United States of America

NUCLEAR REGULATORY COMMISSION

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

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

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

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

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

The order of public speakers will be
determined in the order in which the yellow comment
cards are received. So, if you'd like to speak	onight, please complete and return one of those
yellow cards, which you can find at the table outside
of the meeting room, to the table.

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

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

I recognize, I would like to ask that we
keep the area in this front row clear. If you have
something that you would like to give to the NRC
staff, please hand it to me, and I will bring it up
to them. We'd like to keep, again, this space open.

Okay.

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

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

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

A few minor housekeeping matters. The bathrooms are just around the corner. The exits are
just through the doors in the back. While cameras are permitted, please try not to obstruct the view of other audience members. Be judicious with flash. And if you'd be so kind at this time to silence all of your cell phones or other mobile devices.

At this point I would like to announce that we have representatives from several elected, or from several offices tonight. We have representatives from Senator Jeanne Shaheen's office, Senator Maggie Hassan's office, Congressman Chris Pappas' office, Senator Ed Markey's office, Senator Elizabeth Warren's officer, and Congressman Seth Moulton.

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

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

MR. KLUKAN: This is Chris Ellms of
Governor Sununu's office. I apologize. I added your name to the lower part of my list, but not the upper part. Any other elected officials? Speaking into two microphones right now. Any -- Oh, one sec.

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

MR. KLUKAN: Thank you.

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

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

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

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

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

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

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

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

And as Brett said, you know, the reason
we're having this meeting is to communicate. Because
we realized that we had not adequately communicated
our plans to issue these things in January, which is
well ahead of the contemplated hearing on ASR later
this year.

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

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

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

We were able to get answers to the staff's
questions. And we were able to wrap up the review
at the end of the year. And we made our safety
conclusions, and don't see any safety concerns with issuing the amendment and the renewed license.

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

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

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

So, the hearing is not undermined by our actions issuing the amendment and the renewed license. The hearing is independent. The ASLB, the Board that reviews the contention is independent of the staff. They do their job after, and we can, you know, they'll do their job after we have done our job.
And if there's new information that needs to be considered, anything out, you know, an outcome from that hearing that we need to consider, we shall. And if there's action that needs to be taken on the license, that action will be taken.

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

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

So, here's the agenda for tonight's meeting. So, first we're going to talk about the license amendment and the license renewal application at a high level. Okay. We'll give you an overview of those things.
We'll talk about the highlights of the conclusions for the staff's technical review and the safety findings that are in the safety evaluations related to the license amendment and the renewed license, the license renewal that we plan to issue.

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

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

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

We can, again, we'll talk about the safety evaluation, but not any new information. And we're not going to be able to speculate on what the Board may or may not conclude, based on any information that has been or will be presented to the
Board. That's a separate activity from our safety review.

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

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

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

And as you'll see on the slide we have a timeline that illustrates milestones related to the license renewal application. And those are shown along the top of the arrow. And milestones related to the ASR license amendment, which are shown along the bottom of the arrow.
As you can see, in 2010 NextEra submitted the license renewal application to the NRC for review. But at that time ASR had not yet been identified at Seabrook.

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

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

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

Also in September 2018 the NRC staff completed its safety evaluation report for the license renewal application, which found that with
the information from the ASR license amendment request, the license renewal application will now meet all of the NRC safety requirements for the proposed renewed license.

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

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

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

This will not impact the upcoming hearing on the license amendment request. We anticipate that the hearing on the ASR license amendment will occur
in mid to late 2019, several months after the final safety evaluation for the ASR license amendment is issued.

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

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

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

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

Since 2010 micro-cracking due to ASR has been identified in multiple Seabrook concrete structures. Additionally, the cumulative impact of
ASR expansion has led to instances of deformation of some Seabrook structures.

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

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

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

Generally speaking, the acceptance criteria represent a level of expansion in Seabrook concrete structures that would not negatively affect
the intended function of the structures. NextEra would compare the condition of Seabrook's concrete structures to these acceptance criteria every six months to three years, with the exact time period dependent on the severity of the ASR.

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

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

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

NextEra developed two plant specific aging management programs, or AMPS, for one,
monitoring ASR, and two, monitoring ASR effects on site structures. These are called the ASR monitoring AMP, and the Building Deformation AMP. And they're sufficient to manage ASR degradation for the period of extended operation.

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

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

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

I'm now going to turn the presentation over the Justin Poole, the project manager for the Seabrook ASR review, who will discuss the timing of
MR. POOLE: Thanks, Angie. As Joe mentioned, and Eric as well in his opening remarks, there's a hearing scheduled before the Atomic Safety and Licensing Board on the ASR license amendment.

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

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

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

After receiving the Committee's conclusion the NRC staff reevaluated the question of when to issue the license amendment and the renewed license. The NRC staff determined that issuance
before the hearing was appropriate because, one, the
NRC staff had completed its safety review for the
amendment and the license renewal, and had not
identified any concerns or safety concerns with
issuing the amendment and the renewed license prior
to the completion of the hearing.

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

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

If changes to the Seabrook license are
required as a result of the hearing process then the
NRC staff will implement those changes at the
conclusion of the hearing process. I'll now turn the
presentation back over to Joe Donoghue.
MR. DONOGHUE: Thanks, Justin. Getting me again, and I'll be brief. Thanks again for all of you being here. As Justin said, you know, the outcome of the hearing was not affected by our decision to go forward with the licensing actions.

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

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

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

MR. KLUKAN: Thanks, Joe. Joe, thank you. So, just want to remind people before we get started again. I'm going to move this closer to
myself here. That there are still a couple of seats in the front.

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

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

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

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

We are going to have a three minute time limit on speakers. The reason I do that is to make
sure we accommodate everyone who expressed a desire
to speak tonight.

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

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

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

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

MR. KLUKAN: No. I'm sorry. But you're
going to, members of the public and elected officials will be speaking from that microphone right there.

Okay.

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

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

(Off-microphone comment.)

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

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

Okay. For, one last thing before we start. For your awareness, the meeting tonight is being transcribed. Because of that, I would ask two
things. One, again, not to speak over each other.

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

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

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

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

And I thank the NRC for agreeing to
tonight's public forum. This public hearing will
provide residents with the important opportunity to
make their voices heard publicly.

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

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

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

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

I also express my appreciation to the employees at Seabrook who live in our seacoast communities, and work tirelessly to ensure its safe
A robust and transparent public process is critical to ensuring that community members and stakeholders are able to understand the NRC's review process for Seabrook, and share their concerns directly with NRC staff.

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

PARTICIPANT: Did you say your name?

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

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

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

From the Congressman. I want to thank NRC for hosting this public meeting. Opportunities
for the public to contribute comments to the
Commission before a final determination is made are
important.

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

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

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

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

Yet, another opportunity will also occur
when the Nuclear Regulatory Commission's Atomic
Safety and Licensing Board holds an evidentiary hearing on concerns over whether NextEra is using adequate testing to determine their monitoring, acceptance criteria, inspections intervals at Seabrook.

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

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

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

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

I strongly urge the Atomic Safety and
Licensing Board to hold the evidentiary hearing before moving forward on the license amendment.
Thank you.

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

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

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

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

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

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operating condition.

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

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

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

Any additional requests for delay in this already lengthy and extensive public review process is without merit, and put the future of this critical
resource in jeopardy. Sincerely, Christopher T. Sununu, Governor.

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

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

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

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

I have fought for other sources of power. But, in order to have a wise energy plan for not only
New Hampshire, but New England, we need to maintain existing sources of power.

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

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

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

There’s been an 18 month period with no outages recently. Seabrook has a good safety record.
And certainly they have, under both the prior ownership, and now NextEra, been a good corporate citizen, and a good environmental citizen here on the seacoast.

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

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

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

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

However, my major point of contention at this time is a concern with the regard to the possibility of safely and timely evacuating the
seacoast, this area, in case of any kind of an
emergency at Seabrook.

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

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

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

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

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

I come before you today to speak in favor
of the NRC granting a license amendment to Seabrook
Station, as well as asking favorable consideration of
the 20 year license extension sought by Seabrook
Station.

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

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

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

I am not a scientist, but I can satisfy,
I am satisfied that the long years of work on ASR,
and the letter issued by the Advisory Committee on
Reactor Safeguard should lead to the license
amendment sought by NextEra.
I would also like to express our strong support for the license extension of 20 years sought by NextEra. This process began with the presentation to the Seabrook Board of Selectmen back in 2010 timeframe, with consistent communication between NextEra and the Town of Seabrook, and the Town Manager's Office since then.

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

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

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

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

MR. KLUKAN: You can just --

MR. KHAN: Where I --

MR. KLUKAN: Thank you very much. Okay.

Next up we have Michael Ossing, the Marlborough City Councilor at Large.

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

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

I have three points I would like to make to reinforce why the license amendment for ASR and
license renewal should be issued now.

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

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

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

Third, monitoring program. The strength and backbone of the nuclear industry is defense in depth. The ASR monitoring program is another example of defense in depth. The ASR monitoring programs
that are part of the license renewal all have acceptance criteria that, should movement in concrete be observed, there are actions to take.

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

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

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

MR. KLUKAN: Thank you very much. All right. At this time that exhausts the list of individuals, or elected officials or their representatives, who notified me prior to the meeting.
that they would like to speak. However, are there any other elected officials or representatives thereof who would like to give a prepared statement at this time? Going once, twice, okay.

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

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

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

And then, at that final time, when your time is up, it will click again. Don't be alarmed.
However, I would ask that you please politely conclude your remarks, so that we can move on to the NRC's response, and then to the next speaker.

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

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

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

And I founded it because my family's in the nursing home profession. And I was told by the former Executive Director of the Nuclear Regulatory Commission to leave a paralyzed resident behind in our nursing home, and give her a bottle of potassium
iodide to drink if we couldn't move her. So, that meant special needs people are expandable. And that came from the Executive Director of the NRC.

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

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

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

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

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

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

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

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

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

MR. COMLEY: I'm done?

MR. KLUKAN: You're done.

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

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

MR. COMLEY: Okay. Thank you.

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

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

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

I did not fully appreciate the benefits
of nuclear power compared to renewables with battery storage. At A123 Systems we built and tested 53 foot trailers filled with 900,000 battery cells, with a capacity of one half megawatt hour.

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

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

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

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

The proposed energy, Clear River Energy Center in northern Rhode Island, is the replacement
for Pilgrim Nuclear Plant, which provides reliable power, but is being prematurely closed in 2019. To be clear, this is a natural gas plant.

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

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

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

MR. KLUKAN: Thank you very much.

(Applause.)

MR. KLUKAN: That was impressive. Rarely do people hit it right on the mark. So, and again, all joking aside, I don't want to cut off anyone tonight. That's not my ambition here. It's
really, I have one primary duty. And that's to make
sure whoever came here with a desire to speak tonight
gets an opportunity to do so.

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

Please.

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

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

We cannot afford to throw this 80 percent
of clean energy away. We need to reduce emissions
and continue to provide the safest, most cost
effective clean technology by extending Seabrook's NRC license.

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

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

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

I hope to see New England use clean, proven nuclear energy from Seabrook Station. Let's continue its safe operation to 2050 and beyond. Let's not make the same mistake of shutting down nuclear in favor of fossil fuels, which caused climate change in the first place. I have a copy of this if
MR. KLUKAN: Yes, I'll take it from you.

Thank you. Next up we have Mr. Dennis Beaudoin.

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

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

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

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

That's just the electrical workers. I don't know the numbers off the top of my head, but
every 18 months the maintenance of the plant generates
millions upon millions of dollars for the local
economy through New Hampshire construction workers.

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

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

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

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

But what was really surprising was that
statistics show that worldwide, nuclear is one of the
safest forms of energy. And it's dependable. It
runs all day, every day. And needs only a small
amount of fuel every year and a half. Nuclear should be a big part of the world getting to zero carbon emissions.

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

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

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

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

MS. ANGWIN: Okay. I have a copy of this afterwards for you.

MR. KLUKAN: Okay. Thank you.

MS. ANGWIN: Okay. My name is Meredith Angwin. I'm a chemist who has worked in many aspects of the power industry. I performed and supervised
research on reducing pollution from gas turbines, from coal power plants, and from geothermal plants, as well as research on reducing corrosion in gas pipelines, hydropower penstocks, and nuclear plants.

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

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

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

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

And it's usually described as NOX, N-O-X, which is the precursor to photochemical smog, and
directly forms acid rain. It is impossible to prevent NOX formation in a high temperature combustor such as a gas turbine. And it cannot be entirely cleaned up.

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

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

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

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

MR. KLUKAN: Thank you very much. Next we will have Christopher Nord. Christopher Nord.
MR. NORD: I'm Chris Nord. I'm a Board Member of the C-10 Research and Education Foundation, and the Chair of the Committee that's working on the opposition to the license amendment request that Seabrook has filed.

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

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

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

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

NRC Commission upheld the admissibility of C-10's five contentions refigured to one in 2018.
In this ruling NRC staff argued in support of the admissibility of C-10 contentions. NRC regulations require that the adjudicatory hearings must be completed before licensing action is taken. However, staff can move to issue a license amendment before completion of an adjudicatory hearing if it would pose no significant hazards.

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

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

Because of all of this, as of tonight we have filed an emergency petition with the Nuclear Regulatory Commissioners to hold the license amendment request in abeyance, and by extension the license renewal application, until there is a proper
review of NRC's determination of no significant hazards to ensure that licensing actions do not take place while reviewing the no significant hazards, give due recognition to the significance, complexity, and lack of adequately rigorous study of ASR, which is reflected in the license amendment request from NextEra, and provide guidance and instruction to staff for establishment of significantly more rigorous and sophisticated state of the art methods.

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

MR. KLUKAN: Thank you, Mr. Nord.

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

MR. KLUKAN: Thank you.

MR. NORD: Thank you.

(Applause.)

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

MR. DEGON: Degon.

MR. KLUKAN: Degon. Please.

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

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

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

Nothing in nuclear power is taken lightly. Everything is taken very, very seriously.
I appreciate the Nuclear Regulatory Commission, because they keep us in check. Department of Energy keeps their people in check. There's always checks and balances. The ASR issue, nine years' worth of study, I think it's fair to say that that's a pretty good study.

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

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

MR. KLUKAN: Thank you.

(Applause.)

MR. KLUKAN: All right. Just to give you a status update, I have 16 people who would still like to speak this evening. Assuming we go through
them at the pace we are, there will be some time at
the end.

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

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

So next up we have Grace Pearson. Grace
Pearson?

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

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

But soon after I settled in, I walked to
the launch at least one a day, paying attention to
the plant, listening, and looking for venting,
wondering what was being emitted and how often, and
if there were any adverse impacts to the water at the
launch area.

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

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

I found five of these models online, each
have their own advantages and limitations. And if
EPA Region I has access to any of them, I would think
New Hampshire DEP should as well.
I am particularly concerned about any predicted ground level impacts during inversion conditions and calms, both of which reflect poor dispersion.

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

During my 12 years employment at New Jersey DEP in the Bureau of Air Quality Evaluation, we occasionally reviewed computer modeling results for cooling towers. The one for which I still have the impact analysis is Oyster Creek in Forked River, New Jersey, which was retired September 18th, 2018, almost ten years ahead of schedule due to New Jersey=s revised water rules that required new cooling towers at a prohibitive cost. The plant had been operating commercially since December 1st, 1969.

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

Plume abatement was the most effective using a hybrid, wet/dry cooling system such that when...
the resultant mixture left the tower, it was not saturated with water vapor as would be the case with wet cooling only.

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

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

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

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

I think I have a unique perspective on Seabrook Station. I have a bachelor’s degree in health physics and a master’s in radiological sciences. I became a certified health physicist back in 1992.
I also worked at the Seabrook Plant for more than 30 years. I know the people there, the processes, the programs, and the culture at the station. Since last May, I have retired, and I’m no longer at the plant, no longer working for Seabrook Station.

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

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

As a resident of Newburyport, I hope the Seabrook Station can continue to operate for many more years, and I support prompt license renewal.

Thank you for the opportunity to speak tonight.
MR. KLUKAN: Thank you.

(Applause.)

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

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

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

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

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

After reviewing the data myself, and
modeling dozens of grid scenarios, I can confirm these statements are accurate, especially when it comes to our local grid here in New England.

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

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

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

An article in the Boston Globe 17 years later quoted Lori Smith, the town manager, saying, AI
have yet to meet anyone happy that Maine Yankee is gone. All these years later, we’re still feeling the loss of jobs, the economic downturn, and the huge tax increases.

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

MR. KLUKAN: Thank you very much.

(Applause.)

MR. KLUKAN: Next we have Daniel Duarte.

MR. DUARTE: Thank you very much. My name is Daniel Duarte. I just came over here tonight to show my concern about the power plant. My major concern is about the location. And I have a question. I wanted to know if the location is in danger for a flood in the next 10, 20 years, and also if there’s a flood in the location, if we have waste, nuclear waste storage, and if it will be a problem for the environment.

And my other concern is if there’s an EMP attack or a power grid loss, if the nuclear reactor will be in danger.

I have a few questions, yes or no. I’d
like to give one of you each. If you possible can
answer and give it back to me, I appreciate it.

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

MR. DUARTE: Thank you very much.

MR. DONOHUE: We didn’t bring the
experts here related to flooding hazards or EMP, but
I do know that that’s considered as part of the review
of the safe operation of the plant. And this had to be evaluated and is part of the license now.

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

What were your other yes or no questions?

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

MR. DONOHUE: The plants are designed with safety systems to address a loss of electricity to cool them down.

MR. DUARTE: Thank you. If we have a EMP
attack, how long can we cool down the facility?

MR. DONOGHUE: I don’t think we -- I don’t have expertise in there. I don’t have an expert here on that. But I think that anything that causes a loss of electrical supply to the plant has systems to provide electricity to replace any lost sources that allow cool down.

MR. DUARTE: Do you know for how long?

MR. DONOGHUE: Off hand, I don’t know.

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

MR. DONOGHUE: I don’t know if this has come up in other meetings that I haven’t been a party to. So I, myself, can’t answer that question. I wonder if this came up in any of the annual assessment meetings maybe. No.

MR. DUARTE: Thank you.

MR. DONOGHUE: I don’t think so.

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

MR. DONOGHUE: I believe the evacuation
plan is provided. But --

MR. DUARTE: Thank you, sir.

MR. DONOGHUE: -- I=m not sure of anything more than that.

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

MR. DONOGHUE: Again, this is part of the emergency plan. I don=t know the details of that myself. And that subject is, you know, outside the scope of what we want to talk about tonight.

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

MR. DONOGHUE: I don=t know the risk level, but all plants are evaluated for flood hazards wherever they happen to be located.

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

MR. DONOGHUE: Thank you.

MR. KLUKAN: So just to clarify, you heard Joe talk about this. I=ll echo Joe. The
purpose of the meeting tonight is to discuss specifically ASR in the license amendment process.

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

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

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

So again, we will write those down, Justin is writing those down right now. We're going to take those back, give those to the region, and we'll make sure that they're addressed preemptively,
if you will, at the annual Assessment Meeting which
will be scheduled late in April.

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

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

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

We were originally given approval,
standing by the ASLB. But the Nuclear Regulatory
Commission overruled that and denied us a hearing.
And so you can imagine we=re dismayed to hear that
now you want to issue the new license before we have
a hearing with the remaining intervenors that are still looking to represent the public interest in a formal hearing.

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

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

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

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

But I would mention that nuclear is not carbon-free. There have been studies shown, when you
look at the total life cycle of nuclear, particularly the fuel fabrication, the fuel production, it does require a lot of energy to produce that. And most of that comes from fossil fuels.

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

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

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

(Applause.)
MR. DONOGHUE: Doug, right?

MR. BOGEN: Yeah.

MR. DONOGHUE: So it=s a good question.

Because, as I said in my opening remarks, originally we planned to issue it after the hearing. Besides, you know the regulations allow it.

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

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

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

As I said earlier, the outcome of the hearing could result in the staff having to go back and take action to change the license further. If
there's information that's presented to the Board, and the Board makes a finding, and we have to implement something, we'll do that. We can go as far as issuing an order to the plant to do that.

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

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

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

MR. BOGEN: It still doesn't answer my question of what difference it would make whether you waited six months. After nine years, you'd think you could wait another six months.
Again, it’s 11 years before the license renewal runs out, the existing license runs out. We are not going to freeze in the dark, the lights aren’t going to go out, you aren’t going to lose your jobs any time soon. We have another decade of plant operations.

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

MR. KLUKAN: Thank you.

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

If required, you know, as an outcome of this hearing, if need be, we have to assign people back to redo the safety evaluation and put other
requirements into place, we'll do that. But we're trying to be as efficient as we can.

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

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

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

MR. BOGEN: Okay. Thank you.

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

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

I speak here tonight representing the
Chamber in support of the renewal of the license. My experience with Seabrook Station, believe it or not, goes back over 35 years. I was actually the employment manager from 1982 to 1988. So I saw it through construction into the operations of the plant.

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

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

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

It would be very difficult for us to lose Seabrook Station and continue to convince businesses
and companies all around the country why it would be
a good reason to move to the seacoast. So we need
not only Seabrook Station, but we need electricity
behind Seabrook Station.

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

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

So I=mn not an engineer, I can=t speak to
the technical part of this hearing, but I can tell
you that the power plant has been a very effective
member of our community and one that we=re proud of.

Thank you.

MR. KLUKAN: Thank you.

(Applause.)

MR. KLUKAN: Next we have Patricia
Torkildson. Torkildson. Sorry, again I apologize.

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

I came here tonight not to oppose the license extension for Seabrook but to ask that the license extension not be granted at this time. Wait until after the issues with the concrete are fully vetted with the public. Hold the public hearing with the Atomic Safety and Licensing Board that was promised for this coming summer. Allow the issue of the degraded concrete to be fully discussed with the public at that meeting and allow time for the public to digest and respond to what we learn.

When it comes to nuclear power, safety needs to be a major concern for the government. When a nuclear power plant is deteriorating due to ASR, the government=s concern should be even greater. This concern is not shown when the government appears
to be rushing to extend the license of a plant that
is already degraded. With 11 years left on the
license, on the plant’s license, what’s the rush?

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

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

MR. KLUKAN: Thank you.

(Applause.)

MR. KLUKAN: Next we have Kinsey Boehl.

Kinsey Boehl?

MR. BOEHL: Good evening, and thank you
for the opportunity to speak tonight. Nuclear power
is an important part of environment, excuse me,
environmental stewardship in the nation. Carbon
emissions are a global problem. Seabrook Station
powers more than 1.4 million homes and businesses and
reduces carbon emissions by four million tons a year. Seabrook also provides a large economic incentive to the region. It provides good jobs and highly trained and well educated employees that live in and around the seacoast.

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

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

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

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

MR. KLUKAN: Thank you very much.

(Applause.)
MR. KLUKAN: Next we have Herb Moyer.

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

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

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

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

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

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

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

If you will check the Hampton Falls Police Records, you will find some 300 DWI arrests for plant workers going to the plant and coming from
the plant. So there was a lot of drinking onsite at the plant. That’s a matter of public record.

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

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

MR. KLUKAN: Thank you very much.

MR. MOYER: Thank you.

(Applause.)

MR. KLUKAN: Next we have Cathryn Capra.

Cathryn Capra?

MS. CAPRA: Hi, I’m Cathryn Capra. I’m from Georgetown, Massachusetts. And I’m very concerned about the safety of the plant. I heard many words that were alarming to me and saw some on the slide and from the engineer, progressive, it’s
causing cracking, it cannot be reversed, causing degradation.

And then I read that it can be managed or corrected. And I don’t know how you can do that with something that is irreversible and progressive, what you mean by that and what you would do.

MR. DONOGHUE: So I’ll take that as a question.

MS. CAPRA: Yeah.

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

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

Correcting or reversing is not B—it’s the kind of phenomena you can’t do that. So this
monitoring has to stay in place. And as I said earlier, that’s why this monitoring program is so important and why it should be part -- and we think it will be put into the license, okay.

Is there anything you can add to that, Angie?

MS. BUFORD: Sorry, I haven’t talked in a while, so my throat’s hoarse again. But I just wanted to say that ASR is indeed a degradation mechanism. It’s an aging effect along with concrete.

I would say there are a multitude of aging effects that affect concrete that are factored into the concrete design codes when concrete’s designed. The American Concrete Institute applied for safety factors that account for all types of degradation.

Cracking occurs in all concrete over time as it ages.

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

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

MR. KLUKAN: I stopped the clock.

Normally I --

MS. CAPRA: Oh, okay.

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

MS. CAPRA: Okay.

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

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

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

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

MS. BUFORD: So part of our safety
evaluation in the license amendment request was to
look at their monitoring program to determine, for
each structure, what are they monitoring, and what
are the acceptance criteria, and how did they come to
those?

So their monitor B-

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

MR. KLUKAN: Sure.

MS. CAPRA: Thank you.

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

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

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

If they got to those limits, they would
need to, just like any other issue that would come
up, they would need to assess the issue and determine
-B and the NRC would concurrently, through our
oversight process, determine whether they could
continue to be safely operated.

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

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

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

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

And also, was the testing that was done,
was it done on actual pieces of concrete from the
plant when it was evaluated for ASR?

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

ASR at Seabrook is a very slow progressing B-

MS. CAPRA: Right, right.

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

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

MS. CAPRA: Okay, thank you.

So basically, the bottom line though is it was not actual concrete taken from the actual
plant. It used accelerants, and it was from a similar area. Is that correct?

MS. BUFORD: That=s correct.

MS. CAPRA: Okay, thank you so much.

MR. KLUKAN: Thank you.

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

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

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

I have several questions. One is are you saying that NextEra will be monitoring the ASR itself? If so, this is of great concern. I think there should be independent monitoring of the ASR. It=s kind of like the fox guarding the hen house.
It also sounds like you’ve already made a decision, so I’m wondering whether our input tonight will have any effect on the licensing. And can you better explain who actually makes the final decision on the license? Is it the results of the hearing, or your conclusion. I was a little confused about that tonight.

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

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

MR. KLUKAN: Thank you.

MR. DONOGHUE: All right, thanks. I’ll try to get to all of them. The program in place, that’s already in place to monitor ASR is inspected by the NRC. So we’re watching, we have been, and we continue to do inspections. We have residents on site who watch and inspect all of the activities of
the plant. And this will be another inspection
activity that will be included.

MS. YOUNG: And they'll be there going
forward as well?

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

I think the final decision, the
Commission delegated the license renewal to the
Office of Nuclear Reactor Regulation, so it's
management at the office level, not the Commission
itself.

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

MS. YOUNG: Well, that's meaning you guys
or somebody else?

MR. DONOGHUE: Actually, my boss. But -
MS. YOUNG: Your boss?

MR. DONOGHUE: Yeah, yeah.

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

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

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

Link to the B- of the extension. So in the regulations, the NRC regulations for renewed licenses were put in place. And there=s a lot of background to those where the Commission considered what made sense. And what made sense was an extension
no longer than 20 years. That seemed reasonable.

I think it touches on the things you talked about. Things could change over some time.

So some practical things, without getting into a lot of technical detail are that, you know, the original license made some assumptions that went out to 40 years.

To go beyond those 40 years, there’s new information that’s needed. There’s aging mechanisms, besides concrete, that affect other things besides concrete that have to be accounted for. And the plant has to demonstrate that they can put programs in place to support that 20-year interval. And we won’t re-license beyond that interval.

So, you know, and there are some plants now that are coming in for a subsequent license renewal. But we won’t go, you know, that 20 years is the most we’ll extend at any one time, all right.

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

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

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

MS. YOUNG: You got everything, yes.

MR. DONOGHUE: Okay.

MR. KLUKAN: Thank you very much.

Okay, next we have Linda Cooper. Linda Cooper?

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

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

MR. DONOGHUE: Okay, so thanks for your
questions. Just to make sure I got them, the
similarity of the test specimens that are concrete,
I think Angie addressed that, but she can give you a
little bit more detail. But the other new question,
I think, for tonight --

   MS. COOPER: The rebar?

   MR. DONOGHUE: -- yeah, yeah. There=s

   MS. COOPER: Yeah B-

   MR. DONOGHUE: Does ASR affect the

   rebar?

   MS. COOPER: It=s going to affect the

   rebar. And is that part of the monitoring?

   MR. DONOGHUE: Right. And I don=t know

   the answer to that. And I=m wondering if Angie can

   shed light on it.

   MS. BUFORD: Okay, so I wanted to speak

   high level to the representativeness that the staff

   found between the test specimens and Seabrook.

   Because that=s a key component of the hearing that=s

   going to be taking place. And so what we can say is,

   it really needs to be limited to what=s available in

   the safety evaluation.

   But I will just say that the staff found
that the concrete was built to the same specs as
Seabrook in terms of reinforcement and size. And it
was tested to loadings that are part of the Seabrook
design.

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

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

(Off-microphone comments.)

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

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

There were multiple cores taken at
Seabrook that showed that there was no corrosion issue
for rebar in multiple cores, on the order of dozens, on different areas of the site. And that makes sense, because of the alkaline nature of the reaction would actually cause it to be a higher pH area which would be less likely to have corrosion.

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

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

And as far as ASR breaking down rebar, that’s not known to occur.

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

MS. BUFORD: So if something I’m trying to think of what something might happen with rebar. So what I can say is that what -- part of the testing was to look at was rebar anchorage to make sure that the specimens in the testing program were
able to maintain the reinforcement length between the rebar. And so when they tested the specimens, they found that the rebar didn’t, so to speak, break apart which is something that you would look at in the testing.

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

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

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

MS. COOPER: Okay. All right, thank you very much.
MR. KLUKAN: Thank you.

Next up we have Jay Gustaferro, Gustaferro, from the Massachusetts Lobstermen=s Association.

MR. GUSTAFERRO: Thanks, Jay Gustaferro.

I want to use this moment here, I=m going to beg your forgiveness to move off from ASR for a quick moment and make this kind of a teaching moment from my friends and neighbors in the seacoast here.

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

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

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

It=s so that they can borrow more money on that decrepit electric tea kettle out here. They want to borrow as much money as they can as quickly
as they can, because they know, the people with the
money, what a piece of crap it is. And I’m sure that
all the regulators know that also. But that’s for
another thing.

So I just wanted to, you know, those of
you who live in this community, don’t be too quick to
be supporting this industry and these guys. And ask
yourself why, why has there been such a push to
support it? What’s the rush? That’s the rush, so
they can get as much out of that thing as they can,
and then get the hell out of Dodge with their money.

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

And maybe just a little plea of humanity
for you guys, since I’ve spent the last two minutes
yelling at you or around you, there was a gentleman
from my community. I think his name was McLinnan
(phone), he was the only NRC commissioner up to
that point who ever voted against a power plant.
And go back and read some of his testimony for why he objected to Seabrook. It was kind of a landmark thing that he actually objected. And of course, you know what happened to him. They ran him out of town on a rail. But I got to know him many decades ago. And he always told me slept better.

I guess that’s all for this evening.

Thank you all, and don’t be so quick to believe it. You know, common sense is uncommon. Think about the why.

MR. KLUKAN: Thank you.

(Appause.)

MR. KLUKAN: Next up we have William Woodward.

MR. WOODWARD: Woodward.


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

The long view takes us back to the resistance to situating a nuclear power plant right here. One of the objections was you don’t have an
answer to what you’re going to do with the spent fuel.
I still haven’t heard the answer.

Why aren’t we talking about that tonight.

There’s a national program to ship it to Native American lands in New Mexico and Texas. But that’s very, very dangerous. So that would be something to look into with NISC, which is an organization pointing out the flaws in getting rid of nuclear waste.

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

Another thing we could look at in the big picture would be the state of Maine. Until Governor LePage came along, there was a pilot program to have offshore wind replace all of the nuclears on the east coast. It’s actually doable. They were set back by LePage. And now Massachusetts has caught up, and I understand they have several plants going now.

Investors believe that this is the future.

My university is going to 50 percent renewables by 2030 and 100 percent renewables by 2050. Why don’t we have scientists here talking about, climate scientists, talking about what we need to do
over the next 30 to 50 years.

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

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

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

We've got pediatric cancer, not only here on the seacoast but around every reactor in the country. There's data on that. Why don't we have
that data? Why don't we discuss how many kids have
to get cancer to support this industry?

    Thank you for your time.

MR. KLUKAN: Thank you.

(Applause.)

MR. KLUKAN: Okay. Next we have Joe

Casey, Joe Casey.

(Off-microphone comments)

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

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

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

MR. KLUKAN: Go through them and then B-

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

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

I would like to know if you say, Angie,
that there were cores taken from the concrete, dozens of them, why were not those cores or some similar cores used to do the ASR evaluation?

I'd like to know what the stage of degradation of all the concrete structures are at the plant. And how was that modeled if you didn't take concrete from the plant itself to do that?

I'd like to know why the second structure that was never turned into a reactor -- we only have. There are two structures there, one was used, why you weren't testing that structure instead, because it has the same kind of concrete.

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

We also talked a little bit, some people here, about sea water intrusion. I'm concerned about that, whether calculations of sea water intrusion, that we know provides additional alkali for the ASR reaction, was taken into account. Because we know that there will be chronic inundation of the seacoast
over time due to sea level rise.

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

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

So one of the things that we=ve been trying to do is to know what our exposure is. We know that there is some radiation release during regular maintenance activities. We wonder about the ASR and whether or not there=s additional radiation
being released as a result of the ASR. And we would like to know, in our communities, what our real time exposure is to radiation. We would like to have real time radiation monitors in the seacoast outside of the plant so the communities know what their exposure is.

MR. KLUKAN: Thank you.

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

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

MR. DONOGHUE: Huh?

MS. MESSMER: I got them all at once.

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

MS. MESSMER: Okay.

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

In order to relicense the plant, the
licensing basis of the plant needs to include the
programs B-

MS. MESSMER: I understand.

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

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

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

MR. DONOGHUE: Oh, I see, okay.

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

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

Issuing the license amendment, that=s
what the contention is on, the subject of the hearing
is the license amendment. So, you know, we’d still
be having a similar question, right, we’d still be
taking an action before the hearing. So the renewal
B-

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

(Simultaneous speaking)

MR. DONOGHUE: Go ahead.

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

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

MS. MESSMER: Somebody mentioned an April
assessment meeting.

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

MR. DONOGHUE: Oh, the annual assessment
meeting for the plant, the Region I. So again, I’m
going to say again, the safety evaluation is complete.
It’s been a long review, both the license renewal itself and the license amendment, relatively long compared to other similar actions.

And we find there’s no safety concern from what we’ve looked at. So we’re ready to issue the actions. Those don’t undermine the hearing. So the hearing can progress. And any outcome of that hearing, if need be, we could go back and change the license in this area, including up to ordering the plant to do something.

Did you have something to add?

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

Now, that evaluation methodology in those monitoring programs form the basis for the aging management programs that are being credited in the license renewal application. So there’s the connection right there. And so they cannot be decoupled.
So the license amendment has to be approved to get those things into the licensing basis for the plant and update the licensing basis so that that new licensing basis, updated licensing basis, can be renewed for the plant.

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

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

MS. MESSMER: That’s what I’m asking.

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

MS. MESSMER: I know. But I’m saying, why can’t you just amend the license to address the ASR through the regular process of allowing us to have a public comment period and then address the license extension later on?

MR. OESTERLE: That could be done. But we are following our normal process where we evaluate what was requested of us, come to our safety conclusion and, in addition, this is not part of the normal process, but because ASR was such an important
issue for Seabrook, and for the NRC, and for the Advisory Committee on Reactor Safeguards, they also wanted to look at what was done by the Applicant and the staff=s review.

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

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

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

MR. DONOGHUE: So the next, I think, three or four questions you had, and I=m going to try to, in shorthand, repeat them back to make sure we=re getting them all. I warned her ahead of time I=m tossing them to Angie, because they=re more
The concrete cores that were taken at the plant and how they were considered in evaluating the effects of ASR, what stage of degradation various structures are in, just from listening, I know a little bit about that. But I'm not going to waste time, so I'll let Angie try to address that one.

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

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

MR. DONOGHUE: Oh, the --

MS. MESSMER: -- unfinished.

MR. DONOGHUE: Okay, I --

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

MR. DONOGHUE: Okay, okay.

MS. MESSMER: -- theoretically, hopefully, probably is. Why wouldn't you have tested the concrete on site in that second reactor vessel
that was never employed instead of taking concrete
from some other place and trying to model it?

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

And then the slow progression that=s been
observed --

MS. MESSMER: And whether it=s been
calculated out.

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

MS. BUFORD: Okay, so the first question
was when you say why weren=t cores used to do the ASR
evaluation, you=re talking about when I mentioned
that when they took cores, and they looked at the
rebar, into the condition of that.

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

MS. MESSMER: Right.

MS. BUFORD: So are you asking why didn=t
they do, like, a petrographic analysis of those or B-

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

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

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

You know, there’s really not a lot of
value added. And then doing a petrographic to then
confirm the presence of ASR when it was already
evident, from just visual observation, there=s no strength-type characteristics that can be obtained through a petrographic examination. That=s just to determine presence of or lack of ASR.

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

MS. BUFORD: Okay.

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

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

So any data that you get from that, from the material testing, it=s really not applicable to structural behavior for actual in situ structures.
And that wouldn’t have been, well, I don’t know that, you know, that was an initial pushback that staff had that, you know, we questioned. How are you going to address ASR for the inner structural capacity.

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

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

So a piece of concrete by itself, a core, is going to behave a certain way if it experiences ASR, or it gets loaded, that is shown to be different than a wall, or a floor, or something. And that’s why large scale testing, those words large scale are
important where it=s the material interacting with
the other components that make a structure that=s
important to evaluate. Does that make --

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

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

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

And so that’s why, you know, they could have taken more petrographic analysis, but I think that the reason they didn’t is because they had already identified that ASR was to a point in those areas that they needed to do through-wall expansion measurements.

So the second question here is what’s the current state of the structures?

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

MS. BUFORD: It is in the SE. And I don’t want to misspeak, so I would, and maybe I couldn’t even find the exact number. There’s a fair amount of each. I think that, you know what, I’m going to ask you to go back to the SE, because I don’t --

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

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

MS. MESSMER: Yeah.

MS. BUFORD: Stage 3 are the more advanced.
MS. MESSMER: Any Stage 4?

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

And the amount of rigorous analysis that was done, all the Stage 3s have very, very rigorous, you know, volumes of analysis, and computered modeling, and that. And as the ASR is less severe, the analyses are a little bit, you know, they were able to be a little bit B- they didn’t have to do a full ANSI model for every structure.

MS. MESSMER: Yes.

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

So that, let’s see, the third question I had was why was Unit 2 not used, the concrete. So I understand, at least from what I was told from the licensee, that Unit 2 was not kept in the condition. You know, I think it was abandoned even before they
were able to finish the dome of the concrete.

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

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

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

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

So at the site, we verified that Seabrook is monitoring all, I’ll say, you know, cracking that
is able to be monitored and at frequencies that are
applicable to the severity of the ASR.

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

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

MS. MESSMER: Even in the Tier 3?

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

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

MS. BUFORD: It's within the bounds of
the testing. So the testing program went above what,

you know, I think that they looked at what is the
wildest, you know, not wildest, but what's a
projection that made sense through the life of the
plant and considering a possible life extension,
tested limits beyond that and then added margin. And
then those limits are based there on that margin.

MR. DONOGHUE: Okay. Thanks.

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

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

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

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

MR. DONOGHUE: Right. So there were
previous questions where, I think, Brett said that we’ll ask. The Region’s been taking notes, and at the annual assessment meeting, which is -- it is scheduled for April.

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

PARTICIPANT: April 24th.

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

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

MS. MESSMER: No, I’m familiar with that. I’m talking about in the communities themselves.

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

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

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

MS. MESSMER: Okay.

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

MS. MESSMER: So in April then, April 24th we'll hear about that?
MR. GRAY: April 24th, I=m taking notes. I=ll try to be able to answer that very shortly.

MS. MESSMER: Thank you very much. Yeah.

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

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

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

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

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

MR. KLUKAN: Thank you.

So our last scheduled speaker, and we=ll talk about how we proceed with the rest of the meeting.
after this, but our last speaker is Jack Van Loan, last ticketed speaker. Jack Van Loan.

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

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

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

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

At the assessment hearing three years ago, >16 I think, I was told that the bedrock foundation of the containment building was 21 feet below mean sea level. If you add the other half of the sea level, it=s about five feet up to ground level, you=re approximately 30 feet down. And I don=t know how wide it is, but in my mind that=s a massive quantity of concrete, a lot of cubic yards.
And is there any testing of all that concrete or how many spots in the containment inside and out are being monitored or observed? Or have you recognized ASR?

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

MR. VAN LOAN: Well --

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

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

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

MR. VAN LOAN: Right.

MR. DONOGHUE: Okay. I don’t know the answer. I’m going to ask the guys from the SER.

MS. BUFORD: So the actual bedrock is not accessible. It’s underneath the foundation of the containment, right. But there are accessible areas
that are below grade that have experienced ASR and
that are being monitored.

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

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

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

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

MS. BUFORD: Yes.
MR. VAN LOAN: So you’ve got a lot of stress on the concrete. And if you’ve got ASR down there, and you can’t access it, you seemingly haven’t done any excavations down to bedrock on the outside and looked for symptoms.

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

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

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

MS. BUFORD: It’s less possible for there to be the cracking because of the ASR. But that’s
really -B if there=s no cracking, then there=s not an
issue with the structure to be able to perform its
function, right.

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

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

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

Because you=re not causing rebar stresses
that, you know -- and you=re not causing a lack of
adherence between the concrete and the steel, you know. So the expansion is just not able to B-

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

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

MR. VAN LOAN: With ASR in it.

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

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

MR. VAN LOAN: Okay.

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

MR. VAN LOAN: Okay. I won=t go into my theories, because it=s to say I don=t have any
education or PhDs behind me. Thank you.

MR. KLUKAN: Thank you very much.

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

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

MR. KLUKAN: Okay, we have 15 minutes.

Oh, we have one person. Please.

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

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

So these pieces of concrete that she’s been talking about that were tested are not part of Seabrook. They are made up samples in Texas. And further, who’s doing this testing? It’s not the NRC.
It's two engineering firms that NextEra chose and paid for. So I think, here again, we have a fox guarding the hen house problem. And I think that that should not be happening.

MR. KLUKAN: Thank you.

(Applause.)

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

(No response.)

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

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

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

And one of them, I spoke with you B- is
it okay if I call you Joe?

MR. DONOGHUE: Absolutely, yes.

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

And I’ve gone to a lot of work with these packets, you know, to save you time. Because I didn’t want to bring up a lot of things. But how do you feel about gag orders on first responders?

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

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

And that video tape, you know, I really want all three of you, all four of you, to look at that video tape. And I’d like to have comments on
what you think.

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

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

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

I’ve talked to 200,000 first B- 200 first responders. And they want this hearing. You certainly wouldn’t object to having a B- to be in favor of a first responder hearing. Because those families have B- they have families too.

And I’ve worked on this for four years.
And we’ve got these towns, and we’ve got also Hampton Falls now. And we need that hearing. And, I mean, I want to prove that democracy still works in this country. And we need your help to do that.

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

Here we are, what do we do with a school bus when it fully depreciates? The owners of the plant, the construction B- the architects of the plant said shut it down after 2030. Now we’re extending the license, even considering it to 2050? We don’t let school buses take our kids around when they’re fully depreciated.

MR. DONOGHUE: So Mr. --

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

MR. KLUKAN: Thank you very much.

MR. DONOGHUE: I can't answer that.

Thanks, thanks for your concern. Are the requests for hearing part of your packet? You said there have been requests sent to the NRC?

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

MR. DONOGHUE: So the requests are in here?

MR. COMLEY: Yeah.

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

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

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

Now, when ASR was discovered, I think I mentioned this earlier, that was at the beginning of the license renewal review. The license renewal
review, except for ASR, the ASR issue, was complete back in 2012.

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

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

(Off-microphone comments.)

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

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

MR. KLUKAN: Thank you very much.

MR. COMLEY: Thank you.

MR. DONOGHUE: Who was next?
MR. KLUKAN: What was your name again?

MR. MCNEIL: Colby.

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

MR. NORD: Yes.

MR. KLUKAN: You are up next.

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

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

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

MR. KLUKAN: I think it's important B-

(Simultaneous speaking)

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

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

You know, it's not fair if you're going to tell people that it's only three minutes. And
then you know what, you end up letting people stand
and speak for more than six minutes on issues that
don’t even pertain to the cause of this meeting. Can
I get on with my comments, please?

MR. KLUKAN: I think it’s important to
address that. And then I will give you B- we will go
over in time out of fairness to everyone involved.
Normally, I said at the beginning of my instructions,
I don’t usually allow back and forth. Because it
does then expand out.

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

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

I appreciate that you wanted to give a
presentation. And I’ll give you that opportunity
now. I just wanted to explain to you my methodology
out of fairness to everyone in this room.

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

The second point, these concrete scientists that we're bringing represent the only independent peer review that the License Amendment Request is going to receive. Because the Nuclear Regulatory Commission allowed NextEra to call their new unprecedented system for testing proprietary. That has meant that no other scientists that are outside the industry or the Nuclear Regulatory Commission have had a chance to actually check the methodology. The methodology is not good. Just because NRC staff says it's good, does not mean that...
it has been properly and fairly and independently
reviewed, second point.

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

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

There's no reason that NRC needs to do
that because you have 11 years left on your license.
The reason that, that system was set in place is
because of the Three Mile Island accident and the
fact that after TMI -- and I hope you'll give me a
chance to finish this concept -- after the Three Mile
Island accident, there was a challenge to venting
steam -- radioactive steam from the reactor
containment. And that challenge ended up impeding
the license renewal for Three Mile Island. And so
NRC put in place this rule that means that you can
take this step without dealing with citizens founded
contentions that affect -- that may affect that
license.

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

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

MR. DUARTE: I just want to give that to
him please.

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

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

MR. KLUKAN: Sure.

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

MR. KLUKAN: Thank you. Okay, so out of fairness because I did let C-10 talk longer, who else would like to speak? Raise your hand right now. So I have one, two, three, four. And then that's it. Okay? So if you didn't raise your hand right now, we're going to -- once those four have spoken again, line up in the order -- it doesn't really matter
because you're all going to get a chance to speak.
So line up at the mic or you know, amongst yourselves.
And then after that, we're going to close the meeting.

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

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

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

MR. KURK: Colby Kurk.
MR. KLUKAN: Thank you very much.

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

MR. KLUKAN: Thank you very much.

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

There was a study done after Fukushima of course. There was a lot of emphasis certainly on the issues of flooding, extreme weather, storm surge, et
cetera. And I had an opportunity to peruse that study to some degree, which was issued last year, I believe. And yes, the plant is not within the design basis, I believe is how you put it, for this extreme weather. The worst impacts of climate change and sea level rise and so forth. And the recommended solutions were some doorstops and issuing of sandbags.

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

I guess just since I don't have much time and we're getting done here, I just ask given what you know now from the monitoring that's been done; eight years of research and so forth, can you assure the public that in 20, 30 years' time, this plant will continue to be safe to operate? And if you
can't do that, 100 percent, why are you issuing a re-
license? And won't we just be re-visiting this in
ten or 20 years?

I feel like it's been Groundhog Day. I
know it was a couple weeks ago. But I get the sense
we keep asking the same questions. And we either get
the same answer or no answer at all. And I think the
public would really like to know some of these
answers, which I understand you can't answer here.
But somebody should be here in April to answer those
questions.

MR. DONOGHUE: Okay, on the -- on the
safety evaluation for ASR and for the license renewal,
I'm going to tell you that the staff's come to the
conclusion that the plant can be operated safety based
on what we know. And what the monitoring programs
intend to do. And as I said before, we'll be
inspecting those programs over the life of the plant.
Okay?

The other issues yes, I'm not going to
try to address those now, but you should have
assurance that the Agency's done a thorough review
here. There's programs that are going to be in place.
And when the license is renewed, those requirements
MR. BOGEN: Well again, on the issue of flooding, I don't have assurance on that. We haven't gotten the answers. And I really encourage you to hold a more intensive public meeting on that whenever you can, hopefully before the license is reissued. Thank you.

MR. KLUKAN: Thank you.

MR. DONOGHUE: There were two more people, right?

MR. KLUKAN: Two more people. You can decide amongst yourselves.

MS. CAPRA: Hi, Cathryn Capra from Georgetown again. Thank you so much. This has been very informative and I've enjoyed being here.

(Off-microphone comment.)

MS. CAPRA: Oh, sure. I did have a follow-up question when we talked about ASR that you know, it can't be corrected or reversed, but that repairs had been done, I think you mentioned -- and I was curious -- you said in one or more of the structures, what those repairs were and why they were made? Was that correct? Did I hear your correctly?

MS. BUFORD: Yes, so the monitoring
program that we reviewed and approved -- Oh, I'm sorry, it includes if there is an area where, you know, the program requires corrective actions. Then there have been at least one instance that I can pull from the top of my head where the ASR had caused some movement between buildings that caused like an elastomeric joint seal to need to be replaced. You know, the requirement was for there to be a joint seal there.

PARTICIPANT: Like a rubber joint.

MS. BUFORD: Like a rubber joint seal between, you know --

MS. CAPRA: Oh, okay.

MS. BUFORD: For seismic reasons in some areas, there are elastomeric joints.

MS. CAPRA: Okay.

MS. BUFORD: And because of the ASR issue -- And I recall in one area that the joint had come apart. That needed to get repaired. That was all just part of, you know, carrying out the program. So we've seen that the program not only monitors, but performs corrective actions in a timely and safe manner. That's an example.

MS. CAPRA: Thank you and I just had one
more question. I'd love to communicate with you guys more, but I'm just -- when you talked about monitoring and the safety monitor -- it was like NextEra or somebody would do an inspection every three to six months for safety, I didn't hear that right.

MS. BUFORD: So the monitoring programs -- Well safety is an underlying basis for all of this.

MS. CAPRA: Right, right. I just got confused.

MS. BUFORD: Yes, so -- And I apologize if I was the one that caused that confusion. But the areas are monitored as often as every six months up to three years, depending on the -- what has been observed -- the ASR symptoms that have been observed to date. And those monitoring frequencies are subject to change if and when ASR becomes more severe in an area, it will be monitored more frequently. And we've verified that those monitoring frequencies are adequate to detect any sort of expansion that would cause the need for a corrective action. And you know six months is a really short frequency.

MS. CAPRA: I was going to say three years sounds like a long time.

MS. BUFORD: Well so three years is for
the areas that are -- that the ASR severity is very low.

MS. CAPRA: Okay, okay.

MS. BUFORD: And it's the maximum time for any area where ASR's been detected. So those are areas where, you know, whether it's barely recognizable up to, you know --

MS. CAPRA: Right, like a Tier 1 or Stage 1.

MS. BUFORD: Like a Tier 1, that's exactly right.

MS. CAPRA: Oh, okay. So a Tier 3 would be more like the six months?

MS. BUFORD: The six months. Tier 3--

MS. CAPRA: Got you.

MS. BUFORD: -- is every six months.

MS. CAPRA: Okay.

MS. BUFORD: Yes and Tier 2 is every 18 months.

MS. CAPRA: Okay. Thank you for clarifying that. And who would be doing that monitoring, the NRC or NextEra?

MS. BUFORD: NextEra is responsible for carrying out their program. That's why we're --
That's a part of their license amendment. That's going to be a requirement for the remainder of the license. But the NRC does focused inspections on the program, so we'll continue to do those to make sure that there is an independent verification that the licensee is carrying out the program in accordance with their license.

MS. CAPRA: Okay. But those will be two separate things?

MS. BUFORD: Yes. Yes, us inspecting the program as they're carrying it out. We're doing it -- We're inspecting to make sure they're doing what their license requires.

MS. CAPRA: Okay. Okay, great.

MS. BUFORD: Yes.

MS. CAPRA: Thank you.

MR. KLUKAN: Thank you. All right, our last speaker. And if you would, just start with your name again. I'm sorry.

MR. WOODWARD: William Woodard, Durham, New Hampshire. I just had a follow-up question. What is -- well, what have we learned from Indian Head? The state of New York brought a law suit --

PARTICIPANT: Indian Point.
MR. WOODWARD: Indian Point, excuse me. Indian Point, because there was a suspicion that the bolts were degraded. And so I know this is not related -- or maybe it is related to concrete. But I want to know what you've learned from the fact that a high percentage of the bolts were so degraded that they had to shut down Indian Point and repair them? But it took a lawsuit by the state of New York to get them to do that. So have we learned anything from that for New Hampshire?

MR. DONOGHUE: So I think you're referring to the baffle-former bolts. Right? Okay. I'll say something and then I'm going to hand the mic over. That issue is something that's now well enough known that the industry has taken some steps. The Indian Point specifics I don't recall. I wasn't part of that activity. But I mean as far as what we've learned as you know, how to address and correct material problems -- Is that -- I just want to make sure we're clear on the question.

PARTICIPANT: Maybe regular servicing of the bolts to see if there's a problem.

MR. DONOGHUE: Okay, so I know there's inspections that are conducted and service
inspections that are conducted to make sure that those bolts -- the integrity of those bolts are satisfactory. Is there anything that you can add to that?

(Off-microphone comment.)

PARTICIPANT: Indian Point, my inspectors did -- we also inspected Indian Point. And you're referring to baffle-former bolts. They are bolts that hold these plates around the core. And we have -- we have requirements and commitments from the industry that they must examine the internals around the reactor. And indeed because of our oversight, these bolts were found at Indian Point and another plant to have more than expected head cracks. But that is the reason we have a program, that they need to examine these bolts. And when we found more that were cracked than expected, we expected the licensees to adjust their programs and to replace them.

So the state of New York, I think they did enter with an agreement, but that's not because of -- We have our requirements and I'm aware that there was an agreement with the state, but that's neither here nor there for us. And so what we've
learned is that we need to ensure that our oversight
continues and that our requirements are met.
That's probably our -- that's what we've learned.

MR. DONOGHE: Thank you. Thank you very
much, Mel.

MR. WOODWARD: I have one more question.
What's Plan B? What's Plan B for ASR if in the future
with the monitoring -- over the next 20 some years if
we discover more ASR problems?

MR. DONOGHUE: Okay, so for Seabrook,
part of the monitoring program is to monitor the other
structures in the plant. And to monitor the
progression and the existing ASR and if there's
appearance of ASR in other parts of the plant. That's
my understanding.

As far as the industry, I think -- Well
an information notice was issued when this first came
to light at Seabrook to tell the whole industry about
it. So they have to be monitoring their plants. And
if they -- if they find ASR, they're going to have to
take some steps. But this is the only plant in the
country that has ASR effect in its structures.

PARTICIPANT: Have we remediated? Is it
possible to remediate?
MR. DONOGHUE: Well I think Angie pointed out that there can be repairs that might be required to maintain the structural integrity and the ability for plants to perform their functions. So that's the extent of it. You can do repairs to make sure that the structures can do what they're intended to do. There's no magic potion that I'm aware of that, you know, you can use to get rid of the ASR. You just have to learn how to monitor it and deal with it.

MS. BUFORD: And I'll just add that you know, they're going to need to monitor ASR just like they're going to need to monitor every other aging effect through the extended operating period. And if there's something that they come across, whether it be ASR or anything else that is -- that challenges the ability for any structure or component to perform its function, they're required to act. You know, so it's one of, you know, a lot of lot things they need to look for. And this is just, you know, one more thing that Seabrook needs to look for that other plants don't.

PARTICIPANT: Thank you. That's reassuring.

MR. DONOGHUE: Thank you. Before Brett
closes the meeting, I just want to say a few words. First of all, those of you who are still here, thank you for your perseverance. And for all of you that commented -- provided your comments, we really appreciate it. That's why we're here.

At the onset of the meeting, I said as clearly as I could, that we don't think we communicated our decision on when to issue these licensing actions clearly enough. So that's why we're here is to address that and to hear your concerns. I think we heard a wide range of concerns. We heard opinions, certainly on both sides, whether for or against the plant. But we heard concerns about the licensing actions that are before us that are the subject of the meeting.

We heard about other issues that were brought up. And we've accepted material. We've taken notes from the concerns that we've heard about. And the Agency is committed to address your concerns. We're committed to the safe operation of this and all facilities and the handling of all radioactive material across the country. And you know, that's our job. That's our central mission. So we're doing that. We're trying our best to communicate how we're
doing that and to assure you as much as we can that
we've achieving that mission. We'll answer your
questions in other forums just like this as much as
we can to alleviate your concerns.

Besides thanking you who participated in
the meeting, that was the bulk of the meeting. That's
why we're here. I do want to thank the law
enforcement officials that are still here. Thank you
very much for being here. I appreciate your
attention. Maybe you learned about concrete because
I certainly have in the last two years, a lot more
than I did when I poured some in my backyard.

Okay, so there's going to be a transcript
of the meeting. There's going to be a meeting
summary. I think there was a slide up here that I
almost blew by, but Justin stopped me, that had some
links on it -- the documents that you can reference.
And again, thank you for your participation. Brett.

MR. KLUKAN: So I don't have much more
to add to that other than I would also like to
specifically mention Andrea. She was the one manning
the registration desk. Without her assistance, this
meeting -- or her -- I shouldn't say assistance --
without her hard work in planning for this meeting,
this meeting would not have happened. So I just
wanted to especially thank her while I have the
microphone on.

And so thank you all for coming. I think
we have feedback forms on the table. If not, they
are located on the NRC website. We are always
interested to know on how you think our meetings are
going and what we can do to improve. And so with
that, I'll say thank you very much.

(Whereupon, the above-entitled matter
was concluded at 9:21 p.m.)