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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
+ + + + +
PLANT OPERATIONS SUBCOMMITTEE
MEETING

+ + + + +
MONDAY,
SEPTEMBER 9, 2002

+ + + + +
The Subcommittee met at 1:30 a.m. in Room T2B3,
Two White Flint North, Rockville, Maryland, John D.
Sieber, Chairman, presiding.

ACRS MEMBERS PRESENT:

JOHN D. SIEBER	Chairman
GEORGE APOSTOLAKIS	Member
MARIO V. BONACA	Member
GRAHAM M. LEITCH	Member
STEPHEN L. ROSEN	Member

1 NRC STAFF PRESENT:

2 MAGGALEAN W. WESTON Staff Engineer

3 CINDY CARPENTER Inspection Program Branch Chief

4 PETER KOLTAY Inspection Program Branch

5 DONALD FRAHM Inspection Program Branch

6 DONALD HICKMAN Inspection Program Branch

7 DOUGLAS COE Inspection Program Branch

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P R O C E E D I N G S

(1:33 p.m.)

1
2
3 MR. SIEBER: The meeting will now come to
4 order. This is a meeting of the ACRS Subcommittee on
5 Plant Operations. My name is John Sieber. I'm
6 Chairman of the Plant Operations Subcommittee, and my
7 Co-Chair for this project is George Apostolakis, who
8 is Chairman of the Reliability and PRA Subcommittee.
9 Other members in attendance are Mario Bonaca, Graham
10 Leitch, Steve Rosen, and I guess that's it for the
11 time being.

12 The purpose of the meeting is to discuss
13 the reactor oversight process as it relates to the
14 staff requirements memorandum, which directed that the
15 NRC staff, with input from the ACRS, resolve the
16 apparent conflicts and discrepancies between aspects
17 of the ROP that are risk-informed, for example, the
18 significance determination process, and those that are
19 performance-based, for example, those that are
20 performance indicators. Maggalean W. Weston is the
21 ACRS Staff Engineer for this meeting.

22 The rules for participation in this
23 meeting have been announced as part of the notice of
24 this meeting, published in the Federal Register on
25 August 22nd, 2002. A transcript of the meeting is

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1 being kept, and will be made available, as stated in
2 the Federal Register notice. It is requested that all
3 speakers identify themselves, use one of the
4 microphones available, and speak with sufficient
5 clarity and volume so they can be readily heard. We
6 have received no written comments from members of the
7 public regarding today's meeting.

8 George, do you have any comments you'd
9 like to make?

10 MR. APOSTOLAKIS: No, that's fine.

11 MR. SIEBER: Okay. Thank you. We'll now
12 proceed with the meeting. Ron Frahm, you may begin.

13 MR. FRAHM: Thank you. Can everybody hear
14 me?

15 MR. SIEBER: Yes.

16 MR. FRAHM: I actually have a personal mic
17 on. I'm Ron Frahm from the Inspection Program Branch,
18 and I'd actually just like to point out before we get
19 started, I fell yesterday. I tripped over my
20 daughter, and I hurt my back a little bit, so I will
21 need to be getting up and down frequently throughout
22 the presentation, because sitting in one place for a
23 long period of time is not very comfortable.

24 MR. SIEBER: We may all do that.

25 MR. FRAHM: Okay. And that's why I have

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1 the portable microphone.

2 As I said, good afternoon. With me today
3 at the table are Doug Coe. He is the Section Chief in
4 the Inspection Program Branch responsible for the
5 Significance Determination Process, as well as our
6 Inspection Program. To my right is Don Hickman. He's
7 our Task Lead for the Performance Indicator Program.
8 We also have with us Cindy Carpenter. She's the Chief
9 of our Inspection Program Branch, and I believe
10 several other staff members are available in the
11 audience to address specific questions that might come
12 up during today's briefing.

13 We certainly welcome this opportunity to
14 sit down with the ACRS and exchange ideas in the
15 interest of improving the ROP. Actually, my first
16 slide is the direct quote from the SRM that John has
17 already gone through. The only thing I'd like to add
18 is that this is really the focus of today's
19 discussion, in that this SRM was a result of an ACRS
20 briefing of the Commission on December 5th of 2001.

21 We intend to address this SRM in our
22 annual ROP SECY Self-ASsessment Paper that will be
23 issued next March. Although we have a few specific
24 slides I'd like to go over today, we'd really like to
25 gather your insights and your inputs, because this is

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1 a group effort that we need to put together, and
2 address this SRM. Because as you see on the first
3 line, the staff should provide the recommendations
4 with ACRS input, so a big point of today is to gather
5 your input.

6 MR. LEITCH: That SRM seems to imply a
7 differentiation between risk-informed performance-
8 based that is significant determination process versus
9 performance indicators, but are there not also some of
10 the cornerstone indicators that tend to be more
11 performance-based than risk-informed?

12 MR. FRAHM: Absolutely.

13 MR. LEITCH: For example, I'm thinking
14 about inoperable sirens. Isn't that really a
15 performance-based indicator?

16 MR. FRAHM: Yes, it is. Some -- in fact,
17 this statement is a little unnerving. I'll actually
18 go off on a tangent of my own here. It seems to imply
19 that you can be either risk-informed or performance-
20 based.

21 MR. LEITCH: Yeah.

22 MR. FRAHM: But in my mind, any input into
23 the ROP is performance-based. If you have an SDP
24 issue, it's based on a performance issue.

25 MR. LEITCH: Right.

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1 MR. FRAHM: And all the performance
2 indicators are performance-based, as well. So to me,
3 being risk-informed is a subset of being performance-
4 based, and there are certain aspects of the ROP that
5 are more performance-based than others.

6 MR. LEITCH: Okay.

7 MR. FRAHM: But it is not specifically --
8 the SDP is risk-informed and not performance-based,
9 and the performance -- I'm sorry. The performance
10 indicators are performance-based and not risk-
11 informed. It's not that fine a line.

12 MR. LEITCH: Uh-huh.

13 MR. FRAHM: Okay. Moving along. We'd
14 like to first discuss some of the basic fundamentals
15 of the reactor oversight process. First, the ROP
16 regulatory framework was developed by a task group
17 based on expert judgment, and includes seven
18 equivalent cornerstones of safety. These cornerstones
19 were selected based on their comparable importance in
20 meeting the agency's mission to protect the public
21 health and safety.

22 Regulatory response to plant performance
23 is determined by the action matrix, based on both
24 performance indicators and inspection findings across
25 these seven cornerstones. It's important to note that

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1 an underlying principle of the ROP is that the
2 crossing of a performance indicator or inspection
3 finding threshold will have a similar meaning with
4 respect to staff response and safety significance.

5 Assessment reviews are performed on a
6 continuous quarterly and annual basis for all plants.
7 We also have an annual wrap-up meeting of senior
8 managers called the Agency Action Review Meeting,
9 where we confirm the staff actions to-date, as well as
10 go over the ROP self-assessment process, and industry
11 trends. And we believe that to-date, after two and a
12 half years of ROP implementation, the plants appear to
13 be receiving the appropriate level of oversight.

14 We based this on the fact that two agency
15 action review meetings have been conducted and
16 completed, and senior management has confirmed that
17 the staff actions were appropriate, as well as
18 continuous interface with regional management. And
19 most recently, the mid-cycle reviews were completed
20 about a few weeks ago, and the regions stated that
21 they were able to get the right plants in the right
22 place to make sure that they're getting the
23 appropriate regulatory attention.

24 MR. LEITCH: Do you know if fire or fire
25 prevention, perhaps more properly, was ever considered

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1 as cornerstone?

2 MR. FRAHM: I personally do not.

3 MR. LEITCH: I just wonder how -- in other
4 words, as you look at the plants today, it seems to me
5 that the emergency preparedness issue being a
6 cornerstone, has suddenly heightened the attention,
7 and properly so, on siren performance, for example.
8 And I guess, I just wondered as I was reading about
9 some of the fire protection issues here for a meeting
10 later this week, I was just wondering why isn't fire
11 -- in other words, if the plant is having a lot of
12 non-consequential fires, or poor performance on the
13 fire brigade, those kind of things, isn't that a
14 cornerstone safety issue? How is that reflected in
15 the cornerstones?

16 MR. FRAHM: Well, I believe currently,
17 fire protection is handled across all of the reactor
18 safety cornerstones, if I'm correct. Please keep me
19 honest. It was not -- I was not part of the task
20 group that put together the cornerstones, and I'm not
21 really -- I'm not sure anybody here was, for that
22 matter. But I'm not sure what the basis was for not
23 including fire protection.

24 MR. LEITCH: Say a fire that impacted a
25 mitigating system, that would come under the mitigated

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1 system cornerstone.

2 MR. FRAHM: That's right.

3 MR. LEITCH: I'm thinking of a fire that
4 doesn't necessarily affect the mitigating system. I
5 mean, it's -- you know, a lot of minor fires I'm
6 talking. Like fire in a pile of trash some place, or
7 fire in the weeds at the plant, those kind of things.
8 I guess I just don't quite see where that fits into
9 the system.

10 MR. COE: Well, I can help maybe a little
11 bit. This is Doug Coe. I think that the whole
12 concept of fire was as another set of initiating
13 events that the plant had to be designed to mitigate.
14 And similar to -- it didn't achieve a cornerstone
15 status of its own because it was -- there was already
16 a mitigating systems cornerstone. And we examined,
17 you know, fire protection types of issues, and in the
18 process of deciding how to address them from an SDP
19 standpoint, and we formulated a separate SDP for fire
20 protection issues. And that could be either
21 increasing initiating event frequency, or a
22 degradation in some barrier, or some mitigation
23 function. So it fit the overall framework of the ROP,
24 and it didn't require its own cornerstone. It seemed
25 to be captured within the seven cornerstones that have

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1 been already --

2 MR. APOSTOLAKIS: But if you had frequent
3 risk insignificant fires which I think is part of the
4 question of Mr. Leitch, would that affect your
5 assessment of the safety conscious work environment?

6 MR. FRAHM: Well, the safety conscious
7 work environment is a cross-cutting issue. If there
8 was problems in that area, they're expected to reveal
9 themselves through things that we can see, a series of
10 small or minor fires might be one of them. But the
11 framework was designed originally to put a threshold
12 on those issues, so that the minor issues, the ones
13 that did not pose a health or safety risk, or an
14 impact of that nature, were ones that we expected the
15 licensee to treat within their own corrective action
16 programs, and provided that those issues never rose
17 beyond or above that threshold of significance, that
18 we would -- the assumption we made was that the
19 licensee properly maintaining or controlling that.

20 Now the question you raise is a good one.
21 If you've got a licensee that has, you know, a lot of
22 these that are greater than what you would normally
23 expect, and other plants have much less, then you'd
24 expect there's a performance problem with that plant.
25 Okay. Now that does not slip by our attention. Our

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1 inspectors, or field inspectors, our resident staff
2 are monitoring, and they see evidence of problems at
3 low levels. Okay?

4 The program requires that we identify
5 problems at higher levels, or higher significance
6 thresholds in order to take agency action, additional
7 agency action. But we are out there. We are looking,
8 and if we identify that kind of a trend, it factors
9 into how and where we look, as we conduct our normal
10 baseline inspection activities.

11 MR. LEITCH: So that could yield as
12 inspection finding, even if these fires were minor,
13 non-risk consequence, but there were a significant
14 number.

15 MR. FRAHM: Yes, and I emphasize that
16 inspection findings can be a very low safety
17 significance. And we have a program -- the process
18 that we -- you know, the framework that we've set up
19 provides for a relatively expeditious dispensation of
20 those findings, so that we can continue on with our
21 inspection activities, looking for the issues of
22 greater significance.

23 MR. APOSTOLAKIS: I wonder whether this is
24 the appropriate time, but it seems to me - to raise
25 the question - but it seems to me that your bullets

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1 here and later on seem to imply that this is a very
2 successful process. And I wonder whether the Davis-
3 Besse's event would have any impact on that? I mean,
4 I understand that it was all green, and yet they now
5 -- everybody finds problems with the way they were
6 running the plant and so on. Doesn't that tell us
7 something about the process, when all the indicators
8 are green, and then you have such a major problem?

9 MR. COE: Yes, I think it does. And I
10 think that the Lessons Learned Task Force was just
11 completing their work now, and should be issuing their
12 report very shortly, is going to give us some of their
13 perspectives on that very question.

14 MR. APOSTOLAKIS: So you are not
15 addressing that issue today.

16 MR. COE: No, we are not.

17 MR. APOSTOLAKIS: Okay. Okay.

18 MR. FRAHM: Okay. Next slide, please. So
19 far, the staff believes that having both risk-informed
20 and performance-based thresholds provides a nice
21 balanced approach, as I discussed earlier, and that
22 they actually work in concert together. They're not
23 opposing forces. They're actually forces that work
24 together.

25 MR. APOSTOLAKIS: I'll tell you where the

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1 problem is. I think it's not the issue of risk-
2 informed versus - well, it depends on what you mean by
3 performance-based - but performance, I think the
4 action matrix has a problem there, because the
5 performance indicators are, in fact, indicators of
6 performance. There's truth in advertising there. And
7 then the SDP is really risk-based. So now when we
8 say, and maybe that was part of the problem with
9 Davis-Besse again, that in terms of risk, maybe it was
10 okay, but -- I mean, it was not okay but, you know, we
11 didn't come very close to any major thing. But in
12 terms of performance, it was terrible. And as you
13 know, one of the major comments the ACRS made was that
14 the thresholds for the performance indicators, except
15 for the green/white are risk-based, and they shouldn't
16 be. And I'm really wondering whether the performance
17 indicators should be part of the action matrix at all,
18 because you are mixing two different things.

19 On the one hand, you have the SDP with its
20 risk thresholds. Okay? And some of them are better
21 than others.

22 MR. FRAHM: Right. Some of them have risk
23 thresholds.

24 MR. APOSTOLAKIS: SDP for power operations
25 is much better than SDP for emergency planning, for

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1 example, or something else, security, for what you
2 don't have a PRA. But how can we mix the two? How
3 can we say in the action matrix, if you find any
4 whites or yellows, do this. When some of the yellows
5 may come from performance, others may come from risk.
6 I think that's a real issue in my mind. I mean, the
7 matrix itself should be scrutinized that way.

8 I don't know whether one needs to treat
9 them separately, or somehow reconcile them, because
10 the bases are very different.

11 MR. FRAHM: Well, I'd just like to say
12 that all of them are performance-based, and some are
13 more risk-informed than others. Thresholds in both
14 Pis and the SDP, and that that was one of the
15 underlying principles and premises when this task
16 group got together a few years ago, was to make those
17 thresholds have relatively the same weight, using
18 expert judgment.

19 MR. APOSTOLAKIS: No, but they're --

20 MR. ROSEN: Not necessarily based on risk.
21 If we had risk insights available, we used them.

22 MR. APOSTOLAKIS: No, the thresholds,
23 except for the green/white are all risk based. That's
24 why you get 23 transients, which is, you know, a very
25 high number than normally it is, because you want the

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1 frequency of transients to be so high, that the core
2 damage frequency jumps -- that's unrealistic.

3 Now another thing, that's -- I don't claim
4 I have the answer, but I think -- I'm troubled by the
5 fact that the performance indicators, especially when
6 you go to white, is based on how my peers are
7 performing, but then everything else is based on
8 absolute measures of risk. And I don't know what the
9 answer is to that, but I think it's a flaw in the
10 action makers.

11 MR. COE: I think that your -- if I'm
12 correct, you're restricting your comments right now to
13 the performance indicators for mitigating systems and
14 initiating events. Correct?

15 MR. APOSTOLAKIS: Yeah.

16 MR. COE: Right, because those are the
17 ones in which the risk basis was applied. And all I
18 can tell you is -- and it's not as satisfying as we,
19 perhaps, would have liked it to be. Maybe it was --
20 there were ways of -- maybe there are ways of making
21 that first threshold between green and white more
22 risk-informed than it is right now. But what we did
23 do, if I'm recalling correctly from the SECY paper
24 that we wrote, we did use the risk model to establish
25 the white/yellow threshold, and then we made sure that

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1 the performance-based threshold, which was the
2 green/white threshold, was below that. In other
3 words, the number of initiating events, or the numbers
4 of hours of that mitigating system being out of
5 service was below that, so that there would be a
6 differentiation. And I'd have to go back to that
7 original SECY paper to better articulate why it is we
8 couldn't get more risk-informed with that first
9 threshold.

10 MR. SIEBER: Because nobody would be in
11 it. Yo would have to commit so many sins to get to a
12 white indicator, that nobody would be there, so they
13 used peer comparison.

14 MR. APOSTOLAKIS: Actually, the ACRS took
15 the other position. The other thresholds that are
16 risk-based should not be. We agreed with the
17 green/white, but we have a problem with the
18 white/yellow and yellow/red, because they're -- as you
19 know very well, you will never have a core damage
20 event because the frequency of transients went up.
21 No, it's an indication of performance. What will get
22 you there, or close, will be an accident sequence.

23 MR. SIEBER: Yeah, but didn't we agree two
24 months ago that, or at least we were told that the
25 only color change that would be in the performance

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1 indicators was green and white.

2 MR. APOSTOLAKIS: That was an idea that
3 was proposed, and the staff did no object to it. I
4 don't think they committed --

5 MR. SIEBER: Well, maybe we'll find out
6 today.

7 MR. APOSTOLAKIS: I don't think they're
8 thinking about it any more.

9 MR. SIEBER: I think another point that is
10 part of this conversation, that I have struggled a
11 little bit with, using the single action matrix for
12 both performance indicators and risk information. And
13 the only way that I can conclude that that's, perhaps,
14 an appropriate thing to do, is that somebody has
15 decided, and I think it was regional administrators,
16 plus NRR Staff people, that if I -- for each of these
17 indicators, if they showed up at a given licensee,
18 here's the action I would take. And that would be
19 different -- it would be the same action whether it
20 was a performance-basis indicator or SDP. And so
21 that's a way to think about it, and it doesn't relate
22 to the commonality between performance-based
23 indicators and risk significance. It's more related
24 to what would NRC management do under a variety of
25 circumstances, and let's lump everything that would --

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1 where we would take the same action into a single
2 matrix. And that was a way to decide how to integrate
3 the SDP process and the performance indicator process.

4 MR. COE: I believe that's what we've
5 done.

6 MR. SIEBER: I think so too, but it
7 doesn't jump out at you. And when we see some of
8 these inconsistencies, and try to figure out well, why
9 does having too few people attend emergency plan
10 training, why is that equivalent to having a high head
11 safety injection pump out?

12 MR. APOSTOLAKIS: Equivalence across.

13 MR. SIEBER: Yeah. And so there is
14 probably an area where one could easily be confused.
15 And if we do anything, if we adopt a single action
16 matrix and some folks have suggested that maybe we
17 need two different ones, one for Pis and one for SDPs,
18 or violations, however you want to call it. I
19 personally don't think that's necessary to do, but if
20 we have just a single one, the text should explain
21 what the basis for it is, so that that confusion just
22 didn't linger out there.

23 MR. APOSTOLAKIS: That's a very
24 interesting point, because if that's really the way it
25 was construed, then it changes the perspective. I

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1 still don't think that you will need the yellow and
2 red for the performance indicators, because --

3 MR. SIEBER: You'll never get there.

4 MR. APOSTOLAKIS: You will never get
5 there.

6 MR. SIEBER: If you had 20 scrams --

7 MR. APOSTOLAKIS: Putting something down
8 that makes you --

9 MR. COE: We recognize that we're not
10 going to 25 scrams at a plant in a year before we take
11 action, you know. We'll never get there.

12 MR. SIEBER: Well, the company will take
13 action. They will change after management.

14 MR. COE: It'll be taken over by events
15 before 25 scrams --

16 MR. APOSTOLAKIS: Green and white is
17 probably enough, maybe a yellow under certain
18 conditions, but certainly not red.

19 MR. COE: The staff had actually the same
20 concern when I think we were first developing that
21 aspect of the ROP, but they were retained. Those
22 thresholds, the yellow, red, and white/yellow
23 tresholds were retained, even though they were
24 relatively high, to offer a sense of margin, I think.
25 It was, perhaps, a little bit of a surprise that

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1 that's the way it came out, but as you thought about
2 it, you recognized that all other things being equal,
3 as if you simply change the initiating event
4 frequency, you would have to get to a fairly high
5 level of those kinds of transient initiators to get to
6 the same risk value, if you had a mitigating system
7 out for X number of hours that met that threshold, as
8 well.

9 MR. APOSTOLAKIS: But this is supposed to
10 be a real thing. It's not -- I mean, it's not a
11 sensitivity study to see how they PRA results change.
12 But the truth of the matter is, we have had an
13 accident sequence precursor program now for over 20
14 years. The things that have really concerned both the
15 industry and the agency as being significant are
16 sequences of events, never the frequency of one event.
17 It's sequences. Something happens, something else
18 fails, something else fails, so you say my, God, you
19 know.

20 MR. COE: Scrams with complications.

21 MR. APOSTOLAKIS: Yes. Exactly. So I
22 need to report this. Why can't we take similar
23 thinking here, and say in terms of performance, yeah,
24 we worry about exceeding the 95th percentile of
25 performance, and we do certain things. But in terms

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1 of risk, what really matters is the combination of
2 event, and we already have a problem with those
3 things. So why isn't there an entry in the matrix
4 that says the ASP gives me this, and now that takes me
5 to a yellow, and I'll do something. Because the ASP
6 is, in fact, realistic.

7 MR. COE: To answer your question, in many
8 cases the ASP, the Accident Sequence Precursor
9 Program, does parallel the effort we take, you know,
10 to characterize the significance in risk terms. Often
11 they take longer, but they do a more detailed job, in
12 many cases a more analytical job. And we have a
13 continuing concern about the paralellism of those two
14 programs, ROP and ASP. And I think we've talked about
15 that before. It's something we need to resolve
16 between the two offices that sponsor those two
17 programs.

18 But fundamentally, you know, some of the
19 events that occur reveal certain deficiencies of the
20 plant, and the event itself can be characterized in
21 terms of its risk impact, in terms of the likelihood
22 that the core could have progressed through the
23 sequence to a damaged state, and that can be
24 characterized as a probability. However, it may, in
25 fact, if there's complications, reveal that there were

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1 certain degraded conditions that may have existed for
2 a period of time. And it's the task of the SDP to
3 determine whether or not there was some kind of
4 deficient licensee performance that contributed to the
5 degrading condition, or even the condition which
6 prompted the event to occur in the first place. And
7 that degraded condition, or that performance issue is
8 what we're trying to assess.

9 Fundamentally, we're not -- fundamentally
10 we recognized at the very outset of ROP development
11 that an event could happen. In fact, at that time,
12 AEOD or the research folks that had been doing the ASP
13 Program, very strongly indicated that bad events,
14 significant events can often happen, you know, to good
15 licensees. There seems to be no correlation between
16 a licensee's performance and the really significant
17 events that have occurred. They couldn't make any
18 correlation, and so their expectation was that
19 occasionally, a significant event would happen. It
20 may have, you know, generic implications, and we
21 certainly as an agency, may have to take action. But
22 in terms of our assessment of that licensee's
23 performance, if lightning strikes and a bad event
24 happens, that may not be a performance issue, so we
25 very strongly related our process to a definition of

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1 a performance issue.

2 That disciplines not only the staff in its
3 thinking, in terms of articulating what that issue is,
4 and the identifying what condition that it created,
5 which then we can measure or estimate in terms of its
6 health and safety impact using risk.

7 MR. APOSTOLAKIS: But let's take the plans
8 with complications, with two complications. Now I
9 have a compound event, three events, a transient and
10 two additional events. When I do the SDP, am I going
11 to consider the compound event, or each one
12 separately? I think there was a problem once that the
13 inspection manual said you do them separately.

14 MR. COE: Yes.

15 MR. APOSTOLAKIS: Has that been corrected?

16 MR. COE: Yes. Well, we have guidance
17 now. I would offer that, you know, the guidance is
18 essentially that a determination needs to be made, as
19 to whether the two things that occurred simultaneously
20 were connected through some common cause. If they
21 were, they're treated as a single issue. If they're
22 entirely independent, and completely unrelated, and
23 they just happened to have occurred at the same time,
24 they're treated independently.

25 MR. APOSTOLAKIS: Well, let's say the

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1 condition -- I mean, it's obvious they are not
2 completely independent. Now independence we don't
3 have to worry about. If I analyze the sequence in
4 SDP, what cornerstone am I affecting now? Am I --
5 because I have an initiating event. I have some of
6 the mitigating systems into it. Where am I going? Am
7 I going to both of them? Am I going -- because if I
8 go to both of them, I have a problem, that they are
9 really in terms of frequencies, and not the
10 probability of, you know, this thing going close to
11 core damage risk, in other words, so that's where the
12 problem seems to be. I don't know where it could go,
13 and this is important.

14 MR. COE: Each finding does have to be
15 assigned to the most applicable cornerstone, so in the
16 case that you mentioned, if you have a series of
17 things happen, perhaps you had a deficiency that
18 caused the initiating event, and you had some -- and
19 then there was complications which were revealed
20 because of the initiating event. Those complications
21 would likely be in the mitigating systems cornerstone.

22 MR. APOSTOLAKIS: Right.

23 MR. COE: If there was a performance
24 deficiency that was identified that actually caused
25 the initiating event, that would be under the

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1 initiating event cornerstone, or it would be captured
2 as PI, as a hit on that PI.

3 MR. APOSTOLAKIS: But the problem, Doug,
4 with that, is that the initiating event is in terms of
5 a frequency, you know, a rolling frequency over a
6 three-year period, so it will count it as one event.
7 And it may end up being nothing, because you didn't
8 have anything the last two years. And yet, you may
9 have come close to core damage because of the compound
10 event. There are two different ways. In other words,
11 you're counting it as one incident that will be
12 included in the frequency calculation. When, in fact,
13 the PRA tells you well, you had these complications,
14 my friend, and you were close by ten to the minus two,
15 or something, three.

16 MR. SIEBER: It seems to me --

17 MR. APOSTOLAKIS: This is the difference
18 between a risk evaluation and performance evaluation.

19 MR. SIEBER: It seems to me though, that
20 if you really wanted to measure risk and evaluate
21 licensee performance based on risk and events, that to
22 evaluate compound events as separate issues, whether
23 they're related or not, doesn't give you the risk
24 picture.

25 MR. APOSTOLAKIS: No, it does not.

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1 MR. COE: You're correct. And we
2 acknowledge that the SDP process is not intended or
3 expected to characterize the probability of core
4 damage given that a specific event happened on a
5 specific day. Again, we make a very strong
6 distinction. That is the task of the ASP, the
7 Accident Sequence Precursor Program, and to a large
8 extent it's still our task, as well, in NRR, to
9 understand that combined significance of that event.

10 MR. SIEBER: Let me ask a question or so
11 about ASP. It seems to me that that is not so much of
12 a -- is not a classic traditional PRA type of
13 exercise. And it seemed also to me that since that
14 work is done here, and that cranking-out evaluations
15 of these events may be as much as a year behind, at
16 times. You know, the event occurs, and it takes a
17 year to get the ASP done. And that's sort of like
18 hitting your dog three weeks after he messed up your
19 carpet, you know. The dog's looking around wondering
20 why did you hit me?

21 MR. APOSTOLAKIS: But with the tools that
22 the ROP is developing, maybe you don't need to wait.
23 You don't need to do such a detailed analysis. I
24 mean, with the tools that they are developing, you can
25 evaluate a compound event, I think, with the same

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1 degree of accuracy that you're evaluating other things
2 is the SDP.

3 MR. SIEBER: It depends on the event
4 though.

5 MR. APOSTOLAKIS: And again, you know, if
6 it's really very important, then you do a more
7 detailed analysis, you take better action.

8 MR. COE: That's correct.

9 MR. APOSTOLAKIS: It's not -- in other
10 words, when I say ASP, I don't necessarily mean the
11 process as it exists today. I mean the idea of taking
12 a compound event, calculating the condition or
13 probability of core damage, and then taking some
14 action on that basis. Now it seems to me this is
15 separate from the ROP.

16 MR. COE: But it has a very distinct role
17 in our response to that event. And, in fact, for the
18 very reasons that you've described, because that is
19 important. It is important from a public safety
20 standpoint how close to that event come to a core
21 damage state. We use that as -- that has a special
22 place as an input to our determination of whether we
23 activate a special inspection on an augmented
24 inspection team, or even possibly an incident
25 investigation team.

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1 MR. APOSTOLAKIS: Right. So is the ROP's
2 purpose something else then?

3 MR. COE: Well, if those teams are
4 implemented or initiated on the basis of our concerns
5 over risk. And as you obviously, you know, can see,
6 you may have very little information at the very early
7 stages of an event, or just after an event has
8 occurred, so we may not have a really clear picture.
9 So we make the best job, or we make the best estimate
10 we can, and then go forward from there. But then
11 those inspections are out there to identify the
12 performance deficiencies that will form the basis of
13 our finding, so we do try to make -- we try to make
14 sure that the ROP is looking at a performance issue,
15 and characterizing that using the risk metric of delta
16 CDF, and we stick to that.

17 And then the CCDP metric can be used to
18 classify the significance of an event, but it doesn't
19 play a role in assessing the performance of that
20 licensee.

21 MR. APOSTOLAKIS: So what I gather from
22 what you said, is that the reactor oversight process
23 is really oriented towards an assessment of
24 performance.

25 MR. COE: Yes.

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1 MR. APOSTOLAKIS: Not risk, even though a
2 lot of the thresholds are risked-based, it's really
3 performance we care about.

4 MR. COE: It's a performance assessment
5 process. And that's why we had to be clear about the
6 input.

7 MR. APOSTOLAKIS: So the frequent minor
8 fires that Mr. Leitch mentioned, should have a place
9 there somewhere.

10 MR. COE: Yes.

11 MR. APOSTOLAKIS: But if there is a big
12 fire with consequences, that's ASP. That's somebody
13 else. It's not ROP, so I think the -- and some of my
14 colleagues over the last two years have been arguing
15 that way. The problem that is confusing me, is the
16 purpose, and the scope, and the objective of the ROP,
17 I don't think is clearly stated. And if it is
18 performance oriented, why do I need the reds? And the
19 action there is that the Commission gets involved and
20 so on. Do you really expect that to happen without
21 something major that -- I mean, the kind of stuff
22 there that you care about, minor things that may lead
23 to a performance issue, so if you're talking about the
24 Commission getting involved, then to me, that's not
25 just performance, so that confuses me.

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1 But then if I look at the rest of ROP, I
2 think you're right, Doug. I think it's more
3 performance oriented, because we have other programs
4 for more serious stuff. And that's not --

5 MR. SIEBER: Talk to me about this MSPI.
6 You've got it on your next slide. How MSPI relates to
7 everything we've been talking about here. Mitigating
8 System Performance Index. It's the first bullet on
9 your next slide.

10 MR. FRAHM: Yeah. And there is actually
11 -- this has been briefed to the Subcommittee before,
12 and it's an ongoing separate issue, but we're prepared
13 to talk about it.

14 MR. SIEBER: Well, before we --

15 MR. ROSEN: And in the context of what
16 we've been talking about, is complications on an
17 initial transient, that's being needed -- we need to
18 really evaluate the risk signifiante of transients
19 with complications, not just the, you know, some
20 individual event happening. This Mitigating System
21 Performance Index goes, as I understood it, it begins
22 to go some, in some way the direction of the PRA or
23 the SAP. It begins to put together some of the issues
24 in a risk context. Correct?

25 MR. HICKMAN: This is Don Hickman. It

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1 does to a limited extent. The Mitigating System
2 Performance Index is similar to the other Pis, and as
3 we've discussed here already. The performance
4 indicators are an accumulation of counts of a
5 particular type of event. And when you have a
6 compound event, you don't get the synergy of those
7 events together. That isn't captured in the PI in any
8 way.

9 In fact, in the Mitigating Systems
10 Performance Index, I don't know if you have seen the
11 latest version that we're using. We already started
12 the pilot program on that, and we specifically state
13 in there that the color of the PI, the color of the
14 event will be the color from the Mitigating Systems
15 Performance Index, if it's a single failure, or a
16 single train unavailability. But if it's more than
17 that, that is a compound event, we determine the color
18 of that event by running it through the inspection
19 process, which means the SDP. So again, we do not
20 capture the cumulative affect of multiple problems in
21 the MSPI.

22 MR. APOSTOLAKIS: All right. You said
23 that you have already started the program, the pilot
24 program. Are you planning to brief us on this?

25 MR. FRAHM: I believe it's scheduled for

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1 November.

2 MS. CARPENTER: They postponed it, I
3 think, to late November.

4 MS. WESTON: Right. It's not this group.
5 It was another group, but it's been postponed. It was
6 scheduled for October 31st. It has been postponed.
7 Last week my indication was that --

8 MS. CARPENTER: They wanted accumulation
9 of data in order to --

10 MS. WESTON: Yes.

11 MR. ROSEN: Brief us on what they were
12 going to do. That's one --

13 MS. WESTON: Right.

14 MR. SIEBER: Well, before we jump too far
15 ahead, I'd like to go back to one of the beginning
16 issues, which is why do we have both SDP and
17 inspection issues, and performance indicators? I
18 thought to myself, based on my own experience, you can
19 actually run a power plant for a year, and never have
20 an incident, you know. And it's a nice thing when it
21 happens, but then you say how do you evaluate the
22 licensee with regard to public safety and the
23 performance of the plant? And you would have nothing
24 to put in the matrix. And without the performance
25 indicators as a measure of what's going on month-by-

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1 month, that gives you at least some kind of basis for
2 evaluating the plant.

3 When you get to the SDP though, that gives
4 you a basis for evaluating whether you issue a
5 violation or not, what the severity of the violation
6 is, whether enforcement is going to take place or not,
7 even though that is independent, as I understand it.
8 And I think that you -- in order to have a fully
9 fleshed out program, you have to have both.
10 Otherwise, you know, there's a lack of information.

11 MR. FRAHM: And, in fact, every plant
12 submits the performance indicators, and every plant
13 gets the baseline inspection program. And as they
14 move across columns in the action matrix based on
15 performance, they get increased regulatory attention,
16 so I agree with that.

17 MR. LEITCH: That's where I think the
18 program lacks a measure of the effectiveness of the
19 Corrective Action Program, the licensee's Corrective
20 Action Program. Because, you know, if you go -- as
21 Jack indicated, if you go for a year without any
22 events, is that luck, or is that because you have a
23 really good Corrective Action Program? You're
24 identifying the root causes of things, and you're
25 nailing them shut once and for all. And I think -- I

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1 don't know if it's a cross-cutting issue or exactly
2 where it fits, but it seems to me there are a number
3 of performance indicators that could be used to
4 measure the effectiveness of the licensee's corrective
5 action program. It would be very significant in
6 assessing licensee performance.

7 MR. COE: I, personally, agree with you.
8 And a number of us have been looking for ways of
9 improving that aspect of our baseline inspection
10 program, which we look at the corrective action
11 program at a team inspection once every two years.
12 And then periodically, between that time. But you're
13 right. The industry uses metrics, you know, more than
14 just a simple backlog type of metrics that we're
15 fairly accustomed to, so I would have --

16 MR. LEITCH: Yeah, metrics like self-
17 identify -- the number of issues that are self-
18 identified, versus self-revealing, versus identified
19 by others. You can plot all these things, and glean
20 a lot about the effectiveness of the Corrective Action
21 Program.

22 MR. COE: We're continuing to think about
23 those.

24 MR. APOSTOLAKIS: Let me raise an issue of
25 process here though, because I think we're headed for

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1 disaster. The SRM says should provide recommendations
2 resulting in a transparent manner comparing conflicts
3 and discrepancies. Now in our letter, we ha a number
4 of problems, and you guys are not addressing them.
5 You are saying that there is a continuing improvement.
6 There is -- plants appear to be receiving appropriate
7 action. This is too high level. I see us in March
8 still disagreeing. I would expect that today you come
9 in here and say that ACRS said these thresholds should
10 not be based on this. We say this. You are not doing
11 that. When are you going to do that?

12 I mean, I sound a little harsh, but I
13 think the SRM is very clear. And we are not doing
14 that. We are not resolving our differences. We're
15 talking at a very high level, and it's all verbal.
16 You know, you say something, or Graham says something.
17 Doug says something, then Mario says something.

18 MR. COE: Let me try to be more clear,
19 because we do have kind of a, I guess a couple of
20 messages that we'd like to make sure that we have an
21 opportunity to lay on the table. And one of them is,
22 you're correct, is that we believe that today the ROP
23 is working pretty well, well enough to continue to go
24 forward and evolve incrementally, and improve it as we
25 go with experience.

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1 We think that we agree that -- with your
2 comment earlier that our basis isn't clear, and that
3 we need better clarity on the basis for how we've
4 chosen our thresholds, and how these fit together,
5 especially with respect to the disparity between the
6 risk-informed bases, and the non-risk-informed or more
7 performance oriented bases.

8 And finally, we listened with great
9 interest to some of your thoughts. In particular, Dr.
10 Apostolakis, about decision analysis. And, in fact,
11 we've had discussions with our research, office of
12 research. And, in fact, Office of Research is
13 sponsoring some work this coming fiscal year, and
14 we've offered the ROP as an example of a decision
15 process that might be amenable to some of the decision
16 analysis-type of methods that they're going to be
17 exploring. And so I think that gets us a little
18 further down the road.

19 MR. APOSTOLAKIS: Right. But the way I
20 see it, and I really don't want to sound like a bad
21 guy, but you know -- I see us writing to the
22 Commission in March saying we are continuing the
23 dialogue and discussing the issues. And I think the
24 Commission will get upset, because we had very
25 specific issues that we raised in our letter. They

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1 have to be addressed. We've met twice already in that
2 conference room, give you ideas, you gave us ideas and
3 all that. And now we are again -- yeah, this is the
4 letter. And we are again talking at a very high
5 level, and that concerns me.

6 I don't see -- I mean, September, as you
7 know, it's not easy to set up these meetings so, you
8 know, if you want to set up the next one, maybe we'll
9 go to November now, or even December because there are
10 no dates. And I don't see us making real progress.

11 MR. FRAHM: Well, I would like to point
12 out that you did have your letter, and we did give you
13 a formal response to that letter. And our response
14 was dated January 10th, 2002. And you came back in
15 February of 2002 and said that generally you concur
16 with the staff's response to your letter, and you
17 mentioned the specific SRM that we're here to talk
18 about today. And I think the other thing was the
19 thresholds for the risk-informed performance
20 indicators not being meaningful for the mitigating
21 systems and initiating events, so we have addressed
22 the majority of your concerns in that letter. And
23 you've actually blessed them off in a follow-up
24 letter.

25 MR. APOSTOLAKIS: I think our response was

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1 conditioned on the fact that we are going to have this
2 give and take, in response to the SRM. It's not -- in
3 general, we concur. I mean, we're going to go to the
4 Commission and say yeah, in response to the SRM, in
5 general we concur. I mean, we have to have specifics.
6 The fundamental problem is the reconciliation of
7 performance.

8 And by the way, let's not say performance
9 in general. This is a specific type of performance.
10 It's performance in terms of how well am I performing
11 compared to my peers? Because performance-based may
12 mean a lot of things. You know, I had an incident
13 today. That's part of how I perform. Right? No,
14 this is different. The threshold was set according to
15 what the fleet of the plants was doing, and now I'm
16 taking the frequency, you know, a year over the last
17 few years, and I make certain decisions, so we have
18 one set -- one part of the action matrix based on
19 that, and another significant part based on risk.

20 There is a fundamental problem there which
21 we don't seem to be addressing, except recognizing.
22 And time is running out.

23 MR. COE: I think it' recognized that the
24 issues you've raised are part of the basis of the ROP.
25 We have a shared objective, and a shared aim, I think,

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1 that to establish parity of color between
2 cornerstones. We all share that objective. I know
3 that that's your concern, and it our concern, as well.
4 What we believe that we can do, is to continue to work
5 with our, you know, our experience that we gain and
6 improve those SDPs and the performance indicators as
7 time goes on, to continue to seek the right level of
8 parity between these colors, so that they do represent
9 something that we can justify as equivalent in terms
10 of the way that we need to respond.

11 MR. SIEBER: If you don't do that, then
12 the concept of a single action matrix is false.

13 MR. COE: Yes. Correct.

14 MR. LEITCH: I think parity of color
15 between cornerstones is certainly one issue. I think
16 there' also an issue of parity of color between
17 performance indicators and inspection findings. It
18 seems to me unfortunate that we hold the lowest level
19 of inspection findings green. I mean, I think that
20 adds a lot of confusion. Maybe people are beginning
21 to understand that a green inspection finding is --

22 MR. APOSTOLAKIS: Not good.

23 MR. LEITCH: -- not the same as --

24 MR. SIEBER: It's not good. It's not as
25 bad as a white.

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1 MR. LEITCH: At the base of it though, it
2 seems to me that that just introduces a lot of
3 confusion, that we always have to explain away. I
4 just wondered why we didn't -- I mean, we have a whole
5 rainbow to choose from. Why not purple? I mean, it
6 just seems confusing.

7 MR. FRAHM: You're right. That's been a
8 personal pet peeve of mine, as well, to be honest with
9 you.

10 MR. COE: It's something that has been a
11 topic of discussion and debate amongst the staff, I
12 think, since the beginning, you know,
13 conceptualization of the ROP. You know, and let me be
14 clear, that just a little bit of history here. The
15 formulation of the ROP stemmed from the identification
16 of those cornerstones, and then below those
17 cornerstones, each cornerstone, it was ascribed a
18 series of attributes. Okay? And that was done very
19 systematically. Each of those attributes was then
20 examined in terms of whether or not we could collect
21 information on those attributes, that attribute using
22 a performance indicator. And if we could, we did,
23 because the theory was that it would allow us to limit
24 our inspection activity in that area, and we had -- we
25 would have a greater reliance then on more objective

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1 measures of performance for that attribute. And, of
2 course, that was one of our goals for ROP, better
3 objectivity. And so we -- when we ended up at the end
4 of the day, we had a series of performance indicators
5 which, you know, had to be measurable and fairly
6 objective, and we tried our best to do that. And then
7 those areas which we couldn't monitor with performance
8 indicators were left to the inspection program to
9 monitor those attributes.

10 And so then we recognized, certainly, that
11 performance indicators were a combination in some
12 cases of acceptable performance, and degraded
13 performance. Okay? Because you could incur, for
14 instance, mitigating system unavailability because of
15 routine maintenance, and that would add to the
16 performance indicator, and presumably that would be
17 managed so that it wouldn't exceed the thresholds.
18 But that was a very -- you're exactly right. It's a
19 very distinct difference between an inspection finding
20 which is always deficient performance, and performance
21 indicator, which is often a collection.

22 But we were comfortable enough that
23 although that disparity was somewhat inelegant in
24 terms of a rational basis, its outcomes provided us
25 with a tool that we could use, that was workable. So

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1 there was a practicality aspect of going forward, even
2 though we understood that this disparity existed, and
3 it was less elegant than what we would perhaps liked
4 to have achieved.

5 MR. LEITCH: And you say that green equals
6 green because they're both in the licensee performance
7 bands?

8 MR. COE: Yes. Right. And how we got
9 that, how we got to green may have been a little
10 different in performance indicator space than it was
11 in inspection finding space. And there may be a
12 little bit different bases, but on the whole, looking
13 at the past historical performance of the industry, we
14 felt that we would be getting inputs to the action
15 matrix that would reveal problems when they should be
16 revealed, problems sufficient for us to ramp up our
17 engagement with that licensee. And so from a
18 practicality standpoint, it worked. And getting it
19 any more elegant in terms of its foundation and its
20 basis across the risk-informed and nonrisk-informed
21 aspects didn't seem, at the time, and in fact, I think
22 I should be honest, we didn't have the time to
23 reconcile that. And we made the judgment that we
24 could go forward, and it would work.

25 MR. APOSTOLAKIS: But it's not an issue of

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1 what you did then. We fully appreciate what you did,
2 and you really did a great job given the pressure you
3 guys were under. What worries me is that I don't see
4 any progress now in the sense of I sort of expected
5 today's session to be very detailed, not as high level
6 as it turns out to be. We hear a lot of we recognized
7 this was a problem, but to do this. This is not an
8 issue of what happened in the past. It's what do we
9 tell the Commission in March, and I don't think it
10 would behoove either one of us to tell the Commission
11 we'll continue studying the problem, because it's been
12 a while now since they issued the SRM. I thought we
13 had made some progress in the past, you know, in the
14 meetings. And I'm really worried.

15 MR. COE: Well, once again, we do agree
16 with you that there is a better -- a need for better
17 clarity. The word "transparency" in the SRM points to
18 this need for a clearer articulation. And we have
19 been working on a basis document that we hope will
20 satisfy that need. It's been slow in coming,
21 admittedly, and probably, you know, should have been
22 given further additional priority in the past, but we
23 are at the last stages, I think, of bringing it
24 together. And I will offer that even as it's issued
25 in its first revision, it may still lack some of the

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1 SDP basis, which is still being informed by current
2 experience as we speak.

3 MR. SIEBER: Why don't we move on to your
4 next slide, because you've got a bunch of them and
5 time is just flying by.

6 MR. COE: And hopefully, some of your
7 concerns will be addressed as we go along.

8 MR. FRAHM: Is this on?

9 MR. SIEBER: Yes.

10 MR. FRAHM: Okay. Thanks. Didn't sound
11 like it.

12 MR. LEITCH: Can I just ask a question of
13 clarity here? I think what we're -- are we intending
14 to -- are you requesting that we generate a letter on
15 this topic, or is this a discussion to help --

16 MR. FRAHM: That's actually one of the
17 things we wanted to discuss today, was do we need a
18 letter. And if so, when will this letter come about?
19 I'd rather hold-off before we get there.

20 MR. LEITCH: Okay. Fine. We'll get to
21 that.

22 MR. FRAHM: But that's one of the things
23 we need to talk about, is what do we need to do as a
24 collective team to address the SRM.

25 I guess we're on the second bullet on the

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1 staff approach slide. And this goes to the -- our ROP
2 self-assessment process is based on meeting the ROP
3 program goals, as well as the four strategic goals of
4 the NRC. And those program goals are to be objective,
5 to be risk-informed, not 100 percent risk-informed,
6 but risk-informed, you know, to the level of available
7 information.

8 MR. APOSTOLAKIS: I have to stop this.
9 The ACRS never disagreed with that. You are giving us
10 things that we agree with you, and I'm saying the SRM
11 says resolve your differences. Where are our
12 differences? Nobody ever questioned that you guys
13 wanted to do this, and you did a fine job. Seek
14 continuing improvement. Sure, we never said you are
15 not. That's my problem with today's meeting, we're
16 not addressing the real issues.

17 MS. WESTON: George, I think in the
18 response to their January 10th memo, you reiterated
19 some issues there that -- specific issues that needed
20 addressing, and I think those are the items that you'd
21 like to get to, is in the memo that I gave you dated
22 February 13th.

23 MR. APOSTOLAKIS: Yes.

24 MS. WESTON: And those are specific
25 things, I think, that need to be addressed.

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1 MR. APOSTOLAKIS: That's the way I read
2 the SRM.

3 MS. WESTON: Yeah. Right. So if -- the
4 response to your January 10th memo did not just say
5 that the ACRS --

6 MR. FRAHM: Oh, absolutely.

7 MS. WESTON: -- generally agreed, but they
8 also reiterated the list of issues that they thought
9 were --

10 MR. FRAHM: Right. And those were the
11 threshold values for the mitigating systems and
12 initiating events, Pis should be looked at to make
13 them more meaningful.

14 MR. APOSTOLAKIS: This is what we ought to
15 be discussing. We never questioned your intent. And
16 we, in fact, applauded you. You did this.

17 MR. SIEBER: In fact, that's what our
18 memorandum really says. We agree with all this
19 philosophical stuff. Here's the issues.

20 MR. HICKMAN: We've talked about a couple
21 of issues here. One is parity, you've talked about
22 parity and you've also talked about the concern about
23 the PI threshold, and it ought to be performance-
24 based, rather than risk based. There's a difference
25 between what we're measuring with the SDP and the Pis.

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2 They're complimentary views of plant performance.
3 What the SDP is looking at is a given event or
4 condition, and the risk significance of that event or
5 condition. The PI is looking at an accumulation of
6 problems over a period of time. We've gotten a lot of
7 feedback from the inspectors, and that they're
8 concerned that if all we do is run an event through th
9 SDP, that it may turn out green, but that's one more
10 failure of a high head injection pump, or one more
11 failure of a steam water pump, and it happens a lot.
12 We need to do something about that, and that's what
13 the Pis will do.

14 MR. SIEBER: We have to go two slides to
15 get that, and I have some questions.

16 MR. HICKMAN: But they're complimentary.

17 MR. SIEBER: See, the philosophical things
18 is, we want parity. Everybody wants parity,
19 consistency, but the question is how will you address
20 things that are mechanistically incorrect?

21 MR. HICKMAN: Well, do we achieve parity
22 if we have risk-informed SDP results, and performance-
23 based PI thresholds?

24 MR. SIEBER: You can't.

25 MR. APOSTOLAKIS: That's the big question.

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1 MR. SIEBER: Well, you can't. You can,
2 and the way you can is it all depends on what action
3 NRC management will take to a given licensee. And
4 what makes parity is, if you have a bad performance
5 indicator, or an inspection finding of the same color,
6 they will take the same action. See, that's not
7 really spelled out very clearly any place, but that's
8 how you came up with it. But when you go and
9 philosophize about what it all means, you de-emphasize
10 the concept of parity based on NRC actions, and try to
11 show equivalents, which there isn't any.

12 MR. ROSEN: Of course not. I mean, the
13 whole idea that you could make equivalents from
14 barrier integrity, emergency preparedness, public
15 radiation, safety.

16 MR. SIEBER: Right.

17 MR. ROSEN: Occupational radiation, same
18 thing --

19 MR. SIEBER: That's right.

20 MR. ROSEN: It's ludicrous. You can't --
21 I mean, those each occupy 20 percent, those five
22 cornerstones occupy 20 percent of a top manager or a
23 commissioner's attention. Of course not. They have
24 different values. Each of them are different. Their
25 societal values are different. I mean, these are

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1 continuing dynamic things. That's not the -- to try
2 to drive those things to parity, parity for who?
3 Parity for Commissioner Merserve, for Chairman
4 Merserve? Parity for Commissioner Dichus? Of course
5 not. The issue is to go back to what Jack said, is
6 that it's parity with regard to what the agency's
7 senior management would do. Parity with respect to
8 action makers.

9 In other words, a serious finding in
10 physical protection which we're all, you know, much
11 more concerned with these days is, would be -- the
12 agency would take the same action with regard to a
13 serious finding with regard to public radiation
14 safety, so that's the nub. That's the only stilling
15 point you can find in this discussion, where things
16 come together.

17 MR. APOSTOLAKIS: I like that approach,
18 but then I would go a little further and ask myself am
19 I using realistic indicators. Does it make sense --

20 MR. SIEBER: Are they the right ones?

21 MR. APOSTOLAKIS: -- to assume that just
22 the frequency of transients will take me through that,
23 because it will never do. So all these things -- in
24 other words, you start with what you gentlemen just
25 said, and then you start questioning values. You

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1 start questioning maybe this is the way we are doing
2 it now, but we did this analysis. Maybe it doesn't
3 make sense to do it that way any more.

4 MR. SIEBER: Right.

5 MR. APOSTOLAKIS: Parity was not a problem
6 with --

7 MR. ROSEN: Parity with respect to action.

8 MR. APOSTOLAKIS: Action is the key.

9 MR. ROSEN: That's right. If you got this
10 finding in this cornerstone, is that the same -- would
11 the agency take the same action with regard to this
12 finding in a different cornerstone? And now you say
13 okay. Yeah, probably, but now let's look at what this
14 indicator is. Is it going to give the right --

15 MR. APOSTOLAKIS: Does it make sense?

16 MR. ROSEN: Is it going to give the right
17 signal so the agency managers can take action, or is
18 it an indicator like 23 scrams, which is meaningless,
19 because you'll never get there. It actually has no
20 affect. You may not have the scram now. You might
21 have one next month. By the time you have three
22 scrams in the first same quarter, agency management
23 would be all over the licensee.

24 MR. APOSTOLAKIS: But then I would also
25 address the issue of the compound event.

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1 MR. ROSEN: Yes.

2 MR. APOSTOLAKIS: How many there I have to
3 have.

4 MR. ROSEN: Right. You've got to have --

5 MR. APOSTOLAKIS: Without saying I have to
6 do an ASP, as an example.

7 MR. COE: You're raising concepts I know
8 that you had offered to us in a briefing that you gave
9 us about some decision analysis techniques. The one
10 concept involving different weighting for the
11 different cornerstones is one that has some -- has
12 generated some interest on our part.

13 MR. ROSEN: But I just told you not to do
14 that. I think that weighting the cornerstones is not
15 the issue. You're looking at whether or not the
16 agency managers would take the same action for the
17 same red -- for a red finding in one cornerstone
18 versus the other. That's the basis, so you have to
19 look at underneath there. What gets you to a red
20 finding in those different cornerstones. Are those
21 things -- do they have in substance the same --

22 MR. APOSTOLAKIS: Which is the equivalence
23 of colors. That's the same thing. But another thing
24 I've noticed, and maybe you can correct me, is that
25 we've been discussing this now two or three years. My

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1 impression is that the staff is extremely reluctant to
2 touch the action matrix. They're willing to discuss
3 the performance indicators, the SDP, improvements, yet
4 the action matrix seems to be something that nobody is
5 willing to touch, and change, and do something to. I
6 don't -- that's my impression. I wonder why that's
7 the case.

8 MR. COE: Actually, we are making
9 adjustments to the action matrix. I think you can
10 speak to that. Right?

11 MS. WESTON: Do you have to go back to the
12 Commission to make changes to the --

13 MR. COE: Well, it goes back to what we've
14 told the Commission we're going to do.

15 MR. APOSTOLAKIS: It's part of the
16 process.

17 MR. COE: I think we're refining it as we
18 go. We're adding more clarity, hopefully, to it. And
19 we're trying -- as we gain experience with it, we
20 encounter problems that we see the need for further
21 definition, further guidance, and we try to get it.

22 MR. APOSTOLAKIS: My complaint today is
23 that you are doing all these things, keeping the ACRS
24 in the dark. I would have expected you today to come
25 in here and say this is what we're doing. This is

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1 what we think we're doing. What do you guys think?

2 We have proven in the past, especially in
3 the context of Regulatory Guide 1.174 that you were
4 perfectly willing to discuss so-called half-baked
5 ideas, and offer you our's. We did that. Okay? So
6 you don't have to come here with a finished product.
7 So, you know --

8 MR. COE: No, I think we understand that.

9 MR. APOSTOLAKIS: -- when I see we intend
10 to remain objective, I mean, frankly I don't get
11 excited by it, to put it mildly, because I know you
12 are objective, and I know you intend to remain
13 objective. The thing is, what are these things that
14 you are doing? You say we're changing the matrix.
15 Well, what exactly are you doing to it? Not to
16 verbally, now it's too late.

17 MR. SIEBER: I would imagine based on what
18 I've heard so far that they haven't changed the
19 matrix. What they're trying to do is explain what the
20 terms mean.

21 MR. FRAHM: That's part of it, is
22 clarifying the terms and the basis for different
23 decisions, and what gets you in each column.

24 MR. SIEBER: But the basic philosophy and
25 the lines between the boxes hasn't changed. Right?

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1 MR. COE: Correct. Yes.

2 MR. SIEBER: So you didn't change the
3 matrix.

4 MR. COE: No, we're refining it. We're
5 tuning it.

6 MR. SIEBER: Yeah.

7 MR. COE: And certainly, if we were
8 contemplating significant changes of the nature that
9 you had suggested earlier, we would certainly want to
10 engage the ACRS with that before we made a final
11 decision.

12 MR. APOSTOLAKIS: Well, is there a
13 schedule here somewhere? Do you have a schedule of
14 meetings?

15 MR. COE: Yes.

16 MR. APOSTOLAKIS: Because I'm really
17 worried here. When are we going to see details, you
18 know, you guys, how you address the issues we raise
19 there.

20 MS. WESTON: Like what are you doing about
21 the thresholds?

22 MR. APOSTOLAKIS: Yeah.

23 MR. COE: I think --

24 MR. APOSTOLAKIS: Come to me with
25 discussion with a slide that says bullet one. This is

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1 what we're going to do.

2 MS. WESTON: Right.

3 MR. APOSTOLAKIS: So that's a commitment.

4 Now what we say here is --

5 MR. HICKMAN: I think to get there, Dr.
6 Apostolakis, I think what we need to do is take each
7 of these issues one at a time. Early in the
8 presentation, I think Doug mentioned that with some of
9 the comments we're talking strictly about initiating
10 events and mitigating systems cornerstones. We said
11 that earlier.

12 There is also the issue of from
13 cornerstone to cornerstone, as Dr. Rosen mentioned.
14 Emergency preparedness and physical security, and how
15 they relate. Are they on a par with initiating events
16 and mitigating systems? That's another issue. If we
17 maybe try to address each of these issues
18 individually, we might be able to make some progress
19 that way.

20 MR. APOSTOLAKIS: But when? When will we
21 do this?

22 MR. HICKMAN: I'm willing to talk to them
23 about the initiating events and mitigating systems
24 thresholds, and why they're the way they are.

25 MR. APOSTOLAKIS: This is not --

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1 MR. HICKMAN: And maybe address your
2 concerns about that.

3 MR. APOSTOLAKIS: Because you're not
4 telling us this is what we're planning to do. You're
5 telling us what --

6 MR. SIEBER: I'm going to make a
7 suggestion here that if we can move along, we'll take
8 a break. And if we can get to slide 8, that's
9 probably where the break is going to be. If we don't
10 get there, no break.

11 MR. FRAHM: I was actually thinking of
12 jumping to slide seven.

13 MR. APOSTOLAKIS: We covered everything.

14 MR. FRAHM: And we've already said this,
15 but I'll just repeat it. Doug actually mentioned this
16 earlier.

17 MR. SIEBER: Let me ask a question about
18 slide six.

19 MR. FRAHM: Okay. Okay.

20 MR. SIEBER: I was assigned a special
21 project to analyze a plant event, and there is a
22 screening in the SDP process that occurs first. And
23 if that screening comes out some color other than
24 green - okay - or white, like a big color, they decide
25 they'll do a more refined SPAR model evaluation, if

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1 they can, because SPAR doesn't model everything. It
2 didn't happen to model this event.

3 Now all of a sudden the color goes from
4 yellow to green. Okay? And I have heard one way or
5 another that amongst the regions that occurs more
6 often than is desirable. Is there something wrong
7 with the initial screening process for the SPAR model.
8 Yes, deterministic. Okay. That makes it not
9 worthwhile?

10 MR. COE: The screening process for
11 reactor safety, a degraded condition that affects
12 reactor safety, I should say, is -- there's three
13 phases to that process.

14 MR. SIEBER: Right.

15 MR. COE: And the Phase I process is a
16 simple check sheet.

17 MR. SIEBER: Right.

18 MR. COE: And it's at a level that if you
19 pass through the check sheet, you have a fairly high
20 assurance that you're green. Now we don't limit
21 inspectors from inquiring further, or even processing
22 the issue through Phase II, but if it meets one of the
23 criteria, it goes on to Phase II. Or if the inspector
24 chooses to examine it that way, then they can
25 certainly do that. And that process, we're continuing

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1 to refine. In fact, that is process that is the
2 subject of a great deal of debate right now, from the
3 highest levels of the Commission, to the inspectors
4 and analysts that are in the field, so we have a task
5 group that's formed. This is indicated here, that was
6 directed by the EDO, and it's going to look very
7 closely at that question. But we are, in fact,
8 continuing to try to refine that tool so that it does,
9 through its use and, you know, cause inspectors in the
10 field, as well as decision makers in the NRC to have
11 a better appreciation for risk, and the implications
12 of a particular issue. And whether we get to the
13 point where we value it as a continuing tool that
14 contributes to the suite of tools that we provide for
15 our decision in other purposes, then fine. If not,
16 then we'll continue to work on tools that will meet
17 that need.

18 I can't tell you, you know, in a given
19 case. You're right. It may be -- the screening
20 process may be over-conservative, and that we designed
21 the process so that that was more likely than if it
22 were under-conservative.

23 MR. SIEBER: Or the Phase II and Phase III
24 work may be incorrectly representing what really went
25 on. I happen to be a deterministic guy and, you know,

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1 if you say that I have the safety system that's
2 electrically driven. And under the tech specs it's
3 inoperable because of degraded grid voltage, and so
4 that forces you to shut the plant down, which makes it
5 even worse. Okay? And that comes out a green? I
6 don't think so. And SPAR doesn't address that at all.

7 As part of your continuing actions, will
8 you tell us exactly what you have done to the Phase I,
9 Phase II, Phase III process, because that's also the
10 concern that we have, as to what's the consistency
11 there. And are we evaluating events properly? And
12 while we're doing that, we ought to talk about again,
13 hopefully, these compound events.

14 I, personally think they ought to be
15 evaluated as a single event with the events happening
16 the way they did, as opposed to splitting it up so
17 that everything comes out green.

18 MR. ROSEN: Well, I agree with that. You
19 know, you really don't learn anything from taking a
20 compound event and splitting it up.

21 MR. SIEBER: And turning it into a --

22 MR. ROSEN: You can turn Three Mile Island
23 into a walk in the park. And what happened was we
24 lost --

25 MR. COE: We do want to know, and

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1 appreciate and understand the risk implications of
2 events, and so not only does NRR attempt to gain that
3 insight, but the ASP Program in a much more perhaps
4 methodical way over a greater period of time, to a
5 greater level of detail and sophistication, perhaps,
6 also does that, as well. And again, as I mentioned
7 earlier, we do have -- we acknowledge we need to
8 reconcile those two processes, so I don't want to
9 leave anybody with the impression that we don't value
10 those insights.

11 The real question that we had to wrestle
12 with early-on is, again, what aspects of that event
13 that were revealed are, you know, indicative of
14 deficient performance? And that's what we want to get
15 after? We want our process to reflect deficient
16 performance. And so, you know, typically compound
17 events or multiple things that fail give us lots of
18 opportunity to explore deficiencies, and I don't think
19 I'm aware of any particular case where a compound
20 event like that has not resulted in some additional
21 regulatory oversight.

22 MR. ROSEN: Let me ask you a question
23 about the IG report. The Inspector General has just
24 published this report, I guess, Stephen Dingbaum. OIG
25 Report O2A-15, a review of NRC's significance

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1 determination process.

2 The SDP task group, that's your second
3 bullet on this slide. Is that the partial response to
4 this IG report?

5 MR. COE: Yes, sir. It is.

6 MR. ROSEN: And it's going to take into
7 account and deal with the issues that were raised in
8 the IG report?

9 MR. COE: Principally, the recommendation
10 that the OIG report makes regarding the utilization of
11 the Phase II process, and the recommendation for a
12 broad overview or review of the SDP process is what
13 the task group is specifically chartered to do.

14 MR. ROSEN: In particular, the IG talks
15 about that the staff is using quite a bit of resources
16 to complete the Phase II analysis materials. And the
17 suggestion that's made here is that that be stopped,
18 and that something else be done. Develop an action
19 plan by September 6th, of this month, which was a
20 couple of days ago, to correct the Phase II weaknesses
21 or eliminate them. So meanwhile, this continued
22 expenditure of a million and fifty thousand dollars
23 remaining to develop the Phase II until the action
24 plan is complete.

25 One of the things that's troubled me all

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1 along about all this is the -- and I know I don't have
2 unanimity from the other ACRS members, but the idea
3 that the staff has to have its own independent models
4 for risk analysis. The plants now have, to varying
5 degrees, some very good PRAs, and some not so good.
6 But it seems to me that the right answer in cases
7 where a licensee has a peer reviewed PRA, and has
8 gotten good marks, that the right answer is for the
9 staff to require or to work with the licensee to
10 identify the importance of these compound events that
11 we were talking about before.

12 MR. COE: And we would hope, too, that the
13 licensee provides their insights to us in ways that
14 are understandable, and that which we can evaluate the
15 quality of their insights.

16 MR. ROSEN: Right.

17 MR. APOSTOLAKIS: But Phase III involves
18 the licensee. Right?

19 MR. COE: Well, Phase III is anything that
20 is not addressed or where you would depart beyond the
21 guidelines and the rules that are associated with the
22 Phase II process. You're out into an area where
23 you're using best available methodology, and it's not
24 prescribed. If the licensee has insights, if we can
25 use SPAR model to get insights, I think the thing --

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1 the message -- your point is a good one, and it's part
2 of one of the fundamental reasons why this task group
3 is meeting. And the idea goes to the quality of
4 models. And I think -- you know, I will tell you that
5 the program office position from the start has been
6 that no model is -- can have any pedigree that will
7 allow it to be used without having, you know,
8 thoroughly reviewed its influential assumptions for a
9 particular given condition that you're trying to
10 evaluate.

11 A condition that you're trying to evaluate
12 may influence a number of assumptions that were built
13 into a model, which that particular condition will
14 influence, but lots of other conditions that were
15 envisioned when the model was created, you know, it
16 would have addressed, the model would have addressed.
17 But this particular condition is very different than
18 what was conceived of when the model was built, so
19 fundamentally, we absolutely have to have a process
20 that reveals and exposes those things that are most
21 influential to the risk outcome. And whether that
22 insight comes from the licensee model, or from an NRC
23 model, or from a hand calculation, which -- and all
24 three have been the basis for some of our decisions in
25 the past. It has to be understandable and scrutable

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1 to the extent that we can evaluate that quality.

2 MR. ROSEN: Well, you're going way passed
3 where I was. I was simply saying that rather than
4 this presumption, that the staff has to have its own
5 model, and it has to be completed from the licensee's
6 model. To me that's the failed concept. The licensee
7 has already spent, in the case of a plant that I was
8 involved with, 20 years in developing a model. It is
9 robust, complete, in-depth in a lot of ways that a
10 SPAR model couldn't be. If that particular plant
11 happened to have an incident, a compound incident like
12 we talked about, the very best place -- the best place
13 to get the very best insight into the risk
14 implications of that is to have the plant staff use
15 this model and brief the NRC on the outcome.

16 Now the NRC, at that point, can say okay.
17 We agree with you. We swallow it hook, line and
18 sinker, or we don't agree with you. We're going to go
19 off and do our own SPAR model. We're going to ask you
20 to run different cases, or whatever. But it seems to
21 me a cooperative effort. You would use staff
22 resources a whole lot better than trying to develop a
23 wholly independent system from the licensee, who has
24 already done everything they can think of, and spent
25 decades in enhancing their model.

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1 MR. APOSTOLAKIS: The process allows this.
2 This particular process is much better at that point,
3 with another. Because here if you look at the -- even
4 in the second column of the action matrix, the
5 licensee gets involved.

6 MR. COE: In any case, the --

7 MR. APOSTOLAKIS: Right in the beginning,
8 bring this up right away.

9 MR. COE: The licensee is by process
10 offered an opportunity to publicly convey to us
11 information that they think is relevant to the
12 significance determination. I don't disagree with
13 you. I mean, I think in general it would be --
14 everybody would like to have a single model that we
15 all agreed upon.

16 The truth of the matter is, is that the
17 vast amount of time and effort that's been put into
18 licensees developing their own models has done so
19 without a lot of staff or regulatory oversight. And
20 therefore, we have a situation that exists today where
21 we have so many different models that have been
22 developed, all of very high complexity. All developed
23 to, you know, differing standards in some cases.

24 But the point that I made earlier, and I
25 think I still come back to, no matter how we go

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1 forward, whether it's a single model, or whether we
2 can find value in assessing or understanding the
3 differences between two models, it all comes to how
4 best can we reveal and open these complex models up,
5 and make them intellectually understandable to the
6 decision makers who are actually going to have to do
7 the judging. You indicating the staff can interact
8 and come to accept what the licensee has provided, but
9 that takes individuals who have expertise, not just
10 within risk analysis, but within a whole assorted
11 number of technical disciplines that may influence the
12 result of that analysis. So the things that are most
13 important to that particular issue need to be brought
14 forward, and laid out fairly clearly. And at that
15 point, if our process demands that, it really doesn't
16 matter where the model came from, because ultimately
17 we all see what the basis of that risk outcome is in
18 ways that we can understand, and then evaluate whether
19 or not it's appropriate. So maybe some day we'll have
20 a common model, and that would be a nice thing. But
21 today, we don't.

22 MR. SIEBER: Maybe we can move on.

23 MR. FRAHM: Do we want to talk a little
24 bit about potential PI improvements and SDP
25 improvements, or should we jump right into --

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1 MR. SIEBER: Why don't we go right --

2 MR. FRAHM: -- our conclusions?

3 MR. SIEBER: Conclusions. By the way --
4 oh, before you --

5 MR. APOSTOLAKIS: Seven. I want to --

6 MR. SIEBER: That's where we're going.

7 MR. FRAHM: Yes. Right. That's where we
8 are.

9 MR. APOSTOLAKIS: I thought you were on
10 eight.

11 MR. SIEBER: No, not yet. I don't know
12 what the other members or the full committee chairman
13 thinks, but if we don't have more detail, I don't
14 think we can answer this SRM.

15 MR. APOSTOLAKIS: We cannot answer the
16 SRM, and on page 8 it says followed by ACRS letter.
17 I don't know what I'm going to write, or what you're
18 going to write, or what the Committee is going to
19 decide.

20 MR. SIEBER: Yeah. There's not enough
21 detail on issues --

22 MR. APOSTOLAKIS: We need the details.

23 MR. ROSEN: The only thing I heard that
24 goes to -- if you go back to the first slide you
25 showed, not the 1st slide, the first slide.

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1 MR. COE: The quote or --

2 MR. ROSEN: The quote from the SRM.

3 MR. SIEBER: Right.

4 MR. COE: Okay.

5 MR. ROSEN: This is what we're supposed to
6 be working on.

7 MR. APOSTOLAKIS: Yes.

8 MR. ROSEN: Provide recommendations
9 resolving the transparent manner of conflicts between
10 the aspects of, blah, blah, blah. Okay. Put it back
11 up. Put that one back up. Let's have the meeting
12 over. Let's start the meeting over. Let's start
13 again. This is what we're supposed to have done.

14 MR. SIEBER: Well, we didn't do it.

15 MR. APOSTOLAKIS: We didn't do it.

16 MR. ROSEN: We didn't do it, but we did
17 touch on it. The closest we came was when you talked
18 about the action matrix.

19 MR. APOSTOLAKIS: We've been touching it
20 for years. I don't want to discuss it any more. I
21 respect the individual opinions of the members and the
22 staff here.

23 MR. ROSEN: And I understand that.

24 MR. APOSTOLAKIS: But to see a slide that
25 says we, the staff, are going to do this. Bam.

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1 MR. ROSEN: How about we, the staff, are
2 not going to do it. We're not going to --

3 MR. APOSTOLAKIS: Or you're not going to
4 do it, yeah.

5 MR. ROSEN: We're not going to do anything
6 because, here's the because. Because --

7 MR. APOSTOLAKIS: That's what I mean.

8 MR. ROSEN: -- the action -- it's okay to
9 have these differences. There are no conflicts and
10 discrepancy. There are differences, but not conflicts
11 and discrepancies. And it's okay because what counts
12 is that the action matrix that we eventually --

13 MR. FRAHM: Is the great equalizer.

14 MR. ROSEN: We move to an action matrix.
15 Well, what we're trying to determine is what --

16 MR. APOSTOLAKIS: What's the level of
17 specificity it wants.

18 MR. ROSEN: -- would the senior management
19 at NRC do given comparable --

20 MR. APOSTOLAKIS: Because then it gives us
21 the opportunity to have some real input. This is
22 really what I --

23 MR. ROSEN: Now that's an answer that came
24 out of this discussion. I don't know that's a good
25 enough answer for you, or for --

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1 MR. APOSTOLAKIS: Well, it's a great
2 start.

3 MR. ROSEN: It's the only answer we've
4 heard that --

5 MR. SIEBER: I was the one that said the
6 answer, so it's right now, within the last hour,
7 that's good enough for me.

8 MR. FRAHM: Well, the bottom line is --

9 MR. APOSTOLAKIS: Anyway, that's where
10 we're coming from. To answer this, we need much more
11 specificity on the slides, not discussing them. We
12 discussed forever. We discussed it here. We
13 discussed it in the conference room. We discussed it
14 again in the conference room. This is not the issue
15 here. Now we need to know specifics. We are revising
16 this, and this is what we're going to say.

17 MR. ROSEN: We're not revising it.

18 MR. APOSTOLAKIS: Or we're not revising
19 because we don't want to, because of this reason.

20 MS. WESTON: And I think I heard with
21 regards to the thresholds, for instance, that you had
22 looked at some of them and decided not to change them.
23 I think --

24 MR. COE: At this time.

25 MS. WESTON: Right. So that answers one

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1 of the -- in the response, the February 13th, 2002
2 response was thresholds. That will answer that one.
3 They're not changing them.

4 MR. SIEBER: Well, we told --

5 MS. WESTON: Right. Right. But maybe to
6 tell you that so that you can take the next step,
7 which is to disagree.

8 MR. APOSTOLAKIS: My point is we're not
9 making --

10 MR. COE: Well, maybe some of us will
11 agree, and some of us won't.

12 MR. HICKMAN: That is why a few minutes
13 ago, I offered to explain to you why we have the
14 thresholds that we have, implying that we are not at
15 this time considering changing the thresholds.

16 MR. APOSTOLAKIS: Yeah, but you see it's
17 3:00, and for the first time you are saying implying
18 that. I don't know that, and I have discussed it wit
19 a lot of the staff three or four times now. I don't
20 want another discussion that is just a discussion. I
21 want it specifically on the slides. We're going to do
22 this.

23 MR. ROSEN: I'm trying to be polite to
24 you, George, and say no. We're not changing it.

25 MR. APOSTOLAKIS: Then we are --

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1 MR. FRAHM: And the bottom line is we are
2 not making any drastic significant changes, because we
3 feel we have two and a half years of run time, so far
4 so good. It appears to be about where we want to be.
5 The action matrix has the right plants in the right
6 columns.

7 MR. APOSTOLAKIS: Maybe you can go to
8 slide seven.

9 MR. SIEBER: Yeah.

10 MR. ROSEN: Accept that Davis-Besse,
11 acknowledge that --

12 MR. FRAHM: We don't know yet.

13 MR. ROSEN: We're holding off until we see
14 the final results from --

15 MR. FRAHM: That's right.

16 MS. WESTON: So you're not going to --

17 MR. APOSTOLAKIS: They're not holding off.
18 Go to seven.

19 MS. WESTON: So you're not changing the
20 thresholds. You're not looking at concurrent
21 findings.

22 MR. SIEBER: You aren't changing the
23 action matrix.

24 MR. ROSEN: Well, he said earlier that
25 they were not going to make changes based on Davis-

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1 Besse until they heard what the Lessons Learned Task
2 Force had to --

3 MR. APOSTOLAKIS: Yeah, but the slide --

4 MR. ROSEN: Yeah, but it doesn't say that.

5 MR. APOSTOLAKIS: This was prepared before
6 March.

7 MR. ROSEN: It doesn't say that. That's
8 true.

9 MR. FRAHM: Now what I'd like to do
10 though, let's go through this slide here. But then
11 I'd also like to go back to that SRM and break it
12 down. I thought that was a very good idea. Let's
13 actually break it down and discuss the pieces of that
14 SRM, and how we're handling it. Because I think we've
15 already discussed these things today, so that was
16 certainly my intent. Maybe we missed it.

17 MR. SIEBER: WE'll cover this slide, and
18 then we'll take a short break, because I can't last
19 much longer.

20 MR. FRAHM: Okay.

21 MR. SIEBER: So let' do that, and then we
22 can discuss what you want to tell us that you aren't
23 going to do, and we'll discuss what our response is to
24 that.

25 MR. FRAHM: Okay. And that's essentially

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1 what this slide is. This is our conclusion slide as
2 to what we're going to do based on --

3 MR. APOSTOLAKIS: And here is my reaction
4 to that.

5 MR. FRAHM: -- what we know today.

6 MR. APOSTOLAKIS: Instead of saying
7 recognize I'm creating a detailed basis document
8 today, I was hoping to see the details of that
9 document, even though it's not complete. This is the
10 real issue here. Well, unfortunately we didn't do
11 that. We really have to discuss when we're going to
12 do it.

13 MR. FRAHM: Okay. The next slide does
14 talk about where we're going from here, so --

15 MR. APOSTOLAKIS: Unfortunatly, it says
16 that we're meeting in December again.

17 MR. FRAHM: But that we will have
18 continued ongoing informal discussions, and that's
19 when we can go over --

20 MR. APOSTOLAKIS: How? How? You think we
21 can come here any time --

22 MR. COE: We can provide you with the
23 information you requested. Certainly.

24 MR. FRAHM: Absolutely.

25 MR. APOSTOLAKIS: And then how do we

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1 interact?

2 MR. SIEBER: Well, we can't do it unless
3 it's done in a collegial way.

4 MR. APOSTOLAKIS: It has to be done in the
5 Subcommittee.

6 MR. SIEBER: Right. We have to get
7 together.

8 MR. APOSTOLAKIS: Ask Ms. Weston how easy
9 that is.

10 MS. WESTON: It's not. We are out of time
11 in terms of meetings. We are truly out of time.

12 MR. SIEBER: Well, this week we're working
13 seven days. If there was a way to get eight days out
14 of week, maybe we could do it.

15 MR. ROSEN: Maybe we could meet at 1 a.m.

16 MR. SIEBER: No.

17 MR. APOSTOLAKIS: In the old days we used
18 to do that, you know. Joe Murphy told me there was a
19 Subcommittee meeting when he was supposed to show up
20 in the afternoon, and he actually started addressing
21 the Subcommittee at 2:00 in the morning.

22 MR. COE: We are trying to be responsive
23 here, truly. Although we would tell you that we don't
24 think that we need to change the thresholds now, but
25 that we are going to continue to work in improving the

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1 SDP and the Pis, to further fine tune the parity
2 between colors. We also were telling you that we will
3 formulate a basis document that will lend greater
4 transparency to these, what we consider very much
5 apparent differences. They're not -- we don't
6 consider them conflicts.

7 MR. FRAHM: Right. They're not
8 discrepancies. They're differences.

9 MR. COE: There are differences, and we
10 acknowledge that --

11 MR. FRAHM: That aren't extremely clear.

12 MR. COE: To be more clear about that.

13 And finally, we do -- we are interested in the
14 concepts that were exposed to us by Dr. Apostolakis.
15 And I think we've -- we're interested in gauging
16 research and further evaluating that.

17 MR. APOSTOLAKIS: The nice thing about
18 meetings like this is that, you know, you get
19 immediate response. I think they are discrepancies.
20 I think that in my mind, mixing performance with risk,
21 it's not clear how you do that. Okay?

22 Now you seem to be happy with it. I am
23 not. I don't know how other members feel, but to mix
24 things that are based on the frequency of transients
25 with something that is based on, you know, on core

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1 damage frequency was out by an order of magnitude, I
2 don't know. Maybe the answer is to go back to the
3 action. But this came out here today. I mean, come
4 on.

5 MR. SIEBER: That's the only link.

6 MR. ROSEN: That's the only link. Once --
7 you're feeding apples in here, and oranges in here,
8 and it comes up here. There's a fruit salad mixer up
9 here, and it spits out this amount of fruit salad, or
10 that amount of fruit salad.

11 MR. APOSTOLAKIS: But then --

12 MR. ROSEN: And it's the same.

13 MR. APOSTOLAKIS: But then there is more
14 to it. I mean, that's a good starting point.

15 MR. COE: And we do our best to make the
16 apples and oranges as comparable as we can. We're not
17 going to be exactly equal.

18 MR. ROSEN: No, no. I don't want them
19 comparable.

20 MS. WESTON: No.

21 MR. ROSEN: All I want you to do is
22 explain why this orange and this apple --

23 MR. COE: Are relatively --

24 MR. ROSEN: -- are as important as each
25 other, and can work together.

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1 MR. APOSTOLAKIS: Oh, then I'm with you,
2 if you want that explanation.

3 MR. ROSEN: That's what I want.

4 MR. HICKMAN: What we tried to do to get
5 parity was to make both the Pis and the SDP risk-
6 informed to the extent that we could with the ROP.
7 The ROP is a work in progress. I'm sure you all know
8 that. We are making significant changes, and will
9 continue to make significant changes to the
10 performance indicators, but to have parity, we need to
11 have them risk-informed.

12 To the degree that we could do it at the
13 time, we came out with a number, 25 scrams. Granted,
14 no one will ever get there. But we take action long
15 before a plant gets anywhere near 25 scrams.

16 MR. BONACA: I'd like to ask you a
17 question about that. I agree that performance
18 indicators are risk-informed, you know, of themselves.
19 Why do you have the thresholds be risk-informed when
20 it's -- I don't understand that. I just, you know,
21 because so much of that --

22 MR. HICKMAN: Well, the inputs to the
23 action matrix are the colors from the Pis and the SDP.

24 MR. BONACA: I understand that. Why do
25 you have to have the thresholds risk-informed?

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1 MR. HICKMAN: So that they are comparable
2 to the SDP.

3 MR. APOSTOLAKIS: You just said that they
4 are unrealistic.

5 MR. BONACA: They're unrealistic.

6 MR. APOSTOLAKIS: Realism is an important
7 input here, as Mr. Coe told us earlier.

8 MR. HICKMAN: One thing that we can do,
9 now that we are well along in the development of the
10 SPAR models, when we get a full set of SPAR models, we
11 can then go back to the initiating even cornerstone
12 and make plant-specific thresholds for the scam of
13 Pis. Now they're still going to be hot, but because
14 the risk is --

15 MR. BONACA: But that's the industry is
16 operating at a level where performance is much beyond
17 thresholds resulting from risk information. Okay?
18 You are not going to get insights from measuring these
19 -- that's a whole issue that we're trying to point out
20 here.

21 MR. APOSTOLAKIS: It's a philosophical
22 issue. It's a fundamental --

23 MR. BONACA: So we're happy enough with
24 the identification of initiating events, for example,
25 as performance indicators. They are risk-informed.

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1 Okay? But the threshold doesn't have to be risk-
2 informed if it is not meaningful. I mean, you may be
3 measuring something there -- I mean, what I'm saying
4 is that you are not going to get anything from the ROP
5 right now. All you're getting is greens. No wonder
6 Davis-Besse is green. Well, no surprise to me,
7 because if you go and you use thresholds which are
8 risk-informed, you are going so deep, so down in
9 performance, nobody is performing at that level any
10 more, so it's just something historical.

11 MR. HICKMAN: Well, actually, we have had
12 a number of plants that have gone non-green in scrams,
13 and they continue to. We have a plant that has five
14 scrams, and we have thresholds at three and six, so we
15 do get information from the scram PI.

16 MR. APOSTOLAKIS: So what do you want to
17 do?

18 MR. FRAHM: Can we go through these last
19 two slides, and then take it from there?

20 MR. BONACA: My last statement is that I
21 still haven't understood why you must have your
22 threshold risk-informed. I mean, just you're hanging
23 onto that so hard, and I don't understand. I mean,
24 because again, you know, you have selected initiating
25 events, mitigating systems indicators, which are in

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1 and of themselves risk-informed. That's how you
2 selected them. They're about, you know, performance
3 of the systems. The threshold doesn't have to be.
4 There's a set of risk-informed, particularly if in
5 order to measure it, the risk-informed threshold, it's
6 false. I mean, you don't have 27 scrams without
7 anything else happening. Probably the only time the
8 scrams, the risk associated with the scram is the
9 smallest part of everything else that happened there.

10 MR. APOSTOLAKIS: The letter says, "This
11 approach, however, has a deeper, more intractible
12 flaw." And it's not being addressed here. WE're
13 saying we're just having differences that need to be
14 cleared up. "A deeper, more intractible flaw", black
15 and white. The Committee believes that there is a
16 fundamental flaw with this, and you're saying no.
17 It's a matter of explaining what we did.

18 MR. SIEBER: Okay. I would suggest right
19 now that we take a break for about sixteen minutes.
20 And after you're done with your two slides, I have to
21 give a report to the full committee on this, so I
22 would like to go around the table and ask each member
23 what they feel. And you would probably be interested
24 in knowing how we feel, so you're invited to stay and
25 listen. Why don't we come back at 25 after 3.

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1 (Off the record 3:29:09 pm.)

2 MR. SIEBER: We're on 7?

3 MR. FRAHM: Yes. I guess we'll proceed
4 without George.

5 MR. SIEBER: Yes.

6 MR. FRAHM: Okay. Basically, here's our
7 conclusions, and in a nutshell we think the ROP is
8 working as it is. We've had about two and a half
9 years of running time. It's a work in progress. It's
10 in its infancy. We know that there's several
11 improvements that need to be made. Some of them we
12 aren't even aware of yet, because not all aspects of
13 the process have been tested. So as we go along, we
14 understand that we need to make improvements. And
15 that's actually built into the process. We have an
16 ROP self-assessment process, and we're constantly
17 looking at the process to look for improvements.

18 We also recognize the need for a clearer
19 basis for the Pis and SDPs, and are creating a detail
20 ROP basis document. It's very much in its draft form
21 at this point, but actually the most -- the bulk of it
22 is coming from the 99-007 SECY paper that actually had
23 in the attachments quite a bit of the basis, so that
24 might be one place to look until we can get you a copy
25 of the basis document. But I understand that we are

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1 going to try to get you a copy of our draft-basis
2 document to the point it is today, or to the point it
3 is next or, you know, as soon as we can really pull
4 something together that's presentable. I'm not really
5 sure exactly what the statu is, but we believe that
6 that basis document will go a long way towards making
7 our decisions and the elements of the ROP more
8 transparent.

9 We agree that you have to look in three
10 different places to get your answers sometimes, and we
11 kind of wanted this document to be the document to
12 pull it all together. And we would actually treat
13 that as a living document, and as changes were made to
14 the process, we would also change the basis document,
15 and give the basis for why those changes were made,
16 and why certain other changes were not made. That
17 would also be part of the basis document.

18 And as Doug had pointed out earlier, we do
19 plan to work with research to explore the use of a
20 formal decision theory in the ROP, but this is a
21 longer term project. We've begun discussions with
22 them, and we understand that they have resources
23 budgeted for FY03, generically for decision theory,
24 and we have offered up the ROP as a potential
25 consideration for something to use as the test case.

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1 MR. LEITCH: The last time we talked, you
2 had indicated that there was a reluctance or a
3 hesitance to make changes too frequently or too
4 quickly, because stability of the process was also a
5 concern. So to what extent --

6 MR. FRAHM: That's a good point.

7 MR. LEITCH: -- is that limiting your
8 desire to make changes now?

9 MR. FRAHM: I don't believe that's a
10 limiting factor any more. I'd say that was probably
11 more limiting during the first year of initial
12 implementation. We pretty much wanted to keep it
13 steady, but since, I don't believe that's a limiting
14 factor.

15 MR. HICKMAN: Well, with regard to Pis,
16 when we make a significant change to a PI, we run it
17 through a fairly lengthy pilot process. And the
18 current one MSPI, we estimate will take about a year,
19 and everybody is aware. Everybody is informed. The
20 industry is informed of what's going on during that
21 time, so it's kind of a gradual phasing.

22 MR. COE: Anything substantial would -- I
23 think there's an expectation that we would engage our
24 stakeholders, and some of the ideas that Dr.
25 Apostolakis had proposed were associated with maybe

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1 there's different weightings that you give to the
2 cornerstones. We've even heard differing views - okay
3 - even here today. And so we'd have to engage in a --
4 certainly, we would want to engage in an extensive
5 process of dialogue with our stakeholders. This
6 process was born of such a dialogue, and any
7 substantive change to it needs that continued dialogue
8 for its credibility ongoing. But if we taking it in
9 terms of accumulating a number of changes, perhaps, in
10 doing that all at one time, versus incrementally make
11 changes.

12 MR. COE: If you're talking about
13 substantive changes, I think no, we're -- we would
14 wait to accumulate change, little changes,
15 administrative or editorial-type changes to our
16 guidance and our processes. We would, maybe, wait and
17 accumulate some and make changes regularly like that.
18 But substantive changes we would address individually.

19 Currently, we're talking about modifying
20 the action matrix to a allow a little bit more
21 flexibility in various columns in some respects. And
22 the question of how we treat old design issues,
23 relative to whether they should be considered for
24 action in accordance with the action matrix or not, is
25 another area that we're trying to deal with some

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1 issues that have come up recently. So we'll deal with
2 those when we -- and as soon as we can arrive at a
3 solution, we'll implement that.

4 MR. FRAHM: Finally, the last slide talks
5 about our proposed future plans, and where we go from
6 here to address the SRM. And I am not so sure now
7 about these bullets, but I understood that we would
8 hopefully have a full committee meeting in the
9 December or February time frame, and that meeting
10 would be followed by an ACRS letter. And if that were
11 to be the case, we would prefer the earlier meeting so
12 that we could actually digest and address your
13 specific concerns from that letter in our annual ROP
14 self-assessment paper, which goes up to the Commission
15 in March.

16 MR. SIEBER: If you don't change anything,
17 and therefore it doesn't adopt our recommendations,
18 what kind of letter do you think we ought to write?

19 MR. FRAHM: I couldn't tell you. You
20 know, as I said on the last slide, we are making
21 incremental changes. But as far as a wholesale change
22 of the ROP, it's not happening today. You know, we
23 just don't feel like we have enough run time on the
24 ROP to really make any significant changes.

25 MR. APOSTOLAKIS: The answer though, what

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1 you're saying is that in December or thereabouts, it
2 would be the first time that we will actually see what
3 you do.

4 MR. FRAHM: I'm hoping that's not the
5 case. I talked to Mag a little bit just during our
6 break, and I'm hoping that what we can do is provide
7 you a succinct write-up of bullets that addresses your
8 three concerns from that February 13th letter, and
9 gives you a little bit more detail as to -- kind of
10 summarizing our presentation today as to why we think
11 we're good enough as we are today.

12 MR. APOSTOLAKIS: And then how do you
13 expect to find out what our reaction would be to what
14 you write?

15 MR. FRAHM: I'm open to suggestions.

16 MR. APOSTOLAKIS: I mean we certainly have
17 to provide it back, because it has to be a Committee
18 letter.

19 MR. FRAHM: Could that be the next full
20 committee briefing?

21 MR. APOSTOLAKIS: That's too late.

22 MR. FRAHM: I don't know. I really don't
23 know.

24 MR. APOSTOLAKIS: Isn't it too late?

25 MS. WESTON: Well, originally, we had

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1 anticipated that we would have these working meetings
2 to hash out the details prior to a February meeting,
3 where the only thing that would be left there would be
4 for you to talk about what you were going to put in
5 the letter, and have it reach the Commission prior to
6 their assessment. Okay?

7 Now that that hasn't happened, we're
8 trying to talk about a December meeting instead, but
9 from my perspective today, that December meeting
10 cannot be the meeting where you write a letter.

11 MR. APOSTOLAKIS: No.

12 MS. WESTON: It can't be, because you
13 somehow need to have an opportunity to talk about the
14 kinds of things that they're going to provide for me
15 to give to you somewhere in the interim.

16 MR. APOSTOLAKIS: And also, full committee
17 meetings, you know, usually you get an hour and a
18 half, at most two hours.

19 MS. WESTON: Right.

20 MR. APOSTOLAKIS: Is that enough time to
21 discuss the various issues?

22 MS. WESTON: Probably not, not this
23 subject.

24 MR. FRAHM: Well, I'm hoping with that
25 third bullet that we would have continued information

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1 exchange between now and that time.

2 MR. APOSTOLAKIS: The only information we
3 can give you is in forums like this. We cannot write
4 anything as a subcommittee.

5 MS. WESTON: Right.

6 MR. APOSTOLAKIS: So you can provide to us
7 written documents, but we cannot reply.

8 MS. WESTON: And you have to sit down, and
9 right now we don't have any time to carve out, to do
10 that. I'll have to go back and look at the schedule,
11 but right now, we don't have any time. That I do know
12 because we had kind of looked at subcommittee
13 meetings. We don't have subcommittee meeting time.
14 Whether or not we could squeeze in a lunch time
15 discussion, but given the nature of this, we can't do
16 it at lunch because the discussants are just too long.
17 Yes. So, you know, I'll try to find some -- try to
18 find another subcommittee time but when would you have
19 something available to the subcommittee of substance
20 that would allow the meeting to be fruitful?

21 MR. FRAHM: Do you have any thoughts,
22 Cindy, on a time frame that we could actually put
23 together the document that addresses succinctly the
24 three points from that letter? And we could provide
25 to you at that time a copy of the ROP basis document

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1 in its current condition, which is far from being
2 ready to being issued.

3 MR. KOLTAY: I assume that, you know, we
4 know where we are, and we have all that information.
5 It's not something you need to develop.

6 MR. FRAHM: I thinkj we have our positions
7 on these points, so I think we can get those to you
8 pretty quickly.

9 MR. COE: I think it's clear though, too,
10 that we have made the judgment now that from the
11 standpoint of the practicality and the efficacy of the
12 current process, is adequate enough to continue
13 forward with incremental changes. The redefinition of
14 the thresholds to be more consistently either risk-
15 informed or more consistently performance-based, isn't
16 a step that we feel is necessary at this time. But we
17 are acknowledging that that may not be very clear in
18 our guidance, and we will step up to the task of
19 making it more clear as to why that's okay. And we
20 will explore future options with research.

21 That's where we are at today. What might
22 be of value is given that, simply given that, that if
23 the Committee feels that we are vulnerable in some
24 manner, that there might be some adverse affect
25 downstream that we haven't envisioned yet of having

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1 this particular process the way it's defined right
2 now, it would be helpful to us to have a better
3 understanding or appreciation of what you think is our
4 greatest vulnerability in proceeding in this fashion.

5 MR. SIEBER: Well, you folks have the
6 answer to the SRM, and so if what you end up doing is
7 what you're telling us today, I'm sure you'll tell the
8 Commission everything is just fine. We decided not to
9 incorporate the specific comments of the ACRS, and I
10 don't think we have to write a letter. Does anybody
11 disagree? George, you know more about the protocol
12 than I do.

13 MR. APOSTOLAKIS: Yeah. We'd probably
14 write a letter that says we continue to believe and --

15 MS. WESTON: Just as you have in the past.

16 MR. APOSTOLAKIS: I think if I were a
17 Commissioner though, you know, they issued the SRM on
18 the 20th of December of 2001, and they're receiving a
19 feedback in March of 2003, which means something like
20 15 months.

21 MR. SIEBER: Right.

22 MR. APOSTOLAKIS: Feedback that says we
23 didn't do anything, but we may do something in the
24 future. How patient do you think the Commissioners
25 are going to be?

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1 MS. WESTON: Now they did get an interim
2 response. Remember, Mike sent the comment back to
3 them saying that the Committee and the Staff were
4 continuing to work on this, and that we would have an
5 answer in the March assessment.

6 MR. APOSTOLAKIS: So things are worse. He
7 promised that there would be an answer.

8 MS. WESTON: Yes, he did.

9 MR. APOSTOLAKIS: Rather than we'll
10 continue to think about it.

11 MS. WESTON: He committed to having some
12 response in the March assessment paper.

13 MR. FRAHM: But is it not an answer to
14 say, you know, basically that last slide about our
15 conclusions, that we feel the ROP is headed in the
16 right direction? We are making incremental
17 improvements. We feel putting the basis document out
18 will make it very transparent as to why decisions were
19 made.

20 MR. APOSTOLAKIS: Do you think that, you
21 know, if you say we think it's okay, that you are
22 resolving the transparent manner of apparent
23 conflicts? You're not providing technical arguments
24 why what we said is inappropriate.

25 MR. FRAHM: Personally, I would think we

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1 could try to downplay there are apparent conflicts and
2 discrepancies, and that we just think that they're
3 differences between the Pis and the SDPs. And that
4 feeds okay into the action matrix, because the whole
5 point of the action matrix is to base -- that
6 determines our plant response to different issues.
7 And the feeders to the action are the SDPs and the
8 Pis.

9 MR. ROSEN: That's the only substantive
10 thing I take away from this whole discussion. That's
11 what you believe. Now the question is do we believe
12 that's satisfactory. We haven't had a chance to assess
13 that.

14 MR. FRAHM: And that's an important issue.
15 That's the underlying principle of the ROP.

16 MR. ROSEN: Well, what I expected to come
17 back is you'd come back and change all these things,
18 you know, to make them more consistent. Well, that
19 didn't happen because you feel like you just
20 described. Okay. Now I need to sleep at least 24
21 hours, and think about whether or not I agree that's
22 okay.

23 MR. APOSTOLAKIS: Well, also it seems to
24 me we should have some of these decision makers
25 present to actually question them whether they feel

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1 there's parity and all that. I mean, we just said
2 that. And Jack started saying, you know, this is a
3 way I think you can justify it. And all of a sudden
4 it becomes a position, but where are the real decision
5 makers who actually made that determination? And, you
6 know, maybe we can question them taking two or three
7 of those that are all yellow and say now what is the
8 rationale? Why is this, you know -- why do they lead
9 to the same action? I mean, there is more to it than
10 just saying this is the philosophical approach.

11 MR. ROSEN: Right. You've got to hit the
12 -- somebody's got to serve, somebody hits it back over
13 the net. And then, you know, the rally continues.
14 And we just started.

15 MS. WESTON: So you would like to have an
16 opportunity to question --

17 MR. APOSTOLAKIS: Sure.

18 MS. WESTON: -- the decision makers with
19 regard to the assessment.

20 MR. APOSTOLAKIS: If that's the point,
21 then of course.

22 MS. WESTON: I'm trying to clarify this so
23 that staff understands what it is we want.

24 MR. FRAHM: And where we go from here, I
25 think it's important that we're all clear on --

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1 MS. WESTON: Yes.

2 MR. SIEBER: Well, the decision makers are
3 the regional administrators. Right?

4 MR. COE: I don't know. Well, the process
5 is one where the region proposes a significance
6 characterization based on the written published
7 publicly available SDP. And it comes to a panel at
8 headquarters composed of Cindy Carpenter and the
9 regional division director sponsoring it, and the SDP
10 owner, which is generally at the branch chief level,
11 and an OE representative. And they basically look at
12 the package that's presented, and assure that the SDP
13 as publicly prescribed has been followed. And the
14 people who have helped develop the SDP are often
15 available to answer questions. And then out of that
16 comes a decision.

17 MR. SIEBER: From the regional
18 administrators.

19 MS. WESTON: And it starts with the risk
20 analyst in the region. Is that correct?

21 MR. SIEBER: For those going through the
22 resident inspectors.

23 MS. WESTON: We were looking at the DC-
24 Cooke one, and we happened to speak to the risk
25 analyst who worked on that particular one.

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1 MR. APOSTOLAKIS: This is, I think, the
2 implementation of the ROP. And I think what we're
3 discussing is the development --

4 MR. FRAHM: Framework. Right. Right. So
5 we're talking two different things.

6 MR. SIEBER: Why it's consistent.

7 MR. ROSEN: The decision maker is the
8 person who says yeah, your answer to Apostolakis and
9 company is correct. That's what we stand on. Is that
10 you, Cindy?

11 MS. CARPENTER: Yes.

12 MR. FRAHM: I think so. And the
13 Commission, I guess, at some point when we --

14 MR. ROSEN: All right. Cindy says that's
15 the answer. Okay. Now we can think about whether we
16 agree.

17 MR. APOSTOLAKIS: Right. And we actually
18 -- I mean, the answer cannot stop there. You have to
19 be able to defend why, you know, if I pick four
20 different yellows, they're equivalent, that they would
21 have led you to the same decision.

22 MR. ROSEN: Right.

23 MR. APOSTOLAKIS: And I think the regions
24 have to be involved in this.

25 MS. WESTON: That's why I said it started

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1 with the risk analyst.

2 MR. ROSEN: Yeah. And when we go with
3 that, after we take four or five examples and we track
4 through, and we get -- we can draw some conclusions
5 based on examples.

6 MR. APOSTOLAKIS: Yeah.

7 MR. ROSEN: That we agree that you end up
8 in the same place, and that our presumption, which was
9 that you needed to have some parity at the level of
10 indicators and SDPs that you complained about in the
11 letter, turns out not to have been particularly
12 germane, because that's not what they're asking.

13 MR. APOSTOLAKIS: All we said was that we
14 don't think that this is right. Show that they're
15 equivalent

16 MR. ROSEN: And their answer is that they
17 don't have to be equivalent, because of the way --

18 MR. APOSTOLAKIS: They say that they're
19 equivalent in the sense that they would lead to the
20 same action.

21 MR. ROSEN: Right.

22 MR. APOSTOLAKIS: It was a very good
23 point. And then we have to scrutinize that.

24 MR. ROSEN: Right.

25 MR. APOSTOLAKIS: And we have to have some

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1 people who actually participated in such decisions in
2 the past, to tell us that yes, that's what we meant.

3 MR. SIEBER: Well, there was --

4 MR. APOSTOLAKIS: If I see this thing in
5 the fire protection and nothing in emergency planning,
6 I would have done the same thing.

7 MR. SIEBER: In the early stages of the
8 ROP, it seems to me there was a meeting of the
9 regional administrators and a bunch of other people
10 where these issues in the action matrix were discussed
11 as to, you know, what do we do if this happens? What
12 do we do if that happens, and so forth. You may be
13 able to resurrect some of that, in order to show that
14 the regions actually somehow or other, and this may
15 not be true, but somehow or other participated in
16 determining the oranges and apples colors that Steve
17 talked about.

18 MR. APOSTOLAKIS: And then the other
19 problem the Committee has had is with yellow and red
20 of the performance indicators.

21 MR. SIEBER: Yeah. And at one time we
22 would say, you know, when you pass green, that's it.

23 MS. CARPENTER: This is Cindy Carpenter.
24 I think that's one Don and I talked about that we will
25 go back and take another look at. Okay? But as for

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1 the equivalency, this is something that every cert
2 panel looks at when you have the branch chief of the
3 PRA branch and the Inspection Program Branch, and the
4 Regional Division Director. When they're looking at
5 these, you know, the cert panel is saying is this --
6 you know, the purpose is to get to the regulatory
7 response, to what action should we be taking. And the
8 panel, when you're done with those and you say this is
9 yellow, is this the appropriate response that the
10 agency should be taking? Okay. And that's done each
11 time, and we recognize that there are improvements
12 that need to be made in the SDPs.

13 They're in the process right now of
14 looking at the HP SDPs, and they're looking at those
15 thresholds right now.

16 MR. SIEBER: And the fire SDP, which is --

17 MS. CARPENTER: They're working on that,
18 on the SDP. Okay? But we do know that there are
19 threshold issues in the HPSD. And that is something
20 that they're looking at, and they're engaging the
21 industry on today.

22 MR. APOSTOLAKIS: If we manage to find a
23 half a day or a day to have a subcommittee meeting,
24 are there going to be people here who have made these
25 decisions in the past, so we can ask a few questions,

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1 that would be willing to defend the equivalency? And
2 then we can also go into more detail into what people
3 have to do, why do you still want yellow/red for the
4 transients and so on, and what purpose does it serve.
5 It's not all practical here. There is also some, you
6 know, theoretical stuff. You know, if something is
7 unrealistic, then why have it there?

8 MR. SIEBER: You mean the loss of heat
9 thing, 200 and something?

10 MR. APOSTOLAKIS: Yeah.

11 MS. CARPENTER: But the purpose of having
12 them there was to just kind of inform the public that,
13 you know, if you have 25 scrams, this is what it takes
14 to reach that yellow/red threshold. It wasn't that it
15 would be practical. You're right, because we
16 certainly take action before that. But the purpose
17 was to be more -- to basically inform the public that
18 these are the different levels, and this is what it
19 would take to reach that kind of a threshold.

20 MR. FRAHM: And to show the safety margin,
21 that you're this far from that red threshold.

22 MR. APOSTOLAKIS: See, but that may be
23 misleading, because safety is not threatened by the
24 frequency transients. Safety is threatened --

25 MR. SIEBER: By initiating events.

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1 MR. FRAHM: I think the objective was
2 laudable, Cindy, but I don't think that that really is
3 an effective way to communicate with the public.

4 MR. APOSTOLAKIS: And should it be in the
5 action matrix, if you can communicate it somewhere
6 else.

7 MS. CARPENTER: Well, those in particular
8 are not in the action matrix. I see what you're
9 saying on that.

10 MR. APOSTOLAKIS: You can communicate that
11 somewhere else. The fundamental point is that this
12 committee, and I think all of us in responding to the
13 Commission, we must be able to say more than just we
14 met with the ACRS Subcommittee on September 9th,
15 because if we have a public meeting with the
16 Commission, and they ask me, if I'm still the
17 Chairman, you worked with the staff, I would say no in
18 public, because we didn't work together. So we better
19 do that. We better have another meeting where you
20 come in here with details, with the appropriate
21 people, and we are allowed to scrutinize to the extent
22 we like. Then it's okay. Then we worked together,
23 because right now there are fundamental differences.

24 You keep saying well, you know, maybe we
25 have some differences, but they are not really

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1 discrepancies. I think they are. I'm not convinced
2 that you can mix performance with risk. Now you may
3 be able to, but right now I'm not convinced. So and
4 if I must, I'm sorry, but I have to say that.

5 MR. SIEBER: Well, you have to do it using
6 the rationalization as opposed to a technical
7 argument.

8 MR. ROSEN: That it's through the action
9 matrix process.

10 MR. SIEBER: That's right.

11 MR. ROSEN: And you have to construct --

12 MR. APOSTOLAKIS: Yeah, you have to have
13 some argument. But we never got any of that. That's
14 what I'm saying. Look, I know that it's not a matter
15 of invoking Newton's Law. Gee, we know that.

16 MR. SIEBER: It's not a momentum equation?

17 MR. APOSTOLAKIS: It's not the momentum
18 equation, no. So I think if we all manage to get a
19 day in November some time, if you guys are ready then.

20 MS. WESTON: Okay.

21 MR. APOSTOLAKIS: Really go into details,
22 and avoid generalities and so on, I think that will be
23 very useful. Otherwise, let's --

24 MR. COE: It sounds like what would be
25 most helpful then would be the individuals who are most

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1 conversant with the specific SDPs and Pis to bring
2 forward to you some case examples. Case examples, I
3 think, are providing the level of detail for you to
4 make an independent evaluation of whether or not you
5 think we're coming out.

6 MR. ROSEN: But the essence of it is
7 making a finding in one cornerstone, and getting the
8 action matrix color. And then taking a finding in a
9 different cornerstone, completely different, and
10 showing that you get to the same action.

11 MS. CARPENTER: That we get to the same
12 regulatory response.

13 MR. ROSEN: Get to the same action.

14 MS. CARPENTER: And why we think that's
15 appropriate.

16 MR. ROSEN: And that, therefore, when you
17 get all done with that exercise, you would try to get
18 us to agree that there doesn't need to be fundamental
19 changes below the action matrix.

20 MR. APOSTOLAKIS: At least for the time
21 being.

22 MR. ROSEN: At least for --

23 MR. COE: I think if it gave you a sense
24 of comfort that the staff is not over-reacting or
25 under-reacting in any particular cornerstone, and that

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1 the level is action is comparable, for comparable
2 colors, then I think --

3 MR. APOSTOLAKIS: That's important.

4 MR. COE: That's the level of comfort that
5 we've achieved, and I -- obviously, we haven't --

6 MR. APOSTOLAKIS: Well, that would be
7 great.

8 MR. ROSEN: No, but this is not going to
9 be a matter of a closed end equation with a solution.
10 This is all about value judgments.

11 MR. COE: Yes. That is right. Thank you.
12 That's it.

13 MR. APOSTOLAKIS: Absolutely.

14 MR. KOLTAY: You have to recognize that
15 the region is, you know, public health and safety. We
16 need to determine how many inspectors to send to that
17 site based on the finding. That's all we're trying to
18 do. So the PI will never be equivalent to an SDP
19 finding. What we're saying is we have a white PI, we
20 have a white finding, that's two findings that are
21 relatively important, two different areas. I think we
22 need to go out to that site and determine if there's
23 anything else that's wrong.

24 MR. ROSEN: Well, you said yesterday you
25 arrived at my value judgment point having to do with

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1 the way you internally managed the inspection
2 resource. But my value judgment point was at the very
3 fundamental level. People in authority are making
4 judgments that the physical protection and public
5 radiation safety, or physical protection and
6 mitigation systems performance are done with similar
7 results. You know, that's a set of very complex value
8 judgments.

9 MR. SIEBER: Well, it's even worse than
10 that in a way because if you look at the -- some of
11 the significance determinations that have been made on
12 RadCon, particularly ALARA where no violation occurred,
13 it's come out yellow.

14 MR. ROSEN: Sure.

15 MR. SIEBER: And then you compare that
16 with safety systems that are out of service, and it
17 doesn't come out yellow. And that scares me.

18 MR. ROSEN: And you compare that with
19 security, you know, with a couple of doors that didn't
20 work.

21 MR. SIEBER: Comp hours.

22 MR. ROSEN: Or Comp hours, and these are
23 valued.

24 MR. SIEBER: Which means no degradation in
25 security.

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1 MR. ROSEN: No, but security is based more
2 on the threshold --

3 MR. APOSTOLAKIS: Well, let me ask you
4 another question that, you know, I would like some
5 answer to. If you decide that the green/white
6 threshold for the Pis will be based on PR performance,
7 which is what would have --

8 MR. SIEBER: That's what it is now.

9 MR. APOSTOLAKIS: Why should the
10 green/white threshold for fire protection not be based
11 on PR performance? Graham mentioned the number of
12 sirens or whatever --

13 MR. SIEBER: That's emergency planning.

14 MR. APOSTOLAKIS: Do I have any -- oh,
15 that's emergency planning. I'm sorry. Do I have any
16 historical record as to how the fleet out there
17 performs with respect to that? And maybe put
18 something equivalent to the 95th percentile. Why
19 don't I do that here and I'm relying on risk, and I do
20 it on the transient. Is it just convenience, because
21 I have information?

22 MR. SIEBER: I think so.

23 MR. APOSTOLAKIS: And is that something
24 that's acceptable? I mean, it has to be acceptable to
25 some degree too.

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1 MR. SIEBER: Well, individual licensees
2 know when their sirens weren't operable.

3 MR. ROSEN: Yeah. And I think there was
4 a presumption that we didn't want to collect a whole
5 bunch of new data. We wanted to use the data we had
6 in new ways.

7 MR. APOSTOLAKIS: Would a week polling of
8 inspectors have given you a pretty good idea of what
9 this threshold should be, without collecting data?

10 MR. ROSEN: With regard to sirens?

11 MR. APOSTOLAKIS: Yeah, sirens or
12 sprinklers that don't work, and so on. And say yeah.
13 And then, you know, you look at after a week,
14 especially if you come from headquarters you're going
15 to say well, gee, you know, it seems if it's between
16 three and seven, or even six, rather than going to
17 core damage frequency and force the core damage
18 frequency to go out by an order of magnitude. Why is
19 that simple? You know, we are masters at eliciting
20 expert opinion in this agency, NUREG 1150 and so on.
21 I mean, seismic stuff, why not do that? You know,
22 poll our inspectors and say, you know, what do you
23 think in this case? What is the number you usually
24 see? And then take some convenient --

25 MR. ROSEN: I think that could have been

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1 done, but they have data on siren performance, so they
2 just used that.

3 MR. SIEBER: And they don't know whether
4 a sprinkler works or not, unless you have a fire.
5 Okay? You can go out and test them, but once you test
6 them, it's like testing hand grenades, you know. You
7 don't know what you have after you're done.

8 MR. ROSEN: You don't get many volunteers.
9 Throw a hand grenade on the ground and jump on it. If
10 it doesn't go off, it's fine.

11 MR. APOSTOLAKIS: But these are the
12 questions that --

13 MR. ROSEN: If it does go off, it does go
14 off.

15 MR. APOSTOLAKIS: We discussed public
16 confidence this morning. I mean, this is part of
17 public confidence.

18 MR. COE: You raised a question that was
19 already raised earlier by Dr. Bonaca, and that was why
20 do we need to be risk-informed at all? And I think --
21 and I've been pondering that question.

22 MR. APOSTOLAKIS: If you are working on
23 the basis of performance, why do you have to be risk-
24 informed? That's a good question.

25 MR. SIEBER: Yeah.

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1 MR. APOSTOLAKIS: And in light of what
2 Davis-Besse shows, where you have everything green,
3 and then, you know --

4 MR. COE: I will only say that we were
5 motivated to be risk-informed in the thresholds
6 whenever it was possible, and we could defensively
7 justify it.

8 MR. SIEBER: And it also became a theme of
9 the agency, and everybody joined the band.

10 MR. HICKMAN: The intent was to be -- have
11 more objective information to base our actions.

12 MR. BONACA: But you see again, the
13 threshold of 27 scrams or whatever it is, without any
14 other consideration of what led to the scram, what the
15 consequences of the scram were, and so on and so
16 forth. It's a total. There is nothing that is
17 realistic about it. In fact, it's just a conjecture.

18 MR. HICKMAN: For that particular
19 indicator, the assumption is that they're all
20 uncomplicated scrams. And we have another indicator
21 that counts more complicated scrams with lower
22 thresholds.

23 MR. COE: And I assure you that we are
24 interested in those other aspects and attributes of a
25 particular event.

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1 MR. APOSTOLAKIS: But, you know, this
2 issue of what is the purpose of the action matrix has
3 been discussed here with you and among ourselves for
4 a long time. And there is a group of ACRS members
5 that take the position that this gentleman -- and by
6 the way, you should have identified yourself on the
7 record.

8 MR. KOLTAY: I'm Peter Koltay.

9 MR. APOSTOLAKIS: Okay. The position you
10 take --

11 MR. KOLTAY: K-O-L-T-A-Y.

12 MR. APOSTOLAKIS: That the purpose of the
13 action matrix is to tell the administrator, the
14 regional administrator --

15 MR. SIEBER: What to do.

16 MR. APOSTOLAKIS: -- what attention to pay
17 to what. And we're marshalling resources. That's
18 what these guys keep saying, marshaling resources to
19 make up the case. If that's the case, why don't we
20 make everything else consistent with that objective?
21 Do I need to have the extreme right columns that say,
22 you know, unacceptable performance, the Commission
23 gets involved and so on. It's not obvious to me that
24 when you are dealing with performance, like Mario said
25 earlier, you're really down here. So why do I need

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1 those two right-hand columns which really indicate
2 that something very serious is going on, and that
3 we're about to shut them down?

4 Now I see an example where performance has
5 deteriorated so much that I reach that level, then I
6 can be convinced. But that's the point, that if you
7 state clearly the objective of the action, if it's
8 marshaling resources, then do everything else in a
9 consistent manner. And I'm not even sure you need to
10 bring risk into this any more.

11 If the objective is to -- is oversight,
12 real oversight, you know, then you have to bring into
13 this the issue transient with a couple of problems,
14 the sequence, how close did I get? You know, this is
15 the real issue, and then the answer is no, no, no.
16 ASP does that, which says immediately oh, so the
17 action -- this is not the revised oversight process
18 because there are other problems that contribute to
19 oversight. So there is -- I agree with you gentlemen
20 that there is a problem of clarity here. What are we
21 trying -- what are we after, and is everything else
22 we're doing consistent with that? Because I think
23 we're mixing things.

24 MR. FRAHM: And that's where we tried to
25 focus today's briefing on, was getting at the clarity

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1 of that SRM. Actually, I don't know that we got
2 there.

3 MR. SIEBER: I need to ask a question now.
4 I don't recall, and that's probably because of
5 inexperience, that any enforcement action or in the
6 old SALP system or in the new ROP, that the ASP
7 program led to any conclusion. I thought that was
8 independent.

9 MR. COE: It simply led -- it was a
10 trending mechanism in the past. And it was
11 information that was used at a very high level.

12 MR. SIEBER: Yeah, that's true. But it
13 didn't evaluate individual events.

14 MR. COE: That's right. Well, it didn't
15 evaluate individual performance of a licensee.

16 MR. SIEBER: That's right. And so when we
17 talk about ASP, it really doesn't apply to anything
18 that we're talking about. Right?

19 MR. COE: The evaluation of performance
20 for those events was done on a much more real time
21 basis using the SALP process earlier.

22 MR. SIEBER: Yes.

23 MR. COE: And I want to be clear, that the
24 ROP when it was developed, this very question came up.

25

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1 You know, what do we do about a significant event,
2 significant from the standpoint of core damage
3 probability of that particular event. And the answer
4 was, which is embedded in our guidance, that we would
5 use that to inform our immediate response. But
6 ultimately, the ROP, the response would be looking for
7 performance deficiencies that contributed to the
8 seriousness of that event. And that those would be
9 the foundation of our performance assessment, and our
10 characterization of the licensee's performance.

11 MR. SIEBER: Okay.

12 MR. COE: And I hope that made sense.

13 MR. SIEBER: Well, I think it's maybe a
14 good idea, but I don't recall that being in your
15 guidance.

16 MR. COE: In fact, there's a specific
17 section in Manual Chapter 0609 that very specifically
18 describes why delta CDF is the metric of choice for
19 ROP, and not CCDF. And there's a mathematical
20 treatment, and a non-mathematical treatment for
21 clarity.

22 MR. SIEBER: Okay.

23 MR. LEITCH: Can I take it in a slightly
24 different direction for a minute? I'm a little
25 confused about what you said about the OIG report.

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1 Apparently, the OIG report suggests that the SDP,
2 particularly Phase II, is seriously flawed, and that
3 we should stop spending money on further development
4 until we have that situation analyzed and decide what
5 we're going to do. And one of those things may even
6 be to eliminate Phase II of the SDP. Is that
7 something that you're doing? I mean, what is the --
8 I'm not sure what the force of the OIG report is. Do
9 you have to comply with that? Is that something
10 you're --

11 MR. COE: Yes. What it's prompted is the
12 EDO has directed the formation of a task group by
13 memorandum. That task group has now been chartered.
14 The charter was signed on Friday. It will be led by
15 an SES manager from the region. It will be composed
16 of individuals representing --

17 MR. ROSEN: From which region?

18 MR. COE: It happens to be Region II. But
19 it will be composed of representation from NRR and
20 research, as well as the regions. And it will address
21 that specific -- these specifics issues that were
22 raised in the report, in the IG report.

23 MR. LEITCH: One of the issues that's
24 raised there, is that Phase II yields -- typically it
25 yields conservative results. And later in the process

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1 findings that produced insignificance. We not only
2 heard this by virtue of this report, but we were in
3 Region II a couple of months ago, and they had a
4 number of findings. In fact, I think almost every one
5 they found was reduced for some reason or other, and
6 that certainly has a significant impact on public
7 credibility, the process.

8 MR. COE: Yes. I think too many occasions
9 where we publicly and preliminarily say that it's this
10 color, and then it subsequently in the final analysis
11 changes to another color. Too many of those occasions
12 would be detrimental to public confidence. Our
13 experience has shown roughly, I think, 30 percent or
14 thereabouts have had a change in color. That's not
15 overly troublesome from a public confidence
16 standpoint. And some of our public advocacy groups
17 have commented on that very point, that it's more
18 important that we get a preliminary result out quick,
19 or quicker in the public. Get the issue out in the
20 public domain so that the public can observe the
21 dialogue that occurs between the licensee and the
22 regulator, in coming to a final determination. Not to
23 say that we don't continue to work towards
24 establishing a more -- you know, a better answer at
25 the preliminary stage, but we recognize that, you

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1 know, the first answer may not be fully informed by
2 all of the information that a licensee might be able
3 to provide to us.

4 MR. SIEBER: Well, this gets back to Steve
5 Rosen's point. Do you have adequate tools at the
6 staff level to be able to come up with an accurate, or
7 more accurate assessment, risk assessment than the
8 licensee has? Because I looked at the correspondence
9 after that initial draft determination, and the
10 licensee begins his argument, you use this number, and
11 it would be this. And this isn't modeled right, and
12 I think that the staff has distributed the SPAR models
13 to the licensees that came from IN and EEL, and so the
14 licensee has had opportunities to play with it and
15 compare. And a lot of licensees complain that SPAR is
16 too simple.

17 MR. COE: Yes, they do. And certainly,
18 similarly they complain that the Phase II process is
19 too simple. But you said something, you said
20 accuracy, and often in these kinds of discussions, the
21 term "accuracy" comes up with respect to risk
22 evaluations and analyses. That presumes a standard,
23 and it's a standard that we'll never know. It's
24 hidden in the probability distributions.

25 There's no accuracy associated, that I can

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1 discern, in a probabalistic analysis. What's really
2 important is process exposure, the exposure that the
3 process gives to the underlying assumptions. That is
4 what renders quality to the regulatory decision,
5 because I don't -- we can have a debate, I guess, or
6 a discussion, but I don't think that there will ever
7 be a set of standards or pedigree which, if met, would
8 always -- would allow the unrestrained use of a
9 probabalistic risk model without having its most
10 significant and most influential attributes revealed
11 every time you use it to make a decision.

12 It's just important the people in the
13 field who are closest to the particular plant design
14 that's being modeled have access to that model.

15 MR. SIEBER: I agree.

16 MR. COE: In understandable manner.

17 MR. SIEBER: Yeah.

18 MR. LEITCH: I just read a report that I
19 guess -- it had a rad finding because of the
20 description was not complete, but it really said that
21 under certain circumstances, the AFW may fail to
22 operate. And then there seemed to be some discussion
23 about whether this was a, what they call an old design
24 issue. And I guess doesn't that -- isn't that the
25 crux of what we're trying to do with the ROP?

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1 In other words, if we're giving credit, so
2 to speak, for the -- I mean, this was a licensee self-
3 identified issue. It evidently had been there for
4 years. I don't know if that makes it better or worse.
5 It kind of depends what we're trying to do with the
6 ROP. In other words, we're saying okay, this guy was
7 good, and that he self-identified the issue. It was
8 apparently not something not real obvious. It had
9 existed for all these years, and they finally found it
10 and corrected it, so in one sense that's good. But
11 again, if you're trying to really look at risk, it's
12 been there for a long time. So I mean, to what extent
13 are you thinking about credit for old design issues?

14 MR. COE: Well, the whole idea of
15 classifying a issue as old design issue was intended
16 to provide some credit. In the pre-ROP days, we gave,
17 and still do under traditional enforcement, give
18 mitigation credit to a licensee. And we don't, even
19 today, certainly we don't want to provide disincentive
20 for licensees to conduct aggressive programs to
21 identify those kinds of issues, but it's truth in
22 advertising. We have to be very honest that what was
23 found was significant. Maybe it's very significant.
24 At the same time, we want to acknowledge that the
25 licensee was the one who found it through a program

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1 which would have -- with some effort, more effort than
2 normal, than normally expected. And so we created the
3 old design issue category for that purpose, and to
4 allow that credit.

5 MR. LEITCH: So with that -- if I
6 understand that correctly, then that might not affect
7 the color of the finding, but might affect what you
8 would do as a result of that finding?

9 MR. COE: No. That's what I meant by
10 truth in advertising. The color will be what the
11 color is, based on the significance.

12 MR. LEITCH: The color is red. Yeah.

13 MR. COE: Yeah.

14 MR. SIEBER: That's part of the
15 enforcement process. That may mitigate a civil
16 penalty, but it doesn't mitigate the fact that the
17 event occurred, that it's serious, and it has a color.

18 MR. COE: Well, with the exception that we
19 don't issue civil penalties when we have issues that
20 have been processed through the normal ROP process.
21 It's only when we go outside to the traditional
22 enforcement process that we would use civil penalties.

23 MR. SIEBER: Yeah, but you do both.
24 Right? In the case of a civil penalty.

25 MR. COE: The issues involving localness,

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1 or actual consequences, or impeding the regulatory
2 process, go directly to traditional enforcement, and
3 you might expect civil penalties there.

4 MR. SIEBER: Yeah, but I see in your
5 action matrix that enforcement is there. It just
6 doesn't go through the --

7 MR. COE: Yes. Enforcement is limited to
8 notices of violation, and they carry -- the associated
9 finding carries a color significance. In the case of
10 the one that you mentioned, I believe that was a high
11 significance, and a very high significance. And that
12 the theory was that the action matrix response would
13 not -- you know, we would still implement a
14 supplemental inspection to the degree that the
15 significance would suggest. But that if -- but that
16 that would not add to any other elements or any other
17 inputs to the action matrix to cause the licensee to
18 move up in the action matrix columns. In other words,
19 that's the credit that was being given.

20 Unfortunately, that particular example
21 brought that licensee to the farthest-most column, or
22 next to the farthest-most column, single red, which
23 there really wasn't any credit.

24 MR. FRAHM: And there wasn't any current
25 performance issue that we were concerned with, so we

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1 didn't consider them in that same realm with the other
2 plants that are in that fourth column of the action
3 matrix, so that's part of the --

4 MR. COE: For issues of lesser
5 significance, that thought process works, but for an
6 issue of red significance, it didn't give them really
7 any credit at all, and that's what's caused us to go
8 back and rethink how we want to apply this category.

9 MR. APOSTOLAKIS: So what is the rule for
10 going to the traditional enforcement process, versus
11 ROP?

12 MR. COE: The traditional enforcement is
13 invoked right now by process, whenever you encounter
14 a violation or -- yeah, a violation in this case of
15 willfulness, of actual consequences that would be, for
16 example, over-exposure exceeding the part 20 limits,
17 or a violation of where the regulatory process was
18 impeded by failure of a licensee to make a report of
19 some nature that was required. And in those, it was
20 decided early in the development of ROP that that was
21 going to be handled under traditional enforcement
22 regardless of what the actual or estimable impact was
23 from a public health and safety standpoint, because it
24 got to such fundamental assumptions that we were
25 making.

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1 MR. ROSEN: Well, another subject also out
2 of the IG report, coming back to something that Graham
3 brought up. It says here in the report, the IG report
4 that between April 2000 and February 2001, three of
5 ten findings using the reactor safety SDP initially
6 evaluated as greater than green, were reduced to green
7 findings, three of ten.

8 Now is it your expectation that that's
9 about the average that's going to pertain in the
10 future, or is that too high for you?

11 MR. COE: We would like to work that
12 number down. The 30 percent figure I think was one
13 that was based on the first two years of ROP
14 statistics that we developed. And we are continuing
15 --

16 MR. ROSEN: That's between April 2000 and
17 February 2001, so it's less than two years. It's
18 about nine months.

19 MR. COE: Right. And I think the 30
20 percent figure came from about two full years of data.
21 But all I'm saying is that yes, we're trying to get
22 that number down. We acknowledge that there's a
23 potential public confidence issue with, you know,
24 continually degrading or having to downgrade, I should
25 say, the colors of these.

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1 MR. ROSEN: So you agree. And that's the
2 answer that I would have come to too, that it's too
3 high, way too high. And it shouldn't happen, period.
4 And then if it does, it should be a rare event in my
5 thinking. In order for that to be true, that it's a
6 rare event that a finding gets downgraded, it means
7 you're going to have to use good models right in the
8 beginning, which means you're going to have to
9 probably use -- if you use the SPAR models, you're
10 going to have to -- before you decide what the initial
11 color is, you need to go to the licensee and say to
12 him in a meeting which you haven't yet concluded what
13 the initial color is, this looks like it might be a
14 yellow, for example. And before we make it yellow,
15 here's your chance. You've got ten working days to
16 tell us why it shouldn't be yellow. We'll stay here.
17 We'll work with you. We'll figure out PRAs, but in
18 ten days we're going to come out with something. In
19 other words, to prevent the mischaracterization.

20 MR. COE: That is precisely the process
21 that we employ.

22 MR. ROSEN: And you still get three of
23 ten?

24 MR. COE: Well, what happens is between
25 the time that we say preliminarily we think this is

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1 yellow, and offer the opportunity to provide further
2 information, they do. We evaluate it, and it
3 subsequently becomes white or green.

4 MR. ROSEN: Oh, yeah. So that's included
5 in the three of ten, that case?

6 MR. COE: I think that the three of ten
7 were the distinction between the preliminary public
8 declaration by the NRC, and the final public
9 declaration by the NRC.

10 MR. SIEBER: And those are both public
11 documents. They're in letter form.

12 MR. COE: They are both public documents,
13 yes.

14 MR. SIEBER: And so anybody can count.

15 MR. COE: Yes, sir. That's right. Now I
16 will add --

17 MR. SIEBER: And it has to be that way.

18 MR. COE: Well, I will add very quickly
19 that the whole idea of a publicly available SDP
20 process, whether it be in the reactor safety side or
21 in the other cornerstones, was to allow an engagement
22 with the licensee using a common framework of
23 significance determination, and to exchange
24 information right fro the very start. And we have an
25 expectation out there that our inspectors will discuss

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1 these things with the licensee right from the very
2 start.

3 Here's what my SDP says. What does your
4 detailed model say? Why is there a difference? And
5 let's explore that. What are the underlying
6 assumptions that are making this a difference? But
7 that at some point, we're obligated to come forward in
8 a public forum and say we've assembled as much
9 information as we can reasonably get our hands on, and
10 this is what it tells us. And then be public about
11 it, to achieve this kind of timeliness aspect that the
12 public expects. They don't -- the flip side of
13 getting to the, essentially what I would call the
14 final solution of the preliminary stage, is the length
15 of time that it takes. And the longer you engage the
16 licensee in a non-public forum, the more it looks like
17 negotiation.

18 I maintain to you and to everyone else,
19 that we do not negotiate with a licensee. We seek
20 information so that our decisions are better informed,
21 but we are sensitive to the optics of that.

22 MR. ROSEN: Well, to me it's a failure to
23 come up with something that changes. And coming up
24 with it in public and then changing it is a failure.
25 Somehow you have to get around that.

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1 MR. SIEBER: I'm not sure that you can
2 based on the difference between the models, and the
3 difference in assumptions.

4 MR. ROSEN: Well, maybe that goes to the
5 point I made in some internal correspondence. Maybe
6 they shouldn't be different models.

7 MR. SIEBER: Well, I understand that, but
8 not everybody agrees.

9 MR. APOSTOLAKIS: If you eventually have
10 hand-held computers that have the PRA then you will
11 not have this problem.

12 MR. LEITCH: But isn't there a trade-off
13 between accuracy and timeliness?

14 MR. SIEBER: Yes.

15 MR. COE: Yes, indeed.

16 MR. LEITCH: You know, either one of which
17 can impact public confidence.

18 MR. APOSTOLAKIS: Yeah. I think --

19 MR. LEITCH: I have my friends and
20 neighbors saying, you know, what color is Davis-Besse?
21 And I say we don't know yet.

22 MR. APOSTOLAKIS: That's the problem. I
23 think I agree with --

24 MR. LEITCH: Seven months.

25 MR. APOSTOLAKIS: I agree with Steve that

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1 changing the color is a problem, but the biggest
2 problem in terms of public confidence, it seems to me,
3 is Davis-Besse, where we say everything is fine. And
4 then, you know, things turn out not to be fine. And
5 you wonder now where was the oversight process when
6 there were problems with the filters, and so on and so
7 on. And that --

8 MR. ROSEN: Yeah, but that's death by one
9 stroke, the Davis-Besse thing. The other thing --
10 this other thing is death --

11 MR. APOSTOLAKIS: I wouldn't say that, but
12 it certainly --

13 MR. ROSEN: -- by a thousand hand bites.
14 If every time you make a determination or three out of
15 ten times that you make a determination, it's actually
16 changed to a lesser case, that's not good either.

17 MR. APOSTOLAKIS: It is not good. I agree
18 with that, but I don't think it's as bad as --

19 MR. ROSEN: Yeah, you can't compare the --

20 MR. APOSTOLAKIS: We're comparing badness
21 now.

22 MR. SIEBER: Well, the --

23 MR. APOSTOLAKIS: You can make a good case
24 though that, you know, when I want to do something
25 real quickly, I will do it in a conservative manner.

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1 MR. SIEBER: I think it's incorrect to --

2 MR. APOSTOLAKIS: But the public refuses
3 to accept it.

4 MR. SIEBER: I think it's incorrect to
5 expect the ROP to predict future events.

6 MR. APOSTOLAKIS: Not predict.

7 MR. SIEBER: Predict events that are a
8 phenomenon, that nobody believed would happen, and
9 phenomenon logically weren't analyzed, and weren't
10 inspected for. And so I don't find the fact that
11 they were all green, and all of a sudden they had
12 this cavity in their reactor vessel head unusual,
13 because the only thing that would have caught it is
14 safety culture kinds of things, attention to detail
15 and how inquisitive are you, and so forth.

16 MR. APOSTOLAKIS: Well, the root cause
17 analysis says that there were indications. There
18 were --

19 MR. SIEBER: That's right.

20 MR. APOSTOLAKIS: -- items that had been
21 agreed to do, and they were deferred from --

22 MR. SIEBER: To the --

23 MR. APOSTOLAKIS: This is something
24 that's observable, and this issue about the
25 containment, you know, the upsize, island upsize and

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1 so on.

2 MR. SIEBER: But none of those factors
3 are indicators or violations, by the way, in the ROP.
4 If you made it comprehensive enough to cover
5 containment filters, and humidity, and radiation, and
6 all these other factors. That's what plant
7 management is supposed to do. An agency like the NRC
8 could not compile that massive data that's consistent
9 from one plant to another.

10 MR. COE: Correct.

11 MR. LEITCH: And it indicated it looked
12 at the Corrective Action Program that may begin to
13 give you a hint of --

14 MR. APOSTOLAKIS: That's what I'm saying.
15 The cross-cutting issues really have been neglected
16 in the ROP.

17 MR. SIEBER: That's right.

18 MR. BONACA: Well, the problem we're
19 making the connection that cultural issues will
20 reflect themselves in, again, performance of this --

21 MR. APOSTOLAKIS: The Corrective Action
22 Program --

23 MR. BONACA: -- equipment that is by now
24 very -- you know, the whole organization is focused
25 on. I don't think, you know, again -- I mean, I

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1 wrote it down on the paper, but I do believe they
2 would not give you insights of that type because the
3 performance of an organization has to be so degraded
4 to give you poor performance on these indicators.

5 MR. SIEBER: It takes time.

6 MR. APOSTOLAKIS: That was an assumption
7 in the question many times.

8 MR. ROSEN: It's not a leading indicator.

9 MR. BONACA: Because to particularly the
10 organization there, it's so focused on a lot of
11 processes from, you know, the maintenance rule to the
12 performance of this -- since INPO stated in 1980s,
13 and so on and so forth. So those are things that
14 they have pared down, and you have to have a complete
15 degradation of the organization before you see signs
16 in the performance of the systems. There are other
17 things in the Corrective Action Program, the repeat
18 events. Which, by the way, we're missing now to the
19 performance -- to the significance evaluation,
20 because we are not counting any more how many times
21 the same event has been happening and not recorded.
22 We are just evaluating the significance of an
23 individual event.

24 MR. SIEBER: Well, I think the Pis and
25 the ROP were developed because those are the only

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1 ones that were readily available. They were
2 consistent across the industry because of --

3 MR. BONACA: That's true.

4 MR. SIEBER: And all this other stuff,
5 everybody compiles statistics, but they compiled
6 their own, with their own definitions.

7 MR. BONACA: Yeah, but the point I'm
8 making is that that's why Davis-Besse is no surprise
9 to me that there is an inconsistency between the
10 event and the performance as much as everybody else.

11 MR. SIEBER: Yeah, I agree with that.

12 MR. APOSTOLAKIS: And I think we should
13 be learning from experience. We didn't pay enough
14 attention to the cross-cutting issues. Now Davis-
15 Besse tells us we have to, and maybe do something in
16 the future. It's not a matter of assigning blame.
17 It's a matter of progressing. But what I think is
18 not, frankly, appropriate is to have a meeting today
19 where it's stated that the ROP is working.

20 MR. SIEBER: Well, they can state it. We
21 don't have to necessarily agree with it.

22 MR. APOSTOLAKIS: And that's why I just
23 spoke up.

24 MR. SIEBER: I disagree with you. I do
25 think it's working. It's not telling us what we need

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1 to know. Okay? In other words --

2 MR. BONACA: A failure to communicate.

3 MR. SIEBER: There's lots of sweat on the
4 table, and everybody is doing their thing. It's just
5 that we would like to accomplish more with the tools.

6 MR. LEITCH: Sweat, but is there any
7 blood on the table?

8 MR. APOSTOLAKIS: I can say that many
9 times the staff did a remarkable job given the
10 pressure they had to deliver something within a year,
11 was it? I don't remember. It was really a short
12 time. And we are not talking about a well-defined
13 problem here. You're talking about the major issue.

14 MR. SIEBER: That's right.

15 MR. ROSEN: It's a lot better than what
16 we had before. We said that in writing.

17 MR. APOSTOLAKIS: We said that in
18 writing.

19 MR. ROSEN: The trouble is, is that let
20 us have -- get hit in the teeth with a Davis-Besse,
21 and maybe something in the future. It doesn't like
22 it. It doesn't yet have the sophistication to give
23 us an early warning of those kind of things, and head
24 them off.

25 MR. APOSTOLAKIS: And nobody --

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1 MR. ROSEN: Now the question fairly asked
2 is do we really -- are we really counting on ROP to
3 do that for us? And the answer is yes.

4 MR. COE: And there are programs to
5 provide that kind of insight.

6 MR. ROSEN: The answer is yes, I am
7 counting on ROP to do that for us. You know, if it
8 doesn't, then maybe we need another system.

9 MR. APOSTOLAKIS: No, I really think we
10 need it's the basis of --

11 MR. ROSEN: I think --

12 MR. APOSTOLAKIS: Safety versus work
13 environment, corrective action program, and human
14 performance. We have to pay more attention. That's
15 all.

16 MR. COE: The avenue I think to get to
17 where you're going, and I think we all want to get
18 there, is to risk-inform our processes. And you
19 don't just risk inform process, people implement
20 processes. You have to risk-inform the people.

21 MR. APOSTOLAKIS: Right.

22 MR. COE: This gets to the question that
23 the IG has raised, and that we're trying to address.
24 You've chosen a tool to put in the hands, the very
25 hands of the inspectors who are out there day to day

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1 in the plants, and this tool is to help give them in
2 one sense -- I mean, in one sense it's a screening
3 tool, but in another sense, it's to give them a sense
4 of what's important at that plant.

5 I will offer that if you take the medium
6 LOCA worksheet for the Phase II at Davis-Besse and
7 apply one order of magnitude increase to the
8 frequency of the medium LOCA, that you will get a
9 significance color that's greater than green. Now is
10 that understanding? Does that sensitize an inspector
11 to evidence that significant leakage might be
12 occurring? I think, and same true for small and
13 large break LOCAs, and other transient conditions.

14 The idea here is to give inspectors a
15 tool that over time, as they use it, will develop in
16 them a sensitivity towards these kinds of things.
17 When the evidence exists, then they're more apt. I'm
18 not saying that it's guaranteed. It's never
19 guaranteed but they're more apt, and they're more
20 likely to maybe pursue it, where we can understand
21 it.

22 MR. SIEBER: Well, I think that's one of
23 the places where judgment comes in. If I were the
24 inspector, as cynical as I am, and somebody told me
25 what's the probability at that plant for a medium

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1 LOCA, I would have said one, you know. It was a
2 matter of time.

3 On the other hand, when you do that, the
4 risk isn't all that bad. It's like five times ten to
5 the minus three or something like that.

6 MR. ROSEN: But then you have a medium
7 LOCA with complications, because you never know what
8 else isn't going to work.

9 MR. SIEBER: But that's where the five
10 times ten to the minus three comes in, because if
11 everything worked it would be ten to the minus ten.

12 MR. APOSTOLAKIS: And then, of course,
13 public confidence would suffer a little bit.

14 MR. SIEBER: Yeah. Well, anyway, we may
15 be getting off the track a little bit. I would
16 suggest that, and agree with George, the cross-
17 cutting issues are important, but I think that that's
18 also very complicated, and would take longer than we
19 have in the next six months to even formulate ideas.
20 On the other hand, it's something that shouldn't be
21 ignored.

22 We've come to the end of your slides. I
23 would like to -- and we've all expressed plenty of
24 comments which I think are in pretty much
25 synchronism. On the other hand, I would ask any

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1 member if they would like to add to the comments they
2 have made.

3 MR. APOSTOLAKIS: You feel you have
4 enough to brief the full committee?

5 MR. SIEBER: Yeah, but I can actually do
6 it very quick, I think. Steve. Mario. Graham.

7 MR. LEITCH: I'd just like to summarize
8 a couple of things.

9 MR. SIEBER: Okay.

10 MR. LEITCH: One is --

11 MR. ROSEN: Use your microphone.

12 MR. SIEBER: Pick one.

13 MR. LEITCH: Sorry. I just would like to
14 emphasize the importance of the licensee's corrective
15 action program. And I do think although it would
16 require some standardization, I think we could come
17 up with some significant performance indicators with
18 respect to the licensee's corrective action program.
19 And I think that's really a key element here that may
20 be somewhat lacking.

21 I think it's unfortunate that we have
22 called low significant inspection findings green. I
23 continue to feel that that clouds the picture a
24 little bit, mixing green inspection findings with
25 green performance indicators, which have really

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1 different significance.

2 I guess thirdly, to get back on the issue
3 of fire, I think fire is a very significant
4 contributor to risk, and I'm not sure that we're
5 focusing as much attention on fire as we should be in
6 this oversight process. I just use the example of
7 sirens, and I think licensees have all of a sudden
8 got a lot of religion, if you will, about the
9 operability of sirens because of the high visibility
10 that this brings to it. And I just think we need to
11 do something to enhance the visibility of fires,
12 small fires. And think the big risk significant
13 fires that burn down the HPC system or something,
14 that's okay. That's going to show up in a mitigating
15 event, but I mean what about the, you know, the
16 training of the fire brigade, the response to fire
17 drills, the small fires and those kinds of things.
18 I think that whole -- I can see that in my mind as
19 almost another cornerstone kind of issue.

20 MR. ROSEN: I hope you're coming to the
21 fire protection subcommittee meeting.

22 MR. LEITCH: I am. I wouldn't miss it
23 for the world.

24 MR. APOSTOLAKIS: It's a hot issue these
25 days.

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1 MR. LEITCH: That's all I have.

2 MR. SIEBER: Well, I would like to thank
3 the staff for providing their presentation. It gives
4 us a lot to think about. And we'll expect to see you
5 again.

6 MS. WESTON: Okay. Before you leave,
7 we're going to do -- try to do a November
8 Subcommittee meeting where you will have persons here
9 who can respond to the Committee's questions as they
10 raised them today. And based on our discussion
11 today, it seems to me that I need to try to carve out
12 a day, or at least six hours, at least.

13 MR. APOSTOLAKIS: And also, the specific
14 actions they're taking and positions in written
15 documents by March.

16 MS. WESTON: Right. And you're going to
17 provide us with the basis document in its draft form,
18 and some -- and your position on what you're doing
19 regarding the thresholds, concurrent findings, and
20 the differences in the colors for Pis and SDP. Is
21 that correct?

22 MR. FRAHM: Yes.

23 MS. WESTON: Okay.

24 MR. SIEBER: Okay. Well, thank you very
25 much, and this meeting is adjourned.

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MR. ROSEN: Thank you.

(Off the record 4:35:20 p.m.)

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