

UNITED STATES OF AMERICA
U.S. NUCLEAR REGULATORY COMMISSION

WORK ORDER 68
PUBLIC MEETING TO QUERY INDUSTRY ABOUT THEIR
POST FUKUSHIMA PLANS AND ACTIONS

SEPTEMBER 21, 2011

12:00 P.M.

TRANSCRIPT OF PROCEEDINGS

Public Meeting

APPEARANCES

Participants:

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Deputy Executive Director for Reactor and Preparedness
Programs and Long-Term Steering Committee Chair
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Brian Sheron
Director
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Eric Leeds
Director
Office of Nuclear Reactor Regulation
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Michael “Mike” Johnson
Director
Office of New Reactors
Nuclear Regulatory Commission

Anthony “Tony” Pietrangelo
Senior Vice President and Chief Nuclear Officer,
Nuclear Energy Institute

Bill Webster
Senior Vice President for Industry Evaluations With The
Institute Of Nuclear Power Operations,

Charles “Chip” Pardee
Chief Operating Officer, Exelon Generation
Chairman of The Industry’s Fukushima Response
Steering Committee

1 PROCEEDINGS

2 LANCE RAKOVAN: Good afternoon everyone. Sorry for the late
3 start. My name's Lance Rakovan. I'm a communications specialist here at the
4 U.S. Nuclear Regulatory Commission, or NRC, and I'm going to facilitate this
5 afternoon's meeting. I've got my associate Sara Mroz in the phone booth who's
6 going to help out with the phone lines. So hopefully we'll keep things moving and
7 keep things on topic.

8 The purpose of our meeting today is for the members of the nuclear
9 industry to discuss their activities and any actions taken or that are planned to
10 address the lessons-learned from the Fukushima Dai-ichi nuclear accident. This
11 is a Category II public meeting by NRC's definition. That means primary
12 discussions are expected to take place essentially with the NRC and industry
13 representatives. There is a portion for public involvement to ask questions at the
14 end of the meeting.

15 Our agenda is fairly simple. After some opening statements, we're
16 essentially going to hear from industry. And, again, as I stated, and then we'll be
17 opening up both the phone lines and here in the room for questions for the NRC
18 staff. This meeting is being transcribed, so if I see anything going on that may
19 make it so that our transcriptionist cannot get a clear transcription or that possibly
20 the people on the phone lines or that are watching through the webinar might
21 have difficulty hearing, that includes electronic devices going off in the room --

1 that was a hint to turn them off if you have them -- anybody who is having the
2 side conversations, talking over each other, et cetera, I'm going to take some
3 steps to hopefully prevent that. For those of you who are on the phone lines, if
4 you could keep your phones on mute, we'd appreciate that.

5 There are public meeting feedback forms that are at both entrances
6 to the room, so if you have a chance to fill out those, those give us an idea of
7 how we did today and we'd appreciate hearing from you. Since we are a safety
8 organization, always like to go through where the emergency exits are in the
9 room. As you can see, there's four of them on either side. So hopefully nothing
10 will happen, but just in case there's an earthquake or something like that, please
11 exit in a calm and orderly fashion.

12 I will be back once we're done essentially with the discussions at
13 the table when we open it up for the public comments or public questions. And
14 with that, I'd like to turn it over to Martin Virgilio.

15 MARTY VIRGILIO: Thank you, Lance, and good afternoon and
16 welcome. Thank you for coming today. Today's meeting is being held at the
17 request of the nuclear industry. They requested the opportunity to meet with us
18 and discuss their initiatives and response to the events at Fukushima. Both the
19 Commission and the staff have really appreciated the input that we've received
20 from our stakeholders as we've moved forward to act on the Near-Term Task
21 Force recommendations. We're working diligently today to develop a paper that
22 we owe to the Commission on October 3rd that's the next in a series of
23 submittals to the Commission on our next steps. This paper will look at the
24 additional Task Force recommendations, prioritize those recommendations, talk
25 about impediments for implementation, and the resource implications around

1 implementing those recommendations.

2 I'd like to thank the panelists and the audience in advance for
3 participating. It was unfortunate that we had to compress the time on the notice
4 for this meeting, and so we apologize in advance for that. But we were operating
5 under a very compressed timeline to get this paper completed by October 3rd.
6 We really do look forward to hearing from industry. This is a great offer and a
7 great opportunity for us to hear about all the initiatives that they have ongoing.

8 And what I would like to do next is just introduce our side of the
9 table. Then I'll turn it over to Chip -- to Mr. Pardee, let him introduce the other
10 side of the table. So, on my far left is Brian Sheron, our Director of the Office of
11 Research, Eric Leeds, our Director of the Office of Nuclear Reactor Regulation,
12 and Mike Johnson, our Director of the Office of New Reactors. And so, with that,
13 Chip, I'll hand it over to you.

14 CHIP PARDEE: Thank you, Marty, and I'll follow suit with
15 introductions briefly. On my far right is Tony Pietrangelo, Senior Vice President
16 and Chief Nuclear Officer at the Nuclear Energy Institute, on my immediate right,
17 Mr. Bill Webster who is the Senior Vice President for Industry Evaluations with
18 the Institute of Nuclear Power Operations, and I'm Chip Pardee, Chief Operating
19 Officer at Exelon Generation but here today as the Chairman of the industry's
20 Fukushima Response Steering Committee.

21 So to the extent that, you know, the dialogue continues, I think
22 we're all here representing various members of the industry organization at large
23 as it pertains to the Fukushima Response Steering Committee. Obviously you
24 may have some questions for what, you know, my company specifically is doing
25 that would help provide some flavor or color to some of our commentary and I

1 would be happy to provide that.

2 We are anxious to get into, you know, really the meat of the
3 discussion, and that is where we think we need to be focusing our energy, our
4 efforts, and our resources on the short term. The industry very promptly after the
5 events of March 11th in Japan pulled together a consortium of representative
6 companies, the nuclear operating companies, the large architect engineers or
7 nuclear vendors here in the United States, the owner's group representing the
8 boiling water reactor owners and the pressurized water reactor owners, the
9 Electric Power Research Institute, INPO, the Institute of Nuclear Power
10 Operations, NEI -- essentially all of the major companies or organizations that
11 have some stake in operations from the industry perspective here in the United
12 States. And either directly or as a member of other groups, each of those
13 companies or organizations is represented in the material that we're providing.

14 I realize that to some extent the information that I'm providing you
15 may be redundant or duplicative to other conversations, briefings that we've had
16 but I think it would behoove us to spend just a few minutes up front talking about
17 the structure on how the industry has positioned itself and what kind of activities
18 are underway and what our priorities are. I think that's important for us to provide
19 the proper context for how we're moving forward.

20 As you can well imagine, we're all off examining very similar
21 information streams coming out of Japan. We also are highly interested and are
22 analyzing and prioritizing the actions that we think we need to take to improve
23 our safety posture here in the United States, so there is a great deal of overlap
24 between the efforts that we have underway and what you, the Nuclear
25 Regulatory Commission, have embarked upon. Obviously, there are also some

1 differences. You're spending a lot more time on regulatory structure. We're not
2 spending a lot of time on, you know, things like rationalizing the regulatory
3 process. And some of those recommendations that came out in the Near-Term
4 Task Force report, I think we'd be happy to proffer opinions but not what we
5 spend a lot of time focusing on.

6 So I thought what I would do is spend just a little bit of time going
7 through the governance, the structure that we've put in place, and talk about
8 where we think we are today in the continuum of learning and analyzing the
9 lessons-learned from Fukushima Dai-ichi and the actions that we have already
10 taken, and where we're going from here. And I think that will be a good platform
11 for us to start our dialogue about, some of the specific recommendations, if that
12 suits you.

13 Okay, Marty, what I thought I would do is pass out to you folks the
14 Fukushima Response Steering Committee Charter and also The Way Forward
15 document which is essentially our high-level governance document, what it is
16 that we're trying to accomplish and how we're putting together the structure for
17 analyzing and translating the lens from Fukushima into our specific lessons-
18 learned that are actionable. These documents don't contain specific content
19 such as, you know, how we think the question on the liability for hardened vents
20 should be dispositioned. What it does say is that we think we need to have the
21 confidence in our capability to control primary containment parameters during
22 accidents that are beyond our current license or design basis. So it will address
23 goals at a high level in the form of strategic goals that clearly infer some of the
24 actions that we'll be describing. It's the end result that we're seeking, as it were.
25 But this document will not go into any technical details on how we have arrived at

1 the conclusions that we have. We do have a response plan that is being built
2 now. It already captures our short-term actions and as we further our analysis
3 and arrive on areas that we believe require further either information or analysis
4 or, for that matter, action, the strategic response plan will incorporate that. And
5 that's what we're using to coordinate the timelines, the resources, and such that
6 are relevant to our ability to complete these actions successfully.

7 I think the charter is self-explanatory, and I wasn't going to spend a
8 lot of time on it. It really does two things for us. One, it outlines who the
9 representatives are on the steering committee and what organizations they
10 represent. And it also represents how we essentially gain the authority to make
11 decisions for the industry at large, so we went before the boards of the Nuclear
12 Energy Institute, the Electric Power Research Institute, and the Institute of
13 Nuclear Power Operations with the idea that we would take advantage to the
14 extent possible organizations or committees that have already been stood up in
15 the industry, where we have a great deal of proficiency at drawing together
16 technical resources, operational resources, our NSSS vendors that have the
17 background expertise on why the bases for the capabilities of our power plants
18 were established in the first place, in some cases decades ago. So we do have
19 this capability and had it prior to Fukushima, but the volume of information and
20 some of the extraordinary learnings that we had from Fukushima required a
21 further degree of coordination. And that's really what this charter provides, is a
22 means for that coordination effort amongst existing industry organizations and
23 the authority to act on the lessons-learned and such.

24 With that said, I'll transition to The Way Forward document. And I
25 won't go page by page, but just a couple of areas that I thought would be

1 worthwhile pointing out where we are, because they have been the subject of
2 some conversation in some previous public interactions that we've had.

3 I'll start with strategic goals. And I just want to spend a moment on
4 the first one, and I'll read it because we think it's very important and can get lost
5 in the dialogue of what we need to do explicitly from our learnings from
6 Fukushima Dai-ichi, and that is the nuclear workforce remains focused on safety
7 and operational excellence at all plants, particular in light of the increased work
8 that the response to the Fukushima event will represent. We used the Institute of
9 Nuclear Power Operations essentially to keep us honest with this. INPO
10 continues the evaluation regimen that I know that you're familiar with. They are,
11 and Bill will be able to speak to more detail on this if you wish, but they are
12 looking at the lessons-learned from Fukushima to see how they should change
13 the evaluation process. But I think it's important to note that there has been no
14 upset in that routine where every power plant gets evaluated by INPO on a
15 periodicity something on the order of every other year, and we think that's very
16 important to continue. We've spoken in other forums about how important it is to
17 not distract the operators and the operating engineering staff from their very
18 important task of just plain operating the power plants as well as we possibly can.
19 And the structure of the Fukushima Steering Committee Charter and The Way
20 Forward document tries, to the best we can, to insulate the operating power
21 plants from the analysis and the formulation of lessons-learned until such time
22 that it's time for us to take action. And then those actions are implemented either
23 through the Institute of Nuclear Power operations, tools, or tools from the Electric
24 Power Research Institute or the Nuclear Energy Institute. Again, these are
25 processes that have already been established. They're in place for us. We're

1 obviously exercising them for the Fukushima Dai-ichi lessons-learned and
2 actions.

3 I won't go through the rest of the strategic goals. I know that we
4 have spent time with you on them, and they are largely in keeping with the
5 overarching conclusions that it appears the Near-Term Task Force was seeking.
6 So I think a great deal of alignment with what we are trying to achieve and the
7 direction that NRC is heading, I realize that on one hand, that may be of little
8 interest to you, but I think it is important especially given the highly visible rhetoric
9 that one may hear back and forth between how the regulator is interacting with
10 the industry, I think we are largely aligned on what it is that we're trying to
11 accomplish and what kind of timeframes we think we should be able to get this
12 work done in.

13 So I think for the most part our dialogue will be focused on those
14 areas where it appears we may have some disagreement or a different view, but
15 I don't think that should color the general perspective that there is a great deal of
16 alignment based on the information that we have today.

17 The Way Forward document is living. We are, for example,
18 contemplating adding a couple of strategic goals just by example. We're looking
19 at the information flow around the control of exposure to the public. There has
20 been a lot in the various media outlets or products talking about things like
21 protecting the food chain, the ingestion pathways, and what kind of dose
22 projections in analysis are done that support the repopulation of various areas.
23 We are looking to see whether or not we need a strategic goal in that area to
24 make sure that we have competence in our ability to project doses to the public
25 should we find ourselves in events such as this.

1 Another example would be the command and control structure that
2 appears to have been a factor in at least the timeliness in some of the actions
3 that were contemplated or executed at Fukushima shortly after the events. We
4 are examining the differences as we understand them between their command
5 and control structure and ours. And we may in fact adopt a strategic goal that
6 reflects around that. I bring this up simply to illustrate that there is considerable
7 information yet to be earned or analyzed from Fukushima Dai-ichi, and I do not
8 wish to project this as carved in stone at this point. You know, other areas that
9 we are looking at in the spirit of continued learnings may be more technically
10 driven such as the viability of some of the ultimate heat sinks that, you know, we
11 really haven't spent a lot of time on the ability of utilization of the safety-related
12 cooling water systems because they were overwhelmed by their lack of A/C
13 power, but there may be other lessons-learned that just haven't been as
14 prominent in our discussions thus far. And The Way Forward document and its
15 strategic goals and its strategic response plan, which is the specific execution
16 document that underlies this, will incorporate all those lessons-learned.

17 I think rather than spend a lot of time on the structure on how we
18 break down the lessons-learned that come into Fukushima Dai-ichi, how we put
19 them through their analytical exercises and roll those back up into tangible
20 actions for the stations, I will simply go to Page 8 on The Way Forward
21 document. And it gives a high-level depiction of how the major industry
22 organizations, EPRI, INPO, and NEI, fit in with the steering committee and the
23 industry at large. And you can see the building blocks in white halfway down the
24 page. And that was our means of dividing these lessons-learned up until what
25 amount to functional areas so we could keep control of the prioritization and the

1 technical resources and the synchronization of our lessons-learned and actions
2 as they come forward. And that's really what we're in the middle of now.

3 Before I turn it over to Bill and Marty, I thought I'd spend just a
4 moment, just pause and see if you have any questions on the overarching
5 governance structure, how we've put this together thus far.

6 BRIAN SHERON: One question. I think you said that, you know,
7 whether you're -- well, if your steering committee comes up with, for example,
8 things that should be implemented at plants, you said that would be
9 accomplished through the normal mechanisms you have with NEI and EPRI and
10 INPO?

11 CHIP PARDEE: That's correct, Brian.

12 BRIAN SHERON: Okay. And that would mean that the utilities
13 would be obligated to institute whatever it is your --

14 CHIP PARDEE: That is also correct. I will say in summary, and
15 Tony and Bill may choose to elaborate further, but when they are issues that are
16 typically not directly related to our safety posture, the Nuclear Energy Institute will
17 be the lead organization. And those initiatives are adopted essentially by vote
18 with all the chief nuclear officers representing all the nuclear units. And they
19 would be initiatives such as our groundwater protection initiative. If it has to do
20 with the safety posture of our stations including, you know, our training regimens
21 and such, it's the Institute of Nuclear Power Operations that is typically in the
22 lead. And the Institute of Nuclear Power Operations does not work on a
23 consensus process, so they -- and this is in keeping with the way that the
24 institute was set up in the early 1980s, post-Three Mile Island. If it appears to be
25 something that would improve safety posture in the context of nuclear power

1 plant operations, INPO has the standing authority to require the industry to adopt
2 further actions. And we are using those tools just as we have in years gone past
3 in order to improve industry performance at large. So, to your point, once the
4 decision is made to undertake one of these activities, it is expected that we all do
5 it. And I should say, in the case of INPO, they will then turn around and
6 essentially inspect to it.

7 BRIAN SHERON: Okay. The other question I had just was on your
8 other page here, your steering committee, you said your charter. What I didn't
9 see anywhere written in here was a coordinating role with the regulator, namely
10 NRC.

11 CHIP PARDEE: If you look --

12 BRIAN SHERON: Where do I find it?

13 CHIP PARDEE: You won't in the charter. You will find it in The
14 Way Forward document.

15 BRIAN SHERON: Oh, okay.

16 CHIP PARDEE: And you can see one of our building blocks on the
17 far right --

18 [talking simultaneously]

19 BRIAN SHERON: -- regulatory interface, right.

20 CHIP PARDEE: Yeah. And you will also find in our Guiding
21 Principles, which I did not speak of, to your point, which is on Page 3 of the
22 document that there are words in number five about coordinating with Federal,
23 state, and local government and their attendant organizations and making sure
24 that we stay coordinated. So, to the extent we can, we're trying not to duplicate
25 effort, especially as it pertains to a common understanding of the facts. What we

1 do with those facts is obviously going to be a matter of debate, but we think that
2 we should not be debating, you know, what happened over there, our
3 understanding, the timelines, the sequences of events. You know, those kinds of
4 things, you know, we think it's important right from the get-go to make sure that
5 we have a common understanding of what occurred with our various
6 stakeholders in the Federal, state, and local governments.

7 ERIC LEEDS: Chip, I think you just answered my question. When
8 you said "we," you mean the collective "we," all of us.

9 CHIP PARDEE: The collective "we." Yeah.

10 ERIC LEEDS: The regulator, the industry, even the state and local
11 governments.

12 CHIP PARDEE: Right, including the NGOs for that matter. I mean,
13 we all have to have a common understanding of the facts or we think that it will
14 impede our ability to analyze and prioritize and implement in a timely fashion.

15 ERIC LEEDS: Thank you.

16 CHIP PARDEE: Just before -- oh, I'm sorry, Marty. Go ahead.

17 MARTY VIRGILIO: First of all, I appreciate you pointing us back to
18 strategic goal number one because we all need to ensure that we don't lose the
19 focus on safety for operational facilities. My question is the response plan on
20 development, it appears that we may be operating in parallel but not talking to
21 each other. Because, as you develop timelines and resource estimates and
22 identify the skill sets you need, we probably need to make sure that we're aligned
23 on what issues we're moving forward with. At the last Commission meeting, we
24 identified seven issues that we thought that we wanted to move forward with as a
25 staff. The Commission is now voting on that paper, and our hope is that they

1 would endorse moving forward on those seven items. Are you mindful of that as
2 you develop your timelines, look at your resource needs and skill sets, as you
3 formulate your action plan?

4 CHIP PARDEE: Yes, we are, Marty, but I must say that we are in --
5 I would say the relatively early stages of the longer-term activities. Some of the
6 longer-term activities that we're contemplating require us to get started now, not
7 unlike some of the dialogue you had at last week's Commission briefing. So
8 we're in essentially the same place. The immediate actions, we did an
9 equalitative [sic] versus a quantitative fashion with regard to resource evaluating
10 and resource requirements and such. But as the analysis becomes more
11 complex on things like seismic response and flooding capabilities and our
12 preventive measures and such, then we are finding that we need to be much
13 more careful about our resource needs and, again, in keeping with last week's
14 meeting, simply because there's a finite number of skilled resources out there
15 and we have to make sure that we're deploying them in the fashion that provides
16 the best safety benefit for us. So, yeah, we're into that now.

17 MARTY VIRGILIO: Good. I think that our paper on October 3rd
18 will lay out our initial thinking, at least about the skill sets that we believe that we
19 need in order to move forward on the higher priority actions that we've identified.
20 So I think over the next couple weeks, we'll likely be in a position to have more
21 dialogue.

22 CHIP PARDEE: That is good. That is one of the reasons why, you
23 know, we asked to have this meeting today was to make sure that we did have
24 some common ground in our view of resource requirements and such, so that's
25 completely in keeping with our mission as well. I will say that I think we're going

1 to find strong and direct analogues to the lessons we learned about NFPA 805,
2 [unintelligible] and the probabilistic risk assessment experts, we're finding the
3 same kinds of challenges to be very deliberate about how we deploy our
4 resources because this isn't a matter of hiring more. We're just simply have
5 exhausted the capabilities of the industry with these highly specialized skill sets.
6 That's not to say that if we hit issues where we think there are true safety issues
7 rather than some enhancement, you know, we have other means of deploying
8 resources perhaps out of the operating crews and such if we need to. We
9 haven't run into any of those yet. So this is a matter, as I'm sure you're running
10 into as well, of balancing these strategic objectives in order to minimize
11 unintended consequences.

12 MARTY VIRGILIO: Okay, so I think that probably following our
13 delivery of the Commission paper on October 3rd, and maybe further
14 development of your response plan, we could sit down again and make sure that
15 we're aligned on resource needs, timelines, which actions we're going to
16 prioritize first, second, and third. Good. Okay, good.

17 MIKE JOHNSON: I was going to hold my question, but I do have a
18 question that I'll ask now. I certainly appreciate that this is an operating reactor
19 issues and, from a safety perspective, that's where we ought to be focused. I
20 was trying to get from the charter or from The Way Forward document an
21 understanding of how new reactors or consideration of new reactors issues so
22 that these requirements in the reactors and all of those implications are factored
23 into the charter or The Way Forward document. I do note that some of the folks,
24 the names that show up on the committee are the same folks that I interface with
25 on nuclear oversight committees, so I know there's a common presence, but I

1 wondered is there a focus with respect to nuclear reactors?

2 CHIP PARDEE: There is, and, in fact, the members of the steering
3 committee were adjusted to incorporate the new reactors faction to make sure
4 that we weren't inadvertently under-prioritizing the needs of licensing and early
5 construction activities and such. So we are adjusting as time goes along. The
6 regulatory response group has incorporated new reactors contemplating new
7 reactors licensing and such, and as we proceed through that, there may in fact
8 be some lessons-learned that pertain specifically to new reactors. But I must
9 say, in large part, that our activities will simply be incorporated as the new
10 reactors, you know, mature in their construction process and such. And we're
11 not -- we're of the belief that we're not going to need a large free-standing
12 organization simply for new reactors lessons-learned. We think, you know, in
13 keeping largely with dialogue around license renewal and such, that just keeping
14 the regulation and the industry initiatives synchronized with the new reactor
15 projects and such that we'll be able to achieve those ends. Tony, don't let me
16 under- or overstate those conclusions.

17 Before I turn it over to Bill to talk about what we have done already
18 as far as tangible activities at the operating units, I thought I'd just ask Tony or
19 Bill to see if they wish to elaborate upon any of my opening comments, or, for
20 that matter, correct any of my opening comments. We good, Tony?

21 TONY PIETRANGELO: We've had a lot of practice with this at
22 other forums, so you did very well, Chip.

23 CHIP PARDEE: Well, thank you. Thank you. Bill?

24 BILL WEBSTER: Yeah. I have no further comments.

25 CHIP PARDEE: Okay. All right, if you would please, just take us

1 through the sojourn.

2 BILL WEBSTER: Will do. Thank you, Chip.

3 What I'd like to do is, as Chip just described it as a sojourn, but
4 really what the industry has done in the last six months with respect to
5 Fukushima, and I think I'll really maybe characterize it in four ways. The first is --
6 and I think the building blocks is actually a reasonably good way to organize it.
7 This first is the things we're doing to renew the focus on the current plant
8 operations. The second is to really get a deep learning of the lessons-learned
9 and actions that the industry needs to take both near-term and long-term. The
10 third is to improve the effectiveness of our emergency response capability, both
11 as an industry and for individual units. And then lastly is the interactions,
12 interfaces we've had internationally as not all the learnings are happening here
13 domestically, and the importance of making sure that this truly is an international
14 response.

15 I'd like to begin that -- and Marty, I appreciate, you mentioned it,
16 and then certainly Chip did -- with our number one strategic goal is the industry
17 focus on the current plants. And so, that's something that we've given a lot of
18 thought to and a lot of attention to. And there's a few things I'd like to mention
19 where we feel that we've really tried to reinvigorate and renew that focus. The
20 first is the Significant Operating Experience Report 10-2 on engaged thinking
21 organization. It was issued in September of last year in response to several
22 operating events that occurred earlier in the year and, really, some going back
23 into 2009. And so we're out doing review visits at each member organization or
24 alliance to make sure that the recommendations for that SOER are well
25 embedded. We're going to have a kind of a recoup of that at our annual CEO

1 conference here in November where we'll report out as to the progress the
2 industry is making on that SOER. We think that this is a watershed SOER in
3 terms of really defining the leader, the supervisor, and the individual contributor's
4 roles in operational and nuclear safety.

5 The second is that IER, so it's an INPO Event Report, and it's really
6 now the, kind of the new program that replaces the SOERs. But the IER level
7 one on operator performance is that we wanted to go put a spotlight on crew and
8 operational performance inside the control room. And so we have done a very
9 deliberate job in that IER really defining for each role, each position, the specific
10 responsibilities. I've asked people to really do detailed self assessments and
11 reviews of both the training and the crew performance. And then we're stepping
12 up on part of our plant evaluations as both the number of crews and both the
13 breadth and the depth of the scenarios that we watch in the control room
14 simulator. And that process is all in -- well under way. Right now we're out of the
15 pilot phase and into the initial phase of full implementation of that.

16 We also wrote a INPO Event Report on the number of SCRAMs as
17 we've seen a slow incremental number of total SCRAMs, both manual and
18 automatic. And we've certainly discussed this in other forums. And so we did a
19 deep review of the SCRAMs from 2009, 2010, and really have some pretty
20 significant recommendations on maintenance and operating practices associated
21 with equipment and vulnerabilities that could result in a SCRAM. And maybe the
22 last one I would just like to talk about because we've had very good dialogue and
23 interface with the Nuclear Regulatory Commission. It's been on a common
24 safety culture language. We think that's a very important initiative to get the
25 common language, a common way of assessing and reviewing safety culture and

1 a way that we keep that in front of everybody in all activities of the plant. And we
2 think the common definition and the attributes that we've worked very carefully
3 on, or the "traits" is really the proper term, is really a very common ground that
4 we can go forward with and continue to reinforce and assess, that that, of course,
5 is safety culture. So we think those initiatives, if I had to highlight a few things
6 that we've looked to kind of reinvigor the attention on current safe operations, I
7 would point to those.

8 The second area has to do with lessons-learned from Fukushima,
9 and I'd like to really talk two things there. The first is the development of the
10 timeline and the lessons-learned from the event. And then the second is the
11 series of INPO event reports that we've written with respect to Fukushima. As
12 you're aware is that we started early on is developing a timeline of the
13 operational events, basically really trying to get a deep understanding of what
14 happened at Fukushima. And that timeline has been drafted. It's -- we are
15 actually in Japan right now working with the TEPCO folks to validate that
16 timeline. We went over with about 120 questions of things that we didn't fully
17 understand about the basic sequence of events, and we've been working very
18 carefully and very supportively with the folks at TEPCO to develop that timeline.
19 The second -- we hope to have that, you know, I'll call it round zero, because we
20 continue to learn more, by the first week of November.

21 The second part of that is going to really be developing the lessons-
22 learned associated with emergency preparedness. And we have another team
23 going over to work with the emergency preparedness folks to really understand
24 the emergency preparedness response.

25 And then the third element and probably the more difficult element

1 is going to be putting together a team that will work with the TEPCO folks to
2 really understand the programmatic, organizational, and cultural issues that
3 underpinned an event such as that that happened at Fukushima. It will probably
4 be late this year, early next year, in terms of those second iterations, in terms of
5 when they'll be done. You know, we view that this -- we would really view this as
6 kind of the agreed to understanding of the facts and we would be very interested
7 in sharing it with the NRC and dialogue with the NRC in terms of a common
8 understanding an appreciation for precisely what happened. And so we'll find the
9 right means to do that. But we'll look forward to that engagement and sharing of
10 what we have uncovered. Yeah, Brian?

11 BRIAN SHERON: Yeah, on the timeline, have you interacted with
12 DOE on that? I know DOE was interested in developing a timeline. We signed a
13 memorandum of understanding with them, but they were going to mostly, I think,
14 focus on the timeline part. And I was wondering if you've been involved with
15 them at all.

16 BILL WEBSTER: We haven't to date. We actually coincidentally
17 have, since I'm up here, are just having a meeting tomorrow to begin that
18 dialogue in terms of what they're looking at how we can support that effort, too. I
19 think all the different efforts whether it be DOE, IAEA, or you know, the
20 government of Japan, is getting a common agreement on that timeline is going to
21 be critical. And so, we will be working in coordination with DOE on that.

22 BRIAN SHERON: Okay, yeah, I was going to suggest because I
23 think -- I agree with you. It's critical that we all have the same perception of what
24 the timeline was and not have different organizations with different timelines and
25 stuff.

1 BILL WEBSTER: Yes, we agree. We agree completely on that.

2 ERIC LEEDS: Yeah, Bill, I'll continue to follow on Brian's thread.

3 Timeline and whenever you see timeline, I'm thinking sequence of events. You
4 know, hand in glove with both of those -- what happened and when did it
5 happened and that agreement. And you talked -- we just talked about the
6 importance of the community coming to agreement. IAEA, have they been
7 involved? The department of Japan -- the Government of Japan, have they been
8 -- you've been talking with TEPCO. Have you seen involvement by any of those
9 organizations?

10 BILL WEBSTER: Yeah, there's really -- the way I see it right now is
11 there's really kind of pre-activity sort of happening so that the first -- and really,
12 it's been done by TEPCO and the Government of Japan, a report that was
13 provided to the IAEA in June and then it was updated here most recently for the
14 general meeting in Vienna that's ongoing right now, Brian. And so we certainly
15 have seen that. Haven't really been a participant in that other than a lot of the
16 work that was done for that, you know, we're -- has been a source of information
17 that we're using with our interactions with TEPCO.

18 The second is the Government of Japan is sponsoring a
19 commission to kind of look more largely at what happened at Fukushima,
20 particularly the government response and interaction with the operating
21 company. And that report we have not, other than the seminal information that
22 was prepared for that, we, you know, have been provided. But we haven't really
23 engaged with those folks much at all. Their report is due out at the end of the
24 year. And so, our primary interaction has been with the engineers and the
25 operators at TEPCO.

1 ERIC LEEDS: Thank you.

2 BILL WEBSTER: And they've been -- just to reiterate -- they've
3 been very open with us. You know, we always -- you get to a point in these
4 things, there are just some things that nobody really knows for sure. And so it
5 takes a lot of deep thinking and questioning to try to figure that out.

6 MIKE JOHNSON: Bill, a question. You see those products you
7 talked about, the emergency preparedness or response, EP response, the
8 timeline -- you see those as being publicly available at some point? Or how do
9 you -- what were your plans with respect to those products?

10 BILL WEBSTER: We're trying to figure out the right way to do that.
11 I think for it to be a common understanding of what happened, it has to have a
12 public dimension to it when it comes right down to it. But to some degree, it's
13 going to be something I think that we'll certainly work with you. We also need to
14 work with folks over at TEPCO in Japan. At the end of the day, it really is their
15 information and so there's a lot of dimensions to getting this done correctly. And
16 I probably have more questions than answers on how that might be done.

17 MIKE JOHNSON: Thanks.

18 MARTY VIRGILIO: Bill, do you have a timeframe for the second
19 and third initiative that you talked about?

20 BILL WEBSTER: Yeah, we hope by the end of first quarter of next
21 year to have that done.

22 MARTY VIRGILIO: Both two and three?

23 BILL WEBSTER: Yes.

24 MARTY VIRGILIO: Good, thanks.

25 BILL WEBSTER: Yes. The next thing I'd like to talk about is the

1 series of IERs INPO event reports that we wrote and the industry response that I
2 was -- as you're aware of, shortly after the event is that we felt that there was a
3 real need as an industry to provide the near-term assurance that each station
4 was in a high state of readiness to be able to respond to both the design and
5 beyond-design basis as we currently understood that condition. And so we wrote
6 IER 11-1, which had folks go out and do walk-downs and verifications to things
7 such as the B.5.b, severe accident management, station blackout, flooding, and
8 the ability to mitigate a fire or flood during a seismic event, that the equipment,
9 that the protective measures, that the procedures, that the training were all in
10 place for those activities. So there were about four recommendations that really
11 was to go out and do verifications and walk-downs. And then any deficiencies to
12 be entered into their corrective action program and then submitted to INPO so
13 that we could do a review of those. And that was done within the first 30 days
14 from the event. So that was complete by April 15 and reported back to INPO.

15 We took the deficiencies and I tell you, as you well appreciate, you
16 put the spotlight on anything, you find deficiencies, and we found deficiencies. I
17 will say that, you know, writ large, we didn't find any deficiencies such that a plant
18 would not have been able to implement their emergency response guidelines. It
19 may not have been exactly as they intended, that, you know, maybe a building
20 was a place where they had anticipated where they were going to put a pump or,
21 you know, a portable piece of equipment. And so there was some problems with
22 that, but people would have been able to fully implement and respond to an
23 event. But, you know, little problems matter in emergency, and so we took each
24 one quite seriously and followed up. But right now there's 60 percent of all the
25 deficiencies that were identified in April are fixed. By the end of the year, 95

1 percent will be fixed. And the other five percent really kind of boiled down to
2 either further inspections that need to be done, it's either rooms or facilities
3 weren't accessible at the time, and so a corrective action document was written
4 as the next outage or the next availability to go do that level of inspection. And
5 so it's kind of -- it isn't so much of a deficiency as it is a need to really follow
6 through and complete the activity as intended.

7 We did put together a team, though, to look at kind of what's the
8 aggregate telling us. And we're about to issue here by the end of the month as a
9 supplement one to IER [spelled phonetically] 11-1, and that really kind of gets to
10 some of the organizational issues associated with the deficiencies that we found.
11 And these are things such as ensuring that B.5.b and the SAMG equipment
12 procedures are in, you know, your configuration control, your procedure control
13 programs. And sometimes these things were done kind of one at a time and that
14 they weren't just fully ingrained in our typical standard plant processes as would
15 be appropriate. The same thing with preventive maintenance program as we
16 found some deficiencies in equipment that was in the preventive maintenance
17 program to some degree because it wasn't necessarily considered installed plant
18 equipment but it was still, you know, to be relied upon, so it appropriately
19 belonged in the preventive maintenance program.

20 The third recommendation is going to be around just ensuring that
21 there's the proper training, that's both identified and conducted for people
22 expected to fulfill roles either for B.5.b or a severe accident management
23 guidance.

24 And then last will be a need to periodically conduct drills and walk-
25 downs and verifications just to make sure, you know, those rarely-used

1 equipment, rarely-used activities, if you don't occasionally go look at them, is,
2 you know, can kind of, the standard can slip a little bit there. And so to have
3 some sort of periodicity where they're gone and looked at will be the fourth
4 recommendation.

5 So, kind of our sense is that will be kind of the near-term action to
6 kind of look at what we currently have in place is in place, is well trained, and
7 gives a high degree of assurance that it would be functional upon demand.

8 The next IER we wrote was 11-2, on spent fuel pool cooling. And
9 this was, again, an early time when we really felt that there was a probably a
10 greater sense of urgency around spent fuels than eventually as things played
11 out. But the more we looked at it, even though we had questions at the time, is
12 that we did get a sense that we probably needed to put some additional attention
13 on spent fuel pools, particularly applying the protected training concept to spent
14 fuel pools during periods of high heat load, assuring that time to saturation was
15 well known both in the control room and the tech support center, and that
16 cautions and reminders in terms of monitoring both temperature and inventory in
17 spent fuel pools were appropriate in both the abnormal operating procedures and
18 emergency operating procedures. And we've worked through with the owners
19 groups to get the guidance so that those cautions can be added to those
20 procedures. And right now, we're looking at all the responses will be due the end
21 of this month on IER 11-2 for those recommendations. And then the last --

22 ERIC LEEDS: Bill, on that, on spent fuel pools, because you
23 mentioned it, at the time of the event, we had a different idea of what happened
24 in those pools, and we currently know today. We have learned things since then.
25 Has that colored your view or changed how you all are taking a look at what

1 actions need to be done for spent fuel pools?

2 BILL WEBSTER: Well, I think -- so, when we wrote that, we knew
3 there was questions. And so we didn't have great certainty as to what the
4 conditions were at the time. I think this IER and the recommendations,
5 independent of actually Fukushima, the more we've thought about it and looked
6 at it and talked about it with the executive advisory group, is that it was
7 appropriate to put these additional controls in place. And so, I don't think that
8 that necessarily has changed. You know, we've talked about just as an industry
9 is that it probably just makes some good sense is to have some diversity of
10 indication of, you know, level and temperature that may not be in place. I mean,
11 that just seems like a reasonable thing to go do, but I don't know that as we've
12 learned more that that's necessarily changed the way we think. I think those
13 would be good things to do, you know, independent of what happened. If this -- I
14 don't know, Chip, anything --

15 CHIP PARDEE: No, I think you captured it correctly. While the
16 consequence term was not what we thought it was, you know, early in the
17 events, you know, we have concluded that that is an area where we should have
18 increased focus, even though timelines tend to happen more slowly in fuel pools
19 than they do in vessel fuel. It is outside a primary containment and therefore we
20 think things like actions in our operating procedures to evaluate levels and
21 temperatures and cooling mechanisms and such are appropriate. So we have --
22 we have not altered our direction with the activities around spent fuel pools.

23 LANCE RAKOVAN: Mr. Pardee, sorry to interrupt, but can you
24 make sure you talk into your microphone next time.

25 CHIP PARDEE: Yeah, sorry about that.

1 ERIC LEEDS: Thanks, Chip.

2 CHIP PARDEE: Yeah.

3 BILL WEBSTER: The last IER that we've written is 11-4, and what
4 11-4 is near-term actions to address extended loss of ac power. And so the
5 basic assumption here is that you lose offsite power, you lose your emergency
6 power sources, but you retain your distribution in the plant. And what we've had
7 is requested each utility or each site to go develop pre-plan contingencies and
8 provide unit-specific coping time and limitations for extended loss of ac. And
9 what we're targeting is a 24-hour extended loss of ac as to develop the methods
10 of maintaining core coolant and containment integrity and spent fuel pool
11 inventory for an extended loss of ac up to 24 hours and to either -- and then to
12 proceduralize how you would go about doing that, or if 24 hours is not a time that
13 is compatible with either the licensing condition or design condition at the plant,
14 just kind of what is that, you know, so that we can kind of understand that in
15 terms of either the appropriateness of resolving it or in some other fashion is
16 developing contingencies to account for that. I mean, you know, fundamentally,
17 the problem we're trying to solve here happened at Fukushima as they lost offsite
18 power, they lost onsite power and couldn't get the emergency response
19 capability there in time to really matter. And so what this is all about is knowing
20 what that is so that we can then work the other side of the equation in terms of
21 what the emergency response capability might need to look like.

22 And so the first is to develop and proceduralize what that plan is for
23 each site. The second is to really look for methods of repowering the central
24 instrument on -- instruments on an extended loss of ac. The third is to assure
25 that they have adequate fuel supplies, whether that be fuel, oil, or air, but other

1 means of, you know, an energy supply that you may need for that emergency
2 response. And then last is to assure that you have adequate communications
3 facilities in place for that 24-hour period of time. Now we have several working
4 groups that are working right now, both PWR, BWR to begin to kind of develop
5 what those scenarios and what the templates might be, you know, to really
6 understand what maybe some of the limitations are, what maybe some of the
7 licensing issues might be related to that, what additional equipment maybe needs
8 to be onsite to be able to cope.

9 And I will say I sat through several of these meetings, and there's
10 some real creative and good thinking going on right now in terms of things that
11 are onsite, things that can be done to really extend and to be able to maintain the
12 critical safety functions for prolonged periods of time using onsite resources. And
13 so right now, we -- the due date for these recommendations is December 28th of
14 this year, is to have this worked on. We're having this series of meetings to
15 make sure we're all kind of working together and understanding what this is. I
16 will say -- and this is kind of current license, current plan design and configuration
17 so we're not -- there's nothing in this that, you know, mandates either a change
18 to a license or a change to, you know, plant design, but this is knowing where
19 you are and proceduralizing that where you are with a focus on critical safety
20 functions, instrumentation, fuel supply, and communications strategies. And so
21 we hope by the end of the year to have a very clear understanding, you know,
22 across the industry on what that looks like and to have that proceduralized going
23 forward.

24 TONY PIETRANGELO: Can I add one point to that, Bill?

25 BILL WEBSTER: You bet.

1 TONY PIETRANGELO: In some of these discussions, the idea of
2 load shedding from your batteries to extend their capacity has come up. Some
3 folks have tech specs on certain loads off their battery system where they would
4 need some kind of amendment request to get that changed in advance. Part of
5 what this information gathering from this IER-4 is is to get not only good ideas
6 about how to do -- how to extend your capability to cope with a extended loss of
7 ac power, but also to identify any constraints that preclude you from getting to 24
8 hours or beyond. If some of them happened to be some tech spec item, I think
9 then we would gather that information and try to do something generically
10 perhaps to ease utilizing that capability to extend battery power, and obviously
11 we'd come to see you with some kind of clip process or something like that. But
12 this is going to identify both good ideas on how to extend capability as well as
13 constraints to furthering that capability.

14 BILL WEBSTER: Yeah. Hey Brian.

15 BRIAN SHERON: Yeah. Could I ask a question on that, or actually
16 a couple? One is how does your 24 hours -- I mean, you've seen what the task
17 force recommendation was, which was the 8 hours and then 72, okay. And that,
18 actually, if you would -- you know, if you read it, it really says, you know, that
19 beyond 72 is when you would think you would be able to bring in offsite, you
20 know, equipment to be able to withstand an extended and indefinite loss of, you
21 know, A/C power. How does your recommendation with the 24 compare with
22 that? I'm not real clear on that.

23 BILL WEBSTER: Yeah, I think our recommendation and a little bit
24 of all this as you know we -- we played with a lot of different numbers. And to
25 some degree there's a fair amount of judgment in any of this. You know, kind of

1 our sense is for near-term action, let's look at 24. Let's see where we are there.
2 Let's see what equipment -- because this really ties very directly to an initiative
3 I'm going to talk about in a minute, is the offsite response capability and, you
4 know, kind of our, you know, judgment is, you know, is the first step, let's
5 understand what that is. Let's understand what equipment is needed, what
6 equipment needs to be onsite, what equipment maybe needs to be regionally or
7 centrally located in terms of having some diversity associated with it. And then,
8 you know, we may look at "Is 24 the right number?" but we really do see this as a
9 near-term -- I don't know if I can call it "interim" but it's a first step. Let's see
10 where we are here. So I don't know that it has a direct correlation. I certainly
11 understand the 8 and the 72 and a high degree of assurance. I think certainly in
12 this country that we could probably get anything anywhere we need it to in 72.
13 You know, there's a lot of debate that maybe 24 plus, you know, 8 hours to get it
14 installed might be, you know, an equally reasonable number. And I think we
15 probably need a lot more study and discussion to really know what that is. But
16 the equation to solve is get the coping times understood, proceduralized, as long
17 as you can, know what the barrier is, and then work the other side of the
18 equation about being able to get the response capability.

19 BRIAN SHERON: What I'm more concerned about is that if you're
20 moving forward with 24, you know, while the NRC, you know, may at some point
21 come out with a different number in a rulemaking, does that -- you know, this
22 gets into the question of are we coordinated in all -- and I'm sort of troubled by
23 that, you know, I'm not convinced that we are yet. That's all.

24 BILL WEBSTER: Yeah, I'm -- the sense is, and again, as Tony just
25 mentioned, is we put some bounds around this. So we're not asking people to

1 modify the plant. We're not asking people to submit license changes. We're
2 asking to know what it is. And so this is actually one where we think we're going
3 to gain the bargain that we want right now and still the leave the room for now
4 further discussion, you know, so that we're not having to circle back and redo
5 things or sending maybe a contrary or a different standard. And so, we see this
6 as a good first step to where we might eventually be going.

7 ERIC LEEDS: In concept, it almost sounds like a 50.54(f) [spelled
8 phonetically] that we would submit, asking for information. All right, 24 hours,
9 can you meet this? Can't you make it? Where are you?

10 TONY PIETRANGELO: Yeah, well, let me see if I can frame it a
11 little bit, that -- this is one of the central questions of Fukushima, right, are the
12 lessons-learned is they couldn't cope long enough with what they had to preclude
13 core damage. As Bill said, this is really the initial first step at information
14 gathering. How long can you really last with what you got right now without any
15 further modifications? That's good information to know now and later when we
16 get into rulemaking or any other activity because this is obviously one of the key
17 recommendations in both the task force report and the SECY [unintelligible]
18 submitted. You got to know where you stand right now to know what else you
19 need to do subsequent and know how fast that other stuff has to get onsite. So
20 this is the first step in saying, "If it happened to me tomorrow, what do I have on
21 hand right now and how long could I last?" Because the four hours for SBOs is
22 the licensing basis number. Everyone thinks they can last longer than that by
23 doing certain things. And, as Bill said, people are getting very creative on how to
24 do that. So each plant is trying to figure out exactly how long they can last as the
25 starting point for a further analysis, and this ties back to one of our strategic goals

1 on synchronizing the time you can cope until the cavalry arrives with the offsite
2 resources. You've got -- and you'd like to have some margin and overlap
3 associated with that as well, so it's just the first step, no plant modifications
4 associated with it. It's information gathering.

5 MARTY VIRGILIO: And let me just add to what Brian said. We're
6 not wedded to the 8 and 72. The Near-Term Task Force made a
7 recommendation and we see that as a starting point for our rulemaking efforts
8 and our conversations. So we're looking for what's the right timeframe.

9 TONY PIETRANGELO: Right.

10 MARTY VIRGILIO: How long do you need to be able to cope?
11 How long is it going to take you to move to installed equipment that can carry you
12 until such time as the offsite equipment can become available? I mean, I think
13 philosophically we agree with that three-stage approach that was outlined in the
14 Near-Term Task Force Report.

15 TONY PIETRANGELO: Yes, we do too.

16 MARTY VIRGILIO: We just need to assign realistic numbers.

17 TONY PIETRANGELO: The other point I'd make is it's not going to
18 be a one-size-fits-all. Different plant designs, different locations, different threats
19 from natural phenomena, ability to get help from a site nearby versus being kind
20 of isolate somewhere. So putting a number on it may be difficult to do. I mean,
21 our strategic goal suggests a more performance based, get it in the time you
22 need it based on what you've got, and have some margins associated with that.
23 It may -- because everyone's different, this is going to be very difficult to
24 shoehorn everybody into a one-size-fits-all.

25 BILL WEBSTER: Yeah, but I would -- I think the 24 hours, Brian, I

1 probably wouldn't ascribe, you know, more significance to it than, you know, the
2 8 or 72 but we got to start somewhere and we need to begin the journey and kind
3 of, our sense is --

4 BRIAN SHERON: Yeah, I wasn't -- I mean, you know, Marty's
5 correct. I mean, we haven't, you know, decided whether 8 and 72 are the right
6 numbers or whatever. I mean, we -- the feeling is the rulemaking will shed light
7 on that in terms of, you know, what's the appropriate, but I'm just saying it's
8 probably -- it's not a number we haven't -- it's a number we haven't nailed down
9 yet. That's all.

10 CHIP PARDEE: This illustrates the importance of understanding
11 the underlying assumptions and capabilities. And without having a common
12 understanding of what, you know, we think we can do with the resources at hand
13 and such, the numbers become irrelevant in some regard. But this is a good
14 activity for us to begin converging on those kind of overlapping capabilities that
15 will allow us to assure ourselves that we can maintain those critical safety
16 functions like core cooling and containment efficacy and such going forward.

17 BILL WEBSTER: The next thing on the IER is just to mention is
18 beginning next year we are putting together review teams that will go to the
19 plants and follow up and look at each of the recommendations in terms of, you
20 know, just to get a verification of implementation. But we also see particularly
21 with these sort of activities, it's really more than a verification. It's really kind of a
22 learning as to what works, what doesn't work, and that we'll continue that
23 learning process with a series of meetings in 2012 where we kind of share best
24 practices and things that people have learned as they've gone forward and
25 implemented the recommendations.

1 I'm going to touch real lightly, because I know there are several
2 other things we need to get into on the other things we have going, and I think
3 the next one I'd just like to mention is that both INPO and NEI are doing a deep
4 review on the industry's response to Fukushima. As you may be aware as we
5 wrote an industry emergency plan following the Gulf Oil spill last year, and we
6 just about had it approved when Fukushima happened. Well, we went an
7 implemented it. I think it served us well, but we're out doing a lot of surveys, a lot
8 of questions right now, and really have done a pretty good job at capturing a lot
9 of lessons-learned. The next stage will be to kind of analyze all the lessons, to
10 incorporate them in the industry's response plan, and to reissue the plan and
11 really get a training regime associated with that. And we'll be working very
12 closely with Jim Wiggins and his staff. I know you're also following through in
13 developing some lessons-learned, and I think that a coordination between NRC
14 and the industry and these emergency responses, I think in hindsight, we did
15 remarkable well. We've got to continue to figure out ways to do better. And so,
16 we look forward to kind of having that interaction as we share our lessons-
17 learned there.

18 And then the last thing on the emergency response is that we are
19 beginning a process right now of looking at the appropriateness in the feasibility
20 of how we do external response for both equipment and technical support.
21 We've kind of had that kind of loosely associated with the INPO emergency
22 response plan. I think one thing from Fukushima is the timelines on being able to
23 do that became quite acute. And so we've got to look at how we're doing that
24 within the industry so we have a task team right now looking at -- and it needs to
25 be tied to the 11-4 level of discussion, but in initial surveys of what equipment

1 would be appropriate to be onsite regional, maybe national, what would be the
2 protocols for storing it, and the ramifications for how it would be logistically
3 moved to a site during a nuclear emergency. And so that work is actively
4 ongoing. We're actually starting right now with an initial preliminary survey as to
5 what that looks like. There was some work done by several utilities early on.
6 Our timeline on that is to really have a lot of the conceptual and groundwork done
7 by the end of the year, and next year is to really begin some detailed discussions
8 of what this might look like to stay on such a capability up in the United States.
9 Again, I think this is another one we'll have to work very closely with the NRC
10 and FEMA and the other branches of the Federal Government in terms of what
11 the industry needs to do and what the interfaces would be, particularly the
12 logistical interfaces during an emergency with the various Government agencies.

13 And the last thing I'd like to talk about is our international
14 interactions. And we've been through the World Association of Nuclear
15 Operators is monitoring very carefully what other countries, other regions of the
16 world are doing. We're going to have a meeting in November of representatives
17 from operating countries from around the world to come together, you know,
18 whether it be the Europeans presenting the stress test they're doing, the various
19 activities that the South Koreans are doing, which, you know, appear quite
20 aggressive. The Russians have done quite a bit -- is to really kind of understand
21 what everybody's doing so that we can kind of capitalize on the best practices
22 and, to some degree, just make sure there aren't any blind spots in our approach
23 in the things we're doing here in the United States vis-à-vis what other countries
24 are doing. And so, our engagement's been I'll say fairly active, but we really
25 hope this November meeting -- and it's going to be focused on the processes

1 people are using with a follow-up larger meeting next summer in terms of what
2 people are finding and what some of the solutions might be.

3 ERIC LEEDS: Where is that meeting, Bill?

4 BILL WEBSTER: Atlanta. We're going to do it in Atlanta.

5 ERIC LEEDS: In Atlanta, okay.

6 [talking simultaneously]

7 MARTY VIRGILIO: -- back to the beginning when you were talking
8 about SOER 10-2 and on the operational events that you looked at and provided
9 some guidance around and your report out in November. I also wanted to
10 acknowledge the fact that not only did you do the review visits, but you also
11 responded reactively when events occurred in parallel with us. I mean, we sent
12 out our special inspection teams. We know you were out there. We appreciate
13 the coordination, so that -- as a matter of fact, I think in almost all cases, you let
14 us go first, conduct our inspections and then you did the follow-up work. And I
15 know that you're talking about reporting out in November. I don't know if there'd
16 be any value in NRC reporting out at that forum or at some other time the results
17 of our -- you know, collectively, the results of our inspections because we
18 conducted reactive inspections around every one of the events.

19 BILL WEBSTER: Yeah, I think that would be a very good idea to
20 explore, because you have, you know, we looked at a lot of the same things so
21 I'd be very -- we'd be quite interested in your point of view.

22 MARTY VIRGILIO: Yeah. I don't know if that can be arranged in
23 that same forum or if we would want to do it in a different forum, but I'll just make
24 that offer that -- you know, because we've got individual findings for each of the
25 facilities that we inspected and then some ideas about, you know, collectively

1 what does it -- what does it mean?

2 BILL WEBSTER: Very good.

3 MARTY VIRGILIO: The next thing I just wanted to point out is your
4 lessons-learned effort about industry's response. NRC is attacking this in sort of
5 a phased approach as well as the Federal Government. The Federal
6 Government has asked us to provide input on -- from an interagency perspective
7 what went well, what needs improvement. So that's sort of externally focused
8 with the rest of the Government. Internally, one of the things that we're just
9 finished or we're just about to finish is what we call the observations. So all the
10 folks, and we had hundreds of people from the NRC staff involved in the
11 response, each one of them had an opportunity to provide their observations.
12 They were reviewed, ranked, and massaged by answer into a product that we
13 should have available for internal discussion within the next few weeks. And
14 then that will lead to then actionable items, as to how should we change our
15 response effort, including do we want to make design changes to our emergency
16 response facility as we move from where it is now in building two to our new
17 building across the street. So that's just for your information.

18 CHIP PARDEE: You know, Marty, that will be a good platform for
19 us as look at command and control and how information flows and who's making
20 which decisions. I think that will be a good foundation for self examination as to
21 how well we would do when the control room operators are making
22 consequential decisions and whether people in my position or people in your
23 position would be an asset or an impediment to that. So I think that, you know,
24 that conversation will lead to, I think, fulsome discussions on making sure we
25 don't somehow get ourselves hung up during events that require, you know, very

1 specific and timely actions in order to mitigate the consequences.

2 MARTY VIRGILIO: That's a good idea. The last thing I would put
3 out there is we're with NEA. As a matter of fact, this week we've got a phone call
4 scheduled for early tomorrow morning to talk about an initiative where we would
5 gather -- the more mature countries would gather in Japan probably sometime in
6 late October or November and share insights from a regulator's perspective
7 about the stress tests, what the acceptance criteria are in different countries
8 because, recall, the stress tests were a set of questions and -- without a set of
9 answers. And so I think each country was then left to develop, well, what's the
10 acceptance criteria in response to the questions. And so it looks like we may be
11 -- we may be having a forum in Japan in either October -- late October or early
12 November to review that. So it's almost a parallel effort to what you're talking
13 about with [unintelligible] except it would be from an industry perspective as
14 opposed to from a regulator perspective.

15 BILL WEBSTER: Yeah. That sounds like a really super initiative. I
16 was just over in Japan and the FEPC, which is kind of coordinating the stress
17 test equivalent in Japan is really trying to understand, you know, what the
18 acceptance criteria might be and what would be a reasonable approach. That
19 sounds like a very timely initiative in terms of the information that would be of
20 value to our colleagues in Japan.

21 MARTY VIRGILIO: Yeah, this is being organized by NEA and I
22 commend them for taking on this initiative.

23 BILL WEBSTER: Yes.

24 MARTY VIRGILIO: That's all I have. Thanks.

25 BILL WEBSTER: Thanks, Marty.

1 TONY PIETRANGELO: Just to complete what we've been doing
2 on the regulatory side, which is in NEI's building block for this. We did stand up a
3 new working group that Dave Heacock chairs, our regulatory response working
4 group. They took the initial cut at the Task Force report in terms of what the
5 near-term priorities and things we thought we could do effectively to implement
6 any of those recommendations. That was vetted up through the Fukushima
7 Steering Committee and then with the full [unintelligible], so that's the process we
8 followed for that, and that's the process we'll follow for other kinds of regulatory
9 activities. We already had existing working groups on emergency preparedness,
10 on used fuel, and we also had some task forces set up primarily on seismic. We
11 did not having anything on flooding that we're forming now to focus technical
12 resources on those particular issues. So we're pretty well geared up now.
13 We've tried to mix what we had already in place and supplementing that with new
14 groups, but Dave Heacock's working group is the one that's really the central
15 regulatory body for us to interact with you all. But it's under the auspices of the
16 steering committee in the [unintelligible].

17 CHIP PARDEE: Thanks, Tony. That's good. Allow me, if I may, to
18 pause just for a minute. We have till 15:30 in total for time remaining. Is that
19 correct?

20 MARTY VIRGILIO: I'll ask Lance. What was the --

21 CHIP PARDEE: I just want to make sure we manage our
22 remaining time correctly, Lance.

23 LANCE RAKOVAN: We had said that we would take approximately
24 two hours for the discussions at the table and then allow half an hour for the
25 public. So we were scheduled to go till 3:00 if you will for discussions at the

1 table.

2 CHIP PARDEE: Okay. Okay, good. And Tony, what I'll ask you to
3 do, while I'm just kind of completing just a little bit of the conversation around our
4 general priorities and such as, if you would just prioritize the Near-Term Task
5 Force recommendations, and we'll go through those and our view and some of
6 the areas, frankly, where we had some differences in contemplated approach.
7 And we should be able to spend, if that serves you, the last 30 minutes or so on
8 those, and then we'll hit 15:00 and the question and answer period. Does that
9 work? Does that work for you?

10 TONY PIETRANGELO: [assent]

11 CHIP PARDEE: Very quickly, Brian, I may have misinterpreted one
12 of your questions to me about interface. We actually have two guiding principles.
13 One is for all of the stakeholders, be they the mayor of the local town or the state
14 officials that are so important for us in our emergency preparedness planning and
15 execution and such. So we have one that focuses on that, which is the one I
16 spoke to briefly. We also have an explicit one about this dialogue, this kind of
17 interaction to make sure that we stay as well coordinated as we can. That is
18 guiding principle number four, and that's really -- that perhaps is what you were
19 asking me, actually, where is the structure around that.

20 We have -- I'll reflect upon one other guiding principle and then go
21 to you, Tony, to have us step through in the priority you see, the Near-Term Task
22 Force recommendations. But we have a guiding principle that say develop
23 response strategies that are performance-based, risk-informed, and account for
24 unique site characteristics. So, in general, as we continue to examine the events
25 at Fukushima, there are actually very few things that have just plain caught us by

1 surprise. This is different than perhaps the way we viewed -- I'll speak from the
2 industry's perspective -- the events of 9/11 where we had not contemplated, you
3 know, a large aircraft used essentially as weapons against our infrastructure and,
4 in our case, our nuclear operating facilities. That was a response driven by a
5 gap, if you will, in our planning and such. We did not contemplate the degree to
6 which terrorism could be impactful upon our plant operations. And B.5.b was
7 essentially the response to that, and I know you're very well-versed in that.

8 We don't see similar kinds of gaps in contemplation of sequences
9 of events and such with what we have found at Fukushima as we reflect upon
10 that. That's not to say that there are not areas for improvement as we look at
11 those very, very low probability, very high consequence events, which is at least
12 the way we are approaching Fukushima. And I at least won't today go into the
13 discussion about whether or not that should have been a contemplated series of
14 events or not. That's not what this is for. But in order for us, we believe, to best
15 take advantage of the resources and the expertise that we have, that we're able
16 to bring to bear with regard to improving our Defense-in-Depth against those very
17 low probability, very high consequence events, we have convinced ourselves that
18 the notion of diversity and redundancy and flexibility will best serve us in our
19 response characteristics capabilities, which does not necessarily lend itself to the
20 proscriptive regulation that Tony was talking to.

21 So, by example, if our end goal is to ensure that we keep water in
22 the spent fuel pools, our general direction is to not migrate to a hardened
23 seismically qualified, you know, pre-established access point with a standpipe
24 going up to the spent fuel pool that we think could withstand a seismic event or a
25 fire or a tornado. Our actions are focused on how can we best assure that we

1 will have that capability without having to understand specifically the sequence of
2 events that lead us to that condition -- system-based in the parlance of the
3 industry, not event-based.

4 And our actions in that simple example -- again, I use as a point of
5 illustration -- will be to have multiple points where we could, and have confidence
6 that we can run fire hoses, flexible hoses from different water sources with
7 different modus capabilities to pump that water up to the fuel pools. So we are
8 less focused on hardening a single option. We are much more focused on
9 presenting a number of viable options such that we can be assured -- and again,
10 in the spirit of Defense-in-Depth that we can maintain that capability. And I think
11 a lot of the comments that we'll end up focusing on as we go through these
12 dialogues will be whether or not we're landing on a single proscriptive solution or
13 that notion of diversity and redundancy and flexibility to obtain the same end
14 state, the same goal, the same function assuredness. And I think that will be
15 reflected through our comments as we move our way through some of the
16 technical details, both with the Near-Term Task Force recommendations and the
17 longer-term recommendations as well. So I thought it would be best just to be
18 explicit about that, that that appears to be at least potentially one area of
19 difference between industry focus thus far and what we can derive from what
20 we're reading.

21 TONY PIETRANGELO: That's actually a very good tee up for
22 going through the recommendations because they're very specific in some
23 circumstances. And our perspective on it not about the exact recommendation
24 that's in the Near-Term Task Force Report. I think, in general, the areas covered
25 in the Task Force Report were exactly the same areas we were looking at, so it

1 was good alignment. At least from our review of the Fukushima events that
2 came out of the Task Force, the means of going about addressing those issues
3 might be quite different as Chip just got into. And I'll try to color that as we go
4 through. So it's not a specific comment on the NTT recommendation. It put it 15
5 feet above the, you know, that kind of thing. It's more of the -- what we think per
6 that approach, with diverse, flexible, agile implementation for whatever. It really
7 colors all of our comments in this.

8 So I was just going to start going through these, and then I
9 encourage you to ask questions. And we really wanted to have some dialogue
10 on these to share. We've had several steering committee meetings. The group
11 was stood up in April. We've been meeting monthly, face to face, and have
12 weekly conference calls. So we're all pretty well versed in all of the areas that
13 we're going to talk about today. And we've gotten a lot of support obviously from
14 our folks, both at NEI and INPO and EPRI and our membership.

15 So let me start with Recommendation 2. That was on the seismic
16 and flooding design basis. This was part of our recommendation on near-term
17 actions to conduct walk-downs against the current design basis for flooding and
18 seismic. We think we would need to have interaction with the staff on developing
19 the protocol for those walk-downs, the acceptance criteria, perhaps even the
20 qualifications of the teams that conduct the walk-downs. We would try to get
21 your concurrence on that approach and then report the results back to the NRC.
22 And we think identifying some vulnerabilities or deficiencies on what our current
23 protective strategies are is a very important near-term action, and it also makes
24 the cut as one of our higher priority items.

25 MARTY VIRGILIO: Do you see a difference, Tony, from what we

1 included in the paper to the Commission from what you just said, because I'm not
2 hearing one. I mean, essentially what we told the Commission is that we need to
3 start the dialogue to agree on success criteria with a walk-down --

4 TONY PIETRANGELO: You did say that, and that was --

5 MARTY VIRGILIO: I just want to make sure that --

6 TONY PIETRANGELO: What I did not hear in the staff paper was
7 against the current design basis.

8 CHIP PARDEE: I think that's an area which ambiguity or, at least
9 from our perspective, ambiguity -- sorry, Lance -- that causes some -- that raises
10 questions in our minds.

11 MARTY VIRGILIO: Right. And I think we need to agree on the
12 answer to that, especially for the walk-downs. Yeah.

13 TONY PIETRANGELO: Go ahead.

14 MIKE JOHNSON: Question regarding the walk-downs. We've
15 done a lot of thinking over the last year and a half or so regarding walk-downs, at
16 least seismic walk-downs and GI-199 [spelled phonetically] and I was wondering
17 if you had some chances to think about it or had perspectives about additional
18 stuff that needs to be done regarding those walk-downs?

19 TONY PIETRANGELO: You just went to a level of a detail I'm not
20 prepared to answer, yeah.

21 MIKE JOHNSON: That's all right. Okay.

22 CHIP PARDEE: With that said, we think that, you know, the
23 process that we're establishing with GI or GSI-199 is the right way to go about.

24 TONY PIETRANGELO: Well, that's the next 2.1.

25 CHIP PARDEE: Oh, I'm sorry. Tony, I --

1 TONY PIETRANGELO: That's all right, that's sort of a segue.

2 CHIP PARDEE: Yeah.

3 TONY PIETRANGELO: We do think that current model that you're
4 following in GI-199 is the right way to go about updating the seismic design basis
5 if that's what warranted. We've got our folks studying the draft generic letter
6 now. We're very hopeful that we can have a public meeting in October on that
7 draft general letter. So that will inform our comments and make them better
8 comments that we give you back by November 15th.

9 We think this model would also apply to flooding. In this case,
10 you've got, you know, the USGS is the technical authority on seismic hazards
11 data. You've done a screening through your GI-199 process to identify the
12 applicable plans. There's a request for information as you were commenting on
13 now, the draft generic letter, a process set up to analyze and report back to the
14 NRC and then take the appropriate action. We think that's the right way to go
15 versus every 10 years, make everybody go out in their particular area and try to
16 update their design basis based on some vague information.

17 First of all, that kind of information doesn't change that often, so
18 making everybody do it every 10 years is pretty burdensome. Two, if there is
19 new information, why wait 10 years? It should be looked at immediately, and
20 that's kind of been the, I think the regulatory approach that's been taken
21 historically when there is new operating experience or significant new information
22 from a technical or even environmental standpoint. The staff analyzes it and
23 then takes the appropriate regulatory action. And I think we're well into that
24 process on GI-199. And from a big picture perspective, what we look for is
25 stability and predictability in the regulation such that when there is new and

1 significant information, there needs to be a screening threshold for how that's
2 going to be considered, a process that that's input into so that that the licensee
3 knows what precisely to do, he accepts the criteria associated with that process,
4 and then the regulatory mechanism for any result match. We think that's the
5 same approach to take on flooding. And it probably hasn't been done as --
6 what's the right word for it? Well, I think GI-199 is establishing that, and it could
7 also be applied to flooding, a very methodical, systematic way of considering new
8 and significant information. And we think, again, we're well on our way down that
9 path.

10 BRIAN SHERON: With regard to 199, I note it's interesting that you
11 brought that up because I think, you know, and I'm not wedded to 10 years. I
12 mean, you heard USGS say that they update their seismic hazard curves every
13 six years, so maybe every six years. But --

14 THNY PIETRANGELO: Well, if it passes some threshold, then yes.

15 BRIAN SHERON: Yeah. Part of the problem we ran into on 199,
16 and I'm not going to claim to be an expert though, is that it's very difficult for us to
17 take generic data like that, okay, and information, okay, and sit there and say we
18 understand how it applies to every plant, okay. And so what happens is then we
19 don't know so we have to, you know, and this -- on this -- you know, the first time
20 with -- we tried to work with the industry, okay, and it ultimately led to NEI
21 saying, "Well, you know, you need to issue a generic letter." You know, so then
22 we had to go off and issue a generic letter. And it's basically saying is now you
23 need to go out and analyze your plants against this new information, okay. All
24 we're trying to -- you know, at least in my mind, the thought was, you know,
25 shouldn't we somehow kind of automate that process rather than have to have

1 NRC sit there and scratch our head and say, "Gee, we don't know how it applies
2 to every different operating plant, okay," but if the industry took this information
3 when it comes out every six years or whatever, okay, had a process by which
4 they could evaluate their plant and either they come in and they say, "Nothing's
5 changed," okay, or "Yes, something has changed and we've got to deal with it."

6 TONY PIETRANGELO: But I think it's a joint responsibility. It's not
7 just the licensee responsibility. They have a licensing base -- they need it until
8 you change it, okay. I think you're -- we are establishing the protocol through GI-
9 199 right now. Can we do it better given the lessons-learned from the interaction
10 thus far? Probably. But let's work together to establish that such that when we
11 do get new and significant information -- this isn't the last time we're going to get
12 new information on seismic or flooding, right. This is going to happen again in
13 the future at some point. All we're saying is to have that protocol established on
14 how to consider it, how to screen it up front so you can determine its applicability,
15 which plants have to do further analysis, report back the results, and take the
16 appropriate action. So I don't think that we're saying anything different.

17 CHIP PARDEE: I don't either. I think the end state you're
18 describing is where we want to be, but as we make this transition from seismic
19 margins to some kind of risk-informed process, it's going to take a lot of
20 conversation back and forth in order to do the right thing efficiently. So, I don't
21 disagree that, you know, in an ideal world we'd be able to absorb, analyze,
22 process the information, and come back and say, "Here's what we think we need
23 to do differently," and, you know, we'll keep our licensing basis updated
24 accordingly, but this is -- as you know, this is not something that we have a
25 particular level of maturity with, with how we're analyzing and keeping the

1 regulation up to speed with, you know, with our new learnings. And as we
2 transition from margins to risk-informed, and I'm sure we will as the years go
3 along, the dialogue that you're describing is important for us.

4 TONY PIETRANGELO: Okay, let me turn to Recommendation 4
5 on extended loss of ac power. And there's two principle recommendations. I
6 actually think both are priority recommendations. Fundamentally, Fukushima
7 was a extended loss of ac power event, central lesson learned. We agree with
8 the staff recommendation to pursue a rulemaking in this area. We note that the
9 Task Force, or that one of the Commissioners voted on an advance notice of
10 proposed rulemaking. I think the SECY was a little less specific about pursue
11 rulemaking, but this is probably the longer pole in the tent because there's so
12 many moving parts in this from, "Can you cope longer?" with "What credit can
13 you give the B.5.b equipment?" versus how long it takes you to get the offsite
14 stuff there. There's pieces that have to be fit into this, so we think the ANPR
15 would be a good idea to kind of flesh out kind of what information you need to be
16 able to do the timelines we're all talking about on coping and mitigation and
17 offsite help. But in any event, rulemaking's the right process for this.

18 And obviously, the other near-term one is the 50.54(hh) to assure
19 you have sufficient B.5.b equipment for a multi-unit event, and then it's
20 reasonably protected. I think we need to dialogue on that. That's another one
21 where you could go traditional and say "I want a seismically qualified, tornado-
22 proof garage for my fire truck," okay, versus "Give me something that won't fall
23 down on my fire truck so that I can get it out of there and unimpeded," taking a
24 more diverse approach to where you station these things versus -- it's the
25 diversity versus kind of the qualification approach. It's appropriate, we think, for

1 beyond design basis. So obviously we need some dialogue, I think, on this one
2 in terms of what's reasonable protection, right.

3 MIKE JOHNSON: Tony, just a question for you. One of the things
4 we are struggling with or dealing with in terms of the next product that we have to
5 deliver is trying to gauge the level of effort or the complexity of development of
6 the technical basis. And so I think what I heard from you, and I just wanted you
7 to clarify or give me your perspectives regarding, for example, the seismic work
8 that we've done and what that means in terms of technical basis development, in
9 terms of additional work that would have to be done if we were going to revise
10 the rule, compared to station blackout where you talk about all of the moving
11 pieces. Can you sort of give me a range or a scale? Have you thought about
12 that?

13 TONY PIETRANGELO: Yeah, I'm not a -- I do know that one of the
14 comments you're likely to get on the GI-199 generic letter is timeframe is not
15 realistic. So it is going to take longer than the one to two years to get the
16 information, do the analysis you want back to be able to make an informed
17 decision on whether you need to do anything different. But that one has less
18 moving parts, I think. It's very technically complex. What makes the 5063 one
19 different is all the moving parts and different pieces that you have to put together.
20 And that's probably I would say a minimum three to four year exercise.

21 CHIP PARDEE: Okay, before we move off Recommendation 4, if I
22 recall correctly, and I don't have my notes in front of me, that one -- the SECY
23 that was issued specifically as it pertains to Recommendation 4 had some
24 reference to definitions to adequate protection. And I think that is an area that
25 we would like to explore with you as to, you know, the approach, you know, why

1 that one in particular would require or contemplate changes to the definitions to
2 adequate protection and, you know, what criteria are being implemented and
3 such. We think that would be both instructive for us and an opportunity for
4 feedback. And we haven't spent a lot of time on that, but I know it came up
5 during the Commission briefing last week. The SECY does beg that questions in
6 a couple different places, and an area that we would like to spend more time with
7 you on.

8 MARTY VIRGILIO: Okay, good. And the areas where you were
9 proposing orders and moving forward with rulemaking, not information collection,
10 but in those areas we did specifically say in the paper, and maybe we didn't say
11 this clearly in the paper I think was the Chairman's point in the dialogue we had
12 at the Commission meeting, but what we did say at the Commission meeting was
13 in those areas where we going to go forward with orders and rulemaking and that
14 we were going to start the process with the presumption that we were going to
15 develop these under adequate protection, we're redefining what constitutes
16 adequate protection. If you go to 50.109 of our regulations, it sort of lays out
17 what is a backfit and what are the tests for backfit, and what are the different
18 brands of backfit that one could have. And the third half is redefining the basis of
19 what's adequate protection.

20 What I anticipate that we'll hear back from the Commission, and we
21 haven't heard back from them yet, is that they would support moving forward,
22 that we presume to start on these kinds of new requirements under this adequate
23 protection backfit as opposed to costs-benefit justified backfit. And we would
24 develop a technical basis. And if that technical basis was sound, then we would
25 move forward. So there would be an opportunity, I think, for us to interact as we

1 develop the regulatory basis or the rationale for moving forward under adequate
2 protection.

3 CHIP PARDEE: Okay, that's good.

4 MARTY VIRGILIO: And this was one where it's probably not as
5 explicit in the paper as we tried to be at the Commission meeting. I think we
6 were very clear about the two orders that we were proposing on containment
7 fence and the B.5.b that we said in the paper that we would do those under
8 adequate protection. And I think in the dialogue at the table, what we then said
9 was that the rulemakings we would start under adequate protection as well.

10 CHIP PARDEE: I'm not sure I kept up with the dialogue at the table
11 and, therefore, my question is actually --

12 MARTY VIRGILIO: No, no. I'm glad you're asking because it
13 wasn't clear in the paper other than, I think, for the two orders.

14 TONY PIETRANGELO: Yeah, that's a great segue into this issue
15 which is the hardened vents, because that's one of the orders recommended in
16 the SECY. I'll profess that we still don't understand why you think you need an
17 order for that. The 23 Mark I's already have hardened vents installed. There
18 was a design criteria developed by the BWR owners group 20-odd years ago. It
19 was accepted by the NRC staff. We don't know why the valves failed in Japan
20 yet and what the failure mechanisms were if they failed at all. Or was it leakage
21 through containment? So, and this -- that's why our recommendation was
22 predicated on "Let's make sure we can get to these valves and that we can
23 operate them without ac power as a first step. When we get more granularity on
24 what happened in Japan, maybe then do a design review against what we have
25 in place here. And then see if there's any changes that result from that." But the

1 orders just didn't seem to be, at least from our perspective, the right tool for
2 where we stand on our knowledge of hardened vents at this point. Why did you
3 recommend [unintelligible]?

4 [laughter]

5 MARTY VIRGILIO: Okay. Go ahead. Anybody can start.

6 [laughter]

7 MIKE JOHNSON: Yeah, I'll -- I was going to -- I was actually -- I'll
8 let Brian talk, but I wanted to -- we were primarily trying to do in this meeting, and
9 I'll have an opportunity to hear from you regarding your plans and perspectives
10 what the industry's going in, so we really haven't set this meeting up to be a
11 dialogue around defense of --

12 TONY PIETRANGELO: I'm just trying to promote understanding.

13 MIKE JOHNSON: I know. So, but I think in deference to the
14 stakeholders who are not here, I didn't want to go too far down the road with
15 respect to that kind of a dialogue, would be my perspective.

16 BRIAN SHERON: I was just going to kind of ask, I mean, what is
17 the industry proposing? I mean, obviously, you know, you just mentioned two
18 concerns. One is make sure they're operable and that they have power --

19 MALE SPEAKER: A way to open them.

20 BRIAN SHERON: Yeah. And the question is, you know, is the
21 industry proposing something as an alternative to what you put there and how do
22 we deal with that? In other words, are you going to -- are we going to get a letter
23 from every Mark I that's going to commit to do this or what?

24 TONY PIETRANGELO: Our recommendation was a CAL [spelled
25 phonetically] for this, because they're already on the docket with a hardened

1 vent, okay. Go back and confirm that you can get any, can access that valve and
2 operate it without ac power.

3 CHIP PARDEE: I agree, but this is one of those where the
4 definitions are critical. So the words in the SECY as I recall say something like
5 "reliable," and the inference is absent ac power. And this was clear we went
6 through the B.5.b actions and such that we had to have alternate means as Tony
7 said to operating these valves. But if reliable means stroke remotely two dozen
8 times, that's going to have a different outcome than we have the capability to
9 operate these valves without ac power.

10 MARTY VIRGILIO: And our intent was that we would have a
11 dialogue to agree on that, you know, what was operability. But we hadn't made
12 up our minds whether this was going to be independent of ac power,
13 independent of station air, you know, separate nitrogen --

14 CHIP PARDEE: Okay, and this is where we get worried about
15 orders, Marty, because when we see order, it's like charge forward. We know
16 exactly what we're going to do, now go do it.

17 TONY PIETRANGELO: That's not how you --

18 MARTY VIRGILIO: And that's not really our intent at all. Our intent
19 is to make sure we have a fulsome discussion with the stakeholders around each
20 one of these issues before we issue the order, or we issue the order that says
21 specifically within the order that before you actually impose, you have this
22 dialogue with all the stakeholders.

23 CHIP PARDEE: Okay. Yeah, and actually, I don't think this is
24 going to be a point of great debate, I don't think. But it is one where we were
25 scratching our heads on, you know, what do they -- the NRC -- see that we don't

1 that would cause them to pull orders out of their quiver instead of some other
2 tool? And the conversation is in the spirit of, you know, are we aligned in our
3 understanding of current state, you know.

4 ERIC LEEDS: If I can add to what Marty said, as the ad hoc
5 committee, the office directors, as we examine these and talked about them, we
6 did just what Marty said. We were thinking we need to engage with all
7 stakeholders before we launch. And just because it says order, that doesn't
8 mean now. That doesn't mean that we've already decided what the answers are.
9 In fact, we're very open to dialogue, and we need to have the dialogue. An order
10 -- an order provides certain regulatory -- a regulatory framework which is very
11 different than a CAL and very different than a commitment. And that's where the
12 debate is going to be among the staff.

13 TONY PIETRANGELO: I've heard that line of reasoning.

14 ERIC LEEDS: What's the pedigree that we're going to want from a
15 regulatory standpoint to back up wherever we get to after our discussions? And
16 that may drive what the actual regulatory tool that we use?

17 TONY PIETRANGELO: I understand.

18 CHIP PARDEE: That makes sense, Eric.

19 TONY PIETRANGELO: Okay. Let's move on. Our next one was
20 spent fuel pools. We did have some recommendations in Chip's presentation
21 last week on things we thought we could do with respect to the spent fuel pools
22 that differed from the Near-Term Task Force recommendations. And again, this
23 gets back to, I think, what Chip was trying to explain before about taking a
24 flexible diversification approach to beyond design basis things versus specifying
25 safety-related or some stylized thing with one line or two that are separated. We

1 think we can move forward with providing diverse means of monitoring the spent
2 fuel pool. We think it was unacceptable that they didn't know the status of those
3 pools when they needed to know it. And it could be -- we know we have more
4 time on the spent fuel pool generally. But you need to know that status or else
5 you're sending people out trying to check it. And that's not a good thing in the
6 first 8 to 24 hours of the event, being distracted with something that you don't
7 know the status of. So we're fully on board with providing some form of diverse
8 means of remotely monitoring spent fuel pool. And there's lots of different ways
9 to do that. This one's also a good example, I think, of that kind of adequate
10 protection versus substantial additional protection. Doing it in a diverse means
11 versus a safety-related, you know, qualified means greatly reduces the
12 implementation costs and makes your cost-benefit determination much simpler to
13 do and pass. So, it's got to stay on -- not all these have to be adequate
14 protection because they won't -- I think there was some fear that because of
15 backfit we would argue about every one of the Near-Term Task Force
16 recommendations because these are very, very low probability scenarios. But if
17 the costs aren't that much, I think they pass on their own merit pretty easily to
18 give you some safety benefit.

19 CHIP PARDEE: So, not to sound flippant, Marty, but I can reach in
20 my briefcase and look at my iPhone and see what my tire pressures are, and
21 there's no reason why we can't have this same kind of flexibility. I mean, there
22 are some very powerful tools out there for us. We're just not used to using them,
23 and we want to keep our options open.

24 MIKE JOHNSON: I just had a question or a thought about that. So
25 I hear flexibility, you're thinking is flexibility and implementation, or flexibility in

1 approach, I guess, flexible approach. Have you thought about flexibility in
2 implementation? There could be -- by that, I mean what are you thinking? Have
3 you thought about these commitments that you're planning? Are these changes
4 to the licensing basis that you're thinking about? Are these -- what are you
5 thinking in terms of what you're thinking today with respect to how you would
6 incorporate these things in a way that so that we would be able to rely on them?

7 TONY PIETRANGELO: I think you've got all the tools and you
8 decide which ones are correct. I think -- and this is where I'm sympathetic to the
9 Task Force Recommendation on the framework, even though that's not going to
10 be for 18 months. I think task force observation laws over the years that the
11 agency has treated beyond design basis things differently in regulatory space.
12 Some got rules like station blackout. Some got 50.54 or generic letters and we
13 did SAMGs or we did hardened vents. So they were treated differently. I think
14 there is room to develop a more consistent approach for beyond design basis
15 events, and I think Chip did a good job articulating where we're at in terms of
16 what we think that should be, not one based on qualification but based on
17 diversity and flexibility. That's very difficult from a -- I think that's different from
18 our history. We've all been weaned on design basis, you know, separation,
19 redundancy, everything -- in a very stylized, transient, but this design basis is
20 predicated on versus a you're not exactly sure what's going to happen with these
21 beyond design basis. And there's a lot more uncertainty associated with it. And
22 to us, it demands more flexibility in the response so that you can deal with some
23 of these unknowns and uncertainties, so for that to be spelled out in the
24 regulations somewhere I think would ultimately be a good thing and would help
25 future commissions. But I think it speaks to your question, Michael, in terms of

1 how you handle it. But maybe some of these examples as we go through them
2 will color that paper in 18 months.

3 Okay. We got about 10 more minutes here. With the next year
4 term 1, we think a high priority is the training on SAMGs and EDMGs. We think
5 there should be a consistent industry standard for how each company goes
6 about training. That has to be -- I think the most important part is it has to be
7 incorporated with the ongoing training. You don't want to let the pendulum swing
8 to these very low, low probability events at the expense of things that the
9 operators need pay attention to on a daily basis [unintelligible], so that's what
10 we're going to look to, INPO and the National Academy, to develop that standard
11 that we can implement across the board for that.

12 BILL WEBSTER: Yeah, and that review was already begun in
13 terms of exactly what is the right standard for this kind of training and, you know,
14 which level of proficiency are we really looking at versus maybe familiarization
15 and orientation. And so to try to understand that a little bit better with everything
16 else that we're expecting in the training regime is that to find the right fit for this,
17 it's certainly more than we're doing now but what is that right spot is something
18 that dialogue is ongoing right now.

19 TONY PIETRANGELO: And then beyond just the training on the
20 existing SAMGs and EDMGS, the whole integration transition from EOPs to
21 SAMGs or EOPs to EDMGs. We've got EPRI and the owners groups as the
22 technical leads for that activity. We see that as a longer term but something that
23 needs to start soon. But that integration, I think these different procedures and
24 guidelines were developed during a different era and is really the appropriate
25 time now to step back and say, "Are we making the operator go to 13 different

1 places to go get this guide?" Should it be better integrated? So we think that's
2 an important one that it needs to start. But I think the effort is going to take a
3 number of years to complete. The training thing I think we can start on in the
4 much more near-term.

5 The last one for priority for the emergency preparedness activities,
6 two in particular. We understand the EP for multi-unit staffing. I think there's
7 been good dialogue. In fact, I think we have the EP working group in our shop
8 today, and I know our folks have been talking with the folks at NSIR about this as
9 well as the communications post-event. And I think that was your command and
10 control piece about how we're going to do that. We do think those are
11 appropriate for work on the near-term, but the main priority is getting the current
12 rule implemented. We just got this new rule, and doing that staffing is, it really
13 will be a supplement to the staffing analysis that's already called for. I don't know
14 whether we can do it in the same timeframe or not but do have to be scenarios
15 worked out to do that analysis. So there needs to be some legwork on the front
16 end, much like all of these things that make sure we're in agreement on the
17 scenarios and the assessment methodology and so that you can accept the
18 results.

19 The rest of these -- and I don't want to over-simplify this, but really
20 the near-term, in our view, and we ran this through the working group and the
21 steering committee, the near-term actions that went into the first SECY really,
22 from our perspective, have turned out to be the priority items going forward. The
23 rest of the -- and I can go through all the rest of these, but I think we kind of all
24 have the same comment on them, that they didn't rise to the top. And so
25 basically we put these in two bins so that the things we think we could go forward

1 with and really is represented in Chip's presentation last week, and the rest is the
2 rest on a slower train. When we do a risk cut at some of these near-term actions,
3 we do think we get the most bang for the buck with the actions we described.
4 The other ones are on ROP or staff actions or studies. I mean, those are longer-
5 term activities, and I think you just have to see where those go. And then there's
6 always the possibility we're going to get additional information out of Fukushima
7 and lessons-learned that will maybe make us go faster on one of these, or
8 there's a new one that pops up. So that's kind of going to be our input. I think
9 we do intend to send you a letter as input to the 45-day SECY, but our initial cut
10 and the vetting we've done thus far, that's kind of where we've fallen out on this.

11 MARTY VIRGILIO: You touched on the issue I wanted to ask as a
12 question is at this point in time, do you see anything beyond what was in the
13 Near-Term Task Force Report as actions that, as an industry, you believe that
14 you ought to be working on?

15 TONY PIETRANGELO: The only one that's been raised, and it
16 came up during our call yesterday, and Chip alluded to it, was this loss of
17 ultimate heat sink.

18 MARTY VIRGILIO: Yes.

19 TONY PIETRANGELO: That one, if we think we need some more
20 information on before we say we really need to go to x, y, and z, but that's the
21 one that's kind of in the back of our minds that we need to run down and
22 understand what happened.

23 MARTY VIRGILIO: One of the things we talked about yesterday
24 was ensuring that there's a certain degree of discipline around additional items
25 that we add, the lessons-learned from Three Mile Island or I think what we saw

1 was the reaction on the part of a number of people who come forward with issues
2 that they've been sitting on for some period of time but now have a forum to bring
3 them up, and it's clear to us that we want to exercise discipline around and
4 adding to the list, that there really does need to be a clear nexus to what
5 happened at Fukushima and a clear improvement and safety associated with
6 what we would bring forward. We would ask all of our stakeholders to adhere to
7 that same disciplined approach. But amongst ourselves, we have also talked
8 about loss of service water, loss of ultimate heat sink as a potential item that was
9 not addressed specifically in the Near-Term Task Force support but something
10 that we may want to look at. And as you point out, as we get the more detailed
11 sequence of events, there may be other things, particularly in that second and
12 third and, you know, that you talked about. We may well see other things that we
13 want to do.

14 ERIC LEEDS: If I could just add, Marty, for our external
15 stakeholders, for people in the audience who are listening in, there are other
16 methods, and most of the external stakeholders know there are other methods to
17 raise issues or safety issues, potential safety issues to the staff that are always
18 available to external stakeholders. There's the 2.206 process, the 2.802
19 process. There are many processes. So it's not that we don't -- I'm trying to
20 amplify with Marty, it's not that we don't or that we're not interested in issues --
21 the exact opposite, we are. However, at Fukushima, we think that there's a set
22 of criteria that we want to have that really focuses the work on Fukushima on the
23 lessons-learned from Fukushima to avoid what happened at Three Mile Island.

24 CHIP PARDEE: Bill, did you have anything you wanted to close
25 with?

1 BILL WEBSTER: I did not.

2 CHIP PARDEE: Tony? I think, Marty, we're ready to pass the
3 baton back over to you. And if you have further questions of us or you want to
4 get into the Q and A period, but we're don with our prepared commentary for
5 now.

6 MARTY VIRGILIO: Thank you very much, and that was very
7 informative. I really appreciate the dialogue. Let me ask Brian -- did you --

8 BRIAN SHERON: Yeah, one -- just one question. In terms of
9 moving forward, do you -- does industry have resource limitations in terms of skill
10 sets or anything? I mean, for example, Generic Issue 199 is going to require
11 people that are seismic experts and stuff. There are other areas in here where
12 there's -- you're competing with resources among yourself, for example.

13 CHIP PARDEE: Yeah, and I would put that in two different
14 categories, Brian, and you guys can help me out. One is, as you referenced,
15 experts in seismic analysis. I think we'll run into the same thing with flooding
16 analysis as we continue to move forward in that process, not so much of a
17 consequence once the water rises, but how can you determine, you know, what
18 rainfall or behaviors of dams that are overwhelmed, things like that. I think we
19 may very well run into limitations in expertise in a couple of those areas. And
20 then the other category -- and we talked about it with our strategic goal number
21 one -- is simply not taking the active proficient licensed operators and
22 overwhelming them with academic exercises. And I don't mean that crassly or in
23 a derogatory fashion, but we -- you know, we do have a finite number of
24 proficient license operators. That's for good reason. They spend tremendous
25 amounts of time in training, as you know. And it doesn't serve us to expand

1 those numbers in a considerable fashion because it dilutes the quality of those
2 particular individuals. So we certainly have ample today, but we're very mindful
3 of overwhelming those resources like licensed operators where we would not
4 want to take inordinate numbers away from these kinds of efforts and at the
5 expense of plant operations. That said, Brian, I'm not seeing us there. We're
6 just going to have to remain mindful of it. So, Tony, Bill? Amplifying
7 commentary?

8 BILL WEBSTER: No, I'm in the same place. But, you know, we
9 need to continue to look at just all the different aspects of the kind of the
10 [unintelligible] because we certainly through our executive advisory group get
11 that feedback. And so we're mindful of it, but it is hard to kind of find what's that
12 specific, you know, limiter that we saw like in an NFPA-805 [spelled phonetically]
13 or something like that. It's not apparent to us right yet what that might be.

14 CHIP PARDEE: I went back and pulled the program notes from the
15 Regulatory Information Conference that we had immediately prior to Fukushima
16 and the focus around making sure we're deploying our resources to our best
17 advantage, paying attention to fundamental operations. We went wrong back
18 then, and I think the comments around resources and focus are completely in
19 keeping with the theme of that.

20 MIKE JOHNSON: Did you say you were going to send in
21 comments on the 45-day after the 45-day?

22 TONY PIETRANGELO: Before. We're hoping to get them in by
23 Friday but certainly no later than early next week.

24 ERIC LEEDS: To inform us?

25 TONY PIETRANGELO: Yeah. Just like we did for the other SECY.

1 MIKE JOHNSON: Thank you.

2 ERIC LEEDS: If I can --

3 MIKE JOHNSON: Yeah.

4 ERIC LEEDS: More of a comment than a question. You know,
5 something we heard from industry and we heard from the NGOs, and now you've
6 heard from Marty, when we get to the point where we start addressing these
7 issues one by one, it's going to be very important that we meet and that we are
8 able to define what success looks like and that we have those conversations.
9 During that time period, I would ask you to go back to Brian's question and keep
10 that in the back of your mind about implementation challenges, resource
11 challenges -- there's an awful lot going on within the agency, at your sites, and I
12 think all of that will be useful as we address each individual issue and go forward.

13 TONY PIETRANGELO: I couldn't agree more. I mean, generally, it
14 takes us too long to resolve issues. And our thinking on making that more
15 efficient is making sure we're on the same page when we start attacking it, that
16 we have the same problem statement, that we establish what the successor
17 acceptance criteria are up front. This sounds familiar, right?

18 ERIC LEEDS: We're in violent agreement, Tony.

19 TONY PIETRANGELO: And that we make sure that we manage
20 that process and get engaged. If there's issues that need to be elevated, elevate
21 them quickly so we can get them out on the table and bring additional resources
22 in if we need to, but, I mean, that's how we're going to get through this. There's
23 a lot on our plate with this, and I think that kind of process thinking is going to be
24 very important going forward.

25 ERIC LEEDS: Well said. Thank you. That's all I have.

1 MARTY VIRGILIO: Thank you all very much. We really appreciate
2 the input.

3 CHIP PARDEE: Yeah. Thank you.

4 MARTY VIRGILIO: I'll turn it back over to Lance.

5 LANCE RAKOVAN: Thank you, gentlemen. Let's go ahead and
6 start out to see if there's anyone here in the room that has questions. If you do,
7 we got a microphone over here at the podium. You can let us know who you are
8 and what group you're with. Anyone here in the room have any questions they'd
9 like to ask? Okay, we'll pause for a moment.

10 STEVEN DOLLEY: Hi, thank you. Steven Dolley with Platts. Two
11 quick questions. The first two was following up on what Eric said regarding --
12 emphasizing that there are other methods to raise these issues with the staff. I'm
13 wondering how that squares with the staff's decision to not take public comments
14 on a petition by the NRDC petitioning to implement the task force
15 recommendations. There was the Federal Register Notice this week, and I
16 believe that what the staff said is we're not going to take comments on this
17 petition because this is being handled through the task force process. If I'm
18 misinterpreting that, I'm pretty sure that's what it said -- if I'm misinterpreting that,
19 I would like -- be grateful for clarification. But if I'm not, how do you square these
20 other methods -- in fact, some of these other methods may be referring back to
21 the Task Force process.

22 ERIC LEEDS: Steve, can you give us more background on what
23 the notification was asking about?

24 STEVEN DOLLEY: NRDC, the National Resources Defense
25 Council petitioned to implement the Task Force recommendations. And there

1 was a Federal Register Notice this week moving forward on the petition review
2 saying the staff's not going to take public comments on the petition because
3 there's already a public comment process for the Task Force recommendations.
4 And I was asking how that squares with your emphasis that there are other
5 independent ways to address these issues if, in fact, some of those other
6 independent ways are precluding at least some avenues for public input saying
7 deferring effectively to the review that's not ongoing in the Task Force
8 recommendations.

9 ERIC LEEDS: Yeah, I'm a little bit at a loss. Maybe someone else
10 will --

11 MIKE JOHNSON: Yeah, well, I thought Eric's point was a good
12 one, and I thought it was really referring to that sort of a broad spectrum of
13 approach that we have with respect to stakeholders, internal stakeholders,
14 external stakeholders being able to raise safety issues, any issues really. As
15 they relate to Fukushima, we've really used this activity as the focal point. And
16 so we've deferred to this activity because we are organized, focused on dealing
17 with those issues in the context of not just our actions but interactions with
18 stakeholders in terms of all of that input going forward. So I think they actually
19 draw a line. It's pointless to the generic, the general, with respect to Fukushima.
20 This is the process the agency's established for dealing with those.

21 STEVEN DOLLEY: Okay, thanks. I understand that distinction.
22 My second question goes -- it appears that many of the industry initiatives are
23 being headed up and carried out and implemented by INPO. INPO doesn't
24 routinely or in fact even typically release its reports or information to the public.
25 Whether some thoughts from the agency on how it can square its transparency

1 goals with initiatives that are implemented through an organization that doesn't
2 typically release reports to the public on what it's doing.

3 MARTY VIRGILIO: I would say by heading these exchanges in
4 public meetings like we have today, it provides an opportunity for everybody to
5 hear about INPOs initiatives are at the same time.

6 MIKE JOHNSON: And I would say just to add to what Marty said,
7 you know, that's why I actually asked the question about some of the products
8 that are ongoing and to what extent those will be publicly available, because I
9 know there was an interest is the value for INPO and what it does in terms of its
10 relationships with the individual members and some of that doesn't need to be
11 made publicly available. It actually probably harms the process to some extent in
12 some instances. But certainly in an activity like this, to the extent we can make
13 that information publicly available, and that was the dialogue I think we were
14 having around that consideration for Fukushima.

15 STEVEN DOLLEY: Thank you.

16 TONY PIETRANGELO: Can I add something there? You also did
17 your own inspections and you had a bulletin that looked at some of the things we
18 were doing post-Fukushima.

19 ERIC LEEDS: Yes. We had two TIs, a bulletin. We made all of
20 that public, yes.

21 LANCE RAKOVAN: Do we have any other questions from
22 participants here in the White Flint complex? Okay, seeing now hands or
23 movements, let's go ahead and open the phone lines to see if we have any
24 questions through our phone lines.

25 OPERATOR: On the phone lines, you can press * 1 if you'd like to

1 ask a question. Once again, * 1. One moment for the question.

2 LANCE RAKOVAN: And if people could please introduce
3 themselves.

4 OPERATOR: We have a question from Paul Gunter:

5 LANCE RAKOVAN: Paul, go ahead, please.

6 PAUL GUNTER: Thank you, Lance. The recommendation that the
7 -- for Number 5, that the agency's recommended that these hardened vents go in
8 by order, you know, Tony Pietrangelo asked the agency why an order. And I'm
9 asking you the same question. What are -- particularly with real reference to the
10 Mark I pressure suppression containment system, if you would comment on the
11 need to vent -- what is it -- what is the event that you're concerned about with
12 regard to the Mark I pressure suppression containment system that would make
13 you put a vent on it? And why would you move from the voluntary installation of
14 vents that went under generic letter 8916 to this recommendation for an order?

15 ERIC LEEDS: All right, Paul, this is Eric Leeds. Would you -- your
16 question is what would be the scenario in which case you would need to vent?

17 PAUL GUNTER: What prompts -- that might quick to -- just to
18 clarify, I would like the NRC to clarify what prompts the agency to first of all, to
19 put a vent on containment in the first place on the Mark I, and you've also
20 recommended the Mark II, so you're suggesting at this point, and I just wanted
21 you to confirm for me that the containment itself is unreliable under severe
22 accident condition and that you are venting in order to prevent a permanent
23 rupture. So, you know, I just want you to -- let's get beyond the vent piece and
24 just talk to, first of all, the containment piece. What is it that prompts you to put a
25 vent on these containments in the first place?

1 MARTY VIRGILIO: In 1989, if my memory is correct, Paul, it was
2 what we call a TW sequence and it was a loss of heat removal capability from the
3 suppression pool that prompted us to enter into a dialogue with the industry
4 about having vents installed. And at that point in time, industry took the initiative
5 voluntarily to go forward with the vents. And therefore, we chose not to take a
6 regulatory action. Today we look beyond that at looking at the vents at
7 Fukushima. And again, let me condition this by saying that we still haven't had
8 that dialogue where we explored the acceptance criteria and all the rationale
9 around why we would want to have and what we would want to have in terms of
10 reliable vents. But today we're looking beyond that loss of heat removal
11 capability to the severe accidents, those low probability/high consequence events
12 like Fukushima to ensure that we have the capability to prevent a containment
13 failure by venting in advance as pressure would increase in the suppression pool.

14 PAUL GUNTER: And that, I assume it also includes hydrogen gas.

15 MARTY VIRGILIO: Possibly, but I'm not sure that we've had all the
16 dialogue necessary to work our way through that.

17 PAUL GUNTER: So fundamentally the issue is unreliable
18 containment that now puts you in the position to look for reliable vents?

19 MARTY VIRGILIO: Well, I think the reliability of the vents has to do
20 with the operator's ability to access them and ensuring that you've got whatever
21 mode of power you would possibly need, be it electric, station air, bottled gas --
22 those are kind of the discussions. And can the operator get to the vents, I think --

23 PAUL GUNTER: Well, Marty, more fundamentally, I just want to
24 get to the point here that, the fundamental point here and concern is unreliable
25 containment, in which -- puts you in the position of putting a backfit on the Mark I

1 and now an expanded number of unreliable containments to the Mark II.

2 MARTY VIRGILIO: I would say -- go ahead, Paul.

3 PAUL GUNTER: You know, the concern then moves to what
4 prompts you to move from the voluntary initiative provided under generic letter
5 8916 to this recommendation for an order. What prompts that move? And that --
6 I think that's essentially -- the public wants the same answer to the question that
7 Marty asked you. You know, why are you giving an order?

8 MARTY VIRGILIO: And Tony asked that question, just to be clear.
9 But I mean, what we're looking at now, what we didn't look at 1989 timeframe
10 was this very low probability/high consequence event.

11 PAUL GUNTER: That has now demonstrated 100 percent failure
12 rate on the vent and the containment in three Mark I's.

13 MARTY VIRGILIO: No, I didn't say that. I didn't say that, but as a
14 mitigated feature --

15 PAUL GUNTER: Well, I mean, I think we all saw that.

16 MIKE JOHNSON: Paul, I would say -- this is Mike Johnson -- I
17 would say that the kind of questions that you're asking are the kinds of questions
18 that we'll get into in a detailed way. We're sort of looking at each other hesitant
19 to answer because we didn't know exactly where you were going, and this does -
20 - the questions you're asking are good questions, I think, in terms of how we
21 scope the recommendations and how we scope what we do in response to that
22 recommendation are consistent with the steering committee's plan is the kind of
23 meeting that you'll be interested in, that you'll want to look forward to as we move
24 forward with implementation of recommendations. We're not going to be able to
25 go forward much more beyond where we've gone today I think in terms of talking

1 about all of the issues about hardened vents and GI-189, you know,
2 [unintelligible] hydrogen uniters [spelled phonetically]. There are other issues
3 related to hydrogen. We won't be able to do that in a detailed way. We'll do that
4 in a detailed way as we go forward with the recommendation.

5 PAUL GUNTER: Well, let me just close then and I'll let you move
6 onto the next questioner, but you know, we have provided a petition under -- for
7 emergency enforcement action under 2.206, and we now have over 6,000
8 current petitioners and October 7th public meeting with our petition review board.
9 You know, we would like to request at this point that we have a seat at the table
10 at future meetings as part of that ongoing effort to address public concerns about
11 the Mark I vulnerability to severe accident and now the recognition that the Mark
12 II vulnerability to severe accident condition and this whole concept of
13 experimenting with the license condition which was that these were supposed to
14 be essentially leak-tight. And what we're seeing concerns us, that we now are --
15 again, this order does not provide us with confidence that due process is going to
16 be a part of this shift to this new experimentation. And the further involvement of
17 the Institute for Nuclear Power Operations and the black veil that such operations
18 then fall behind, these also do not provide us with confidence that this will be an
19 open and transparent process. So, again, we would just like to sort of put a
20 bookmark, a page-marker on this particular meeting and request that, as part
21 of a good faith effort and our effort in putting forward a 2.206 petition on this with
22 broad public support, that we at least get a seat at the table.

23 MARTY VIRGILIO: Paul, that's our intent. This is a meeting that
24 industry asked for to be able to tell us about their ongoing initiatives that have
25 some bearing on the work we're doing to develop the paper we owe the

1 Commission on October 3rd. We will have stakeholder meetings on each one of
2 the individual actions as we move forward. You will have a seat at the table.
3 There will be ample opportunity for everybody to provide their input on the
4 specific issues.

5 PAUL GUNTER: Thank you.

6 MARTY VIRGILIO: Thank you.

7 LANCE RAKOVAN: Okay, do we have any other callers that have
8 questions at this point?

9 OPERATOR: Once again, it is * 1. One moment for the next
10 question. Next question comes from Tom Clements.

11 TOM CLEMENTS: Yes, thank you very much. I'm with the
12 environmental organization, Friends of the Earth, in Columbia, South Carolina.
13 Thank you for the opportunity to ask a question. I appreciate that one of the NEI
14 gentlemen raised the issue of loss of ultimate heat sink towards the end of the
15 meeting. That's something that they're looking at and it's of concern, and also
16 towards the start of the meeting -- and I haven't been able to follow all of it, but
17 one of the NRC officials raised the issue about new reactor impacts of
18 Fukushima and how it's being addressed. So my question is how does the NRC
19 staff, given that NEI has now raised this issue, and I don't believe it was
20 addressed in the Fukushima task force -- how is the NRC staff going to look at
21 the AP1000 design loss of ultimate heat sink and any potential damage to the
22 cooling tank on top of the shield building, particularly if there's no ability to
23 recharge that tank after a seismic or other event.

24 MIKE JOHNSON: This is Mike Johnson at the NRC. With respect
25 to the AP1000 and with respect to applications that are moving forward, COLs,

1 referencing that design, what we've said is that we've got -- just like for the
2 operating fleet -- we've got existing requirements already in place and, in fact,
3 we're using those requirements. And the guidelines that we use to evaluate
4 applications against those requirements, using that, we can, and have in fact,
5 reached conclusions regarding ability of the AP1000 design. And that's when the
6 rulemaking process -- we're in the final COL issuance process, and that's playing
7 out. We have processes by which when the Commission, should the
8 Commission decide to change the requirements, we have processes in Part 52
9 that will enable us to go back and adjust those requirements should they be
10 needed for AP1000 and all the other designs that have already been certified that
11 are in the regulations if you will. So, I think we're in a good place with respect to
12 AP1000.

13 My question for -- the question that I raised for the industry was
14 simply regarding making sure that they are connected for the other designs that
15 are there that are not that far along, the rationale being you could get to a point
16 where from a timing or an implementation perspective, if you make decisions
17 based on what the operating fleet needs, you could end up -- and timelines
18 associated with that -- you could end up in a different place from what new
19 reactor applications need that are going through the process. I'll give you an
20 example. So if there's a design that we're getting ready to certify in two years,
21 for example, and their requirements are getting ready to change, that might have
22 a different implication. And so we just want to make sure that that the industry's
23 thinking about that. That was the basis for my question. I think, again, with
24 respect to Part 52 in the regulations, there are processes in place to make
25 adjustments to designs that are certified, to licenses that have been issued, so

1 that when we learn and decide on recommendations and improvements to the
2 process, we can go back and put those in for new reactors.

3 TOM CLEMENTS: What is the urgency to not include the review of
4 this issue in the rulemaking right now rather than waiting for some kind of Part 52
5 application later to change things? You've got time now before the Commission
6 is going to vote on the certification and before the rulemaking is finalized. Right
7 now is the time to do that rather than waiting on some other procedure once
8 construction might get under way.

9 MIKE JOHNSON: I would say there's no -- take a little exception to
10 the premise of your question. There's no urgency with respect to moving
11 forward. I think my perspective is that based on the requirements that we have in
12 place, that we've thought through, we've reached conclusions with respect to
13 that, you know, are we ready to move forward. And we're not foreclosing the
14 ability to make adjustments to that design or adjustments to the license because
15 the process provides protection for us to be able to do that. So, there's really no
16 reason why you would need to wait. Some of these things, as you've heard, will
17 play out we interact with stakeholders, as we formulate guidelines, as we
18 formulate requirements. Some of these will take quite a while to play out. At that
19 time is when you would go back and then make sure that they apply to new
20 reactors just like they're being applied to operating reactors.

21 TOM CLEMENTS: Well, I must say it sounds like not only with the
22 AP1000 but in general that I think I heard two to four years mentioned but also
23 there was a comment by NEI that some of these things take too long to resolve,
24 and I'm concerned about this meeting today where I don't really hear any
25 urgency in addressing the issues that are before us. And I think that's going to

1 remain a concern and the public needs to be convinced that there's actually
2 some urgency behind the NRC's look at implementing orders or regulations or
3 whatever it's going to be, but I didn't pick that up this meeting. And that's just a
4 comment. You can react or not. But thank you very much for being allowed to
5 say a couple of things. I appreciate it.

6 MIKE JOHNSON: Certainly here in the new reactor guide a sense
7 of urgency with respect to making decisions because I think ultimately the
8 implication of my question is I think from their perspective, they would want
9 decisions sooner rather than later. I think from an industry, certainly from an
10 NRC perspective, we feel a sense of urgency. That's why we've actually called
11 out these things that we would initiate. The Commission's told us to identify
12 these things that we would initiate without unnecessary delay because there is a
13 sense of urgency. Hopefully you hear that from our perspectives.

14 LANCE RAKOVAN: Okay. Do we have any other callers that have
15 questions at this time?

16 OPERATOR: At this time, I show no further questions.

17 LANCE RAKOVAN: Okay, one more request if anyone has
18 questions here in the room. Marty, did you want to have a closing statement?

19 MARTY VIRGILIO: Just once again, thanks to our stakeholders
20 that came in and participated and provided your insights on what industry's
21 doing, and thanks to everybody that came and attended the meeting either here
22 in person or remotely. Thank you, Lance. That concludes our meeting.

23 [Whereupon, the proceedings were concluded]