 And so thank you all for coming. I think  
5 we have feedback forms on the table. If not, they  
6 are located on the NRC website. We are always  
7 interested to know on how you think our meetings are  
8 going and what we can do to improve. And so with  
9 that, I'll say thank you very much.

10 (Whereupon, the above-entitled matter  
11 was concluded at 9:21 p.m.)

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