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Plant Operations and Fire Protection

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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

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4 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

5 (ACRS)

6 PLANT OPERATIONS AND FIRE PROTECTION SUBCOMMITTEE

7 + + + + +

8 WEDNESDAY, FEBRUARY 6, 2013

9 + + + + +

10 ROCKVILLE, MARYLAND

11 The Subcommittee met at the Nuclear  
12 Regulatory Commission, Two White Flint North, Room  
13 T2B3, 11545 Rockville Pike, at 1:00 p.m., Gordon  
14 Skillman, Chairman, presiding.

15 COMMITTEE MEMBERS:

16 GORDON R. SKILLMAN, Chairman

17 J. SAM ARMIJO, Member

18 MICHAEL CORRADINI, Member

19 DENNIS C. BLEY, Member

20 CHARLES H. BROWN, JR. Member

21 HAROLD B. RAY, Member

22 MICHAEL T. RYAN, Member

23 STEPHEN P. SCHULTZ, Member

24 WILLIAM J. SHACK, Member

25 JOHN W. STETKAR, Member

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1 NRC STAFF PRESENT:

2 MARK BANKS, Designated Federal Official

3 SHANA HELTON

4 SHER BAHADUR

5 ROBERT BEALL

6 CHRIS COWDREY

7 HOWARD BENOWITZ

8 GEORGE LAPINSKY \*

9 JACK McHALE

10 TIM REED

11 UNDINE SHOOP

12 MICHAEL WASEM

13

14 \* Present via telephone

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Adjourn	

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

1:07 p.m.

CHAIR SKILLMAN: Good afternoon. The meeting will now come to order. This is a meeting of the Plant Operations and Fire Protection Subcommittee. I'm Dick Skillman, Chairman of the Plant Operations and Fire Protection Subcommittee. The ACRS members in attendance are Steve Schultz, Charlie Brown, Dennis Bley, Sam Armijo, John Stetkar, Bill Shack, Harold Ray. Mark Banks of the ACRS staff is the Designated Federal Official for this meeting.

The Subcommittee will review the staff's action on Fukushima Near-Term Task Force Recommendation 8 rulemaking. Of particular interest to the Subcommittee will be the draft regulatory basis. We will hear presentations from the NRC staff regarding this matter.

We have not received written comments or requests for time to make oral statements from members of the public regarding today's meeting. The entire meeting will be open to public attendance. The Subcommittee will gather information, analyze relevant issues and facts, and formulate proposed positions and actions, as appropriate, for deliberation by the Committee.

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1           The rules for participation in today's  
2 meeting have been announced as part of the notice of  
3 this meeting previously published in the Federal  
4 Register. A transcript of this meeting is being kept  
5 and will be made available, as stated in the Federal  
6 Register notice. Therefore, I request that  
7 participants in this meeting use the microphones  
8 located throughout the meeting room when addressing  
9 the Subcommittee. The participants are requested to  
10 please identify themselves and speak with sufficient  
11 clarity and volume so that they can be readily heard.

12           We will now proceed with the meeting, and  
13 I call upon Dr. Sher Bahadur to begin the  
14 presentation.

15           MR. BAHADUR: Thank you, Mr. Chairman.  
16 Good afternoon. I'm Sher Bahadur, Deputy Director of  
17 the Division of Policy and Rulemaking, Office of  
18 Nuclear Reactor Regulation. Today's topic, as Mr.  
19 Chairman said, is the rulemaking efforts in response  
20 to the Near-Term Task Force Recommendation 8, which  
21 specifically deals with on-site emergency response  
22 capabilities. In the past, we have discussed several  
23 NTTF recommendations with the Subcommittee and the  
24 Committee, but this is the first time the staff will  
25 be presenting to you its work on Recommendation 8.

1           Today, as Mr. Chairman mentioned, the  
2       staff will discuss the weakness in the NRC's  
3       regulation in the areas of Severe Accident Management  
4       Guidelines, supporting procedures, and related  
5       activities. So the presentation will be more like the  
6       regulatory basis that has been developed for the  
7       rulemaking, which will also include four options to  
8       improve the regulatory framework for the on-site  
9       emergency response capabilities.

10           As you may be aware, the reg basis that  
11       the staff has developed has been published for public  
12       comment, and the public comment period will be over  
13       February 22. Last week, we had a public meeting, and  
14       the object of the meeting was, if there was any  
15       question that the staff would answer for the public's  
16       benefit, then we would have done so in last week's  
17       meeting.

18           The recommendation on the on-site  
19       emergency response capability interacts with a number  
20       of NNTF recommendations, including Recommendation 4,  
21       which is the Station Blackout Mitigation Strategies  
22       rulemaking; Recommendation 7, which is the spent fuel  
23       pool instrumentation; Recommendation 9, which is the  
24       staffing and communications; and, lastly,  
25       Recommendation 10, which is the command and control

1 structures and the qualifications for beyond design  
2 basis. You will see in the staff presentation the  
3 approach that we are taking to incorporate those  
4 recommendations, as well, into for Recommendation 8.

5 Now, today's presentation is the first one  
6 among several other meetings that we plan to have with  
7 the ACRS Subcommittee and the Committee. This being  
8 the reg basis, we will come to you when a proposed  
9 rule is drafted. And then, finally, again, we'll come  
10 to you when a final rule is drafted and the package is  
11 ready to go to the Committee.

12 At this time, I'd like to recognize that  
13 this is a joint effort of a working group, a working  
14 group that has members from various offices, including  
15 NRO; of course, NRR being the driving force; NSIR;  
16 Admin; OGC; and OIS.

17 So at this time, I'd like to introduce the  
18 project manager for Recommendation 8, Bob Beall. Bob  
19 Beall is in my staff in the Division of Policy and  
20 Rulemaking, and he's going to make the presentation,  
21 along with other team members. So, Bob, why don't you  
22 take it --

23 MR. BEALL: Thank you, Sher. Good  
24 afternoon. As Sher said, my name is Bob Beall. I'm  
25 a project manager in the Rulemaking Branch, and



1 today's presentation will be given by two people.  
2 Myself, I'll be going over the rulemaking and the  
3 scheduling for Recommendation 8. And Chris?

4 MR. COWDREY: Chris Cowdrey from NRR  
5 Operator Licensing. I'm the technical lead for  
6 Recommendation 8.

7 MR. BEALL: And Chris will be going over  
8 the details of the draft regulatory basis. On slide  
9 two, I'd like to go over first some background of  
10 Recommendation 8.

11 CHAIR SKILLMAN: If I could hold for a  
12 minute. Member Mike Ryan with the ACRS has joined us.  
13 Thank you.

14 MR. BEALL: Okay. Thank you. From the  
15 Near-Term Task Force recommendation, the Commission  
16 issued an SRM directing the staff, as part of  
17 Recommendation 8, to strengthen and integrate the  
18 emergency operating procedures; the Severe Accident  
19 Management Guidelines, or SAMGs; and the Extensive  
20 Damage Mitigation Guidelines, or EDMGs.

21 As part of that, they also directed us, as  
22 our first step, to issue an advanced notice of  
23 proposed rulemaking, or ANPR. The NRC staff and the  
24 working group of Recommendation 8 did that on April  
25 18th, 2012. We had a 60-day comment period, and,

1 during that comment period, we received 18 comments on  
2 the ANPR.

3 Also during last year and early this year,  
4 we've had a number of public meetings to collect the  
5 public feedback on our proposed regulatory actions,  
6 questions on the ANPR or the draft regulatory basis.  
7 We've had public meetings on February 15th, May 23rd,  
8 and November 7th of 2012, and just six days ago we had  
9 one on January 31st. That was the one on the draft  
10 regulatory basis.

11 Our current status for Recommendation 8 is  
12 that we have the draft regulatory basis out for public  
13 comment currently. It was issued on January 8th of  
14 this year and is out for a 45-day comment period. The  
15 draft regulatory basis comment period will end on  
16 February 22nd. As of this morning, we have not  
17 received any public comments, but we still have a few  
18 more weeks left so, hopefully, we'll get some good  
19 comments from the industry and any interested  
20 stakeholders.

21 Once we get those comments back, we will  
22 review the comments and incorporate those into the  
23 regulatory basis, which we're expected to issue out in  
24 May of 2013.

25 CHAIR SKILLMAN: Bob, you just used the

1 word "stakeholders."

2 MR. BEALL: Yes, sir.

3 CHAIR SKILLMAN: Would you give us your  
4 thoughts about how broadly that term is to be applied?

5 MR. BEALL: Well, of course, the industry  
6 has been to all our public meetings and the various  
7 PWR and BWR Owners Groups. And we've also had a few  
8 NGOs, at least for the ANPR part. When they had a  
9 public meeting for that, they were there. So, so far,  
10 that's been the interested parties that have been to  
11 our meetings, and we also had a few comments on the  
12 ANPR from NGOs, also. So this hasn't been just  
13 industry giving us feedback on the Recommendation 8  
14 process.

15 CHAIR SKILLMAN: Have there been any  
16 participants from local municipality authorities,  
17 state authorities?

18 MR. BEALL: Not from states, no. We did  
19 have a couple utilities, Exelon and things like that,  
20 on the ANPR. And TVA was at our January 31st public  
21 meeting. They were there for that, and so was UniStar  
22 was there, if I remember right.

23 CHAIR SKILLMAN: So utilities but not  
24 necessarily the municipalities around the plants that  
25 those utilities own --

1 MR. BEALL: Oh, you mean the governmental  
2 entities?

3 CHAIR SKILLMAN: Yes.

4 MR. BEALL: No, sir. As I recollect, no,  
5 sir.

6 CHAIR SKILLMAN: Thank you.

7 MEMBER STETKAR: Did you get INPO  
8 attendance at those meetings?

9 MR. BEALL: No, I don't think INPO was --

10 MEMBER STETKAR: Or whatever the -- I  
11 always forget the acronyms. The licensed plant  
12 operators have kind of a --

13 MR. MCHALE: No, they have not  
14 participated directly in our meetings.

15 MEMBER STETKAR: They're coming in through  
16 --

17 MR. MCHALE: They've been to Commission  
18 meetings on the broader response but not focused on  
19 this. However, they have been -- I'm Jack McHale, by  
20 the way, the Chief of the Operator Licensing Branch in  
21 NRR. So I've provided the PROS group with the ANPR  
22 and the draft reg basis but have not received  
23 response.

24 MEMBER STETKAR: Oh, okay. Thanks.

25 CHAIR SKILLMAN: Thank you.

1 MR. BEALL: Great. The next slide, I want  
2 to talk about what we're doing next after the draft  
3 regulatory basis has been finalized. Our next  
4 rulemaking step is that we're planning to issue the  
5 proposed rule in the fourth quarter of 2014. We  
6 currently plan on a 75-day comment period for that.  
7 As with the ANPR and the draft regulatory basis, we  
8 will have a public meeting to answer any questions the  
9 public may have. And then we plan on issuing the  
10 final rule in the third quarter of 2016. We'll be  
11 back before this committee at least two more times:  
12 the proposed rule and the final packages we presented  
13 to the ACRS. And, of course, we will issue any new or  
14 revised guides documents when we issue the proposed  
15 rule and the counter rule. And also those documents  
16 will come to the ACRS, also.

17 The next part, we talk about the actual  
18 draft regulatory basis. So I'll turn it over now to  
19 Chris.

20 MR. COWDREY: Good afternoon. Thanks for  
21 the opportunity to talk about the Recommendation 8  
22 draft regulatory basis this afternoon. As you may  
23 know, the Recommendation 8 effort has four main  
24 components to address licensees' on-site emergency  
25 response capabilities. Those four major components

1 are procedures and guidelines, which include the  
2 SAMGs; command and control organization; training  
3 plans; and full-scale exercises for severe accidents.

4 So we'll talk about each one of those  
5 aspects of Recommendation 8 individually as we go  
6 through the presentation. And then we'll move on to  
7 talk about the options that our working group  
8 considered for closing the gaps on some of the  
9 regulations in the area of on-site emergency response  
10 capabilities, talk about some preliminary rule  
11 language that we developed and included in the draft  
12 regulatory basis to spur some comments from the  
13 outside stakeholders, our current thoughts on the  
14 direction of Recommendation 8, and then talk  
15 interactions with some of the other Near-Term Task  
16 Force recommendations and how Recommendation 8 will  
17 relate with those recommendations.

18 MEMBER RAY: That's the point when we talk  
19 about 10.2?

20 MR. COWDREY: That is the point when we'll  
21 talk about 10.2; that's correct.

22 MEMBER STETKAR: Chris, as I read through  
23 this, your fourth sub-bullet under the third bullet  
24 there is a little bit more gray, but it very carefully  
25 always speaks of EOPs, SAMGs, and EDMGs, as if that's

1 the universe. Now, the fourth sub-bullet says other  
2 emergency procedures, but it says spent fuel shutdown.  
3 As you're aware, the ACRS has written letters saying  
4 that we recommend that the fire response procedures  
5 also be included in this universe. I've not seen  
6 those words stated anywhere. What's the current plan  
7 regarding the fire procedures? Because they are of  
8 the same ilk as the current versions of the SAMGs.  
9 They kind of hang out there. They're different from  
10 plant to plant. Operators get into really difficult  
11 situations in terms of priorities and conflicting  
12 guidance or parallel guidance. And, yet, you know,  
13 this current effort seems to be silent in that regard.

14 MR. COWDREY: Right. Recommendation 8  
15 asked us to take a look at developing some regulations  
16 for a comprehensive strategy for severe accident  
17 mitigation and specifically talk to those procedures  
18 which you mentioned, the EOPs, the SAMGs, the EDMGs,  
19 and what we're including as the FLEX guidelines due to  
20 the industry's response to the mitigating strategies.  
21 So taking a look at those sets of procedures, the  
22 EOPs, the SAMGs, the FLEX procedures are symptom-based  
23 procedures that functionally address restoring safety  
24 functions. And in that way, they kind of naturally  
25 fit together into an integrated framework.

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1           So we're trying to maintain that focus on  
2           the procedures and guidelines that go to that end:  
3           mitigating severe accident and mitigating core damage.  
4           And in my personal opinion, the firefighting  
5           strategies are kind of a different approach to a  
6           different problem in terms of --

7           MEMBER STETKAR: I'm not talking about  
8           putting out a fire, I'm talking about controlling the  
9           plant during a fire.

10          MEMBER BLEY: And the fire procedures that  
11          are used in the control room. And if you don't think  
12          power is important to protecting the core, you've got  
13          to instruct me a little bit on that. And, lastly,  
14          there's been one, and maybe two, depending on how you  
15          look at it, fire events where, in fact, the interplay  
16          of these procedures and what it did to operations in  
17          the control room had substantial difficulties. So I  
18          don't quite get the distinction you're making.

19          MR. COWDREY: Well, the way I look at it  
20          and the perspective I have is that fires are just one  
21          of many things that can take away equipment they use  
22          to satisfy safety functions. Fires can take away your  
23          equipment, so can flooding, so can a terrorist attack,  
24          so can a loss of power out in the switchyard.

25          MEMBER BLEY: The one thing that has a



1 procedure in the control room that generally breaks a  
2 guy loose to do that and run it separate from the  
3 rest, and sometimes loading up the fire team takes  
4 people away from the operating staff, too. So I don't  
5 quite see it that way.

6 MEMBER STETKAR: And, Chris, when you say  
7 the fire takes it away, in some cases the procedures  
8 instruct the operators to actively go out and take  
9 away some of the things that they might need, which is  
10 different than the fire taking it away.

11 MR. COWDREY: This is, at least with our  
12 current plan, how the conflicts that might come up  
13 between procedures in the control room with fires,  
14 although I have a difficult time really coming up with  
15 an example of that. The command and control strategy  
16 will be an essential part of Recommendation 8. And  
17 that command and control strategy will be setting up  
18 the organization in a way that ensures that they are  
19 capable to make decisions. You can't predict  
20 everything that a fire is going to do. You can't  
21 prescribe a list of actions to work into an integrated  
22 framework of procedures that will address every  
23 possible fire that could ever occur. So what's really  
24 important is having a command and control organization  
25 set up to make those decisions, establish the

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1 priorities, and, if there is a conflict with a fire  
2 procedure telling operators to de-energize an entire  
3 train of equipment, then that decision can be made by  
4 the command and control organization to --

5 MEMBER STETKAR: I'm sorry. Isn't it  
6 better not to place the command and control people in  
7 that position in the middle of a fire? Isn't it  
8 better to have the guidance kind of worked out  
9 beforehand? What you're saying is, well, we'll leave  
10 it up to the people who are making the decisions  
11 because they're really smart; and, if there are  
12 conflicts, which you said, between the procedures,  
13 we'll let the really smart people make the decision in  
14 the midst of the fire.

15 MR. COWDREY: I think the command and  
16 control organization is going to need to be prepared  
17 to take actions to restore safety functions when one  
18 set of equipment is going away. If there's a fire in  
19 a room, whether or not you take away the equipment  
20 yourself, you might as well count on it going away and  
21 start shifting your strategies to address the  
22 accident, you know.

23 MEMBER STETKAR: I guess I just don't  
24 really understand the push back that we're hearing  
25 from the staff about why --

1 CHAIR SKILLMAN: Chris, if I could, let me  
2 step in just for a second. Both of the gentlemen that  
3 spoke are ex-operators, as am I. And there are others  
4 around this table. And I think, in many cases, people  
5 would rather have a small leak than have a fire in a  
6 plant because you know where that small leak is going  
7 to take you. Not that you want one, but, if you had  
8 a choice, you'd rather have a small leak and bring the  
9 plant down quietly and safely than have a fire that  
10 has a mind of its own.

11 I think what you're hearing ACRS telling  
12 you is, if you're going to talk about transitions,  
13 there needs to be an individual bullet for fire  
14 procedures because they really have a mind of their  
15 own and they really need to be woven into transitions  
16 because they are so peculiar. They're different than  
17 having an intruder. They're different than a security  
18 event, similar but different. And the reason is  
19 because they can take out equipment very quietly, and  
20 you may not know it's gone; or when you deploy your  
21 firefighting teams you deplete your reserves in your  
22 control room, and those individuals may go out and, on  
23 purpose, remove equipment that you need for what could  
24 be the emergency SAMG.

25 So I think what you're hearing us say is

1 we would like to see the fire procedures on a  
2 standalone line as part of your attack on  
3 Recommendation 8. The fire procedures are different,  
4 and they need to be considered.

5 MEMBER STETKAR: Chris, I think what  
6 you're hearing, and Dick said it, especially the  
7 second half of what he said, I'll grant you don't know  
8 what equipment the fire is going to take out, much as  
9 if you had a steam leak in the plant you don't know  
10 what instrumentation the steam might affect. So a  
11 symptom-based set of procedures for basic plant  
12 functions should address all of those types of issues.  
13 And I'll grant you can't and probably shouldn't,  
14 certainly shouldn't try to write procedures issue  
15 specific.

16 However, there are strategies that are  
17 developed in the current fire procedures at many  
18 plants, active intervention strategies that instruct  
19 people to actively go out and de-energize equipment  
20 for example or realign systems because of some pre-  
21 determined vision of what is a safe shutdown pathway.  
22 And those are the issues, for example, in my personal  
23 opinion, that need this type of coordination because,  
24 on the one hand, you may have one person sitting in  
25 the control room looking at functions following a set

1 of guidelines and procedures and, on the other hand,  
2 another person in the control room instructing people  
3 to go turn off things. And sometimes when you turn  
4 off things, they don't come back. And that's the  
5 larger concern, at least from my own personal  
6 perspective, in terms of integrating the fire  
7 guidance. Not so much, you know, firefighting in a  
8 particular location or trying to anticipate what might  
9 be damaged by the fire because that is a very specific  
10 issue, but integrating plant response guidance in  
11 terms of instructions to actively and, in particular,  
12 go out and turn things off or intervene and  
13 reconfigure systems because of a predefined notion of  
14 what is the safe response to this particular fire.  
15 And that's the part where I think it does dovetail  
16 into this.

17 MEMBER BLEY: I'll try another piece to  
18 that. The place that, for me, it fits is, you know,  
19 for alarms and things, you have alarm response  
20 procedures and you have other sorts of procedures that  
21 call on the operators, but they can usually put those  
22 aside while they're doing the emergency procedures.  
23 But a fire won't let you do that. And a fire,  
24 predictively or depending on how it's organized at the  
25 plant, takes one of the board operators away from the

1 activity for some amount of time, and that, in itself,  
2 organizationally, can cause a problem. And there are  
3 a few fire events you can look at to see what that  
4 leads to. The way these are used in the context of  
5 the other procedures worked out ahead is the place,  
6 for me, that's most important. Enough said by me.

7 CHAIR SKILLMAN: Members, any more  
8 comments? Chris, please proceed. Thank you.

9 MR. COWDREY: So as we talked about, in  
10 the procedure integration, we want to make sure we  
11 establish regulations for a comprehensive strategy for  
12 severe accident mitigation. So procedures that we're  
13 looking at so far for establishing those transitions  
14 and ensuring there's no dead-end for operation TSC  
15 staff when they're working through procedures and  
16 guidelines during a severe accident. Those procedures  
17 that we've looked at so far are the EOPs, SAMGs, the  
18 EDMGs, the FLEX guidelines. Spent fuel emergency  
19 procedures are being developed into the SAMGs by the  
20 industry, and then we also worked in those emergency  
21 procedures for when EOPs are no longer applicable,  
22 those shutdown modes, low modes, and cool-down modes.

23 CHAIR SKILLMAN: Let me ask you a brief  
24 question. I'm on your page nine of your regulatory  
25 basis. It's your paragraph 3.4. And you identify the

1 EOPs, the SAMGs, and the EDMGs, but the final sentence  
2 on that page is, "All four sets of procedures will be  
3 relied upon by operators and engineers responding to  
4 an event similar to that at Fukushima Dai-ichi." How  
5 did you get to four from three? What are the four  
6 items that you were anticipating?

7 MR. COWDREY: The fourth item is  
8 anticipating the FLEX guidelines. I'll take a look at  
9 that paragraph and see --

10 CHAIR SKILLMAN: Okay, thank you.

11 MR. COWDREY: So, as I mentioned, these  
12 sets of procedures have all been developed through  
13 various initiatives. So those various initiatives  
14 developed different types of procedures, so no one has  
15 ever gone through and taken a comprehensive overall  
16 look at ensuring there's an integrated framework and  
17 integrated strategy for an accident mitigation as it  
18 progresses past design basis assumptions.

19 So that's the initial effort for  
20 Recommendation 8. We'll go ahead and go to our next  
21 slide and where it specifically talked about the SAMGs  
22 and what is being done with SAMGs to ensure they're  
23 enhanced and integrated under that structure.

24 As you know, there's no current regulatory  
25 requirement for SAMGs. They exist as a result of an

1 industry initiative that was initiated back in the  
2 early 90s. So we've got two steps to take with the  
3 SAMGs and Recommendation 8. First is to establish a  
4 regulatory requirement for the SAMGs, and the second  
5 is to upgrade and enhance the SAMGs to ensure that  
6 lessons learned from Fukushima and other industry  
7 research are incorporated into the SAMGs going  
8 forward.

9 MEMBER BLEY: Have you delved into them  
10 much, or you're just getting organized to --

11 MR. COWDREY: Well, the process that we're  
12 using, that's being used to upgrade the SAMGs is EPRI  
13 develops the technical basis report, so that was  
14 developed originally back in the early 90s and it was  
15 used by the Owners Groups to develop their generic  
16 SAMGs off of that. So EPRI has gone through and done  
17 their first revision to the TBR, and that's very  
18 recently been --

19 MEMBER BLEY: Is that published, or is  
20 that still --

21 MR. COWDREY: Very recently published.  
22 The second --

23 MR. BEALL: Yes, it is out for public  
24 comment, public availability, and then we have it in,  
25 apparently, too, on our web sites.



1           MEMBER BLEY: The thing I wanted to ask  
2           you, if you're done looking at it, is when this idea  
3           of first began, they really were, the first versions  
4           were guidelines, suggested strategies, things to think  
5           about, things to work with the vendor and others and  
6           figure out what to do next. They seem, my opinion,  
7           the ones I've looked at recently seem to have evolved  
8           into something much more akin to procedures, and I  
9           wonder if that's your impression of them.

10           MR. BEALL: Are you talking about the TBRs  
11           or the generic SAMGs?

12           MEMBER BLEY: The SAMGs, the individual  
13           SAMGs at plants which look a lot like the generic  
14           SAMGs, from what I've seen.

15           MR. COWDREY: You're asking if they are  
16           procedures --

17           MEMBER BLEY: Yes. To me, they're  
18           beginning to look more like procedures.

19           MR. COWDREY: More like a continuous use  
20           procedure.

21           MEMBER BLEY: Yes.

22           MR. COWDREY: They haven't developed the  
23           next revision of the SAMGs yet, but TBRs --

24           MEMBER BLEY: I mean the ones that are out  
25           there right now based on the old guidelines.

1                   MR. COWDREY: Based on the old guidelines,  
2 I think, you know, there's an up-front diagnosis  
3 that's fairly proceduralized, fairly step by step.  
4 But for the rest, I think that, generally, high-level  
5 guidelines and kind of the high-level actions that go  
6 to address restoring safety functions --

7                   MEMBER BLEY: Maybe we'll hear from  
8 industry at some later meeting. You know, my memory  
9 of when all this started, the idea of the guidelines  
10 was then to have the broader expertise outside of the  
11 control room, including links to vendors and others  
12 available to really come up on the fly with ways to  
13 deal with a very unusual situation. If they really  
14 are evolving into procedures, my question, ought they  
15 not be in the control room? Why are they outside the  
16 control room? Some of the EOPs now have links that  
17 shoot you to the SAMGs. I'm just curious about that  
18 and what you guys think or if you've gotten far enough  
19 to even be thinking about that. I know it hasn't been  
20 the NRC's job to look at these up until now.

21                  MR. COWDREY: There's different approaches  
22 through the different technologies for how the SAMGs  
23 are implemented and who's making the decisions.  
24 That's all going to be part of the process of  
25 evaluating as we go through . . .

1           MR. MCHALE: And I guess I could add I  
2 think the goal of where we understand the Owners  
3 Groups are going is to the Pressurized Water Reactors,  
4 to standardize among the vendor types there and the  
5 boilers. And then, eventually, the next generation  
6 would be a common approach that would be the same for  
7 all of it. So it's an evolutionary process. The  
8 first thing was the technical basis report and then to  
9 develop the generic SAMGs for the reactor types. So  
10 I think we're pretty early in that process to know  
11 what that final, what the final state looks like, but  
12 the goal eventually is to have it a fairly common  
13 approach for everyone.

14           MR. BEALL: We'll have a much better idea  
15 of that process. Like Jack said, the TBRs are done.  
16 They're working currently on the generic SAMGs per  
17 reactor type. And so when we get to the proposal  
18 stage, which will be next year, we'll have a better  
19 idea. The industry will come back to us in a meeting  
20 and show us what the generic SAMGs look like. They've  
21 already asked us that, said that they were going to do  
22 that. And so then we can take that information and  
23 incorporate that in our proposal.

24           MR. MCHALE: Our understanding initially,  
25 in May of 2011, when we did the Temporary Instruction

1 inspection, and I think one of the conclusions was  
2 that all the plants had SAMGs, but the different  
3 levels of procedural controls and how they were being  
4 trained, there was a lot of variety in there. I think  
5 the conclusions were that everyone had them or thought  
6 they could implement them, but there was a lot more  
7 variability, and part of the goal of this is to take  
8 that out and make it more of a standard approach for  
9 everyone.

10 MEMBER STETKAR: But -- and I know the  
11 Owners Groups, but you mentioned the BWRs and the PWRs  
12 are now trying to consolidate things. And some of the  
13 stuff I've read, and I've not studied the SAMGs so I  
14 don't know specifics, but some of the stuff I've read  
15 anecdotally seems to indicate that there is somewhat  
16 of a different philosophy. And what Dennis was  
17 talking about that some, I don't know whether it's all  
18 boilers but at least some boilers the SAMGs are in the  
19 control room. The shift supervisor, indeed, is in  
20 charge of the SAMGs, whereas in the PWRs it seems to  
21 be more the TSC --

22 MR. MCHALE: That's vendor type --

23 MEMBER STETKAR: Now, the question that I  
24 have is you mentioned eventually the goal is to get  
25 things more consistent. What's -- is that goal part

1 of this effort? The thing I'm thinking about is take  
2 a site, for example, that has a boiler and a  
3 Pressurized Water Reactor under the same organization  
4 on the same site. I could name one. Let's call it  
5 Salem and Hope Creek, for example. If there are  
6 different philosophies in terms of this command and  
7 control for that site, it seems that that ought to be  
8 addressed now. So I'm hoping -- you're nodding. I'm  
9 hoping that that's part of this --

10 MR. MCHALE: Yes, yes, that's --

11 MEMBER STETKAR: -- organization have that  
12 sort of discrepancy.

13 MR. BEALL: It's actually mentioned in the  
14 reg basis about different vendor types on the same  
15 site.

16 MEMBER STETKAR: Is it? Okay. I  
17 understand. Thanks.

18 MR. MCHALE: And that should happen within  
19 the time frame of this --

20 MEMBER STETKAR: Of this, yes. So it's  
21 not something that's getting kicked down the street.

22 MR. MCHALE: Aligning the vendor groups is  
23 this year and so --

24 MEMBER STETKAR: Well, I understood that  
25 aligning all of the Pressurized Water Reactor people

1 under the same sort of umbrella --

2 MR. MCHALE: So the next step would be  
3 within the time . . .

4 MR. COWDREY: All right. So we've  
5 discussed the process which we're using to enhance the  
6 SAMGs.

7 MEMBER RAY: One thing. The third bullet  
8 I've been pondering. What is meant by that? No prior  
9 approval of licensee-specific guidance.

10 MR. COWDREY: We're not going to be asking  
11 the licensees to send in their integrated procedures,  
12 entire set of integrated procedures for our approval.  
13 The intent that we have is to take a look at the SAMG,  
14 generic SAMG guidelines, and evaluate them and endorse  
15 them, as appropriate, through some type of regulatory  
16 guidance, whether it be a reg guide or a letter,  
17 something to that effect, along with any industry  
18 guidance that's developed by NEI or the industry,  
19 again, take a look at that and, where appropriate,  
20 endorse portions of that in our reg guide or whatever  
21 document we end up using. So that's the plan going  
22 forward to ensure that procedures --

23 MEMBER RAY: The word prior means prior to  
24 implementing?

25 MR. COWDREY: Right.

1                   MEMBER RAY: And is this inspectible? I  
2 understand --

3                   MR. COWDREY: Sure is.

4                   MEMBER RAY: -- the intent is that it be,  
5 but I'm just wondering, if somebody changes it, what  
6 does that mean? They have to submit it out -- I'm at  
7 a loss to distinguish between how this is treated in  
8 the world from existing operating procedures, if at  
9 all.

10                  MR. MCHALE: I don't think that it  
11 probably would be treated a whole lot -- I mean,  
12 licensees, for their current EOPs, they control them  
13 with their change process and, you know, we do  
14 inspections and we look at those activities and  
15 compare the bases. And if there are issues, you know,  
16 it could result in a finding order. But I think that  
17 would be the same here. The regulatory guidance would  
18 be to follow the industry guidelines. Also, each  
19 station is going to have its procedural control  
20 activities that they need to follow, so we would  
21 inspect to see that they're following their own  
22 procedures and that their procedures align with the  
23 established industry guidelines. But what we would  
24 not expect is that the NRC would review in detail the  
25 entire set of SAMGs for each individual plant and

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1 approve them prior to their --

2 MEMBER RAY: But, again, I'm trying to  
3 figure out, is this statement here different than for  
4 EOPs? Is there prior approval of licensee-specific  
5 EOP?

6 MR. MCHALE: No, but I think maybe, to  
7 step back, historically, I think, the EOPs came after  
8 the Three Mile Island accident, and there was, I  
9 think, at least to our understanding, there was a  
10 little bit more direct NRC approval of EOPs for each  
11 station. This follows more along the lines of, right  
12 now, like the EDMGs, which came out of the B.5.b.  
13 There's a regulatory requirement that you have them,  
14 but we did not necessarily review and approve each one  
15 of those prior to being developed. So I think this  
16 model is a little bit more aligned with the treatment  
17 of that, you know, the beyond design basis for the  
18 B.5.b issues, if you will. And as opposed to the --

19 MEMBER RAY: Okay. Well, I was just  
20 trying to figure out what the heck this statement was  
21 meant to say, as opposed to when you say, no, I'm not  
22 going to do something, it's like there's an  
23 expectation, well, normally, I would do it, but, no,  
24 I'm not going to do it. What's the "it?"

25 MR. MCHALE: The "it" is we did not expect



1       that we would approve each individual site's SAMGs as  
2       part of this. And I think it was stated because that  
3       question came up, so this is on there to answer that  
4       question.

5               MEMBER BLEY: I guess I just can't imagine  
6       everybody thinking you would do what you said you're  
7       not going to do. I mean, you don't really -- do you  
8       approve the EOPs now?

9               MR. MCHALE: No, no.

10              MEMBER BLEY: I didn't think so. I mean,  
11       they commit to do them before they operate.

12              MEMBER STETKAR: It's a license commitment  
13       in the tech specs that they've got to have --

14              MEMBER BLEY: And you inspect to make sure  
15       they've got them, but you don't approve them.

16              MR. MCHALE: But I think there was some  
17       internal discussions even here about what degree of  
18       prior approval, if any, would there be for SAMGs  
19       because, right now, it's a totally voluntary industry  
20       initiative and, okay, now we're going to make it  
21       regulatory. Well, this is a preemptive answer to,  
22       okay, so you're going to change it to a regulation,  
23       what degree of oversight approval --

24              MEMBER BLEY: So this is really saying  
25       you're going to do with this combined set what you

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1 currently do with EOPs?

2 MR. MCHALE: Yes. And -- yes.

3 MEMBER RAY: All right. It's a mysterious  
4 statement, but I guess we understand it.

5 CHAIR SKILLMAN: Let's proceed, please.

6 MS. SHOOP: Hi. This is Undine Shoop.  
7 I'm the Chief of the Health Physics and Human Factors  
8 Branch. Actually, after TMI, we sent inspection teams  
9 of human factors engineers out to the sites to look at  
10 their procedures. So we did not ask them to submit  
11 them for review and approval, but we did actually go  
12 out and do an on-site inspection. So that's why this  
13 isn't --

14 MEMBER STETKAR: Did you do that for each  
15 site, every site?

16 MS. SHOOP: It's my understanding that we  
17 did.

18 MEMBER RAY: Well, I don't consider that  
19 to have been prior approval, but maybe that's what you  
20 would call it. I was there at the time, so I  
21 understand it.

22 MS. SHOOP: I don't consider that to be  
23 prior approval, but that's why we wanted to put that  
24 in there, so people would understand that we were not  
25 planning to do what we did after Three Mile Island.

1                   MEMBER RAY: Maybe it best to say -- I  
2                   don't know. Okay.

3                   MEMBER BLEY: I thought I understood. I'm  
4                   not sure I do anymore.

5                   CHAIR SKILLMAN: I will say that, if you  
6                   were at the site at that time period that the lady  
7                   just spoke of, it surely felt like that was some form  
8                   of approval. And I think it's fair to say the  
9                   emergency plan is approved. And when the emergency  
10                  plan is approved, the EALs are thereby approved. That  
11                  is the contract between the operator, the NRC, and the  
12                  community. And the procedures are embedded in the  
13                  EALs. So --

14                  MEMBER RAY: Wait a minute. That's way  
15                  too confusing, Dick.

16                  CHAIR SKILLMAN: What I'm trying to say is  
17                  that there is an issue of tacit approval in the  
18                  current emergency planning construct.

19                  MEMBER RAY: All right, then. I don't buy  
20                  the idea of tacit approval, but let's accept it for  
21                  the moment. Is this not going to have tacit approval  
22                  in that sense?

23                  CHAIR SKILLMAN: If the SAMGs are  
24                  identified beyond the general emergency, no. But if  
25                  the SAMGs are included as part of the EALs, an action

1 out of the EAL, I think there is some form of NRC  
2 approval. I do.

3 MEMBER RAY: Okay. I disagree. We don't  
4 -- go ahead, though. I can't make sense out of that.  
5 All right.

6 MEMBER SCHULTZ: In the fourth bullet, the  
7 term potential NRC endorsement, what's the basis for  
8 phrasing it that way, given that we're working toward  
9 the determination of the regulatory basis? Is it that  
10 we don't know exactly what the standards are going to  
11 be; therefore, we're calling it potential, something  
12 that might be done?

13 MR. COWDREY: That's correct. We're going  
14 to take a look at the Owners Groups' guidelines as  
15 they come in. We're still discussing how we'll go  
16 about endorsing them, what avenue to take. But our  
17 intention right now is to take a look at those Owners  
18 Groups' generic SAMGs and endorse them through some  
19 type of regulatory guidance.

20 MEMBER STETKAR: Have you -- and it's okay  
21 to say no. Have you received any indications from the  
22 Owners Groups that they would prefer that avenue, that  
23 they get an NRC formal endorsement of their guidance?  
24 Is initiative coming from that direction, or are you  
25 just in a discussion phase?

1 MR. MCHALE: We're in the discussion  
2 phase. In fact, we're working on setting up our next  
3 public meeting to get exactly to that issue --

4 MEMBER STETKAR: Thanks.

5 MR. MCHALE: -- and find out what the  
6 appropriate form of regulatory endorsement . . .

7 CHAIR SKILLMAN: Please let the record  
8 show that Mike Corradini has joined us. Please  
9 proceed. John?

10 MEMBER STETKAR: No, that's fine.

11 CHAIR SKILLMAN: Go ahead.

12 MR. COWDREY: Okay. So once the  
13 improvements to the SAMGs have been conducted, we'll  
14 have the opportunity to perform follow-on inspections  
15 to ensure SAMGs adhere to the standards that were  
16 developed by the Owners Groups and adhere to their own  
17 site-specific standards, take a look at that overall  
18 integration and make sure there is no dead ends, that  
19 the transitions between procedures are satisfactory,  
20 and then take a look at the training plans and full-  
21 scale exercises and interpret the full-scale  
22 exercises.

23 MEMBER RAY: Is there any thought about  
24 the capability of the simulator to support these  
25 exercises, or is that not --

1 MR. COWDREY: I'd like to defer that  
2 question. We've got a specific bullet on that --

3 MEMBER RAY: Sure, sure.

4 MR. COWDREY: Taking a look at the second  
5 major aspect of Recommendation 8, the command and  
6 control strategy, the ability of the organization to  
7 manage our severe accident ability, communicate and  
8 respond to changes and make decisions. We'd like to  
9 see a fully-defined and documented command and control  
10 structure, and that consists of many different things:  
11 roles and responsibilities are clearly defined and  
12 ensure that all jobs have personnel identified to  
13 perform them; lines of communication are established  
14 to ensure everybody knows who they report to; some  
15 kind of a central decision-making authority for a  
16 multi-unit site. So that talks about what we were  
17 talking about earlier.

18 If there's any fleet-level interaction  
19 that's planned by a specific licensee, there should be  
20 some clearly-defined roles there, if they're relying  
21 on fleet resources. And then --

22 MEMBER BLEY: Can you expand on that a  
23 little, what you mean by fleet?

24 MR. COWDREY: If there's any decision-  
25 making that's going to be done at the fleet level, if

1       there's going to be a fleet person for a multi-unit  
2       site or something like that, that would obviously need  
3       to be worked in. It's going to be fairly, you know,  
4       this command and control structure is going to be  
5       fairly different from site to site due to the various  
6       designs and the various sites, the way they're set up  
7       --

8               MEMBER BLEY: And by fleet, it would be  
9       perhaps all the sites within a single --

10              MR. MCHALE: Corporate office. Corporate  
11       office, local site.

12              MEMBER BLEY: Okay. That's what I  
13       thought.

14              CHAIR SKILLMAN: Let me ask you a  
15       question, please. The way the recommendation is  
16       written from the NTTF document, under 8.1 is specify  
17       clear command and control strategies for their  
18       implementation. Now, your first bullet is structure.  
19       Would you explain the difference between strategy and  
20       structure?

21              MR. COWDREY: Command and control  
22       structure, just specifically how the organization will  
23       align themselves for a severe accident --

24              CHAIR SKILLMAN: And where do you talk  
25       about strategy?

1 MR. COWDREY: I could say structure and  
2 strategy, yes.

3 CHAIR SKILLMAN: I certainly do not agree  
4 with that.

5 MR. COWDREY: Okay.

6 CHAIR SKILLMAN: A strategy is --

7 MR. COWDREY: No, I understand --

8 CHAIR SKILLMAN: -- how you approach the  
9 events that are coming at you. The structure is the  
10 organization for decision-making --

11 MR. COWDREY: -- to the absence of the  
12 word strategy. So, certainly, that needs to be part  
13 of it.

14 CHAIR SKILLMAN: Will there be more in  
15 your presentation about strategy?

16 MR. COWDREY: You know, all we're prepared  
17 to discuss right now is what I've discussed on command  
18 and control organization.

19 CHAIR SKILLMAN: Is that something, is  
20 that something --

21 MR. COWDREY: It's something that --

22 CHAIR SKILLMAN: -- to a future meeting?

23 MR. COWDREY: The SAMG guidelines that are  
24 being developed are discussed in command and control  
25 and where the decision-making is going to be made in



1 their generic SAMGs. So we will evaluate that. I  
2 understand that, within the PWR world, there's various  
3 ways of approaching command and control, whether a  
4 decision is made in the control room or the TSC. All  
5 of that will be ironed out as we work through the  
6 process of improving the SAMGs.

7 MR. BEALL: This is a draft regulatory  
8 basis. When we get to the proposed rule phase, a lot  
9 of those issues about structure versus strategy will  
10 have to be fleshed out and put into the proposed  
11 rulemaking language at the time. So a lot of those  
12 things, the details that you're talking about, will be  
13 presented to this committee at that time.

14 CHAIR SKILLMAN: So I hear you say in the  
15 future we'll talk about it.

16 MR. BEALL: Yes, sir.

17 MR. BENOWITZ: Also, one other thing, if  
18 I may. Howard Benowitz with OGC. I'm also part of  
19 the working group. And I don't have the SRM in front  
20 of us, but the working group received its direction  
21 not from NTTF but from the Commission. And I believe,  
22 and sorry I don't have the language in front of me,  
23 but I know in some of the recommendations the language  
24 that was in the SRM was not exactly the same as what  
25 was in the task force report and recommendation. So

1 I don't know, since I don't have the language in front  
2 of me, I don't know if that explains the difference,  
3 but it might be something if we can pull up that  
4 language.

5 CHAIR SKILLMAN: Yes, could we pull it up  
6 and look at it and find out?

7 MR. MCHALE: I have it here. For the SRM,  
8 it says that, again, recommend as a near-term action:  
9 undertake regulatory action to resolve Near-Term Task  
10 Force Recommendations 8.1 through 8.4. It says issue  
11 an Advanced Notice of Proposed Rulemaking to engage  
12 stakeholders and rulemaking activities associated with  
13 the methodology for integration of on-site emergency  
14 response processes, procedures, training, and  
15 exercises. And then the second bullet is interact  
16 with stakeholders to inform the modification of EOP  
17 generic technical guidelines, to include guidance for  
18 SAMGs and EDMGs in an integrated manner and to clarify  
19 command and control issues, as appropriate. So it's  
20 --

21 CHAIR SKILLMAN: Different still.

22 MR. MCHALE: Different still.

23 CHAIR SKILLMAN: Okay, thank you. Please  
24 proceed.

25 MR. COWDREY: The final aspect that we're,

1 at least initially, talking about for command and  
2 control is the FLEX mobilization. It's going to  
3 require a significant amount of logistics and  
4 coordination, so we'd like to see that outlined in the  
5 command and control structure.

6 As we spoke about earlier, we're  
7 attempting to identify where the ultimate decision-  
8 making authority should lie for severe accidents and  
9 clearly identify that individual and give consideration  
10 to those sites that have multi-unit and various  
11 technology multi-unit units. So take that into  
12 account, to develop some kind of regulations or  
13 requirements for qualifications for that individual.  
14 So we're still in the process of determining what  
15 their qualification level should be, and we'll talk  
16 more about that qualification later in the training  
17 session.

18 MEMBER SCHULTZ: Is that what various  
19 technologies means?

20 MR. COWDREY: That's what various  
21 technologies --

22 MEMBER SCHULTZ: Different types of,  
23 potentially, types of reactors, multiple units, and so  
24 forth?

25 MR. MCHALE: Yes, sir.

1 MEMBER SCHULTZ: Okay.

2 MEMBER STETKAR: And, in principle, this  
3 also applies to new plants coming online, so Vogtle  
4 for example.

5 MR. COWDREY: Yes, yes, because you apply  
6 for this.

7 MEMBER STETKAR: Thanks.

8 MR. COWDREY: And, finally, we'd like to  
9 see a standardized approach to these command and  
10 control structures, to the extent possible, to ensure  
11 that outside organizations have the ability to match  
12 up their capabilities to something that's familiar to  
13 them from site to site. So to the extent possible,  
14 obviously, it will be different from site to site, but  
15 terminology, big-picture structures should be somewhat  
16 standardized.

17 CHAIR SKILLMAN: Would you say more,  
18 please, on outside organizations, what you mean by  
19 that?

20 MR. COWDREY: The NRC, the state and local  
21 organizations, so that they understand from plant to  
22 plant FEMA. You know, if everybody is using the same  
23 terminology, they understand who the decision-makers  
24 are and who they need to interact with.

25 CHAIR SKILLMAN: Okay. Should we

1 conclude, when you, in your first bullet, clearly  
2 define and document a command and control structure,  
3 that also includes decision-makers off-site from state  
4 and local? Is that what you mean?

5 MR. COWDREY: For this particular  
6 Recommendation 8 effort, obviously, we're focused on  
7 on-site emergency response capabilities. So our  
8 aspect of the command and control piece is for the on-  
9 site and specifically the accident mitigation piece.  
10 Now, those are the decision-makers for mitigating the  
11 accident, preventing core damage.

12 CHAIR SKILLMAN: Thank you.

13 MEMBER BROWN: Is it expected that you  
14 would have other, in combating some particular  
15 situation, that other utilities might contribute  
16 resources, and doesn't that really bid to the  
17 direction that you'd like to have the approaches or at  
18 least the strategies to be pretty much aligned with  
19 each other, so not just the terminology. I'm  
20 realizing that plants are different, but at least the  
21 approaches to doing things. This is the last bullet  
22 on the list almost. That almost sounded hopeful, as  
23 opposed to really being pushed.

24 MR. COWDREY: We're still working through  
25 the specifics of it. Certainly, if there's two sites

1 that are planning on providing support for each other  
2 in severe accidents, their command and control  
3 structure should work together. And it's a discussion  
4 we've had ongoing throughout the entire effort so far  
5 is what the standardization of that will look like.  
6 It's still in the middle of the development phase and  
7 discussing exactly how that's going to work.

8 MR. MCHALE: If I could just add one  
9 thing. You had mentioned utilities and mutual  
10 assistance. I know that the industry is moving  
11 towards these regional support centers, so that does  
12 make this an important element there because that  
13 support center could reach out to large geographic  
14 areas of a country. So it's something I think that  
15 needs to be pushed as part of this because having that  
16 somewhat common framework will support those  
17 resources, as well.

18 MEMBER BROWN: Okay, thank you.

19 MR. COWDREY: Okay. Next slide. All  
20 right. So any time you have a major industry event,  
21 that leads to lessons learned, and those lessons  
22 learned translate to new training requirements. So  
23 the third major aspect of Recommendation 8 is the  
24 training and qualifications piece to severe accidents.  
25 Our approach is to take a look at the systems approach

1 to training of Rule 50.120 and add programs for  
2 personnel relied upon for implementing those severe  
3 accident strategies: emergency directors, TSC  
4 directors, maintenance personnel. They already have  
5 their own 50.120 rule, but I'm sure that those  
6 knowledges and abilities are worked into their  
7 training plans and ensure that you've identified all  
8 the job tasks that will be required to be performed to  
9 combat a severe accident and develop knowledge and  
10 abilities and training objectives off of those job  
11 task requirements.

12 And then develop, as we talked about  
13 earlier, develop the qualifications for the ultimate  
14 decision-maker. Should that person have an SRO  
15 license? Should that person have a certification? On  
16 a multi-unit site with different vendor types, do you  
17 have a license on one and a certification on another?  
18 Those types of questions we're still looking for some  
19 industry opinions on. We've discussed it internally  
20 and have various opinions, so we're still in the  
21 process of deciding what that qualification should  
22 look like.

23 We're taking a look at the operator  
24 licensing initial qualification training, taking a  
25 look at Part 55 and the preliminary language to expand

1 some of the requirements to include severe accident,  
2 understanding of the severe accident procedures so  
3 that SRO and RO written examinations and job  
4 performance measures can be implemented on severe  
5 accidents, so KAs can be developed, knowledge and  
6 abilities can be developed out of a next look at the  
7 KA catalogs, and then develop JPMs and written  
8 examination questions off of those for licensed  
9 operators.

10 Now, we've stated throughout the process  
11 that we maintain that EOPs should remain the primary  
12 focus of the operator licensing programs --

13 CHAIR SKILLMAN: Excuse me. Please  
14 finish.

15 MR. COWDREY: We would hate to lose the  
16 ability to address a steam generator tube rupture  
17 because we've spent too much time training on severe  
18 accidents. So the focus, again, we think should  
19 remain primarily for operator licensing in the EOPs.

20 CHAIR SKILLMAN: Your second bullet,  
21 please. That term "ultimate decision-making  
22 authority" seems to carry substantial gravity in this  
23 discussion, and so far your discussion has been about  
24 basically on-site for the owner team responding to the  
25 event at hand. But it seems to me when you use the



1 term or when the staff uses the term "ultimate  
2 decision-making authority," you have begun the  
3 transition over into the people that actually accept  
4 the recommendation from the owner to implement that  
5 recommendation because your emergency response  
6 organization simply provides a recommendation. They  
7 do not implement the recommendation. They can take  
8 care of the issues at hand on site, but when they go  
9 to the PAR the decision belongs with either the state  
10 or the local authorities.

11 So when the plant is driven to a severe  
12 accident situation beyond design basis, whether you've  
13 moved into EDMGs or you're in SAMGs, you're probably  
14 at a general emergency. So you've gone as far as  
15 you're going to go in your EOPs, and a PAR has been  
16 made within 15 minutes if the organization is doing  
17 what it's supposed to do. Who then is the ultimate  
18 decision-making authority?

19 MR. COWDREY: Let me just be more specific  
20 about the ultimate decision-making authority for the  
21 purposes of Recommendation 8. That is the decision-  
22 making authority for the on-site activities, the  
23 activities designed to mitigate the accident and  
24 prevent or mitigate core damage. That's what  
25 Recommendation 8 is. There's Recommendation 9 and 10

1 that will focus on the EP program. We're attempting  
2 to maintain some functional separation between the  
3 two, although we understand that some of the same  
4 people will be doing those functions. But the  
5 ultimate decision-making authority for the purposes of  
6 accident mitigation is something we need to define,  
7 and it does not necessarily have to do with the EP  
8 plan. So who's going to make that decision to vent  
9 the containment? Who's going to make that decision to  
10 inject some water? Those types of decisions are who  
11 we're talking about here.

12 So, obviously, there's some relationships  
13 with Recommendation 9 and Recommendation 10 that we  
14 need to continue to work through. But to be more  
15 specific, we're talking about accident mitigation  
16 decision-making.

17 CHAIR SKILLMAN: Okay, thank you.

18 MEMBER RAY: You made the comment about  
19 what should have priority for training.

20 MR. COWDREY: I'm sorry?

21 MEMBER RAY: You made a comment about what  
22 needs to continue to have a priority for training  
23 time, EOPs or --

24 MR. COWDREY: Right.

25 MEMBER RAY: That implies to me that there

1 would be no increase in the pool of people who are  
2 engaged in training and operating the plant,  
3 basically. In other words, if there's only so much  
4 time in a day and you can only spend so much time on  
5 training because you've got to spend time on watch and  
6 do the other things that you have to do, so we can't  
7 afford to give too much emphasis to beyond design  
8 basis mitigation because that would just take away  
9 from the time that we need to spend on, a limited, a  
10 very limited time we have to spend on training on  
11 operating the plant.

12 How is this tension developed? I don't  
13 see how you can give any time, frankly, to SAMGs --  
14 I've done this a long time in my life -- without  
15 increasing the resource pool.

16 MR. COWDREY: When you're discussing the  
17 resource pool, you mean additional operators?

18 MEMBER RAY: Licensed operators and  
19 training staff.

20 MR. MCHALE: That may very well be the  
21 case that --

22 MEMBER RAY: Well, but, I mean, if we  
23 start off with the proposition that we really don't  
24 have time to spend on SAMGs without taking away from  
25 EOPs, and you certainly don't want to do that --

1 MR. COWDREY: I think there's, and I've  
2 been through -- I was a licensed operator. I know  
3 that every time that there's an event in the industry  
4 we're going to train on it. So the re-qual program  
5 and other training programs are obviously going to  
6 need to add some additional training capacity.  
7 There's little question of that. There's some up-  
8 front work to be done to develop a training plan, but  
9 the Recommendation 8 was clear as far as what, you  
10 know, it doesn't say you don't have to train on severe  
11 accidents, so we have to come up with a requirement  
12 for training on severe accidents. The impact on the  
13 licensees, we have a slide to discuss that later on in  
14 the presentation. We understand it's going to be,  
15 there's going to be an impact in terms of the training  
16 programs. There's a separate recommendation to  
17 evaluate staffing at the plant, so that's something we  
18 need to interact with going forward.

19 MEMBER RAY: All right. That's fine. It  
20 sounded like maybe we were committed already to not  
21 having that kind of an impact. And, frankly, I don't  
22 see how the heck you do this without putting more  
23 resources into the operator staffing and training.

24 MR. MCHALE: Maybe, again, we're operating  
25 off of the sound bite there. If EOPs are a primary

1 focus, I think what we're -- rather than saying we're  
2 precluding that this is going to take more resources  
3 and staff and training, I think that's probably part  
4 of it, but I think the real message here is that we  
5 don't want to do harm to the years of, you know, we  
6 have a lot of operating experience and training  
7 experience and training years invested on our  
8 currently-licensed operators that gives very good  
9 confidence that they know how to handle design basis  
10 events. And we just don't want to do something that  
11 dilutes that focus that we lose the performance that  
12 we've established over time.

13 MEMBER RAY: Yes, without question. But  
14 I'm just observing, and I guess that's what the  
15 purpose of this meeting is, that you're not going to  
16 get there without, therefore, having some increase in  
17 the staffing requirements. And I know for certainty  
18 that the industry is of the view that, you know, we're  
19 out of resources.

20 MR. COWDREY: If I implied in any way with  
21 that last bullet that we were expecting this to go  
22 through without any additional training resources,  
23 that was not my intention.

24 MEMBER RAY: Okay. I'm not just talking  
25 about training resources, you understand. I'm talking

1 about staffing.

2 MR. COWDREY: Right.

3 MR. MCHALE: And Recommendation 9 staffing  
4 study is --

5 MEMBER RAY: Okay, all right.

6 MR. MCHALE: -- to get at that specific  
7 point.

8 MR. WASEM: I'm Mike Wasem. I'm also a  
9 member of the working group. To clarify, some of the  
10 discussions that we've had at our meetings goes down  
11 two paths. And one is the licensed operators and what  
12 they do and what their piece in the SAMG part of it  
13 is. So looking at that, we thought that we needed the  
14 tie to the knowledge and abilities catalog to allow  
15 that to be tested on exams. We also recognize that  
16 there's going to be some increased training and  
17 qualification for these decision-makers. So those are  
18 the discussions that we had. Also, what kind of  
19 training is going to be required for them and what  
20 type of qualifications? Can we talk about whether  
21 these people have license? Do we make them active  
22 license, which, again, would cut into their required  
23 licensed operator training time?

24 So we're looking at both issues. The  
25 licensed operators in the daily running of the plant

1 need to know something about the SAMGs and whether we  
2 transfer from EOPs and SAMGs and that type of thing.  
3 So we have to cover that with the regulation. We're  
4 also looking at what kind of training is going to be  
5 required of the decision-makers.

6 MEMBER RAY: Well, we'll talk about that,  
7 too, but not today I guess. Thank you.

8 MEMBER CORRADINI: Can I ask a different  
9 question, just to follow up Harold, so I understand?  
10 So you said you were an SRO. So what, in your  
11 training now, what is the logic in the training  
12 regimen to decide what to do for emergency operating  
13 procedures? How is it done now? How might it change,  
14 given that you're going to start auditing?

15 MR. COWDREY: Now that we're going to  
16 start piloting?

17 MEMBER CORRADINI: Well, that you're going  
18 to look at, they're currently training on SAMGs, to  
19 some extent; isn't that --

20 MR. COWDREY: TI-184 determined that  
21 training is being conducted at all sites. This is  
22 very inconsistent as far as what's being conducted,  
23 the depths at which it's being conducted, what type of  
24 tabletop discussions or exercises are being done.  
25 It's very inconsistent throughout the industry, and I

1 think one major point is, you know, this isn't just  
2 licensed operators, obviously. This is everybody from  
3 the TSC staff down to the mechanical maintenance  
4 technicians who are out running hoses. So it's  
5 training throughout the entire organization. So using  
6 the systems approach to training and taking a look at  
7 every job task that needs to be done, going through  
8 the procedures, understanding every job task that  
9 needs to be done to work the integrated procedure path  
10 and identifying training requirements off of that,  
11 developing training objectives and training --

12 MEMBER CORRADINI: Okay. That's fine.  
13 But I guess you started with something maybe I  
14 assumed, and that's not true. So right now, in  
15 certain units around the country, there is training on  
16 the SAMGs now?

17 MR. COWDREY: Most have training programs  
18 on the SAMGs.

19 MEMBER CORRADINI: Has NRC just informally  
20 observed what it is now compared to what --

21 MR. COWDREY: Yes. Through TI-184, which  
22 is a temporary inspection, we went out after Fukushima  
23 and took a look at SAMGs, procedures, training  
24 programs, exercises.

25 MR. MCHALE: And I think, just to clarify,



1     you know, we are very intensive on the Part 55  
2     operator licensing and our initial exams. And,  
3     typically, you know, those are design basis based.  
4     And, typically, we'll go through the licensing  
5     process, and then the newly-licensed operators are  
6     trained by their utility on SAMGs. It's not part of  
7     the current Part 55 scope.

8             So they're trained and very EOP driven and  
9     they're examined by the NRC on that. And then,  
10    typically, after that initial license exam is when  
11    they are receiving the SAMG training that the utility  
12    is developing. You know, as Chris mentioned, there's  
13    a lot of variability in what that training is like.

14            MEMBER CORRADINI: So let me ask the  
15    question differently, and then you'll see -- because  
16    it kind of comes with, I think Harold asked earlier,  
17    so if I'm in Iowa at some plant and I'm worried about  
18    station blackout due to some sort of external event,  
19    I would train differently than if I'm in Florida or  
20    New England. So I'm assuming already now in the  
21    training the local site and what it might be  
22    challenged with are already in the training; is that  
23    correct?

24            MR. COWDREY: I don't know what we looked  
25    that specifically into it on --

1                   MEMBER CORRADINI: Certainly, if I'm  
2                   training, other than the fact that I have to worry  
3                   about special events, so I'm assuming now there's  
4                   training on ATWS, now there's training on station  
5                   blackouts, etcetera. And the overlay now from  
6                   Fukushima, at least the simple lesson learned is I  
7                   have external events that could be extreme, those are  
8                   probably site dependent. I'm curious already now if  
9                   there's training based on site location on those  
10                  external events.

11                 MR. COWDREY: As I said, I don't think TI-  
12                 184 took a look to that detail, and I certainly don't  
13                 have the perspective on that.

14                 MEMBER CORRADINI: All right.

15                 MEMBER STETKAR: Let me ask you one other  
16                 -- this is a subcommittee meeting. We can be a little  
17                 more freeform here. I'm a dinosaur, you know. I used  
18                 to be an SRO, but it was before you were born. You  
19                 obviously have more recent experience. One of the  
20                 things that gnaws at me a bit here is the notion of  
21                 the structure where you're characterizing licensed  
22                 operators in the control room. There's some gray area  
23                 between them and the decision-maker, and, because  
24                 those folks, the licensed operators in the control  
25                 room, only have to know that I need to push this

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1 button to start that pump, they're the implementer, I  
2 take direction blindly from those decision-makers  
3 because I've not been trained. They're really smart  
4 people, and they understand what's going on. See,  
5 that was the philosophy back in the 70s when I was  
6 trained to be an SRO. I'm just a poor licensed  
7 reactor operator. I've had a high school education.  
8 I've passed my licensed operator exam. I was taught  
9 the six-factor formula. I don't need to know all  
10 about this nuclear physics stuff. I don't even have  
11 to know how to boil water because other smart people  
12 have written the procedures and the guidance. They  
13 tell me what to do. All I need to know is what button  
14 to push.

15 Are we subtly getting into that situation  
16 again in the regime of severe accidents? Because  
17 having those guys who push the button kind of  
18 understand the fundamental basis of what might be  
19 going on so that they can question that really smart  
20 guy could be important.

21 MR. COWDREY: Where I came from, the  
22 decisions were made in the control room in the SAMG  
23 space.

24 MEMBER STETKAR: Okay.

25 MR. COWDREY: There's an internal

1 discussion going on as far as what the ultimate  
2 decision-maker, what type of qualifications that  
3 individual should have as far as site-specific  
4 technology understanding. The discussion is ongoing,  
5 and, you know, in my personal opinion, as a licensed  
6 operator, if I'm told by someone to do something at  
7 any time that I don't think is right, there's a path  
8 to go through to express your opinion that it's not  
9 the right path to take.

10 MEMBER STETKAR: Good. But, I mean, as  
11 part of that, you need to have some confidence as a  
12 licensed operator that you have enough understanding  
13 of the situation to question that authority, that  
14 you're not being an impediment to solving the problem.  
15 And without that knowledge, you know, there's a  
16 disincentive to question.

17 MR. COWDREY: No, I think that licensed  
18 operators will be a big part of the response to severe  
19 accident.

20 MEMBER SCHULTZ: Are the elements  
21 associated with the qualification and training  
22 associated with the decision-makers in the first  
23 bullet there, is that relegated to 10.2,  
24 Recommendation 10.2, command and control? And the  
25 reason I'm asking is that you have systematic approach

1 to training there, and, to me, it's elevated. That is  
2 to say, it's now being applied to emergency directors  
3 and TSC directors, and I think that is an elevation of  
4 the systematic approach to training.

5 My comment would be we ought not to forget  
6 that systematic approach to training includes an  
7 evaluation piece, as well as a definition of knowledge  
8 and skills required and so forth. And we've used, in  
9 that assessment approach for those positions, drills  
10 and exercises, and I would hope that, in moving  
11 forward, we're going to do something more than that in  
12 evaluating the training that they have, as well as the  
13 credentials that they have for their positions.

14 MR. COWDREY: In the area of conducting  
15 exercises?

16 MEMBER SCHULTZ: No, beyond the exercises,  
17 that the evaluation of the training will, in fact,  
18 other methodologies will be used in that training  
19 evaluation besides the drills and exercises or in  
20 addition to the drills and exercises.

21 MR. MCHALE: Because, again, like you  
22 said, to apply the last element of the systems  
23 approach is the evaluation and feedback to the  
24 training. So if this becomes part of the regulation  
25 that requires that approach, then it would imply the

1 evaluation. And I don't think we've worked out the  
2 details of what that --

3 MEMBER SCHULTZ: But you have it in the  
4 process. That's what I wanted to be sure. Thank you.

5 MEMBER BLEY: I'm going to back up just a  
6 little. I'm not trying to stay here until midnight.  
7 I think Jack said, but I'm not sure who. But I think  
8 I heard in that discussion of staffing that staffing  
9 was going to be considered as part of Recommendation  
10 9. And if that's what I heard, then I thought  
11 Recommendation 9 was sort of narrow on prolonged SBO.  
12 And the way I heard it, there's really a more  
13 generalized look at staffing that will be going on  
14 there. And if that's the case, how are we making sure  
15 that the linkage between the work you're doing and  
16 that work is really tied together? Because you  
17 haven't started to think about that quite yet, and it  
18 will certainly affect what goes on under that more  
19 general look at staffing.

20 MR. BEALL: Well, as part of the overall  
21 JLD and the way we handle all the different  
22 recommendations, the project managers do talk to each  
23 other. I personally attend some of the JLD staff  
24 meetings and hear the updates from the  
25 recommendations. And so, that way, and I hear my

1 status of Recommendation 8 also. So we are in  
2 communications with each other. You know, we try to  
3 make sure we understand what the other project  
4 managers are doing under the various recommendations.

5 MEMBER BLEY: And what the interfaces are  
6 --

7 MR. BEALL: Exactly right; yes, sir.

8 MS. HELTON: In addition to that -- this  
9 is Shana Helton. I'm the Chief of the Rulemaking  
10 Branch in NRR. Recommendation 9 has many different  
11 subparts, and right now staff is looking at  
12 Recommendation 9, 10, and 11, which parts of those  
13 might be considered in a longer-term effort. So  
14 that's all, you know, anything that involves a  
15 rulemaking is in our branch, actually; so it will be  
16 quite easy for Bob and his team to interface with  
17 those other efforts.

18 That said, there are other pieces of 9  
19 that are kind of pulled out, and I think now they're  
20 being considered for another Tier 2 type of activity.  
21 But as Bob alluded, we do try to keep in touch with  
22 each other and coordinate those activities.

23 Later on in the presentation, Bob and  
24 Chris are going to go through all the linkages that  
25 we've identified so far --

1 MEMBER BLEY: Oh, good. Okay.

2 MS. HELTON: -- other NTTF  
3 recommendations, and that certainly is something that  
4 we're trying to make sure that we have a good handle  
5 on because things are not set at the NTTF. The  
6 lessons learned report was a starting point. Since  
7 then, there have been several Commission papers and  
8 Commission direction. We've been active with  
9 stakeholders. We've gotten a lot of feedbacks from  
10 Congress even. So it's an evolving landscape, and it  
11 is a large effort to coordinate, and we're trying to  
12 stay on top of that.

13 MEMBER BLEY: Okay, thanks. Because we've  
14 been concerned about the linkages among these things,  
15 too.

16 CHAIR SKILLMAN: Let's proceed, please.

17 MR. COWDREY: All right. The final aspect  
18 of Recommendation 8, the exercise aspect. And we need  
19 to be able to observe the licensees demonstrate their  
20 proficiency in responding to a severe accident. So  
21 when we say exercises, we're talking very generally.  
22 We want to make sure we don't -- I mean, we're  
23 specifically talking about the biennial exercises.  
24 We're specifically talking about the quarterly drills.  
25 This is going to be a separate, as I mentioned



1 earlier, we're going to have a functional separation  
2 between the EP and the accident mitigation. So this  
3 will be a separate requirement for an exercise that  
4 could be addressed by expanding the biennial exercise  
5 or could be addressed by expanding the quarterly  
6 drills, or a separate exercise could be conducted. We  
7 anticipate most licensees will probably choose to  
8 expand a quarterly drill to meet the severe accident  
9 requirements.

10 MEMBER BLEY: Is watching over this or  
11 inspecting this fall strictly on the residents, and is  
12 all of this stuff going on here going to, what's that  
13 going to do to the load on the residents? Who's  
14 looking at that?

15 MR. COWDREY: I think we're, you know,  
16 very early on in the process here of the draft  
17 regulatory basis stuff. We've done initial  
18 discussions on the impact of the NRC for this  
19 regulation, but I don't think we've decided at that  
20 much detail as far as who's going to conduct the  
21 inspections. Certainly, we'll have an aspect of the  
22 resident and some aspect of operations, operator  
23 licensing, something to that effect.

24 MR. BEALL: There is a Recommendation 12.2  
25 that talks about training the resident inspectors in

1 the regions also on the improvements that we do for  
2 the SAMGs on severe accident procedures. So we're  
3 working with that project manager also.

4 MEMBER RAY: Well, if the drills, as asked  
5 earlier, involve off-site agencies, I don't see how  
6 you can possibly do it because, you know, they always  
7 want to get it done quickly, escalate immediately to  
8 a general emergency, because they're mostly focused on  
9 evacuation, that kind of stuff. They don't want the  
10 plant to be sitting there messing around with things  
11 that don't have any off-site consequences while they  
12 twiddle their thumbs hour after hour.

13 MR. COWDREY: Which is specifically why we  
14 want to make sure it's a separate requirement to  
15 ensure it doesn't have to be done during the biennial  
16 exercise. However it works from there, as long as  
17 we're getting an opportunity to observe licensees,  
18 implement their severe accident management guidelines  
19 and FLEX procedures, then we're meeting the goal of  
20 Recommendation 8.

21 So some discussion that we've had  
22 throughout the process so far is, you know, whether or  
23 not a full-scale exercise or some type of tabletop  
24 discussion is appropriate. It's our opinion that, you  
25 know, a tabletop exercise is just not going to get at

1 many of those sub-bullets you see there, observing the  
2 command and control, observing communications, those  
3 types of things. So really a full-scale exercise is  
4 what's needed to effectively demonstrate proficiency  
5 in this area.

6 We lined up, in the preliminary ruling, we  
7 lined up the periodicity of this drill to kind of near  
8 the periodicity of the EP rule for the purposes of  
9 ensuring, you know, that option is there to conduct  
10 these exercises in conjunction with the EP quarterly  
11 drills or exercises.

12 And, finally, to the point that was  
13 discussed earlier, simulator use during these  
14 exercises. Our expectation was to see that the  
15 simulator is utilized, to the extent possible, within  
16 the current capabilities. We should be able to adjust  
17 parameters, as necessary, to exercise the SAMGs to  
18 ensure that operators and TSC staff are required to  
19 make decisions within the SAMGs. So to that extent  
20 possible, the simulator should be used to do that.  
21 What we don't anticipate at this time is requiring  
22 that licensees develop a core melt scenario into their  
23 simulators to specifically simulate a severe accident  
24 and a core damage in place.

25 The second part, second half of the

1 discussion is on simulator fidelity. Obviously, if  
2 additional requirements come out for new  
3 instrumentation in the control room, then the new  
4 instrumentation needs to be in the simulator. There's  
5 no change to simulator fidelity for severe accidents.  
6 If there's a FLEX capability to hook up a portable  
7 diesel-driven pump and feed generators, well, that  
8 capability should be able to be simulated in the  
9 simulator.

10 So just to summarize, our intent is to  
11 ensure that licensees use the simulator to its current  
12 fullest extent possible when conducting these  
13 exercises.

14 MEMBER CORRADINI: So I want to repeat  
15 what you said at the end there so I get it right. So  
16 you don't want the simulators to have an add-on for  
17 severe accidents?

18 MR. COWDREY: No.

19 MEMBER CORRADINI: So you will simulate  
20 source terms and associated damage states how?

21 MR. COWDREY: That's still to be worked  
22 out, but an instructor or cues to the operators and  
23 TSC staff, those types of things that are used to  
24 force and simulate, force personnel to evaluate their  
25 situation within the procedures and make a decision,

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1 make those transition points that were lined up  
2 earlier in the integrated strategy, making sure we're  
3 exercising those aspects to the overall strategy. So  
4 it does not necessarily build in the core melt  
5 scenario into the simulator to have the simulator  
6 respond to that level of detail.

7 MEMBER CORRADINI: That part I understand.  
8 I guess I want to understand, so there's already a  
9 protocol used for things that the simulator can't do?

10 MR. COWDREY: Yes.

11 MEMBER CORRADINI: And that is you will  
12 say a certain region of the auxiliary building or  
13 whatever has certain temperatures or certain radiation  
14 levels that they have to then deal with from a  
15 procedural standpoint?

16 MR. COWDREY: Right.

17 CHAIR SKILLMAN: Would you please explain  
18 the acceptability of eight years versus two? Why  
19 wouldn't an exercise similar to the current biennials  
20 that, in some cases, go into SAMG territory be more  
21 appropriate than waiting eight? I'm thinking eight  
22 years, you could have individuals go through training,  
23 participate in the plant, and leave and never really  
24 understand how to take that plant into a protection  
25 mode for a very severe accident. It seems to me that

1 eight years is just too long.

2 MR. COWDREY: There's been a lot of  
3 internal discussion on, you know, the length in  
4 between these exercises. It's certainly still open  
5 for further discussion. The intent now is just to  
6 keep at least, in our current place in the rulemaking  
7 process the intent is to keep it somewhere within that  
8 eight-year cycle. So if we do it twice within that  
9 eight-year cycle, great. If once, we've got to come  
10 up with some kind of a justification for how often to  
11 do it. We haven't nailed down that exact  
12 justification yet. We need to discuss that. What we  
13 do want to do is make sure we don't do it so often  
14 that it's impacting the training organization and the  
15 EP organization, setting up the drills to a point  
16 where you're doing it every two years. But maybe  
17 something in between; I'm not sure. As I mentioned,  
18 this was just the initial discussion point. We  
19 started at the eight-year cycle.

20 MEMBER BLEY: These are exercises, in my  
21 opinion, to test the system and make sure the system  
22 has all the things you need to make it work. They  
23 aren't training. I mean, even if you did them every  
24 two years, they're not training because most of the  
25 people won't be there.

1 MR. MCHALE: If I can add to the training  
2 point, one of the things that we talked about was the  
3 re-qualification for licensed operators. And if we  
4 add this to the scope of that within Part 55, which is  
5 part of this, more job performance measure, limited  
6 task, perhaps a subject or written exam. So there  
7 would be training and examination evaluation on these  
8 topics, maybe just not in the large full-scale  
9 setting. So the intent would not to be to train  
10 someone and have them have to think about it for eight  
11 years until the next drill.

12 CHAIR SKILLMAN: What is in my mind is the  
13 benefit of quarterlies that might be surgical, where  
14 it's an all-hands, it's after hours, and you only  
15 focus on one piece. But in the course of the year,  
16 the entire organization has been brought to the  
17 intellectual front of an accident several times. Then  
18 the biennial is once every two years, where you  
19 exercise state, county, local, and your full ERO. But  
20 it seems to me that there's room in that scenario for  
21 there to be challenges to the SAMGs to where you're  
22 keeping the organization on its toes.

23 MR. BEALL: Our initial thoughts, though,  
24 were to, with the recent EP rule that came out, that  
25 set up a whole different cycle for eight years. That

1 was all new, and it stipulated different types of  
2 drills and exercises. So you wanted to utilize the  
3 regulations already out there that talks about an  
4 eight-year cycle for doing drills and exercises, so we  
5 wanted to just use the current regulations that were  
6 just recently put out and add this to one of the, as  
7 another one of the drills and exercises.

8 MR. COWDREY: And I think if you want to  
9 draw a parallel, you take a look at the 50.54(hh)(2)  
10 requirement within the current EP rule. That's once  
11 every cycle, so once every eight years you're  
12 exercising those EDMGs. So it's really no different  
13 here. How often do you exercise for a once in however  
14 often event? You know, it's still something we're  
15 trying to figure out, and we'll have those discussions  
16 with the industry and have those discussions  
17 internally and come up with the right answer.

18 CHAIR SKILLMAN: Well, very commonly, your  
19 planning an exercise takes you to a general. Surely,  
20 that should be only one time in a plant life, so that  
21 is really the front end of your SAMG.

22 Ladies and gentlemen, let me go around the  
23 table. Any comments, at this point?

24 I would like to propose a ten-minute break  
25 until ten minutes to three on that clock to give



1 everybody a chance to get maybe something to drink and  
2 walk out in the hallway if they wish, and let's come  
3 back in ten minutes.

4 (Whereupon, the foregoing matter went off  
5 the record at 2:34 p.m. and went back on  
6 the record at 2:47 p.m.)

7 CHAIR SKILLMAN: Ladies and gentlemen,  
8 let's come back to work. Bob, back to you, please.

9 MR. BEALL: Okay. Our next part, Chris is  
10 going to go over the rulemaking options that we have  
11 in the draft reg basis. Chris?

12 MR. COWDREY: Okay. So we considered  
13 several options on developing a way for Recommendation  
14 8 in terms of how to go about, how to best go about  
15 establishing new requirements in the area of severe  
16 accident mitigation and on-site emergency response.  
17 So just to summarize the four options that we  
18 considered: a new rule, a new regulatory requirement  
19 to address procedures, command and control, and  
20 exercises, and then take a look at that 50.120 to  
21 amend the current framework covering training. Other  
22 options were, basically, just several different  
23 combinations of a new requirement and additional  
24 guidance documents or just guidance documents. But in  
25 the end, we decided that option number one, a new rule

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1 for procedures in command and control, a new  
2 requirement for exercises specific to severe  
3 accidents, and then amending the training requirement  
4 to add personnel to the 50.120 SAT rule.

5 MEMBER RAY: I spent a good bit of time  
6 trying to parse the differences between these things.  
7 I don't know, I consider myself an amateur lawyer, but  
8 I'll be damned if I can understand the differences  
9 between these things, what the difference between --

10 MR. COWDREY: The option two would be a  
11 completely new all-encompassing rule that has  
12 everything needed for Recommendation 8. It has the  
13 command and control, the procedures, and the training,  
14 just all new training requirements in the rules, not  
15 having the training requirement in the 50.120, just  
16 having a new training requirement in a new 50.54 (ii)  
17 (1) training on SAMGs. We decided we'd utilize the  
18 current framework, utilize the current process for  
19 staff-based training, and add our positions to that  
20 list.

21 MEMBER SHACK: That's slicing it pretty  
22 thin.

23 MEMBER RAY: I don't want to take up your  
24 time, but, man, oh, man, like I said, I went through  
25 this and I could not figure out.

1 MR. MCHALE: One is put new requirements  
2 next to where they already exist in the regulations,  
3 and option two is write one big new rule that's a one-  
4 stop-shop for all this. So you're right. It's all  
5 regulation, it's just a matter of packaging.

6 MR. COWDREY: And we did look at options  
7 where there was no regulation, just using additional  
8 regulatory guidance.

9 MEMBER RAY: Yes, that I could figure out.  
10 Okay, thanks.

11 CHAIR SKILLMAN: Please proceed. Let's  
12 go.

13 MR. COWDREY: Okay. So the Appendix  
14 Charlie of the draft reg basis has some very high-  
15 level, very preliminary ruling which kind of  
16 illustrates our thoughts at this point, as far as what  
17 the future of rule language could look like. It takes  
18 a look at 10 CFR 50.54 to add that new requirement for  
19 the integrated strategy and procedures for severe  
20 accidents and then the command and control structure  
21 for implementing those procedures.

22 The second bullet talks about the 50.120  
23 rule, which we've talked about often here today, and,  
24 basically, taking a look at the staff-based training  
25 rule and adding personnel for severe accidents. The

1 three Part 55 rules are basically setting up the  
2 regulations to allow operator licensing staff to  
3 develop KAs for operator licensing examinations and  
4 JPMS, written examinations of JPMS.

5 And the final is not a typo. It's just  
6 that we do not, at this time, know where that drill  
7 and exercise requirement is going to go. There's been  
8 internal discussions on where that belongs, whether it  
9 belongs in the current framework or a separate  
10 requirement. So that discussion is ongoing, but there  
11 will be a new exercise requirement for severe  
12 accidents. So we put this in the draft reg basis to  
13 kind of encourage some discussion from external  
14 stakeholders on what our current approach is going to  
15 be. Any questions on this?

16 Next slide. So as we mentioned earlier,  
17 this Recommendation 8 has a lot of brothers and  
18 sisters in the Near-Term Task Force recommendation,  
19 specifically 4, 7.1, 9, 10, the Tier 3 activity for  
20 accident monitoring instrumentation. All of these  
21 efforts need to be closely coordinated through the  
22 process that Bob talked about earlier: ensuring that  
23 we're participating in each other's meetings and  
24 understand the direction that these different  
25 recommendations are taking, looking for any conflicts

1 that are coming up in the guidance that's being  
2 developed through the various initiatives, determining  
3 where links between initiatives can be strengthened.  
4 And as we've discussed earlier, there's some of these  
5 recommendations, specifically 10.2, that has some  
6 overlap between what we're doing in Recommendation 8.

7 So next slide. So Recommendation 10.  
8 Basically, the EP long-term actions. Recommendation  
9 9, as Shana mentioned earlier, has some aspects to  
10 what EP is doing now and some parts of 9 have been  
11 transitioned or are being transitioned into a later  
12 tier. But those are the up-front actions, and  
13 Recommendation 10 is the long-term EP program  
14 evaluations.

15 Specifically, we want to look at 10.2  
16 because there is some overlap there between 10.2 and  
17 Recommendation 8. So go ahead and go to the next  
18 slide.

19 MEMBER RAY: So you say you're going to  
20 look at it, but are you going to talk about it anymore  
21 now, or are we done?

22 MR. MCHALE: Yes, the next slide.

23 MR. COWDREY: The next slide. So  
24 Recommendation 10.2 specifically is titled "Command  
25 and Control Structure and Qualifications for Beyond

1 Design Basis Events." So, obviously, there's some  
2 overlap there between 10.2 and what we're doing in  
3 Recommendation 8.

4 So 10.2, if you read it and read the  
5 accompanying SECY paper, 12-0095, you get the  
6 understanding that it kind of talks about both aspects  
7 of command and control, both the accident mitigation  
8 aspect and the EP organization aspect. So we're  
9 focused, obviously, on the accident mitigation piece  
10 and the on-site decisions to be made to prevent or  
11 mitigate core damage. And within that command and  
12 control strategy, we obviously have to identify the  
13 ultimate decision-making authority. That was  
14 mentioned in 10.2. We'll identify the ultimate  
15 decision-making authority for the purposes of accident  
16 mitigation.

17 MEMBER BLEY: Has there been any  
18 consideration of actually bringing that into what you  
19 guys are doing?

20 MR. COWDREY: I think there has been some  
21 discussion on that, but I think, as I mentioned, we  
22 want to maintain some functional separation between  
23 the EP and the accident mitigation functions. And  
24 10.2 has aspects of both. So what we can do is  
25 address the on-site, the accident mitigation portions

1 of 10.2, and that leaves the rest to be taken care of  
2 as a long-term action by the EP staff.

3 MEMBER RAY: That's very significant what  
4 you just said because that's not what I had read up  
5 until now.

6 MEMBER STETKAR: That's right. There's a  
7 quote in what we were given that says, quote, "The NRC  
8 anticipates that the guidance contained in NTTF  
9 Recommendation 10.2 would be addressed in its entirety  
10 within the rulemaking process associated with NTTF  
11 Recommendation 8." I was pretty happy to read that.  
12 I'm not hearing that today.

13 MR. COWDREY: No, that's correct. And I  
14 think the further we looked into it after we developed  
15 the draft reg basis, the further we looked into it,  
16 took a look at that SECY paper, re-read the Near-Term  
17 Task Force report, we realized there's elements of the  
18 EP -- because it was talking, when you look at just  
19 the terminology for the recommendation, it says  
20 command and control strategy for severe accidents,  
21 ultimate decision-making authority, qualifications for  
22 emergency directors, and use of licensed operators;  
23 and we're doing those four things. But what we're not  
24 doing is how is the organization interacting with  
25 FEMA. What is FEMA going to do? How are we

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1 interacting with state and local governments? Those  
2 parts which are in the SECY paper in more detail are  
3 aspects that we're not addressing in Recommendation 8  
4 so --

5 MEMBER BLEY: Is somebody working on that  
6 one now?

7 MR. COWDREY: That's a Tier 3 activity.

8 MR. BEALL: A Tier 3 item, so it's a long-  
9 term activity.

10 MEMBER BLEY: So when we get there, the  
11 parts that you worked on, it won't be addressed again?

12 MR. BEALL: Well, that's to be determined  
13 because we have to take this, if you start working on  
14 some of the aspects of 10.2, we have to take that to  
15 the JLD Steering Committee and recommend that we take  
16 on these certain aspects of this recommendation into  
17 Recommendation 8. And then, in a way, we recently did  
18 something similar to this when we incorporated  
19 Recommendation 7.2 to 7.4, I think it was, into  
20 Recommendation 4. That was presented to the JLD  
21 Steering Committee and then presented as part of a  
22 six-month update to the Commission that this was going  
23 to happen, that these aspects of Recommendation 7 will  
24 be part of now Recommendation 4. And if we decided to  
25 incorporate some of 10.2, we would follow the same

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1 sequence.

2 MEMBER RAY: Okay. Go ahead.

3 MEMBER BLEY: Well, I'm a little confused  
4 in that your draft regulatory basis recommendation, I  
5 would assume, got circulated around all the staff and  
6 was approved on the way up, which seems like it should  
7 have covered that process you're just talking about.

8 MR. BEALL: Well, that was a recent  
9 decision to try to incorporate Recommendation  
10 7.2 to 7.4 into Recommendation 4, but, being a draft  
11 regulatory basis, it only goes to a certain level  
12 inside the NRR. And so, in fact, it didn't go in  
13 front of the JLD Steering Committee . It will -- the  
14 final draft will go.

15 MR. MCHALE: But that statement in the  
16 draft regulatory basis, had we had to do that again,  
17 we would not have said exactly those words.

18 MEMBER BLEY: But you'd say something like  
19 on the slide.

20 MR. MCHALE: Exactly. Right. That's  
21 correct. That's a little too simplistic.

22 MEMBER RAY: Separate out in 10.2 the  
23 parts that have to do with accident mitigation from  
24 anything that has to do with off-site or emergency  
25 planning. Forget about that because, at the end of

1 the day, that's going to be somewhat like what has  
2 happened before. What's different here potentially,  
3 and I don't see how you don't incorporate it into  
4 Recommendation 8, is the ultimate decision authority  
5 on accident mitigation. So have you got authority,  
6 and are you going to incorporate that part of 10.2 in  
7 Recommendation 8?

8 MR. COWDREY: Certainly. Everything we  
9 talked about earlier we talked about --

10 MEMBER RAY: Okay. Because I keep hearing  
11 10.2 being talked about as if it was a hole that's in  
12 Tier 3, and we're not going to touch it until hell  
13 freezes over probably.

14 MR. BEALL: We are going to address those  
15 aspects that I spoke about earlier. So some of those  
16 aspects are contained in 10.2, so part of 10.2 will be  
17 addressed by 10.2, by Recommendation 8.

18 MEMBER RAY: You don't need any new  
19 approval to do that?

20 MR. COWDREY: When we take the draft  
21 regulatory basis to the JLD Steering Committee, if  
22 that's our decision to go ahead and incorporate that,  
23 then we will present that to the JLD Steering  
24 Committee as a recommendation that we take those  
25 certain aspects of 10.2 and incorporate them into

1 Recommendation 8.

2 MEMBER RAY: Because it's not going to be  
3 difficult for people to accept whatever you want when  
4 it comes to who talks to FEMA and that kind of stuff.  
5 The real issue is who decides which direction we're  
6 going in a severe accident ultimately.

7 MR. COWDREY: And I don't see how we could  
8 address Recommendation 8 without answering that  
9 question.

10 MEMBER RAY: I agree.

11 MR. COWDREY: So it's not necessarily  
12 taking parts out of 10.2. We're answering the  
13 question that Recommendation 8 told us to answer.

14 MEMBER RAY: Okay. But like everybody  
15 else here, we've been reading very carefully what's  
16 said about 10.2, and we each have different take  
17 aways, but what you're telling us is that, what's  
18 important, in my mind, is what you're saying you're  
19 going to incorporate from 10.2 into 8, which is who is  
20 the ultimate decision-maker when it comes to  
21 mitigation and what are the qualifications of those --

22 MR. BEALL: If the JLD Steering Committee  
23 agrees with us, that decision then, yes, we can  
24 incorporate that into Recommendation 8.

25 MEMBER RAY: Because I'm pretty sure we'd

1 --

2 MR. COWDREY: We're answering that  
3 question.

4 MR. BEALL: We're answering that question.  
5 He's right.

6 MR. COWDREY: We're answering that  
7 question one way or another because you don't develop  
8 a requirement for a command and control strategy --

9 MEMBER RAY: It's going to have an impact.

10 MR. COWDREY: -- that doesn't have that in  
11 it.

12 MEMBER RAY: It's that impact that I want  
13 to make sure we understand and are prepared to  
14 withstand the pushback when it comes because it's  
15 going to come.

16 MR. REED: This is Tim Reed from NRR. I'm  
17 the lead for the station blackout mitigation  
18 strategies rulemaking. Bob was mentioning a little  
19 bit of a combination of some of the NTTF. And in the  
20 case of Recommendation 4, both 4.1 and 4.2, as well as  
21 all of 7, they're being consolidated or we're actually  
22 requesting consolidation in the COM-SECY. So in this  
23 case, we went through the steering committee and we're  
24 going all the way to the Commission and asking for  
25 approval to consolidate and actually revise the

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1 schedule accordingly with COM-SECY-13-0002. That case  
2 is pretty high profile. Obviously, that's a pretty  
3 big order and rulemaking, as this committee is well  
4 aware. So in some cases, we go all the way to the  
5 top. In addition to notifying them in the status  
6 papers, we're actually requesting approval in that  
7 case. So I just want to make sure people were aware  
8 of that.

9 MR. COWDREY: In my opinion, there's  
10 redundancy between Recommendation 8 and portions of  
11 10.2. We are doing Recommendation 8, so it will be  
12 addressing those --

13 MEMBER RAY: Okay. But because 10.2 says  
14 what it does, I know people who believe that the  
15 question of who within licensee organizations and the  
16 so-called element decision-maker has been put in Tier  
17 3. I know that. And if that's not true, you better  
18 be clear about it.

19 MR. COWDREY: And I think the draft  
20 regulations is clear about it, and I think, if that's  
21 true, we should hear from the industry on the  
22 concerns.

23 MEMBER RAY: Okay. Because it's not going  
24 to be an easy thing for people to accept because it's  
25 got to be, 24 by 7, somebody has got to be --

1 MR. COWDREY: The industry responded to  
2 the ANPR question that specifically talked about that,  
3 as well. It provided a response, and it even  
4 specifically talked about potential requirements in  
5 terms of SRO certification or an SRO license. They  
6 were very general about it, but I know they're  
7 thinking about it. And, certainly, it's clear, I  
8 think, in the draft reg basis, as well. So there  
9 should be no surprise.

10 MEMBER RAY: But like I say, because 10.2  
11 is talked about as a Tier 3 item and it does  
12 explicitly include what it does, it's reasonable for  
13 people to think, oh, well, that's for another day.

14 MR. COWDREY: We'll take a look at any  
15 potential for clearing that out.

16 MEMBER RAY: Okay.

17 MEMBER BROWN: I want to make sure I  
18 understand the response to your question. Somebody  
19 started to say we will address command and control or  
20 ultimate decision authority, but we have to take that  
21 before the Joint Lessons Learned. He said we've got  
22 to -- Bill? Okay. I thought I had the right name,  
23 but I want to make sure. He stated that we had to go  
24 and get that agreement to move that or put it into  
25 Recommendation 8, and then you segued into, Chris

1 talked about, you know, we intend to address that  
2 anyway. You don't have to go to the JLD, the Joint  
3 Lessons Learned Directorate, in order to get agreement  
4 to come up with what severe accident mitigation, who's  
5 got charge. And I think that's what --

6 MR. BEALL: Well, that's part of  
7 Recommendation 8 also for on-site. So we're going to  
8 address it either way, but if we want to formally say  
9 that this also addresses 10.2 --

10 MEMBER BROWN: I'm not interested in 10  
11 point -- I'm interested in Recommendation 8, severe  
12 accident mitigation. Somebody is in charge. Somebody  
13 makes decisions, and I just want to make sure there  
14 wasn't going to be a deferral because of something  
15 else.

16 MEMBER RAY: Charlie, I'm just telling  
17 you, because of the language in 10.2, unless you say  
18 something clearer about it, it's going to get stuck in  
19 Tier 3. That's what I'm concerned about.

20 MEMBER BROWN: Yes, I understand that, and  
21 that's why I was worried about a little bit of a --

22 MEMBER RAY: Because people have been  
23 going back and forth on this, and I think they're  
24 talking past each other, and that's all I'm trying to  
25 . . .

1 MR. MCHALE: And recognizing that 10.2  
2 has, you know, the mention of FEMA and the broader  
3 implications which --

4 MEMBER RAY: Yes, who cares about that?

5 MR. MCHALE: -- that's a Tier 3, but we  
6 can't answer the mail on Recommendation 8 without  
7 talking about that issue --

8 MEMBER RAY: Okay. That's fine.

9 MR. MCHALE: -- because it says command  
10 and control and --

11 MEMBER RAY: You're on the record. I'll  
12 flip back to it later.

13 MR. BEALL: So like in the command and  
14 control back on slide seven, that's a lot of what's,  
15 it looks a lot like 10.2.

16 MEMBER SHACK: But you're talking about  
17 getting credit for 10.2 for these activities. You  
18 know, that's a different ball game. As far as doing  
19 this for task eight, you're here.

20 MR. BEALL: Right. Yes, sir.

21 MEMBER RAY: I'm just urging them to be  
22 more clear about it because people can read it the  
23 other way, which is, no, it's in 10.2, and that's in  
24 Tier 3.

25 MEMBER SHACK: Well, they're attempting to



1 formally solve the problem.

2 MEMBER RAY: We'll see.

3 MEMBER STETKAR: Well, the stuff that was  
4 in writing was pretty clear.

5 CHAIR SKILLMAN: I'm now more confused  
6 than I was because when I asked you, Chris, about off-  
7 site, you said, no, this is all about managing on-  
8 site.

9 MR. COWDREY: That's absolutely still the  
10 case.

11 CHAIR SKILLMAN: Okay. So when you asked  
12 Harold, when you answered Harold about 10.2, it seems  
13 to me that you were answering only in the context of  
14 ultimate decision-making for the on-site activities --

15 MR. COWDREY: That's correct.

16 CHAIR SKILLMAN: -- only.

17 MR. COWDREY: That's correct.

18 CHAIR SKILLMAN: And what Harold is  
19 talking about is this world of off-site.

20 MEMBER RAY: No. No, I'm dismissing off-  
21 site. I don't care about off-site.

22 MEMBER STETKAR: What happens off-site in  
23 the sense of FEMA, state and local --

24 CHAIR SKILLMAN: I'm concerned about state  
25 and local. FEMA --

1                   MEMBER RAY: No, that's emergency planning  
2                   stuff. I'm talking about accident mitigation and who  
3                   has the authority to do an irreversible mitigation  
4                   action on-site.

5                   MEMBER STETKAR: You're worried about  
6                   somebody sitting in Chicago making a decision for a  
7                   plant in Texas.

8                   MEMBER RAY: Or in Tokyo or Fukushima,  
9                   yes.

10                  MR. COWDREY: And that's what we're  
11                  concerned.

12                  MEMBER RAY: Yes.

13                  MR. COWDREY: So for purposes of accident  
14                  mitigation, we're going to address the ultimate  
15                  decision --

16                  MEMBER RAY: It's on the record.

17                  CHAIR SKILLMAN: Now, where do we talk  
18                  about the effectiveness of the on-site plan to the  
19                  off-site agencies? Because that is part of success  
20                  for SAMGs. The off-site has to respond.

21                  MR. COWDREY: That would be part of the EP  
22                  plan and, therefore, would be addressed via  
23                  Recommendation 10.

24                  CHAIR SKILLMAN: So 10.2 is really not  
25                  part of that?

1 MR. COWDREY: 10.2 would be part of 10,  
2 which would address that.

3 MR. MCHALE: And it's currently a Tier 3.

4 MR. COWDREY: Tier 3.

5 MEMBER RAY: And I understand that, and  
6 that's okay from where I --

7 CHAIR SKILLMAN: And that is the "S" in  
8 your some aspects on that slide? I think that that's  
9 what you're saying.

10 MR. BEALL: Second bullet is some aspects  
11 of some -- correct.

12 CHAIR SKILLMAN: I'm good. Okay. Let's  
13 proceed.

14 MR. COWDREY: All right. So the impact on  
15 licensees. Obviously, a significant amount of up-  
16 front work needs to be done to upgrade the plant's  
17 specific SAMGs, develop all the FLEX guidelines,  
18 ensure the overall strategy is all put together and  
19 there's no dead ends in the overall strategic approach  
20 to severe accident mitigation. Define the plant  
21 command and control structure, develop the exercise  
22 and training requirements, develop the scenarios for  
23 exercises, implement those training programs,  
24 implement the exercises. And we've got, through our  
25 ANPR, an industry-wide cost estimate of 16 million for

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1 procedural upgrades and 17 and three-quarter million  
2 for training program implementation. So, obviously,  
3 all of this work will require some additional manpower  
4 and some additional knowledge that some sites will  
5 have to add.

6 We want to meet our goals for  
7 Recommendation 8 but have the ruling, which should be  
8 implemented smoothly, so we want feedback from the  
9 industry on anything here that is going to be a  
10 conflict with current regulations or any issues they  
11 see with implementation up-front. That's the purpose  
12 of putting this in the draft reg basis where it,  
13 normally, at least in history, did not happen. So I  
14 don't know what else to say other than, yes, there  
15 will be additional training classes that will need to  
16 be developed by the licensees.

17 CHAIR SKILLMAN: Thank you. All right.

18 MR. COWDREY: So that's the end of that  
19 presentation. We're certainly interested in hearing  
20 any other questions you might have.

21 CHAIR SKILLMAN: Chris, Bob, Jack, thank  
22 you very much. Let's go around the table here.  
23 Comments? Charlie Brown, any comments?

24 MEMBER BROWN: Other than what I said  
25 before and supporting Harold's comments, no.

1 CHAIR SKILLMAN: Okay. Steve Schultz?

2 MEMBER SCHULTZ: I have no further  
3 comments. Thank you.

4 CHAIR SKILLMAN: Thank you. Dennis Bley?

5 MEMBER BLEY: Nothing really to add, other  
6 than I'm really pleased to see this work moving ahead.  
7 I think it's crucial, crucial work. This is really a  
8 big deal. It's going to be tough work, I think, to  
9 get it all the way through.

10 CHAIR SKILLMAN: Thank you. Sam?

11 MEMBER ARMIJO: No.

12 CHAIR SKILLMAN: John?

13 MEMBER STETKAR: Nothing.

14 CHAIR SKILLMAN: Mike?

15 MEMBER RYAN: Nothing.

16 CHAIR SKILLMAN: Harold?

17 MEMBER RAY: I would just say I was asked  
18 early on after the Near-Term Task Force  
19 recommendations came out what I thought was most  
20 important, and I said this because I think it was  
21 most, one of the most important lessons learned, not  
22 the only one for sure and, perhaps, not the most but  
23 one of the most important lessons learned out of  
24 Fukushima. But I think its implementation is going to  
25 be very difficult, and that's why I think being very

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1 clear about the direction that is being taken is  
2 important.

3 CHAIR SKILLMAN: Thank you. Bill?

4 MEMBER SHACK: No comments.

5 CHAIR SKILLMAN: Mike?

6 MEMBER CORRADINI: No comments.

7 CHAIR SKILLMAN: I understand we have some  
8 people on a bridgeline. Let's give opportunity to  
9 hear what they might have.

10 MR. LAPINSKY: This is George Lapinsky  
11 from NRR, Human Factors.

12 CHAIR SKILLMAN: Say again, please.

13 MR. LAPINSKY: George Lapinsky from NRR,  
14 Human Factors.

15 CHAIR SKILLMAN: George, good afternoon.  
16 Please go ahead.

17 MR. LAPINSKY: I have no additional  
18 comments. I've taken down a lot of notes. We need to  
19 clear up language and make it more understandable, but  
20 I think the presentations went very well. No more  
21 comments. Thank you.

22 CHAIR SKILLMAN: George, thank you very  
23 much.

24 MR. BEALL: George is one of my workgroup  
25 members.

1 CHAIR SKILLMAN: Say again, please.

2 MR. BEALL: George is one of my working  
3 group members.

4 CHAIR SKILLMAN: Understand, Bob. Thank  
5 you. Is there anybody else on the bridgeline, please?  
6 Hearing none, we can close the bridgeline. I thank  
7 you very much for a very important presentation today.  
8 I echo Harold's comments. When the Fukushima event  
9 began to be understood, my greatest concern was who  
10 was making the decisions, what was the interaction  
11 between the site and the home office. And some of us  
12 have felt that very same tension when in the middle of  
13 an event. Who really is able to make the decision?  
14 What are the qualifications of those who are making  
15 those decisions? How thorough is the plan that allows  
16 those decisions to be made? What are the consequences  
17 of someone who is making the decision or who feels  
18 that he or she has the authority to make the decision  
19 makes the decision but might not have the authority to  
20 do so? And I think these will all come out as you  
21 refine what you have been working on here.

22 So I thank you very much for a  
23 comprehensive presentation on a very important NTTF  
24 recommendation. Thank you.

25 MR. BEALL: Thank you. We appreciate the

1 time.

2 CHAIR SKILLMAN: With that, the meeting is  
3 adjourned.

4 (Whereupon, the foregoing matter was  
5 concluded at 3:14 p.m.)

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# **NTTF Recommendation 8**

## **Onsite Emergency Response Capabilities**

February 6, 2013

# Background

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- Commission direction:
  - Strengthen and integrate emergency operating procedures (EOPs), severe accident management guidelines (SAMGs), and extensive damage mitigation guidelines (EDMGs).
- The NRC published the Recommendation 8 Advanced Notice of Proposed Rulemaking (ANPR) on April 18, 2012
  - 18 comments received on the ANPR
- NRC staff has held public meetings on February 15, 2012, May 23, 2012, November 7, 2012 and January 31, 2013, to obtain public feedback on the proposed regulatory process and schedule.

## Recommendation 8 Status

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- The NRC published the Recommendation 8 draft Regulatory Basis on January 8, 2013.
  - 45 day comment period.
- The draft Regulatory Basis comment period ends February 22, 2013.
  - No comments have been received so far.
- The NRC staff expects to issue the final Regulatory Basis in May, 2013.

## Next Steps

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- The next rulemaking steps will be:
  - Issue the Proposed Rule in 4<sup>th</sup> quarter of 2014.
    - 75 day comment period.
    - Public meeting will be held during the comment period.
  - Issue the Final Rule in 3<sup>rd</sup> quarter of 2016.
  - The Proposed and Final Rule packages will be presented to the ACRS.
- Any new or revised guidance documents will be issued at the same time as the proposed and final rules.

# Regulatory Basis

## Procedure Integration

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- Comprehensive strategy for severe accident mitigation
- Integrated framework for procedures and guidelines
- Transitions between procedures clearly identified
  - EOPs
  - SAMGs
  - EDMGs and FLEX Guidelines
  - Other emergency procedures (Spent Fuel, Shutdown)
- Improvement and integration of emergency procedures for shutdown and cooled-down modes of operation



# Regulatory Basis

## Requirements for SAMGs

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- Regulatory requirement for SAMGs
- Generic SAMG upgrades by EPRI and owners groups
- No prior approval of licensee-specific guidelines
- Potential NRC endorsement of owners groups standards and other industry guidance documents where appropriate
- NRC inspections areas:
  - SAMGs adherence to owners groups standards and plant-specific format guidance
  - Accident mitigating procedure integration
  - Training plans and full-scale exercises

# Regulatory Basis

## Command and Control

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- Clearly defined and documented Command and Control structure
  - Roles and responsibilities
  - Lines of communication
  - Multi-unit site considerations
  - Fleet level interaction
  - FLEX mobilization
- Ultimate decision making authority for severe accidents
  - Clearly identified decision maker for severe accident mitigation
  - Consideration given to sites with various technologies
  - Qualification requirements
- Standardized approach to allow outside organizations to align capabilities

# Regulatory Basis

## Training and Qualifications

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- Systems approach to training (SAT) programs for personnel relied upon to implement strategies
  - Emergency Directors
  - TSC directors
  - TSC staff
  - Maintenance and support personnel
- Qualifications for the ultimate decision making authority
  - Senior reactor operator (SRO) license (active, previous)
  - SRO Certification
  - Plant or technology specific
- Operator licensing initial and requalification training
- EOPs remain primary focus of operator licensing programs



# Regulatory Basis Exercises

- Demonstrate proficiency in response to severe accident scenarios
- Full-scale exercises designed to evaluate and improve the following:
  - Procedures and guidelines
  - Command and control
  - Communications
  - Personnel knowledge and abilities
- Table-top exercises insufficient for this evaluation
- Periodicity not to exceed eight years
- Simulator fidelity and utilization

# Regulatory Basis

## Rulemaking Options

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- **Option 1:** New regulatory requirements to address procedures, command and control, and exercises; amend current regulatory framework covering training
- **Option 2:** New onsite emergency response capability rule that includes all requirements for procedures, command and control, training, and exercises
- **Option 3:** New regulatory guidance documents and generic communications with corresponding industry commitments
- **Option 4:** New procedures rule; guidance documents and industry commitments to address command and control structure and a training and exercise program

# Regulatory Basis

## Preliminary Rulemaking Language

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- 10 CFR 50.54 - Conditions of licenses
- 10 CFR 50.120 - Training and qualification of nuclear power plant personnel
- 10 CFR 55.41 - Written examination: Operators
- 10 CFR 55.43 - Written examination: Senior operators
- 10 CFR 55.45 - Operating Tests
- 10 CFR 50.XX - Drill and exercise requirements

# Regulatory Basis

## Other NTTF Recommendations

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- NTTF Recommendation 4 – Station Blackout (SBO) and Mitigating Strategies Rulemaking
- NTTF Recommendation 7.1 – Spent Fuel Pool Instrumentation
- NTTF Recommendation 9 – Emergency Plan Regulations for SBO and Multiunit Events
- NTTF Recommendation 10 – Additional EP Topics for Prolonged SBO and Multiunit Events (long-term evaluation)
- NTTF Tier 3 Activity (Advisory Committee on Reactor Safeguards Recommendation 2) – Accident Monitoring Instrumentation

# Regulatory Basis

## NTTF Recommendation 10

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- NTTF Recommendation 10.1 – Protective Equipment Requirements for Emergency Responders
- NTTF Recommendation 10.2 – Command and Control Structure and Qualifications for Beyond Design Basis Events
- NTTF Recommendation 10.3 – Evaluation of ERDS



# Regulatory Basis

## NTTF Recommendation 10.2

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- NTTF Recommendation 10.2 - Command and Control Structure and Qualifications for Beyond Design Basis Events
  - Command and control for accident mitigation and EP organization
  - Identification of ultimate decision making authority
  - Qualifications for Emergency Directors
  - Use of licensed operators in the TSC

# Regulatory Basis

## NTTF Recommendation 10.2

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- Functional separation between EP function and accident mitigation function
- Some aspects of the NTTF Recommendation 10.2 are focused on the accident mitigation function
- Command and Control aspect of NTTF Recommendation 8 will address these aspects
- NTTF Recommendations 10.1, 10.3 and EP aspects of 10.2 will require further evaluation by EP staff

# Regulatory Basis

## Impact on Licensees

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- Upgrade plant-specific SAMGs
- Develop plant-specific supporting guidelines
- Ensure overall strategy is integrated, coherent, and comprehensive
- Define plant-specific command and control structure
- Develop additional training and exercise requirements
- Develop realistic, full-scale exercise scenarios
- Implement training programs and exercise plans
- Industry-wide cost estimates:
  - \$16 Million for procedure upgrades
  - \$17.75 Million for training program implementation



# NTTF Recommendation 8

## Questions

**AGENDA**  
**ADVISORY COMMITTEE ON REACTOR SAFEGUARDS**  
PLANT OPERATIONS AND FIRE PROTECTION SUBCOMMITTEE MEETING

**Rulemaking**  
**Near-Term Task Force Recommendation 8:**  
**Onsite Emergency Response Capabilities**

**ROCKVILLE, MARYLAND**  
**February 6, 2013**

Cognizant Staff Engineer/DFO: Mark L. Banks  
Email: [mark.banks@nrc.gov](mailto:mark.banks@nrc.gov)  
Phone #: (301) 415-3718

Topics	Presenters	Time
Opening Remarks	Dick Skillman, ACRS	1:00 pm – 1:05 pm
Introduction	Dr. Sher Bahadur, NRR	1:05 pm – 1:10 pm
Recommendation 8 Rulemaking Overview	Robert Beall, NRR	1:10 pm – 2:00 pm
Draft Regulatory Basis Overview	Chris Cowdrey, NRR	2:00 pm – 2:50 pm
Subcommittee Discussion	Dick Skillman, ACRS	2:50 pm – 3:30 pm
Adjourn	Dick Skillman, ACRS	3:30 pm

**NOTE:**

- During the meeting, 301-415-7360 should be used to contact anyone in the ACRS Office.
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- One (1) electronic copy of each presentation should be emailed to the Designated Federal Official 1 day before the meeting. If an electronic copy cannot be provided within this timeframe, presenters should provide the Designated Federal Official with a CD containing each presentation at least 30 minutes before the meeting.