

UNITED STATES OF AMERICA
U.S. NUCLEAR REGULATORY COMMISSION

PUBLIC MEETING TO DISCUSS NRC'S REQUESTS FOR
ADDITIONAL INFORMATION REGARDING SOUTHERN
CALIFORNIA EDISON'S RESPONSE TO THE
CONFIRMATORY ACTION LETTER FOR THE SAN
ONOFRE NUCLEAR GENERATING STATION, UNIT 2

FEBRUARY 27, 2013

1:00 P.M.

TRANSCRIPT OF PROCEEDINGS

Public Meeting

APPEARANCES

Southern California Edison Participants:

Thomas Palmisano

Richard St. Onge

John Brabec

Michael Short

NRC Staff:

Doug Broaddus
NRR

Randy Hall
NRR

Emmett Murphy
NRR

Ben Parks
NRR

Dan Dorman
NRR

Rick Daniel

1 PROCEEDINGS

2 RICK DANIEL: Well, good afternoon, ladies and gentleman.
3 Today is a SONGS Category 1 public meeting, and what that means is, this is a
4 meeting between technical folks from Southern California Edison and the NRC.
5 There will be a period of time at the end of some of the initial discussion when
6 the public will be able to -- we'll take questions from the public, and we'll be able
7 to answer those questions. While we're talking about the public, do we have
8 members of the public and the media here? Could you please raise your hand?
9 Just one? Two. Where's the other one? Just one, right? Okay. Thank you for
10 coming. And thank you, ladies and gentlemen that are on phone for joining us
11 today; we very much appreciate you being there.

12 As I said, this is a Category 1 public meeting. My name is Rick
13 Daniel, and I'll be the facilitator today. The purpose of this meeting is to continue
14 where we left off on December 18th. We had a meeting about request for
15 additional information, and this meeting is to allow additional clarification between
16 -- on the RAIs between the NRC and Southern California Edison. It will also give
17 the opportunity to Southern California Edison to bring the NRC up to speed on
18 the status of answering some of those RAIs.

19 Today's meeting there is going to be -- let me back up a second.
20 Regarding the RAIs, there's been about -- I guess around 60 so far, guys -- 67 to
21 be exact, and some of those RAIs just came out over the month of February. I
22 think five went out on February 1st, 15 went out on the 20th, and another 15 went
23 out on the 21st. So, some of these RAIs we may not be able to get real in depth
24 with because either Southern California Edison has just received them or the
25 NRC is just getting responses from them. Now, I'm going to let Doug Broaddus,

1 the project manager, the SONGS project manager here at headquarters talk
2 more about the agenda and the specific RAIs. But this meeting today is going to
3 be broken up into two parts. The initial part that we're going to be getting into
4 first has to do with nonproprietary information. In the event that as we have
5 these discussions that proprietary information does come up, my assistant,
6 Lynne Finch up there, who is a very capable lady, is going to make a note of it in
7 the parking lot up there on the flip chart, and we will get back into those
8 discussions after the break. So, folks on the phone, you're going to be with us up
9 to and including the break. We think this first part of the meeting is going to take
10 about 45 minutes and then we're going to get into about 15 to 20 minutes of
11 questions and comments from you folks on the phone.

12 Additional meetings -- a lot of people want to know or ask about
13 additional meetings. At this point in time there is not a meeting planned, this type
14 of meeting, a technical meeting planned and nothing scheduled at this point.
15 That doesn't mean that there won't be one scheduled in the future depending
16 upon how this discussion goes today and additional information flows back and
17 forth. However, there will be a larger public meeting out in California in the
18 April/May time frame, and that will have more to do with the results of the
19 technical inspection and the technical evaluation. So, more on that much later in
20 time. There is no date picked out yet, April/May timeframe.

21 So, without further blabbing on my part, I'm going to introduce Dan
22 Dorman. Dan is the Deputy Director of Engineering and Corporate Support. Go
23 ahead, Dan.

24 DAN DORMAN: Thank you, Rick. As Rick said, I am Dan Dorman.
25 I'm the deputy director for Engineering and Corporate Support in the Office of

1 Nuclear Reactor Regulation, and I also serve with Art Howell, who is off to my
2 left, as co-chairs of the SONGS oversight panel focused on the steam generator
3 issues. The meeting that we're here for today is a step in the substantial
4 process. We have, as Rick indicated, the staff has been deep into the response
5 that Southern Cal Edison provided to the CAL, the response that was provided in
6 October. The staff issued 32 requests for additional information in December of
7 this year and have now received responses to all of those 32 questions, and we
8 appreciate the effort that the licensee has put into being responsive to those
9 inquiries. As Rick indicated, we've issued an additional 35 questions here during
10 the last few weeks, and the purpose of this meeting primarily is to make sure that
11 we have clarity between the staff and Southern California Edison on what
12 information the staff is seeking so that we can have the best, clearest responses
13 that we can from the licensee.

14 In addition, we understand the licensee is prepared to speak to
15 several of the responses that we received, in particular, to make sure that the
16 staff clearly understands the responses that we have received, and we may have
17 some additional RAI responses that the staff may ask questions about to make
18 sure that we clearly understand the answers that we have received. So, I just
19 want to acknowledge and appreciate the effort of both our staff and the SCE staff
20 and support to continue to move this process forward.

21 We are in the middle of a process. We're not close to the end of it.
22 We need the responses to those 35 questions from the licensee, and the staff will
23 continue its review. This is running in parallel with the staff's efforts to do the
24 CAL closure inspections, the CAL follow-up inspections, and those two efforts will
25 continue in parallel to support an ultimate determination by the NRC. So our

1 focus today again is these RAIs, and we appreciate not only the efforts that have
2 gone into this but also the large team that the licensee has brought to help make
3 sure that we have the clarity that we need here today.

4 Art, anything to add? Tom, any opening remarks?

5 THOMAS PALMISANO: I would like to add just on behalf of
6 Southern California Edison, first all, we appreciate today's meeting. This is an
7 important part of the regulatory process. Our staff has done a lot of hard work to
8 answer the first 32 questions. Your staff is doing a lot of hard work to review
9 these and pose additional questions, and we look forward to today's discussion.

10 As we get into slides you'll see our commitment, just to reiterate it,
11 you know, we are committed to operating San Onofre safely and reliably and
12 protecting the health and safety of the public, and additionally we have
13 committed to not restarting Unit 2 and Unit 3 until both we and you are satisfied it
14 is safe, and we see today as an important part of that process and continuing
15 step in the process. So, thank you.

16 DAN DORMAN: Thanks, Tom. And I guess I'll turn it to Doug to go
17 over the agenda and get us started.

18 RICK DANIEL: Doug, before we get into the agenda, how about
19 we go around the table. You gentleman would like to introduce yourselves.
20 Mike, from Edison, why don't you start?

21 MIKE SHORT: Michael Short, supporting Southern California
22 Edison's Steam Generator Return to Service team.

23 THOMAS PALMISANO: I'm Tom Palmisano, vice president of
24 Engineering Projects and Site Support for San Onofre Nuclear Station.

25 JOHN BRABEC: I'm John Brabec. I'm a manager of the Steam

1 Generator Recovery Project at San Onofre.

2 VICK NAZARETH: I'm Vick Nazareth. I'm the manager of Nuclear
3 Fuel at Southern California Edison SONGS.

4 RICH ST. ONGE: My name is Richard St. Onge. I'm the director of
5 Nuclear Regulatory Affairs for Southern California Edison.

6 RICK DANIEL: Okay. Now the NRC folks. Emmett, go ahead.

7 EMMETT MURPHY: Emmett Murphy, senior materials engineer
8 with Division of Engineering, NRC.

9 ART HOWELL: Art Howell, manager of the SONGS Special
10 Project Region 4.

11 DAN DORMAN: Dan Dorman, deputy director, NRR.

12 DOUG BROADDUS: Doug Broaddus. I'm the branch chief in the
13 SONGS Special Projects Branch in the NRR.

14 RANDY HALL: Randy Hall. I'm the senior project Manager in the
15 SONGS Special Project Branch.

16 DOUG BROADDUS: I'd also like to recognize that we do have
17 some additional NRC staff that are over here and that have also been part of the
18 review. They'll be coming up to the table as needed as we get through the -- to
19 the presentations.

20 DOUG BROADDUS: All right. So, now if we can go to the slide,
21 the overview the NRC RAIs. All right. And Dan and Rick have already covered
22 quite a bit of this, but I'll go through a little bit more detail about where we are
23 with the RAIs, what we've issued up to this date.

24 As both Dan and Rick mentioned, we did issue approximately 32
25 RAIs back in December. Some of those were -- the first 31 of those were

1 discussed during the December 18th meeting, and I'm not going to go over the
2 purpose of those RAIs because we've already had a previous discussion on that,
3 but as we get through the discussions there, some of those RAIs and the
4 responses that you had will come up as well, and we'll talk through what the
5 purpose of those RAIs were at that time.

6 As Rick mentioned, on February 1st, we also issued an additional
7 five RAIs. These RAIs were more specific on the -- an additional report. There
8 were some reports that were submitted to us that were proprietary reports that
9 were submitted after the October 3rd submittal. They were requested by us to be
10 submitted and they really -- these RAIs go over the basis for the assumptions,
11 and the assumptions in the AREVA tube-to-tube operational assessment. Then
12 on the 20th of this month, we also issued an additional 15 RAIs. Some of those
13 RAIs were proprietary, again, going back to the proprietary OA assessments, and
14 they were more applicable to the tube-to-tube wear -- the OAs and tube-to-tube
15 wear. They also refer to the MHI technical evaluation report, and they were more
16 specific on the codes, how the codes were used, the assumptions used in the
17 codes, the basis for those codes for those assumptions. The third set was
18 issued on the 21st, just a couple of days ago, and those, again, were on the
19 operational assessments for the tube-to-tube wear. These were more focused
20 on, again, some of the assumptions but not necessarily with the assumptions in
21 the codes and how the codes were used; they were more on the assumptions of
22 how the different aspects of the operational assessments and how they kind of fit
23 within the guidance and your Steam Generator Tube Integrity Program. So,
24 that's kind of where those are.

25 Of the 35 additional RAIs, approximately eight of those, I believe --

1 11 of those were proprietary and the rest were nonproprietary. So, those 11 are
2 the ones specifically that won't be discussed during the open session. I just want
3 to, for everybody else's information, both in the webcast and in here, some of
4 those that were nonproprietary also addressed and were specifically referenced
5 on proprietary information that was in your submittal, but the RAI itself was not
6 proprietary. So, we recognize that there may be a need in those cases also to
7 not have those included in the open session.

8 Of course, as Dan mentioned, the whole purpose for these RAIs is
9 for us to obtain additional information so that we can complete our review and
10 have a complete and technically sound -- we can make a complete and
11 technically sound decision that's legally defensible on whether or not there's
12 reasonable assurance that the plant is safe to operate as we specified in the CAL
13 itself.

14 All right. At this point, what we were planning to do was to have an
15 opportunity both for you to go through the RAI responses you provided at this
16 point and for us to address specific questions on those first set of RAIs, the first
17 32 RAI responses. Emmett Murphy, I believe, may have some specific
18 questions. What we'll do is we'll let you kind of go through your presentation first
19 rather than having us go first, then any additional questions we might have as a
20 result of that. We'll have Emmett bring those up or any of the other technical
21 staff.

22 So, Tom, I'll turn it over to you.

23 THOMAS PALMISANO: Can we bring up the Southern California
24 Edison slides, please? Okay. So, let me turn it over to John Brabec to introduce
25 the meeting, then I'll have a couple of quick additional comments.

1 JOHN BRABEC: All right, thank you, Tom. Good afternoon. We're
2 very pleased to have this opportunity to continue our dialogue with the NRC staff
3 regarding your request for additional information related to the information we
4 provided in our confirmatory action letter response on October 3rd of last year.
5 Additionally, we're pleased to have the opportunity to present our planned
6 response methodologies for RAIs 33 through 67 to ensure we understand those
7 questions and provide timely and accurate responses to them. As you can see,
8 we've brought with us today most of the technical experts responsible for
9 development of the operational assessments that are part of our confirmatory
10 action letter response. So, we're prepared to have detailed technical discussions
11 as necessary to support answering your questions. With that, I'll turn it over to
12 Tom, if you have any additional comments.

13 THOMAS PALMISANO: Just again to reiterate what I said earlier,
14 fundamentally, thank you for this opportunity to come in and continue this
15 technical discussion. I think there's a lot of ground we'll cover today in explaining
16 and clarifying any of our responses and clarifying your questions, and with that,
17 again, I'd like to now focus on the technical aspects of the meeting. So, John.

18 JOHN BRABEC: All right. Thank you, Tom.

19 All right. The purpose -- if you we could go to the purpose slide --
20 the previous slide -- the purpose of today's meeting is to first provide an overview
21 of Southern California Edison's responses in the Confirmatory Action Letter; that
22 would be very brief. Then we'll discuss SC's responses to RAIs one through 32.
23 Specifically RAIs two, three, and four were submitted on Friday on last week and
24 then 32 was submitted Monday of this week so, we'll have some discussion of
25 those four RAIs. And then to review SC's plans for responding to the draft RAIs

1 33 through 67.

2 All right. We'll start out with our response to the confirmatory action
3 letter. Next slide, please. First, in discussing the power reduction to 70 percent
4 and how that provides safety margin for the restart of Unit 2. What this
5 accomplishes for us is a significant reduction in fluid velocities in the tube bundle,
6 and this creates a condition where there's less energy being imparted to the
7 tubes, causing vibration. Also, significantly reduces void fraction. There is much
8 more moisture in the steam water fluid mixture in the tube bundle, and that
9 provides much better damping at 70 percent when compared to 100 percent.
10 This also prevents fluid elastic instability, the mechanistic cause of the tube-to-
11 tube wear identified in Unit 2 and Unit 3 steam generators. We've also
12 preventively plugged tubes in the steam generators, and those are the tubes that
13 are most susceptible to fluid elastic instability at 100 percent power, and this
14 eliminates the possibility of tube leakage. And then we've identified a short
15 operating interval, that five-month window we've discussed, is significantly
16 shorter than the analysis on our operational assessments demonstrates the unit
17 is safe to operate. Following that short operating interval we will have a complete
18 inspection -- 100 percent tube inspection during the mid-cycle outage.

19 Now we'd like to move on to a discussion of our responses to those
20 initial RAIs 1 through 32 received in December of last year, and as I mentioned
21 this will be primarily focused on our RAIs 2, 3, 4, and 32. We've also received
22 some questions about RAIs 18 and 19 that deal with some instrumentation, and
23 we'll provide our clear position relative to those questions.

24 For RAI 32, which we submitted on Monday of this week, and it
25 deals with compliance with technical specification 5.5.2.11, and in that RAI the

1 NRC asks several questions, and you see on this slide that SCE provides clarity
2 how structural integrity and technical spec 5.5.2.11.B.1 is met for operation up to
3 the rated thermal power, RTP; or to provide an operational assessment, an OA,
4 for tube to tube wear at 100 percent rated thermal power. In our RAI response
5 you'll see, or may have seen that we have done both of the above.

6 As a compliance with the tech spec 5.5.2.11, we point out in our
7 RAI response that tech spec 5.5.2.11 uses the term "normal full power," quote
8 unquote, not "rated thermal power," and there's an important difference between
9 those two terms. The formal commitment and the confirmatory action letter
10 response to limit power redefines our licensing basis of normal full power to 70
11 percent. Our operational assessments demonstrate the steam generator tube
12 performance criteria are met at 70 percent. Therefore, in our October 3rd
13 submittal we demonstrate that tech spec 5.5.2.11 is satisfied.

14 As requested in the RAI 32, an operational assessment at 100
15 percent rated thermal power will be provided to the NRC. This is an OA that is
16 being performed using accepted industry guidelines. This is the Intertek OA.
17 The AREVA and Westinghouse tube-to-tube wear operational assessments
18 continue to provide the basis for operation at 70 percent power, and these OAs
19 demonstrate the substantial margin to the onset of fluid elastic instability exists at
20 70 percent power.

21 Now I'd like to discuss some of the actions that we identify in our
22 RAI 32 response, and these are actions that will be taken subsequent to the next
23 operating interval. As you see, power, as we discussed, will be limited to 70
24 percent unless approval from the NRC is obtained to raise power. The initial
25 operating period will be 150 days, followed by our mid-cycle steam generator

1 inspection. SCE will then perform steam generator tube inspections in
2 accordance with the tech spec 5.5.2.11 and section 8.3 of the return to service
3 report. Any additional indications of tube-to-tube wear due to fluid elastic
4 instability will be addressed with the NRC staff prior to restart. The operational
5 assessments will determine subsequent operating intervals and power levels,
6 and that's for our steam generator program defined in our technical
7 specifications. And we'll continue to use this approach until long-term
8 operational limits including power level are determined.

9 All right. That's RAI 32. In response, at this point in time I'd like to
10 turn it over to Mike Short, and he's going to cover RAIs 2, 3, 4, and any other
11 additional questions perhaps Mr. Murphy might want to bring up about our initial
12 RAI responses in 1 through 32. Mike?

13 MIKE SHORT: Thank you, John. Slide 13 is a summary of RAI
14 number 2 and the response that we provided. It's very similar to the slide that we
15 provided back in December. So, we're just interested at this point if the staff has
16 any questions about our RAI response.

17 EMMETT MURPHY: Yes, and in particular, on this particular -- on
18 this RAI. The response to the RAI, I believe, as a general response, is a bit too
19 sketchy. I have lots of questions after having read the response, and I can, you
20 know -- if you want to spend more time on it, I can. I'll have to turn to my notes
21 here.

22 THOMAS PALMISANO: Is this appropriate that we need to
23 schedule the specific call to talk about this in detail?

24 EMMETT MURPHY: My plans are to write up my questions. I
25 don't know whether we'd want to hold off on such a discussion until I write up

1 those questions. I just read the material for the first time yesterday, but it's clear
2 that much additional information will be needed to support the response.

3 THOMAS PALMISANO: And we recognize these responses, I
4 think, John, you said were submitted on Friday. So, we realize you're just really
5 reviewing them for the first time, and we are more than willing, whether it's
6 additional phone calls or meetings, to give you a chance to get your questions
7 down in writing, because we want to do a good job in answering your questions.
8 So, really, if it works better for you to put your questions in writing and we can
9 schedule the appropriate mechanism to discuss them more thoroughly, we'll be
10 glad to do that. So, basically, whatever works best for you.

11 DAN DORMAN: I think that's probably a good idea just to make
12 sure that we get clarity. You know, we can talk to things off the cuff here about
13 things that we've seen for two or three days, but I think to let you know now that
14 we do have further questions on the first read through the response and then get
15 back later with a better formulated question.

16 EMMETT MURPHY: Yes, I mean the RAI question, you know, it's
17 formally there, is very fundamental to the overall usefulness of the analysis and,
18 of course, it's going to play an important role in your upcoming response to RAI
19 32, so I understand and you understand we'll have to devote, you know, direct
20 our focus to this particular item in particular.

21 MIKE SHORT: All right. Thank you then. The next slide is RAI 3.
22 It pertains to the Intertek OA definition of the wear index.

23 EMMETT MURPHY: Yes, and this likely will have questions on this
24 response as well. This is closely related to RAI 2. Again, we just looked at this
25 information and need to formulate specific questions.

1 MIKE SHORT: All right. Thank you. So, it sounds best to treat this
2 in the same fashion that we plan to treat RAI number 2.

3 Next slide, please, is RAI 4. It also pertains to the Intertek
4 Operational Assessment, and, again, on the definition of the wear index used in
5 this assessment.

6 EMMETT MURPHY: I haven't identified any key concerns coming
7 out of your response to this question.

8 MIKE SHORT: All right. Thank you. And of course, if questions
9 arise we'll include those in the handling of 2 and 3. All right. All right, thank you,
10 then. Next slide, please.

11 We have received two questions that pertain to RAI 18, which
12 speaks to a system known as the Vibration and Loose Parts Monitoring System;
13 and those same two questions also refer to RAI 19, which speaks to a system
14 known as the Smart Signal System. We've repeated the two questions on this
15 slide and the next slide, and briefly what the questions go to is in our response to
16 RAI 18 the question indicates that Edison implied they believe this system, the
17 VLPMS system, will be capable of detecting events indicative of tube to tube
18 contact, and the follow-up question requests the basis for this belief. The follow-
19 up question also requests the discussion of Smart Signals capability to detect
20 noise events indicative of tube-to-tube or tube to AVB content [spelled
21 phonetically].

22 Next slide, please. The second question requests additional
23 information on SCE's long-term plans for ensuring safe operation and how the
24 Vibration and Loose Parts Monitoring System fits into those plans. The question
25 goes on to request information on how the data from the VLPMS system will be

1 correlated to tube wear mechanisms and how SCE will communicate that
2 information to the NRC.

3 Next slide, please. On this slide we've started to work on our
4 response to these two questions, and right now the response will include the
5 points on this slide. The first point speaks to the long-term plan question for
6 ensuring safe operation of Unit 2, and we have provided information on this
7 subject in our response to RAI 32. The operational assessments that support
8 operation at the return to service power level of 70 percent, as we've spoken of
9 earlier in this meeting, demonstrate that fluid elastic instability will not occur.
10 Thus, the real time monitoring of tube-to-tube contact has not been part of our
11 return to service plan; and we will clarify that in our response.

12 The second point we wish to make is that we did not intend to
13 assert or intend to imply that the upgraded VLPMS system would be able to
14 detect tube-to-tube wear. Our plan is to record data on the system during plant
15 operation and to analyze that data during the next mid-cycle inspection. So
16 that's historically based approach that we outlined in our return to service report.
17 That analysis will include a comparison with the results of the steam generator
18 inspection itself and, of course, as we indicated in our response to RAI 19, the
19 Smart Signal technology and the capabilities that it provides will be used in that
20 analysis.

21 The last point we wanted to make was a review of what was
22 contained in our response of RAI 18, and it's summarized in the third bullet on
23 this slide. The upgraded system, again, will be used as a backward looking
24 analysis tool in subsequent inspection outages, such as the upcoming mid-cycle
25 outage, should unexpected wear be discovered during that inspection. The

1 upgraded system will enable Edison to evaluate steam generator site acoustic
2 signal data for events, which may help; and it's important to focus on the "may
3 help" with the understanding of the causes of unexpected tube wear. And then,
4 lastly, we wanted to reiterate that the system in itself is not designed to detect
5 tube to tube contact.

6 That's our intent right now in terms of responding to the two
7 questions that we've received.

8 DAVID RAHN: Okay. Thank you. This is David Rahn. I'm a
9 technical reviewer in the instrumentation and controls branch in the NRR, and the
10 purpose of the first question had to do with determining the appropriate level of
11 confidence you had in the changes that are being proposed for the Vibration and
12 Loose Parts Monitoring System to be able to be used as an investigative tool
13 after the fact, and it didn't appear to me that there was a high confidence, but it
14 didn't say there was no confidence. I mean, basically it appears that it looks like
15 it's a valid approach to try to improve the sensitivity of the Loose Parts Monitoring
16 System. So, it looks like what I hear you saying is that provided that the
17 sensitivity is there you could possibly use that system to go back and look at
18 plant operating conditions that occurred at the time acoustic noise was present
19 and then provide some kind of correlation as to the onset of either tube-to-tube
20 wear or tube to anti-vibration wear or any kind of thing that could potentially
21 cause a resultant metallic noise. I think that's what I hear you're saying.

22 THOMAS PALMISANO: Yes, that's consistent.

23 DAVID RAHN: Okay. The other thing is we have been doing a
24 little bit of research on the capabilities of what GE Smart Signal product is
25 capable of doing, and it's kind of like an exception reporting type software that

1 looks at, like, deviations from normal. So, what happens if the background -- if a
2 particular signal level starts to exceed background then you might be able to
3 record that event and compare it to what other things are going on in the plant at
4 that time. And so, what we were hoping to do is see what was your intent in
5 using that, you know, that possibility to go back and either support or modify
6 conclusions that are being reached in the operational assessment when it does
7 get performed. We just look and see how are you going to use that information.

8 MIKE SHORT: Yes, the Smart Signal system functions as you
9 have stated. It will be monitoring primarily process parameters; inputs and
10 outputs from the steam generator. And we believe it will help us understand the
11 behavior of the machine over the operating period of time. So, we intend to use
12 it in that fashion.

13 DAVID RAHN: Okay. And all of this is all supportive analysis tool;
14 it's not something that's there to help detect leakage. You actually already have
15 a fairly extensive program of primary to secondary tube leak detection system,
16 and that's not changing with the startup of the plant, right?

17 MIKE SHORT: No. Go ahead, John.

18 JOHN BRABEC: Yeah, that's correct. You've correctly
19 characterized our intended use of both of those, what we characterize as
20 additional actions in the return-to-service plan. So, both tools, we anticipate, will
21 make it possible for us should we get unexpected wear in our subsequent
22 inspection window to be able to take those two tools, both the VLPMS data, the
23 Smart Signal process data -- and those process signals are things like steam
24 flow, feed flow, steam pressure -- and to go back in the cycle and look at perhaps
25 were the perturbations [spelled phonetically] that we could correlate to ongoing

1 tube to tube contact or other unexpected tube wear.

2 DAVID RAHN: So, that brings up my final questions which is on, if
3 you do start to sense that there is a leakage over and above that tech spec
4 amount of allowed leakage, are you going to then at that point start going back
5 and analyzing data, or are you going to wait until the end of the operational
6 cycle?

7 JOHN BRABEC: It's our intent, actually, to periodically throughout
8 the cycle take the data and perform some analysis. So, for example, perhaps on
9 a monthly basis we could take the data, do some analysis. Certainly, and as we
10 stated in our return-to-service plan, when we have any confirmed indication of
11 primary or secondary leakage, much less than tech spec allowed, we will be
12 removing the unit from service.

13 DAVID RAHN: Okay. So, you'll be gaining experience in using the
14 analysis tool during the cycle, and that's -- it would help if your response said
15 that.

16 JOHN BRABEC: That is correct, and we'll enhance our response
17 to demonstrate that.

18 DAVID RAHN: Okay. Thank you. That's all I have.

19 DOUG BROADDUS: Before we go on, we should have clarified
20 this ahead of time as to whether we were going to take questions as you're going
21 through it or not, but I think there were some questions on RAI 32, and we may
22 have some additional questions on other RAIs as well. So, actually, I'll start from
23 the standpoint of RAI 32. The first question, I think, relates to the discussion on
24 RAIs 2, 3, and 4 as well, but the response to RAI 32, you indicate that you're
25 going to do a supplement to the Intertek OA. So, is that going to be using the

1 same approach that was used with the supplemental one? Is it going to be the
2 same approach as used with the existing OA -- Intertek OA, and will the
3 questions that Emmett had provided on RAIs 2, 3, and 4 -- will the responses to
4 those also be applicable to that Intertek, supplemental Intertek OA?

5 JOHN BRABEC: I understand the question. Generally, and we do
6 have our operational assessment writer here who can enhance if I don't get this
7 exactly correct. Generally, the methodology is the same as the original Intertek
8 OA, but we have woven in, if you will, the answers -- the required answers to the
9 RAIs that are relative to the Intertek OA. So, the final 100 percent Intertek OA
10 will have addressed the questions that have been asked to date about
11 methodologies for that OA. Would you say that's accurate?

12 DOUG BROADDUS: Emmett, did you have any questions from
13 that perspective? Anything further that you needed to clarify?

14 EMMETT MURPHY: No.

15 DOUG BROADDUS: All right. Second question on the Intertek
16 OA, the commitment for that. You indicated in your response that the OA will
17 demonstrate that that structural integrity performance criteria in the accident-
18 induced leakage performance criteria are satisfied for 100 percent rated thermal
19 power. So, I guess what my question is, is that complete already? Do you
20 already have those results? Is that what you're basing that on? What's the basis
21 of that statement?

22 JOHN BRABEC: Well, the operational assessment for 100 percent
23 power is not quite complete; it's very near completion. So we do have
24 preliminary results that demonstrate that that will give us satisfactory results.

25 DOUG BROADDUS: All right. So, those will be provided to us?

1 And you indicated about mid-March?

2 JOHN BRABEC: That's correct. We've committed to having that to
3 the NRC by March 15th.

4 DOUG BROADDUS: All right. One other question -- I have a
5 couple of other questions. You indicated in one of your slides that the basis
6 between -- let me go back there and make sure I use the right words -- the
7 terminology that was used in the question and in the tech specs of the full range
8 of normal operating conditions and normal steady state full power, and that is
9 they have a specific distinct basis from the terminology used, rated thermal
10 power. What is your basis for -- where do you believe the basis that they are
11 distinctly different is?

12 JOHN BRABEC: It's essentially that the definition of rated thermal
13 power is a maximum number of megawatts we can operate the plant at is a little
14 bit different than what the basis documents that were used or support the actual
15 tech spec change that occurred back in about 2005. There were industry
16 documents, task force number 449 specifically, that do talk to the basis of what
17 the primary parameters of concern are when talking about maintaining structural
18 integrity of the tubes during the operating cycle. There are things like differential
19 pressure across [inaudible] to the secondary side is this differential [inaudible]
20 and primarily for across the tube.

21 DOUG BROADDUS: And you mentioned industry basis
22 documents. Is that something that you could provide? I mean, I don't know if we
23 will -- our technical staff might have all those industry basis documents, but if
24 there are specific citations to that --

25 EMMETT MURPHY: We have all of them.

1 JOHN BRABEC: Certainly, if there's anything additional that we
2 can provide we will do so.

3 DOUG BROADDUS: Okay. All right. The next question I had --
4 you talk about the future plans after the initial 150-day cycle. I guess my
5 question on that is some of the -- the confirmatory action letter we have right now
6 that's out is based upon the commitments that you made previously. One of
7 those is that you wouldn't start up until you've gotten an approval from us. This
8 also appears to talk about approval beyond that initial 150-day time period. So, I
9 guess -- and also not operating above 70 percent until there's some type of
10 approval as well. Is that an additional commitment beyond the commitment -- it
11 wasn't identified in here as a specific commitment, so is that an additional
12 commitment that you're planning to make or...

13 THOMAS PALMISANO: Understand the question. We've laid out
14 what our current plans are, and wanted to propose those to you so that you
15 understand what our current plans are. We also recognize that as you complete
16 the CAL inspection activity and the technical evaluation report we'll come to the
17 point where you ultimately decide what additional commitments we may need to
18 make. So, if we're proposing the one commitment here is to supply the Intertek
19 OA, as we resolve RAI 32 with you we are fully prepared to discuss additional
20 commitments that you feel we need to make.

21 DOUG BROADDUS: I guess maybe reword it slightly differently.
22 Are you prepared to make a commitment such as this? Is that what you're
23 indicating to us? I just want to make sure what your --

24 THOMAS PALMISANO: We're prepared to make commitments
25 along this line once we reach agreement on what would be appropriate that, you

1 know, we feel is, you know, this is what we feel is appropriate now. You need
2 time to review this and discuss it with us, and then we'll be prepared to make the
3 appropriate commitments.

4 DOUG BROADDUS: Okay. All right. Understood. One last
5 question. As I mentioned before, you indicated that the Intertek OA will indicate
6 that the structural integrity performance criteria is met 100 percent rated thermal
7 power, but at the end of your RAI response you indicate that SCE will inform the
8 NRC when the determination is made of whether Unit 2 can be returned to 100
9 percent power operation or long-term operation at reduced power as needed. I
10 guess I'm just wondering in that case, it seems that you're saying you have a
11 demonstration that it can be operated at 100 percent, but this seems to indicate
12 that you don't -- that there's some uncertainty as to whether or not it can be
13 operated at 100 percent. So, if you can clarify what that...

14 THOMAS PALMISANO: Let me clarify the intent of that. We feel it
15 is appropriate to operate San Onofre at 70 percent power to preclude fluid elastic
16 instability from occurring. Okay? As we've all discussed in previous meetings,
17 this is first time phenomena in operating U-tube steam generators. We need to
18 be appropriately conservative as we approach restart of Unit 2, and certainly
19 that's your interest as well. So, we feel operating at 70 percent power is
20 appropriate. There is sufficient or substantial margin to the onset of fluid elastic
21 instability. We're proposing a protocol of five months operating inspection
22 followed by resuming operation, and during those periods of time we will gather
23 more tube performance data allowing us to determine length of operating and
24 possibly higher power levels, subject to your approval, as we've laid out, and
25 ultimately we'll be able to judge whether the plant can return in its current

1 condition 100 percent power or some different permanent power level as needed.
2 So, our intent is to go follow the process we've laid out in that part of the
3 response, keeping you adequately informed committing to limited to 70 percent
4 power unless we have justification to raise power level and review that with you.
5 So, that's what our plan is.

6 DOUG BROADDUS: So, just to make sure I understand it. Is this
7 statement saying in any way that you're uncertain as to whether the plant can be
8 operated at 100 percent power based upon the Intertek OA that you're planning
9 to submit to us?

10 THOMAS PALMISANO: The Intertek OA, again, as John just said,
11 is largely complete but not final. We are confident it will demonstrate that steam
12 generator tube integrity is maintained for the initial operating period at 100
13 percent power. When we submit that we will be confident of that. We think it's
14 appropriately conservative to operate at a reduced power level and continue to
15 gather data on the performance of the steam generators.

16 DOUG BROADDUS: Okay. All right. Did anyone have any other
17 questions on RAI 32 from the staff?

18 ART HOWELL: No questions, just an observation. As Mr. Dorman
19 indicated, we just received your response -- and we haven't got all of it yet, we
20 have to wait for the revised Intertek OA -- but I would note that your position on
21 tech spec interpretation is different from the staff's position that was
22 communicated to you on January 29; so we'll have to address that as we go
23 through our review.

24 THOMAS PALMISANO: We understand that. We appreciate that
25 difference, and we've given you our analysis of tech spec compliance. We

1 understand it's subject to review and we may have some differences, which is
2 why will also deliver the Intertek OA showing compliance at 100 percent rate of
3 thermal power.

4 DOUG BROADDUS: If there are no other questions on RAI 32 --
5 Emmett, did you have any other questions on any of the other responses that
6 you -- to the initial set of RAIs? If you can indicate which RAI and the topic of it
7 that would be helpful.

8 EMMETT MURPHY: Maybe just one clarification. Just one other
9 question. Has to do with RAI 26. In particular, I was interested in how AVB flaws
10 would be projected to grow during future operation. And as I understand your
11 response, in the context of the AREVA OA for tube-to-tube wear, each individual
12 wear flaw is still in service -- on a tube that's still in service at BOC 17, that that
13 wear flaw will -- for that tube at that intersection will be assumed to continue to
14 grow at a rate consistent with what it grew at during the preceding period of
15 operation. Is that a correct interpretation of the response?

16 MIKE SHORT: I'm going to look at Dr. Begley [spelled phonetically]
17 just to be sure, but I believe I know the answer.

18 MALE SPEAKER: Yes.

19 MIKE SHORT: The answer is yes, it does grow at the continued
20 rate --

21 EMMETT MURPHY: As opposed to, like, for other OAs in your
22 package collecting a set of growth rate distributions and randomly sampling
23 those in a probabilistic assessment, this was done differently.

24 MIKE SHORT: That's correct. Each OA approached the issue in a
25 different fashion.

1 EMMETT MURPHY: Okay. Thank you.

2 DOUG BROADDUS: Any other questions? Any other questions
3 from the staff that any reviewers that can be discussed during the nonproprietary
4 portion of it? If not, I don't believe so.

5 I'm going to turn it back to you, Tom. You're looking for
6 clarification, and you're going to talk about your plan for how you're going to
7 respond to the more recent RAIs.

8 THOMAS PALMISANO: Yes, I'll kick it over to John in a minute,
9 but first of all, thank you for the questions on RAIs 1 through 32. We appreciate
10 the time you've put in. We recognize on several of them you have just recently
11 received them, and as we stated earlier, we will be able to support you in any
12 mechanism you need to clarify our responses further. So thank you for that. So,
13 John, let's move on to the next group.

14 JOHN BRABEC: All right. In our discussions for our proposed
15 methodology of approaching RAIs, the recently received RAIs 33 through 67 I'm
16 going to turn it over to Mike Short to lead that discussion.

17 MIKE SHORT: We'll begin on Slide 20, which is the next slide,
18 thank you. This is RAI 35. It speaks to AREVA's operational assessment,
19 something called the upper bound for contact force and clarifications on that
20 information. For each of the slides, much like we performed back in the
21 December meeting, we've repeated the RAI and then outlined our planned
22 response. We offered to -- this to the staff and solicit any questions they might
23 have on this planned response.

24 DOUG BROADDUS: Folks on the phone, we just got these slides
25 this morning, so Emmett hasn't had a chance to look at these yet; so he's

1 reading through it.

2 MIKE SHORT: Yeah, Emmett, this is an outline of our proposed
3 response; it's not the entire response.

4 EMMETT MURPHY: Yeah, part of the RAI has to do with the
5 hydrodynamic force being applied to the tube.

6 RICK DANIEL: Emmett, excuse me a second. Now, let's hang on
7 a minute here. Now, licensee, I think you need to go through what the RAI is,
8 give an oral summary of what you're saying here, and then we'll go from there.
9 And I think this puts the NRC kind of on the spot asking them to respond to
10 something that they've only had very limited time to look at. So, really appreciate
11 you taking the time to go through it, maybe summarizing it, and we'll go from
12 there.

13 DOUG BROADDUS: In particular, if you have -- if there are
14 specific questions that you have, if you need a clarification on the RAI or if you
15 could also indicate whether or not you believe you clearly understand what the
16 question is.

17 THOMAS PALMISANO: Okay. We'll be glad to do that. We've got
18 a number of pages here, so what we'll do is we'll step through, again, many of
19 these RAIs came out fairly recently, so we are just going through them ourselves.
20 So, we'll explain our understanding of the RAI. We are showing you our
21 response plans; not our detailed response. So, please understand, we are not
22 going to answer every aspect of the RAI in this meeting. We're talking about how
23 we plan to respond. So, we'll be glad to walk through this. We'll ask clarifying
24 questions on our end. And, again, we are not expecting you to say this is an
25 appropriate response. You will need time to see our written response once we

1 submit. We're just really looking to clarify it at this point. So, with that, we'll start
2 again. So, Mike, let's summarize the RAI, our understanding, any clarification we
3 need, and then just very quickly summarize what we will address in our
4 response.

5 RICK DANIEL: Before you start --

6 PAT HILAND: Let me go. I'm Pat Hiland. I'm the director of the
7 Division of Engineering, and I'd like to sit here and join in on the discussion and
8 I'll hear your outline here. If I have some comments I'll provide them.

9 RICK DANIEL: Thank you, Pat.

10 MIKE SHORT: All right, again, RAI 35 speaks to upper bound
11 contact forces. Clarify what the averages values, how they were determined,
12 what's the upper bound limit, and why only turbulence excitation was considered.
13 Our response plan will explain how the averages were computed, we'll talk about
14 the fact that small gaps in contact force -- excuse me, small gaps without contact
15 force have been show to provide effective support historically in the industry, and
16 then we'll speak to how the upper bound contact forces were developed and their
17 applicability.

18 PAT HILAND: That would appear to address the question of the
19 RAI. We'll look forward to -- the review will take place.

20 MIKE SHORT: Thank you. Next slide, please, RAI 55. Again, this
21 goes to the AREVA operational assessment, with some clarifications on anti-
22 vibration bar wear. Our response is contained on this slide and the following
23 slide, and it is a question about the total gap. Does it include wear of the anti-
24 vibration bars and how is that wear determined? And it's a follow-up to a
25 previous RAI, number 26. In our response we'll explain that wear was included

1 at AVB intersections. We'll speak to the sizes of the wear-induced gaps. We do
2 use the worst case steam generators to complete this task.

3 On the next page -- next slide, we talk about how the wear level
4 was adjusted in the model and then lastly -- the last point we'll make is that the
5 wear lost volumes after restart are the same as those observed at 100 percent
6 power for the -- excuse me, prior cycle of operation.

7 PAT HILAND: Just a quick clarifying question. You mentioned in
8 the response plan that the worst case in the steam generators are the wear --
9 that you'd taken a look at both Unit 2 and 3. I'm not the expert in this field, but is
10 the wear -- is this an average wear of a number of tubes or is this a specific
11 individual tube in each of those steam generators?

12 MIKE SHORT: Let me ask Dr. Begley for assistance with that
13 question.

14 MALE SPEAKER: Hang on, we're going to grab you a microphone
15 in just a minute.

16 JIM BEGLEY: Jim Begley, consultant to AREVA, performing
17 engineering analysis.

18 JOHN BRABEC: Jim, bring the microphone up a little closer.
19 Thank you.

20 JIM BEGLEY: My name's Jim Begley, a consultant for AREVA.
21 AREVA is performing various engineering analyses on behalf of SONGS. The
22 wear that we're talking about here is the wear that occurs in Unit 2, because
23 that's the unit that we've evaluated for return to service at 70 percent power. We
24 used a conservative analysis that says the wear rates at 70 percent power will
25 continue to be the same as those observed at 100 percent power, which is a very

1 conservative assumption as a number of people have pointed out other than
2 AREVA. So, we used those conservative wear rates. We've looked at the wear
3 indications. There's two different generators. One generator had their first --
4 actually relatively similar, right, but we have used the wear in the worst quadrant
5 of the generator as inspected, all right, and we've replicated that through all four
6 quadrants which is another element of conservatism. And so, we're basically
7 saying the wear indications that are there are the worst case wear indications,
8 and they will all continue to grow at a very conservative rate.

9 PAT HILAND: Okay. I think you answered my question just off the
10 top here. It's a quadrant that you're evaluating; it's not an individual tube. So it's
11 the wear of the whole quadrant. You divided them into four and you have the two
12 steam generators, you took the worst case, and that's what you've assigned.

13 JOHN BRABEC: Right, but we consider every wear indication in
14 that quadrant. We replicate it four times so it's --

15 PAT HILAND: Understand. Thank you.

16 MIKE SHORT: Next slide, please. RAIs 37 and 56, again, speak
17 to the AREVA operational assessment. It's a discussion of the benchmarking
18 and sensitivity of the probability of fluid elastic instability. We provided a very
19 brief response to this RAI in the public portion of the meeting. We have a much
20 more substantial response that we'd like to include in the closed part of the
21 meeting because it contains proprietary information. My suggestion is that we
22 speak to that in that portion of the meeting.

23 If we can move on to slide 25, RAI 38. Thirty-eight goes to the
24 subject of loading conditions and the influence of hydrodynamic pressure.
25 Specifically, it requests how the ATHOS computer code, which models

1 thermohydraulic properties of the steam generator, are converted to
2 hydrodynamic pressure since that conversion is not a direct output of the ATHOS
3 code. So, our response plan will provide the methods used to calculate
4 hydrodynamic pressure from the ATHOS output, and we will discuss the
5 influence of that pressure on the behavior of the U-bend portion of the tube
6 bundle.

7 JOHN BRABEC: Mike, if we could just go back to RAIs 37 and 56,
8 Slide 24. Although the bulk of the discussion on these two RAIs will occur, as
9 much of it is proprietary information, on Slide 24 I'd like to make a couple of
10 points, bullets on that slide that are very important in answering these two RAIs.
11 And essentially the bottom two bullets, that 100 percent power of the SONGS
12 steam generators are outside the envelope for past successful performance
13 relative to in-plane fluid elastic instability, and more importantly the final bullet on
14 that page that at 70 percent power the SONGS steam generators are well inside
15 the operating envelope for past successful performance relative to in-plane FEI
16 [spelled phonetically]. So, I thought it was important that we discuss that now
17 before we move on to the proprietary session. Sorry for that --

18 MIKE SHORT: Thank you. I'd like to move on to RAI 39 if that's
19 okay. RAI 39 requests information about the definition of the term "beta," which
20 is the homogeneous void fraction. We will explain that definition and how it's
21 computed and the relationship between beta and the ATHOS-calculated nodal
22 fraction known as alpha.

23 Next slide, please. RAI 40. Subject of this RAI is the liquid film
24 condition assumptions in MHI's work for tubes which had been removed from
25 service, also known as plugging. In MHI's work they do assume that tubes that

1 are removed from service are in a wet state, and we will provide the basis for that
2 assumption in our response. There's no heat flux associated with plugged tubes,
3 and that's the fundamental rationale for the assumption, and we will demonstrate
4 that the overall results are not sensitive to this assumption.

5 PAT HILAND: Just, if you could provide me some edification.
6 When you say the term, they're not wet, in a wet condition, is that -- you're talking
7 about the inside of the tubes, they're not wet?

8 MIKE SHORT: Pardon me. Thank you for that clarification. We're
9 speaking of the external condition of the tube, and it's very important in modeling
10 the tube behavior to understand in a two-phase environment what that external
11 condition is, and it varies as a function of void fraction along the length of the
12 tube. In the case of plug tubes, our assumption is the entire external surface of
13 the tube is in a wet state because there's no heat flux associated with that tube.
14 That's the foundation for the assumption.

15 PAT HILAND: Thanks.

16 MIKE SHORT: Next slide, please. RAI 42 is a question regarding
17 the preventative plugging program that we implemented on Unit 2. We went
18 through a process we call the screening process, and the question is a
19 clarification that any tube that we screened as susceptible to fluid elastic
20 instability wasn't removed from service by plugging, and the answer is -- we'll
21 provide that answer, and the answer is yes, it was. And the question requests a
22 detailed list of all the confirmed plugged tubes, and we will provide that as a part
23 of our response.

24 PAT HILAND: Yeah, I believe that's just -- is that the normal
25 reporting criteria after a steam generator inspection that -- I've seen my staff

1 review is a list of all the tubes inspected and which tubes, you know, the number
2 of tubes anyway, that were plugged or corrective actions were taken.

3 MIKE SHORT: That's correct. It is part of our 180-day --

4 PAT HILAND: I know it's large.

5 MIKE SHORT: Yes, it is part of our 180-day report to provide you
6 that information, but in addition to the 180-day report, which has not yet been
7 filed, we will provide that information as a part of responding.

8 PAT HILAND: Thank you.

9 MIKE SHORT: Next slide, please. RAI 43, discussion of the fluid
10 forces calculating -- used to calculate whether a support is active at AVB support
11 locations, and there are a number of assumptions cited in the RAI, and there is a
12 request to provide additional information regarding the foundation for those
13 assumptions. Our response plan will provide the additional details on why
14 turbulent excitation force was used to calculate support effectiveness, and we will
15 -- as requested by the RAI, there's a statement in the RAI that has -- which the
16 staff has requested clarification of, and we will provide that clarification as
17 requested.

18 PAT HILAND: Okay. Thank you. That's -- the response plan there
19 is you're going to provide the details on why turbulence excitation forces used to
20 determine support effectiveness.

21 MIKE SHORT: That's correct.

22 PAT HILAND: Good.

23 MIKE SHORT: The next RAI is 44 on Slide 30. This RAI speaks to
24 the small amplitude vibration and its effect on the required contact forces. It
25 requests discussion of our assumptions that no in-plane motion occurs if the

1 stability ratio is calculated to be less than 1.0, how is that accounted for, and how
2 would the analysis results be affected if a smaller value was used for the
3 threshold. We will explain our basis for the method used in responding to both
4 this RAI and prior RAI 43 and 44. We believe it's probably best to do that in a
5 combined fashion, and we will discuss that the stability ratio criteria does not
6 affect the contact force.

7 I'd like to move on to RAI 45, which goes to the Intertek Operational
8 Assessment. That assessment includes a discussion of the effect of power
9 reduction on the probability of initiation of tube-to-tube wear indications, and that
10 calculation is based on understanding of dynamic pressure and how that varies
11 with power; and there's a request to provide additional justification for how that
12 particular relationship was chosen, and how that relationship correlates with the
13 tube-to-tube damage patterns experienced at SONGS. Our response plan will
14 go through the basis for selecting dynamic pressure and the sources of the
15 information used in the Intertek OA, and we'll discuss the verification in
16 comparison with the tube instability calculation shown in that OA.

17 DOUG BROADDUS: Mike, I apologize. The individual who wrote
18 these RAIs is not here, but I just wanted to make sure on the previous one on
19 Page 30 that the response is going to fully address the question. So, is your
20 response going to address whether or not tube motion can occur at stability
21 ratios below one, less than one, and how that would affect the results in that
22 case?

23 MIKE SHORT: We will make sure that our response addresses
24 that question.

25 DOUG BROADDUS: That was a key part of that as well.

1 MIKE SHORT: Thank you. All right. I'd like to move on to slide 32,
2 RAI 46. Forty-six speaks to the Westinghouse operational assessment, and
3 Westinghouse's use of a Connors coefficient, also known as beta value of 5.0, as
4 a threshold value for the fluid elastic instability constant. Our response plan does
5 wish to refer you to a reference that we have filed with the staff that provides
6 substantial detail on the selection and basis for the value of the beta coefficient.
7 We will also provide in our response additional test data to demonstrate that the
8 selection of beta used in the operational assessment is appropriately
9 conservative.

10 PAT HILAND: I'm consulting behind me with the experts to see if
11 they are satisfied, and that's good. Good response.

12 MIKE SHORT: Thank you. Slide 33 speaks to RAI 53. Again, on
13 the Intertek operational assessment and the regression process used to develop
14 the tube-to-tube wear growth model, and whether or not approaches similar to
15 those outlined in generic letter 95-05 were used, to what degree this is
16 conservative, how is data scatter modeled, and ultimately a justification for the
17 distribution used. In our response plan we will explain the regression model.
18 We'll discuss the analysis and the basis for the normally distributed distribution
19 used for the tube-to-tube wear growth model, and overall justification for the
20 approach.

21 Thank you. RAI 54 on the next slide, again, speaks to the Intertek
22 operational assessment. It's an additional question about tube-to-tube wear
23 growth rates and refers to some figures contained in that operational
24 assessment, and how they were used to yield the growth rates, how the figures
25 worked together, and that also there appears to be some missing data on one of

1 the figures. Our response plan is shown on the slide. We will discuss the
2 derivation of the figure 4-13 and how the wear rate was calculated in the
3 operational assessment, and then we will also show that the data is present in
4 the slide. The choice of the axes provided on that particular figure limited the
5 amount of data that we displayed, so we will expand the axes, the range of the
6 axes, so that all the data is displayed.

7 RAI 57, on the next slide, Slide 35 is a question regarding tube
8 support plate holes and their location and, in particular, if the location deviates
9 from the design parameters, and whether or not that was accounted for in MHI's
10 evaluation and if it was used in the evaluation, please provide an additional table
11 that includes how it was handled. Our response plan will point out that tube
12 support plate hole mislocation was considered in the analysis, and as requested,
13 we will provide an updated table including that information.

14 PAT HILAND: I've got to ask the question. Can you just give me a
15 ballpark for the types of mislocations that we're talking about? Are we talking
16 about mils or fractions, or do you have any idea? I know I'm going to get an
17 exact answer.

18 MIKE SHORT: Yes, let me turn to Dr. Kiguchi.

19 MALE SPEAKER: My name is Kiguchi. This mislocation is just a
20 small mils inside the tolerance of the hole.

21 PAT HILAND: So, this is an internal tolerance of the diameter of
22 the hole, the two holes?

23 MALE SPEAKER: This is just the location of the hole.

24 PAT HILAND: Okay. So, it's tube-to-tube distance in mils?

25 MALE SPEAKER: Yeah. [unintelligible]

1 PAT HILAND: All right. Thanks.

2 MIKE SHORT: Slide 37, RAI 58. Questions regarding whether the
3 input parameters for the contact force calculation were sampled randomly or
4 developed through a functional relationship; and in particular requests
5 parameters such as AVB twist and the assumptions that go into those
6 parameters. So, our response plan will take each parameter and indicate
7 whether it was randomly treated and sampled, therefore, and which parameters
8 had functional relationships, and we'll explain the process used to obtain those
9 relationships as shown in a figure within the MHI report, Appendix 9.

10 Next is RAI 59, which requests information about the statistical
11 distributions used for the AVB dimensional inputs and what was their technical
12 justification. Our response plan, as shown on the slide, will include the -- we
13 want to point out that the data provided in Appendix 9, attachment 9-1, are the
14 results of verification testing prior to the application of the change in the AVB
15 nose press loads, and we'll provide justification for the assumed distributions.

16 PAT HILAND: Again, since I have a captive audience here, can
17 you just tell me a little bit about the verification testing? Is this empirical data that
18 you were able to obtain, or what is the testing that you're referring to? You have
19 results of the verification tests. Can you just describe from 10,000 feet what the
20 testing was?

21 MIKE SHORT: In investigating the differences in manufacturing
22 between the Unit 2 steam generators and the Unit 3 steam generators we
23 observed through eddy-current inspection that the Unit 2 steam generators
24 appear to be tighter, if I can use that terminology, than Unit 3. And we went back
25 into the manufacturing process to ascertain why that might be the case, and MHI

1 developed a better understanding -- MHI explained that they made a change in
2 the way the AVBs were fabricated between Unit 2 and Unit 3.

3 PAT HILAND: If I recall, in the December 18th meeting they talked
4 about a two to three mil change between manufacture of Unit 2 and Unit 3 steam
5 generators. Is that the reference we're talking about?

6 MIKE SHORT: I believe that's correct. Those -- two to three mil is
7 a correct parameter. Off the top of my head I'm not sure I can --

8 PAT HILAND: From two to three or vice versa, from three to two.

9 MIKE SHORT: Yes, between Unit 2 and Unit 3.

10 PAT HILAND: Correct. That's what we're talking about? Thank
11 you.

12 MIKE SHORT: And the reference to the press load change is on
13 Unit 3 a larger load was used to press the AVB nose into position. Now, in the
14 bending process of an AVB the nose section, which is the U-shaped portion at
15 the AVB, thickens because on one side as you bend the AVB. So, they use a
16 press to flatten that, and if values of the press load used from Unit 2 and Unit 3
17 were different -- Unit 3's loads were three times those used in Unit 2. As a result
18 of that, the AVBs and the twist associated with them, and the thickness of the
19 nose is different in Unit 3 than Unit 2.

20 PAT HILAND: Okay. Thank you.

21 MIKE SHORT: RAI 60 is straightforward. It's a request for some
22 additional figures, and we will provide those figures for Unit 2. The report only
23 includes figures for Unit 3.

24 RAI 61, on Page 39, points out that in our reports -- in separate
25 reports we provide figures that display that eddy current ding signal information,

1 and the two figures are different, and it requests an understanding as to why they
2 are different. In our response we will point out that the figures are based on the
3 same data. So, it's not an issue of data differences that led to the differences in
4 the figure; however, we excluded some information in reference 3 that was
5 included in reference 2, and that's the reason the figures were different. And in
6 reference 3 the figure excluded free-span ding signals but included tube support
7 plate ding signals. And in reference 2 we included the free-span ding signals, but
8 not the tube support plate ding signals. So, we will straighten that out and
9 provide new figures that clarify and are consistent for these two reports.

10 PAT HILAND: I have to do this. Since I see a new engineering
11 term, "ding signals," the ding I presume is your, you know, surveillance machine,
12 when it goes through and has a threshold that indicates -- is that what it --

13 MIKE SHORT: Yes, let me explain what a ding is. Ding is a term
14 used by our eddy current analysts to describe an indication that the eddy current
15 system returns when it does its inspection of a tube, and a ding is a deformation
16 of the tube surface that is detected by eddy current. If it penetrates through the
17 tube wall it becomes a dent, but there is no change in the -- typically there is no
18 change in the inner surface of the tube; there's a small imperfection on the outer
19 surface.

20 PAT HILAND: So, the eddy current has a threshold that it conjures
21 [spelled phonetically] and it's got a threshold that sends a signal back.

22 MIKE SHORT: Right. And the threshold -- usually the term voltage
23 is used, which is the signal size, and these figures in some cases provide signal
24 size as well as location endings.

25 PAT HILAND: Okay, thank you.

1 RICK DANIEL: Mike, before you go further we have a question on
2 the phone from an NRC person. Ben, can you hear us?

3 BEN PARKS: Yes, can you hear me?

4 RICK DANIEL: Yes, we can. Go ahead.

5 BEN PARKS: Okay. My name is Ben Parks. I'm in the Reactor
6 Systems branch, and I had a question about the proposed response to, I believe,
7 it was RAI 40 about the wetted tubes assumption. I'd like to see if you can
8 explain in a little bit more detail how you plan to show that the assumption is
9 insignificant.

10 MIKE SHORT: I think it's probably best that we address that
11 question in our response so we understand that you wish to have a discussion of
12 how we arrive at that assumption and why we -- how that assumption can be
13 show to be not significant.

14 BEN PARKS: That's fair. I would encourage you to provide a fairly
15 detailed level of discussion for the purpose of the reviewer so that he's not
16 encouraged to have to ask more questions.

17 MIKE SHORT: We understand the question. Thank you.

18 RICK DANIEL: Anything else, Ben?

19 BEN PARKS: That's it. Thank you very much.

20 RICK DANIEL: Go ahead, Mike.

21 MIKE SHORT: All right. On to RAI 62. It's a request for -- in the
22 AREVA operational assessment, a discussion of best estimate stability ratios.
23 It's a series of questions regarding the results of the AREVA operational
24 assessment and how those results compare to best estimate values versus the
25 probabilistic values that we used in the operational assessment. We understand

1 this question, and we intend to provide a very thorough response.

2 RAI 63 is a request to discuss follow-up on some materials
3 provided in the reference shown that speak to differences in contact forces
4 between Units 2 and 3 as a result of manufacturing dimensional tolerances and
5 the fact that we excluded the outermost tubes as a boundary condition in our
6 contact force model. In our response we will explain the basis for excluding tube
7 to -- AVB gaps in the outermost tubes as a boundary condition. We will explain
8 that the calculation results indicate the influence of the outermost tubes is not
9 significant, does not affect the contact forces inside the bundle.

10 EMMETT MURPHY: Have you actually done a calculation to
11 confirm that it's not an important player? Measured AVB gaps?

12 MIKE SHORT: Dr. Kiguchi, the question is, have we actually
13 performed the calculation to demonstrate that the outermost tubes and the gaps
14 associated between the tube and the AVBs does not influence contact forces
15 within the bundle?

16 MALE SPEAKER: This is Kiguchi again. Our understanding is that
17 we have some calculation actually changing the outside dimensions, and the
18 influences only in a few of those inside. Yeah, so, it's not where we want the
19 dimensions.

20 EMMETT MURPHY: The results of that analysis would be very
21 helpful. Thank you.

22 MIKE SHORT: We understand you'd like to see the results of the
23 calculations that we have performed.

24 All right. Slides 42, 43, and 44 ask a series of questions about the
25 twist factor in any vibration bars that results from the manufacturing differences

1 between Unit 2 and Unit 3 steam generators, how those twist factors were
2 developed and defined, requests for clarification of a number of aspects of the
3 twist factor and how it's modeled including how torsional stiffness varies as a
4 function of distance from the AVB nose, specific variation of torsional stiffness,
5 and how were those variations determined. So, it's our intent in responding to
6 this RAI -- to actually to respond to this RAI and the next two as a combined
7 response. The RAI 65 requests a very similar discussion in terms of how the
8 function, once it's calculated or determined in responding to the previous RAI,
9 how that function was used in the contact force simulation. So, 64 requests the
10 details of how the twist factor was developed, and then 65 is essentially a
11 request for how it was used in the contact force simulation.

12 And then 66 is a request for some clarification on twist and
13 stiffness, how those units work and whether or not they can cancel each other
14 out, and, again, it's our intent to respond to these three RAIs as collectively in
15 single response. We'll work through, as I said, how the twist was determined,
16 and then how it's used in the model, and then we'll address the follow-up
17 questions in RAI 66.

18 All right. The last RAI, number 67, in this portion of the meeting on
19 page 45, is a request for discussion of how any tuning of the contact force model
20 was performed to replicate the ding signals that we discussed earlier. And we
21 will provide a detailed description of the factors used to match the eddy current
22 inspection results. There is some relationship to RAI 59, and we expect to
23 combine the response to this RAI and RAI 59 into a single response.

24 RICK DANIEL: Okay. Any closing questions from NRC folks
25 regarding this portion of the RAIs? All right, Doug and Dan.

1 DOUG BROADDUS: Yeah, just one question real quick. I know
2 you'll probably provide this to us as well, and we may have a greater
3 understanding of this after the next portion of the meeting, but overall, when do
4 you expect that you'll be able to get us responses for each of -- for all of these
5 RAIs that we've issued at this point?

6 THOMAS PALMISANO: Let us summarize that at the end of the
7 next portion.

8 DOUG BROADDUS: The reason I'm wondering is because the
9 public will not have an opportunity to hear that at the conclusion of the next
10 portion of it.

11 THOMAS PALMISANO: John, I know we just received some of
12 these and we've laid out our preliminary scheduled. Can you give us kind of an
13 overview? Just one minute, Doug.

14 JOHN BRABEC: Bear with me just for a moment as I review our
15 schedule; I've got our latest schedule with us.

16 DOUG BROADDUS: I certainly understand if we ask additional
17 questions and there's additional clarification it may change that, you know, at the
18 end of the meeting, but...

19 JOHN BRABEC: In our current schedule for responding to the
20 most recent group of RAI responses -- or the latest date I see in the schedule is
21 about the 14th of March and many of them before that.

22 DOUG BROADDUS: So, essentially about the same time that we'll
23 be getting the Intertek OA?

24 JOHN BRABEC: That is correct.

25 THOMAS PALMISANO: And let me put the caveat on, we received

1 some of these just last week, so this is our initial review of them. That's what our
2 schedule is based on. This discussion has been very helpful. We appreciate the
3 questions and the further comments on those; we'll now factor those into the
4 schedule, and we have periodic phone calls to keep you apprised. So, we'll
5 keep you apprised as our schedule develops.

6 DAN DORMAN: All right. As we wrap up the business portion of
7 the open portion of the meeting, I want to also thank you for the effort that you
8 put into putting together an initial take on these RAIs in very short order in
9 coming out here to support this meeting. I note on your last slide -- you didn't
10 read it out there -- but you had no timeline for safety. We're going to keep at this
11 until we've got it right, and we appreciate the effort that you're putting in to
12 responding to the questions that we have. From here we will continue with our
13 review. As we await the additional responses we'll continue to work on the 32
14 responses we have before us. We are starting to develop our evaluation
15 documentation. In parallel we're continuing with the inspection closure activities
16 as well. We don't have a set timeline for that, but the timely response to these
17 questions will help us keep moving this toward conclusion. As Rick indicated at
18 the beginning, we don't currently have any further meetings of this type
19 scheduled, but as we continue our review and evaluate the responses you've
20 provided we'll continue to assess the need, and if we need one we'll have one;
21 and ultimately bring both this technical evaluation and the inspection reviews
22 together to our chief of staff's recommendation regarding the SCE plan. So, with
23 that, I'll turn it back to Rick.

24 RICK DANIEL: Thank you, Dan. Thank you all for the discussion
25 and questions. That concludes the nonproprietary portion of this meeting; so you

1 folks on the phone, we're getting ready to go to you to take your questions and
2 comments as well as those in the room. And we're going to take about 20
3 minutes for this period of time of questions. So, are there any questions in the
4 room right now on these RAIs? And I want to caution you that we're going to
5 stick to the subject of this meeting, the RAIs that were discussed and you heard
6 about today. So, are there any questions in the room?

7 Kendra, stand up and introduce yourself, please.

8 KENDRA ULRICH: Hi, my name is Kendra Ulrich. I'm with Friends
9 of the Earth. My question pertains to the RAI 32 response. With all due respect,
10 quite frankly, it reads to me like a schoolboy's justification for why they couldn't
11 complete a homework assignment. This response essentially is asserting that
12 they understand what the regulations are more than the regulators themselves.
13 But they understand what the interpretation of the technical specification is more
14 than the staff who have told them that they don't believe that this restart plan
15 complies with that technical specification. That said, there's a very interesting
16 indication from their choice to try to comply with this by submitting the Intertek
17 OA supplement, and I was very encouraged to hear that Emmett Murphy on the
18 panel here said that he had a number of questions related to that; and that's
19 because the Intertek OA relies upon traditional measuring data and operational
20 experience. But what we know, what Edison has admitted is that the
21 phenomenon that are experienced within the replacement steam generators are
22 unique globally. So, what they're saying is that by using the operational
23 assessments that actually address what's actually happening within these
24 replacement steam generators they can't show that they actually meet the terms
25 of the technical specification. So, what they're actually doing is relying upon tube

1 wear mechanisms that are known, which isn't the reality of what's going on here.
2 So, they're asking the NRC to set aside the reality of the situation and accept that
3 this is somehow related to what, you know, the rest of the industry globally has
4 experienced.

5 Now, my question relates specifically to a public transparency
6 question, because at the end of this the last two sentences of their response
7 clearly indicate that this is a test or experiment. They say, "We will take this
8 approach until we determine what the operational limits are." That says this is an
9 experiment or a test.

10 RICK DANIEL: Okay. So, what's your question?

11 KENDRA ULRICH: My question is that this reads as a thinly veiled
12 argument for a confirmatory order. What I want to know, because we've been
13 hearing that that is the case, is whether or not Edison has been approaching
14 anybody within the NRC with a request for a confirmatory order to address the
15 NRC's concerns.

16 RICK DANIEL: All right. Thank you, Kendra. Dan, would you like
17 to address that?

18 DAN DORMAN: That might be a better question for the licensee. I
19 have not been approached by anyone from the licensee requesting a
20 confirmatory order.

21 DOUG BROADDUS: What I would add to that is, you know,
22 throughout this whole process we made it clear to the licensee that all options --
23 all regulatory approaches are on the table for us. You know, when we complete
24 our review we'll make a recommendation to Eric Leeds and Elmo Collins on what
25 is the appropriate approach to take. So, I would say that a confirmatory order, a

1 license amendment, everything is on the table right now. There is no
2 determination as to what has to be done in order to be able to restart. We are
3 continuing our review, and we won't be able to make that determination until we
4 complete that review.

5 KENDRA ULRICH: So, changing a technical specification, what
6 process does that require? If a licensee wants to change a technical
7 specification, what is the appropriate process to do so?

8 DAN DORMAN: If the licensee wants to change a technical
9 specification the process is laid out in 50.90; it's a license amendment.

10 KENDRA ULRICH: That's correct. And in this case NRC staff --
11 thank you for that -- NRC staff had said that this doesn't appear to meet the
12 terms of the license. Edison has come back and said, well, full power means
13 whatever we say it means, whatever we want to limit our operation to; that's
14 different. So, in any event, the public has been demanding a license amendment
15 process. NRC staff has come back, as was indicated by Mr. Howell, and said
16 that that is not the position that was indicated to the licensee, I believe he said on
17 January 29th, 30th. So, in this situation it would be wholly inappropriate and
18 completely subvert the demand of the public for a license amendment process in
19 a situation in which the licensee's response doesn't comply with the terms of their
20 license. And that is your position, not ours.

21 RICK DANIEL: All right. Thank you, Kendra.

22 DOUG BROADDUS: I just want to clarify that the RAI does not
23 make any conclusions; all that does is ask for additional information, and in
24 particular it asks for the licensee to demonstrate why they believe that they're in
25 compliance with the technical specifications, or provide a 100 percent operational

1 assessment at 100 percent rated thermal power. It's because we needed that
2 additional information to be able to continue our review in part of our overall
3 assessment is -- what they're planning on doing is in compliance with the
4 requirements, with the regulations, with the license and such.

5 KENDRA ULRICH: Even if they set aside the actual [inaudible]
6 phenomenon that experienced with [inaudible]. That's the Intertek delay.

7 RICK DANIEL: All right. Thank you, Kendra. We're going to go to
8 the phone for a minute. Do we have any callers on the phone who would like to
9 ask some questions? Make comments?

10 OPERATOR: If you'd like to ask a question over the phone, please
11 press star one and record your name. Again, please press star one and record
12 your name to ask a question. One moment.

13 DAN HIRSCH: Dan Hirsch.

14 OPERATOR: Your line is open.

15 RICK DANIEL: Hi, Dan.

16 DAN HIRSCH: Can you folks hear me?

17 RICK DANIEL: We sure can. Go ahead.

18 DAN HIRSCH: Hello all. I had a couple of questions and a
19 generalized comment. One smaller matter is that you were told by Edison that
20 they assumed the same wear rate, but in fact, what they assumed for that was on
21 volume, and then they reduced it by 70 percent in terms of the percent through
22 wall. So I think you may want to take a look at that.

23 The second point I want to make is more important. You asked
24 some questions, as NRC, of Edison as to whether they were proposing on
25 making commitments regarding having to get NRC approval if they either

1 operated at higher power than 70 percent or if they wanted to run for more than
2 the five months. As I read their answer to RAI 32 and what they said in the slide,
3 I am a little concerned that they may have slid over those two matters. As I see
4 their answer, they're saying that they would not run at higher than 70 percent
5 power without NRC okay, but they're proposing to be able to run for five months,
6 shut down, test their experiment, and then decide to run again and again and
7 again. There's no indication in their statement that they're actually asking for
8 permission from NRC for any of that subsequent run. And I think you may want
9 to get that clarified as to whether they are asking you for five months
10 authorization or asking you for unlimited authorization where they shut down and
11 then they decide whether to keep running again and again and again.

12 And lastly, this is related to RAI 32, I just think someone has to say
13 very clearly that it really shakes public confidence in the credibility of Edison to
14 have them come in and try to say that 70 percent power is full power. And I was
15 pleased to hear that the NRC staff in its January meetings had rejected that
16 interpretation. But it's also very troubling to hear them saying that they have now
17 hired someone to try to come up with an analysis to try to demonstrate what it's
18 like [spelled phonetically] to run at 100 percent power. Obviously we wouldn't be
19 here if they could run at 100 percent power. If 100 percent power was safe there
20 would be no need to run at 70 percent power. And I think the credibility is
21 beginning to seriously crumble about this entire process. And I want to point out
22 that the analysis that they may be doing, if it's just for five months, would be
23 insufficient to prove what you need to have proven, which is that indeed they can
24 run for the long periods of time like they seem to be contemplating. Thank you.

25 RICK DANIEL: All right. Thank you, Dan. I want to take those one

1 at a time. Doug, go ahead.

2 DOUG BROADDUS: Well, actually, Emmitt, did you have anything
3 on the first part of that? The growth rate -- rates in any way.

4 EMMETT MURPHY: Yes. This is Emmett Murphy. If I heard the
5 gentleman correctly, he basically restated what I think we heard earlier in
6 response to RAI 26, namely that it is a look-ahead. They are projecting wear
7 rates based on a constant volume -- constant rate of removal of volume. That's a
8 standard approach to evaluation of problems of this type.

9 DOUG BROADDUS: All right. If I understood the second part, it
10 was related to the commitments and whether or not the RAI -- the response to
11 RAI 32 was requesting or indicating that -- a desire to operate at 70 percent for
12 an unlimited period beyond the first 150 days. What I would say on that is we're
13 definitely going to be looking at the specifics of that RAI 32, and we've only had a
14 couple of days to look at it. And I'm certain that will be something that we're
15 going to want to make sure we understand what exactly those commitments or
16 those statements mean, and you know, if there's a need for any clarification.
17 And, as Tom mentioned earlier, you know, if there is any need for that we can
18 talk and discuss that and get those clarifications made.

19 You know, I -- to the specifics of what it means, you know, I can't
20 comment on that right now, because as I said, we're still reviewing it, you know,
21 unless you wanted them to respond to that in any way as to what the intent -- you
22 know, whether you're -- it actually states what Mr. Hirsch was saying.

23 THOMAS PALMISANO: Well, what we have stated here in our
24 response is that durations of run would be determined by the operational
25 assessment process in accordance with the steam generator management

1 program, which is required by our tech specs. Standard program used across
2 the country, and we've said we were limiting operations to 70 percent power,
3 determine the length of the proposed subsequent operating period based on that
4 program, and then the operational assessments were submitted to the NRC in
5 accordance with the program.

6 DOUG BROADDUS: Okay. All right. The third part of that --
7 referred to the Intertek supplemental OA, and I'm not sure if I quite heard a
8 question in that. Emmett, did you hear anything that was a question in that?
9 Maybe I misunderstood.

10 EMMETT MURPHY: I did not.

11 RICK DANIEL: Dan, are you still on the phone?

12 DAN HIRSCH: I am.

13 RICK DANIEL: Do you have a specific question about the OA?

14 DAN HIRSCH: No. Well, yes, on the OA, I guess. Are you going
15 to be getting a revised OA that is simply for five months operation whereas
16 Edison is now claiming that the decision as to whether to run longer than that is
17 within their jurisdiction without having to get your approval? Because if that's the
18 case the OA that you should be getting is for far more than five months.

19 DOUG BROADDUS: I believe what I heard earlier was that the
20 supplemental OA was going to be addressing the 150-day time period, which is
21 consistent with the steam generator tube integrity program in the tech specs,
22 which is you do the operational assessments for the planned period that you're
23 going to be operating for, and then once that period, as Mr. Palmisano was just
24 mentioning, after the end of that period you would be required to do another
25 operational assessment and projecting forward how the additional -- you know,

1 any additional wear that would occur beyond that time period. So, without -- and
2 I think to go specifically to the question of whether we should be asking for
3 anything beyond that, and I'll defer to Emmett if he -- if there needs to be
4 anything more on that. I think it would be -- we would not -- you wouldn't be able
5 to project both what's going to happen now, as well as what's going to happen
6 then unless you have a complete cycle, if you start up and shut down, and then
7 start up and shut down again. I mean, the whole purpose is to look at what
8 occurred during that one cycle and project what goes forward through the
9 program. You know, what the wear is going to be for the next interval. So,
10 providing something for two intervals out I believe is beyond what the
11 requirements specify.

12 EMMETT MURPHY: That's correct.

13 DAN HIRSCH: If I could just respond to that. I think that it's a
14 really big deal, because the CAL, the confirmatory action letter you've issued,
15 says they cannot restart until they get your approval. But they're asking you to
16 give the approval, saying, "Hey, we'll only run for five months." But once you give
17 them that approval, the position they seem to be taking is that they can then
18 choose on their own to keep running, in fact, for years. So if your approval is
19 necessary to determine restart, your approval should be based on what that
20 approval can authorize, and that could be not five months, but years. And I think
21 that's the fundamental problem here, is the five months. You're not even going to
22 be able to tell the difference in terms of the wear on many of these tubes, you
23 know, compared to the 22 months we've already seen. So they're coming in and
24 kind of low-balling what they want you to give permission for, but once you give
25 them that permission they're going to be able to use that permission for far more

1 than they asked to. And therefore, the analysis they provided to you should
2 really be for all that they would be permitted to do if indeed you authorized
3 restart.

4 DOUG BROADDUS: Yeah, I appreciate that input, but I, you know,
5 I can tell you that our assessment is going to be on, you know, what they've
6 provided to us and any decision will also consider longer-term, you know,
7 operation process and how that's going to be addressed going forward.

8 DAN HIRSCH: Then you'd better tell the Hill, I think, that you're
9 contemplating giving them open-ended approval for long-term running, but only
10 analyzing what the effects are for five months. I think there will be a lot of
11 surprise on the Hill about that.

12 DOUG BROADDUS: I don't think I said that. I said -- what I said is
13 that we're reviewing what's been put before us, the plan that's been put before
14 us, and that any decision we make will also consider the longer-term process,
15 and that's one of the reasons why actually we have indicated to the licensee from
16 the very beginning that we need to understand what their long-term plan is, and I
17 believe that's why they provided that in this RAI 32 response, is to start that
18 dialogue and that understanding of the long-term plan.

19 DAN HIRSCH: Well, let me just reiterate. What they told you is
20 they believe they have the power once you state it can restart, that they get to
21 choose the long-term plan; and yet you're not analyzing for what the effects are
22 of that long-term operation. I've made my point. I just think that this is really very
23 troubling and it's not the way a safety analysis ought to be done. One should be
24 analyzing what the potential effects are of permitting restart if in fact that
25 permission allows them to run for considerably longer than five months without

1 having to get your okay.

2 ARTHUR HOWELL: Mr. Hirsch, this is Art Howell. I would just
3 note that the terms of the confirmatory action letter remain in place until such
4 time it is changed and the staff will decide what mechanism by which to change
5 that. So, no decisions have been made at this point, but we will -- we understand
6 your point and we'll take that into account as we go forward.

7 RICK DANIEL: All right. Thank you, Ray. Thank you, Ray. Let's
8 have a question here in the audience.

9 MARK VOSBURGH: Hello. My name is Mark Vosburgh. I'm with
10 CAN, Coalition Against Nukes. And I would like to concur with Kendra Uldrich --
11 Ulrich, excuse me, and the earlier caller regarding the concerns about RAI 32.
12 Specifically, RAI 32 troubles us greatly. The possibility that is being entertained
13 here today seems to be that the Commission will consider possibly changing
14 their own regulations and ignoring the spirit of the regulation itself. It seems to
15 me the regulation was very clear: 100 percent power, full power, that's 100
16 percent of licensee power that was -- that's on record. We know that 70 percent
17 does not equal 100 percent. Okay? Last time I checked, 70 does not equal 100.
18 Okay? I want to be very clear on that. The public that I'm in touch with is very
19 concerned about the possibility of changing that regulation to accommodate the
20 licensee.

21 RICK DANIEL: All right. Thank you, Mark. Do you have a
22 question?

23 MARK VOSBURGH: Yes I do. I have another question as well
24 following. The question is which part of 100 percent do they not understand?
25 Now, the other question that I would have -- I have an RAI of my own here and

1 that is -- okay, I'm -- hello? Okay. I have an RAI of my own, and that is the
2 Mitsubishi memo. Specifically, I'm talking about the memos that --

3 RICK DANIEL: Mark, excuse me. I'm going to stop you right there
4 for a minute, okay? This is not the forum to be talking about that. We're here to
5 discuss RAIs. We have the right people in the room --

6 MARK VOSBURGH: The public is very concerned about that.

7 RICK DANIEL: I understand.

8 MARK VOSBURGH: May I ask when that would be available to us
9 and why it's taking so long for us to get that memo?

10 RICK DANIEL: We'll try to get you an answer, okay?

11 MARK VOSBURGH: Are you taking the situation seriously from
12 our lawmakers?

13 RICK DANIEL: We're absolutely taking all these situations
14 seriously, but what I'm saying is this is not something we can entertain just now,
15 and we're trying to focus our discussion and questions on these RAIs. So, it'll be
16 noted that that's a question and --

17 MARK VOSBURGH: I am requesting that additional information.

18 RICK DANIEL: Okay, and we appreciate that. Thank you very
19 much. Kendra.

20 KENDRA ULRICH: Rick, I appreciate you recognizing that I wasn't
21 quite done earlier, so thank you. So I appreciate Dan Dorman's insight that he
22 has not been approached for confirmatory order, but in fact, my question was not
23 answered. My question was whether anybody at that table or anybody else
24 within the agency, to your knowledge, has been approached by Edison and how
25 often with the request to address the concerns raised on RAI 32 with the

1 confirmatory order? Specifically, limiting power to 70 percent operation.

2 DOUG BROADDUS: If I understand your question, your question
3 is has SCE specifically asked us whether or not we -- to issue a confirmatory
4 order. Is that what you're asking?

5 KENDRA ULRICH: Well, what I'm asking is, you know, if you insist
6 on this interpretation, as the regulator, that they actually have to comply with the
7 wording of their technical specification, if they have expressed to you that they
8 would be amenable to the confirmatory order to address that concern rather than
9 them having to apply for a license amendment, which quite frankly, they
10 should've applied for months ago.

11 DOUG BROADDUS: I think that that, again, I think I would defer
12 that to the licensee whether or not they're interested in a confirmatory order or
13 not, not to us whether or not we're --

14 KENDRA ULRICH: I think that this is an issue of public
15 transparency.

16 RICK DANIEL: Oh, Kendra.

17 KENDRA ULRICH: No, let me finish.

18 RICK DANIEL: I think what they're saying is that no one has
19 approached the NRC.

20 KENDRA ULRICH: They haven't said that. No one at that table
21 has said that they haven't.

22 RICK DANIEL: Has anyone at the table been approached by
23 Edison about doing a confirmatory action?

24 KENDRA ULRICH: Or that they would be amenable to a
25 confirmatory action?

1 RANDY HALL: No one from Southern California Edison has
2 specifically asked me if the NRC would be amenable to a confirmatory order.

3 KENDRA ULRICH: And have they, to your knowledge?

4 MALE SPEAKER: Same here.

5 RICK DANIEL: Dan?

6 DAN DORMAN: I already answered that.

7 RICK DANIEL: Art?

8 ARTHUR HOWELL: Only I would just say that there have been
9 discussions as there has been with members of the public about what paths may
10 be likely or feasible depending on the answers to RAI 32.

11 KENDRA ULRICH: I think that was a yes.

12 ARTHUR HOWELL: There have been discussions about all paths
13 and all options. For example, they can -- as you indicated, they maintained their
14 original position on the technical specification, which is that they're compliant. If
15 that were the case and we still disagree, there's a process to handle that
16 disagreement; it's the backfit process, confirmatory order, license amendment
17 requests, or revised operational assessment. So all four of those have been
18 asked by various members of the public and also by licensee and us.

19 RICK DANIEL: All right. Thank you, Kendra.

20 KENDRA ULRICH: What about Emmett?

21 RICK DANIEL: Emmett, the button, the button.

22 KENDRA ULRICH: I'm sorry. What?

23 EMMETT MURPHY: Negative. I have heard no such inquiry.

24 KENDRA ULRICH: Okay. Thank you.

25 RICK DANIEL: Thank you, Kendra. All right. Let's go back to the

1 phones. Do we have anyone else on the phone that would like to ask a question
2 at this moment?

3 OPERATOR: Yeah. Renald [spelled phonetically], your line is
4 open.

5 MALE SPEAKER: Hello?

6 RICK DANIEL: Hello. We can hear you loud and clear, Renald.

7 MALE SPEAKER: Okay. Hi. Let me first say this. These
8 regulations apply to all the 104 reactors, and affect all Americans, not only
9 Edison. So you cannot change the rules for one utility. The NRC is
10 compromising their reputation and their obligations to all Americans and for all
11 the reactors. What I hear is that Edison is saying forget about the mistakes
12 made by SCE and MHI, and forget about what happened to Unit 3. Just give us
13 permission to operate at 70 percent power and our operators can handle any
14 kind of an accident scenario, and we'll go on from here.

15 RICK DANIEL: All right. So --

16 MALE SPEAKER: It is the job of the NRC now to be totally there to
17 everybody, enforce regulations equally. Thank you very much.

18 RICK DANIEL: Thank you, Renald. Thank you very much.

19 Anyone else on the phone that had a question or make a comment?

20 OPERATOR: Yeah, Bruce Campbell, your line is open.

21 BRUCE CAMPBELL: Thank you. So I asked this at an NRC
22 hearing in Orange County but didn't get a response. When was the anti-vibration
23 bar design team formed to evaluate steam generator replacement at San Onofre,
24 and what were the dates of their meetings? And if you don't have that info with
25 you now, can you get it to me within this week, for instance?

1 RICK DANIEL: We might be able to do that, Bruce. Hang on just a
2 minute.

3 DOUG BROADDUS: Could you indicate to me which RAI you're
4 referring to in this question so we can try to narrow that down what you're asking
5 about?

6 BRUCE CAMPBELL: I don't have the RAIs in front of me. Also I
7 want it --

8 DOUG BROADDUS: Okay. Could you narrow down the topic of
9 what it is that -- you're taking about the design team?

10 BRUCE CAMPBELL: Generator replacement at San Onofre. They
11 performed an anti-vibration bar design team, and I want to know when it was
12 formed, when they first met --

13 DOUG BROADDUS: And you're --

14 BRUCE CAMPBELL: -- and what dates their meetings were.

15 DOUG BROADDUS: Are you referring to a design team that was
16 formed after the CAL was established? Is that what you're -- are you talking
17 about any design team?

18 BRUCE CAMPBELL: I believe Edison and the NRC are well aware
19 which team I'm talking about, and don't try to divert attention just because I don't
20 have all documents in front of me right now.

21 DOUG BROADDUS: Are you talking about the design team that
22 was established after March of last year?

23 BRUCE CAMPBELL: I believe it was established in the middle of
24 last decade or somewhere around there, is what I understand.

25 MALE SPEAKER: Okay.

1 BRUCE CAMPBELL: Are there two anti-vibration bar design
2 teams? I was particularly asking about the first one, but I'd like to know all
3 meetings of all anti-vibration bar design teams related to steam generator
4 replacement at San Onofre.

5 RICK DANIEL: All right. Hang on. We're going to try to get you an
6 answer, Bruce. Just a minute.

7 BRUCE CAMPBELL: Thank you.

8 [inaudible conversation]

9 RICK DANIEL: Yeah, Bruce, since this does not pertain to these
10 RAIs, I'm just going to ask you submit this to us in writing and so we can get you
11 a concise answer. If you can just give us that in writing we would really
12 appreciate it and we'll try to get you an answer, because we do want to answer
13 your question. Okay?

14 BRUCE CAMPBELL: And the best place to send the question
15 would be on that sheet handed out --

16 RICK DANIEL: Yes.

17 BRUCE CAMPBELL: -- at the NRC meeting in Orange County at
18 that address?

19 RICK DANIEL: Yes, sir. And don't forget to check the box that
20 you'd like a response and we'll see to it that we get a response for you. Okay?

21 BRUCE CAMPBELL: And this would be in regards to every anti-
22 vibration bar design team whether it was last decade or this decade?

23 RICK DANIEL: I don't have a response for that right now, but we
24 will research this and we will try to get you an accurate response. Okay?

25 DOUG BROADDUS: What would help us most is if your question

1 is specific to what it is you're looking for -- that's what I was trying to get is to
2 understand, you know, if you're talking about any teams that were developed,
3 you know, years ago or teams that were developed more recently or what,
4 because I'm not exactly sure.

5 BRUCE CAMPBELL: Yeah. When -- I was particularly referring to
6 what was -- the team that met last decade, but I'm also interested in the newer
7 teams if they exist.

8 RICK DANIEL: Okay. If you send that in we'll get you an answer.
9 Okay? Thank you, Bruce. Okay. Next caller, operator.

10 OPERATOR: Thank you. Paul Patterson, your line is open.

11 RICK DANIEL: Hi, Paul.

12 PAUL PATTERSON: Hi. Hi. How are you? Can you hear me?

13 RICK DANIEL: We sure can. Go ahead.

14 PAUL PATTERSON: Just really quickly on the -- just procedurally
15 I'm trying to, you know, just from a non-expert perspective, we're just trying to get
16 a sense as to what the timeframe is here, sort of what the next steps are, so the
17 RAI -- you guys have questions about them and, you know, it's going to go back
18 and forth, just sort of what the next steps, are and when we think -- when do you
19 think you'd be in a position to make a decision on these startups?

20 RICK DANIEL: Go ahead, Dan.

21 DAN DORMAN: Paul, this is Dan Dorman. The -- as I indicated
22 earlier, we don't have a set timeframe because we're going to follow our
23 questioning and we're going to follow our technical evaluation until we get to a
24 conclusion, but the information that the licensee provided here today is that they
25 estimate that they'll respond to our latest 35 questions within about the next two

1 to three weeks. The staff is continuing to evaluate the responses that we've
2 received to the first 32, and then we will evaluate the responses to the next 35,
3 and if we don't have any further questions we'll get into development of the
4 documentation and a lot of internal discussion of the evaluation that we've done.
5 In parallel, we've got some inspection activities that will continue, be ongoing, so
6 I would say that the earliest that we would expect to reach a decision would be
7 probably late April, but I caveat that because as we continue through this there
8 may be additional questions that come up that would cause that to slip out
9 further.

10 PAUL PATTERSON: That's great. I really appreciate it. Thanks
11 so much, and thanks for the call.

12 RICK DANIEL: All right, Paul. Folks on the phone and in the
13 audience here, at this time we said we were going to take 20 minutes. We've
14 taken about 34. I was never that good at telling time. But anyway, we took 34
15 minutes and this concludes our non-proprietary portion of the meeting. So we're
16 going to take a break. If you folks on the phone have any additional questions,
17 please feel free to submit them to the NRC via the public website, and we'll try to
18 get you some answers, especially if they pertain to these RAIs or this RAI
19 process -- review process. So thank you. We're going to take a 15-minute
20 break, and when we come back we're going to be just dealing with folks that are
21 able to deal with propriety information, so that will discount you folks from the
22 public and the news media. Sorry, Kendra. Thank you very much. Let's get
23 back together at 3:20.

24 [Whereupon, the proceedings were concluded]