

1 UNITED STATES OF AMERICA  
2 NUCLEAR REGULATORY COMMISSION  
3 OFFICE OF THE SECRETARY

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5 BRIEFING ON RISK-INFORMED PART 50, OPTION 3

6 \*\*\*

7 PUBLIC MEETING

8  
9 Nuclear Regulatory Commission  
10 One White Flint North  
11 11555 Rockville Pike  
12 Rockville, Maryland  
13 Tuesday, June 20, 2000

14 The Commission met in open session, pursuant to  
15 notice, at 1:30 p.m., the Honorable RICHARD A. MESERVE,  
16 Chairman of the Commission, presiding.

17 COMMISSIONERS PRESENT:

18 RICHARD A. MESERVE, Chairman of the Commission  
19 GRETA J. DICUS, Member of the Commission  
20 NILS J. DIAZ, Member of the Commission  
21 EDWARD McGAFFIGAN, JR., Member of the Commission  
22 JEFFREY S. MERRIFIELD, Member of the Commission

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24  
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- 1 STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:
- 2 KAREN D. CYR, General Counsel
- 3 ANNETTE L. VIETTI-COOK, Secretary
- 4 MARY DROUIN, Section Chief, PRA Branch, RES
- 5 THOMAS KING, Director, Division of Risk,
- 6 Analysis & Applications, RES
- 7 WILLIAM TRAVERS, EDO
- 8 ASHOK THADANI, Director, RES
- 9 CYNTHIA CARPENTER, Chief, Generic Issues,
- 10 Environmental, Financial, and Rulemaking Branch, NRR
- 11 RALPH BEEDLE, Senior VP & CNO, Nuclear Generation, NEI
- 12 JAMES RICCIO, Public Citizen
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[1:30 p.m.]

CHAIRMAN MESERVE: Good afternoon. On behalf of the Commission, I would like to welcome you to today's briefing concerning the NRC's efforts to risk-inform the technical bases of our reactor regulations. Of course, it is found in 10 CFR Part 50.

As I think everyone in the room probably knows, there have been a series of papers that the NRC staff has prepared for the Commission over the last several years dealing with the recommendations to the Commission concerning various options for risk-informing our regulations.

Earlier this year the Commission gave the staff the go ahead to proceed with a study on risk-informing the technical bases for our regulatory requirements for power reactors. This was Option 3 in a 1998 paper, and this is why there is a reference in the caption for this meeting that refers to Option 3.

About two months ago, the staff provided us with a status report on its Option 3 effort, including a draft document that established a framework, an analytical framework for carrying out the study. The staff is here to brief us today on its continuing work in this area. The staff has appropriately been seeking input from outside

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1 stakeholders, so there will be a second panel in which we  
2 will hear from the Nuclear Energy Institute and Public  
3 Citizen.

4 As I think all of you know, the task of  
5 risk-informing our regulations is a high priority one for  
6 the Commission and we very much welcome the opportunity for  
7 the briefing.

8 Let me turn to my colleagues and see if anyone has  
9 an opening statement.

10 COMMISSIONER DICUS: If I could just very briefly,  
11 Mr. Chairman, due to the razzing I was getting in the back  
12 room about my drinking jar, for the record, for my fellow  
13 Commissioners, for the record, this is grape-flavored  
14 Gatorade. Thank you.

15 CHAIRMAN MESERVE: I believe in trust but verify.  
16 [Laughter.]

17 COMMISSIONER DICUS: A clarification.

18 CHAIRMAN MESERVE: Dr. Travers, you may proceed.

19 DR. TRAVERS: Thank you very much. We are glad to  
20 be here this afternoon and give you a status report, Mr.  
21 Chairman, as you indicated on our efforts to develop some  
22 recommendations for potential risk-informed changes to the  
23 technical requirements in 10 CFR Part 50.

24 As you know, and have indicated, the work began  
25 late last year and is described in SECY-99-264. It was  
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1 formally approved, the approach was formally approved in the  
2 Commission's SRM to the staff of February 3rd, 2000. The  
3 work is being done under the principal leadership of the  
4 Office of Research with a lot of close coordination with the  
5 Office of Nuclear Reactor Regulation.

6 As you will hear today, progress has been made in  
7 developing and implementing an approach for the evaluation  
8 and prioritizing of work, and in evaluating an initial set  
9 of candidate requirements. This has involved extensive  
10 interactions with stakeholders, and has also resulted in a  
11 number of potential issues being identified which will  
12 require resolution. In fact, one of the main objectives of  
13 our briefing today is to ensure that the Commission is aware  
14 of these issues, including those that have been raised by  
15 stakeholders.

16 With me at the table today is Ashok Thadani,  
17 Director of the Office of Research; Mr. Tom King, who is the  
18 Director of Division of Risk Analysis and Applications in  
19 Research; Mary Drouin, who the Section Chief in the PRA  
20 Branch in Research; and Cindy Carpenter, who is the  
21 Cognizant Branch Chief in the Office of Nuclear Reactor  
22 Regulation. And what I would like to do now is turn the  
23 briefing over to Ashok Thadani.

24 MR. THADANI: Thank you, Bill. Good afternoon.  
25 May I have viewgraph number 2, please?

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1           The purpose of this briefing will be discuss the  
2 approach and the status of our activities under Option 3 to  
3 bring better safety focus to the regulation in 10 CFR Part  
4 50. While we made significant progress in moving forward in  
5 our feasibility studies, there are a number of important  
6 issues that we do want to highlight, and some of these  
7 issues would likely require policy decisions by the  
8 Commission. We will also briefly describe our communication  
9 and interactions with our stakeholders.

10           May I have viewgraph number 3, please?

11           PRA techniques are very powerful. They allow  
12 integrated evaluation of design and operations and, thus,  
13 afford us better understanding of safety implications of  
14 various transients and accidents, and, in particular, the  
15 interaction between hardware and humans. However, there  
16 remain limitations in methods and data, and, thus,  
17 uncertainties exist, as well as some gaps that preclude our  
18 ability to quantify some of the uncertainties.

19           It is important that we carefully consider these  
20 uncertainties and gaps in determining how we should maintain  
21 defense-in-depth consistent with our understanding of risk.  
22 Also, there are other issues that require considerable  
23 additional dialogue.

24           Let me briefly describe some of the key elements.  
25 The application of the safety goal subsidiary objectives of  
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1 core damage frequency and containment performance will  
2 result in requirements directed towards achieving the level  
3 of safety described in the safety goals. Defense-in-depth  
4 includes balancing prevention and mitigation, that is  
5 focusing on all barriers, cladding, reactor pressure  
6 boundary and containment.

7 In addition, we do need to consider the layer of  
8 defense-in-depth that relates to emergency planning should  
9 there be multiple barrier failures. For each barrier, PRAs  
10 can, in fact, provide very valuable insights in trying to  
11 understand the level of margins that one should attempt to  
12 maintain.

13 This approach that we are pursuing is what I call  
14 sort of a mixture of the rationalist and the structuralist  
15 approach that was described in the ACRS paper, but it is  
16 ensuring that the barriers are there, but using risk  
17 analysis to try and understand what level of margins one  
18 ought to maintain for each barrier.

19 So, notwithstanding the likely effectiveness of  
20 the emergency planning actions such as evacuation, we would  
21 propose that regulations not exclude consideration of  
22 scenarios which lead to significant releases due to  
23 containment failure. That is, major failures of containment  
24 at any time with damaged fuel would be an important  
25 component of the defense-in-depth philosophy.

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1 I am making a point only because this relates to  
2 what is characterized as large early releases. There are  
3 scenarios where one can get significant releases with late  
4 containment failure as well.

5 And the next issue that is important is in terms  
6 of the role of the backfit rule and adequate protection, we  
7 do need to consider several aspects. If adequate protection  
8 is the sole basis for revising regulations, and we get a  
9 hint of that from a recent letter from NEI, then there are  
10 some questions that come up that deserve careful thought.

11 One, how far do we go, since adequate protection  
12 basically means substantial compliance with existing  
13 regulations, how far would we go in terms of revising our  
14 regulations? Today we have regulations which are based on  
15 safety enhancements, dissipated transients without SCRAM,  
16 station blackout. These were developed and based on costs  
17 and benefits. If one were to revise regulations on the  
18 basis of adequate protection, what would we do about  
19 regulations which were developed as safety enhancements?

20 Now, our approach has not been to consider  
21 adequate protection only. As we said, we are utilizing the  
22 Commission's safety goal subsidiary objectives in defining  
23 how far we go. But this does then raise, with the approach  
24 that we are embarked on, there are still issues with that.  
25 For example, as you will hear later, that changes to 50.44,

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1 which is combustible gas control regulation, would lead to  
2 some potential safety enhancements, as well as significant  
3 burden reduction.

4       Should the enhancements that we believe  
5 appropriate if one were to utilize the subsidiary objectives  
6 thinking, should they be based on cost benefit  
7 considerations without including the cost savings from  
8 significant reductions in requirements under the same  
9 regulation, 50.44?

10       Finally, in terms of the PRA quality, there are  
11 two issues that I would like to highlight. PRA quality  
12 should clearly depend on the application. There is no  
13 question that if one is applying probabilistic risk analyses  
14 to assess importance of a small change that only impacts a  
15 very small part of the plant, a sequence, let's say, it  
16 doesn't mean that the whole plant PRA has to have some high  
17 quality. However, PRA quality becomes indeed a critical  
18 element, in my view, when the changes in regulations cut  
19 across systems, structures and components. That is, one is  
20 no longer talking about maybe or two sequences, we are  
21 talking about hundreds and thousands of sequences which are  
22 impacted by changes to structures, systems and components.

23       Now, Option 2 will result in categorization of the  
24 structures, systems and components, and Option 3, as part of  
25 the effort, will consider whether any requirements are

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1 necessary for the lowest safety significant category  
2 identified under Option 2. This clearly means that Options  
3 2 and 3 should be consistent and based on high quality  
4 analyses because they do cut across the whole plant.

5 The second item on PRA quality which I believe is  
6 important, needs to be highlighted, is to make sure that  
7 these studies do reflect whatever uncertainties there might  
8 be in these calculations. We need to understand the  
9 uncertainties to be, in fact, effective in developing the  
10 level of margins we are looking for, that is to better  
11 understand how to deal with the issue of defense-in-depth.

12 A high quality PRA is one that, in fact, fully  
13 displays these uncertainties as against what I call  
14 propagation of point analyses.

15 Now, next, Mary will go through some of the major  
16 activities we have had ongoing.

17 MS. DROUIN: May I have slide 4, please?

18 I am going to try and give you a brief overview of  
19 the scope and approach that we have taken on Option 3. In  
20 risk-informing Part 50, the emphasis has been on the  
21 individual technical requirements associated with each  
22 regulation. But the scope also includes related regulations  
23 and the supporting documents that are associated with it,  
24 the Regulatory Guides, the SRPs, Branch Technical Positions.  
25 The point being is that you cannot look at a regulation by

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1 itself is isolation. Regulations are intricately tied to  
2 other regulations and their implementing documents, and you  
3 have to look at those in a holistic manner.

4 In developing our approach, we have developed a  
5 framework, and this framework has blended, we feel, the  
6 principles of Reg. Guide 1.174, such as defense-in-depth,  
7 with the cornerstones that were established in the safe  
8 nuclear plant operation from the oversight program, so that  
9 we are having consistency with our risk-informed regulatory  
10 activities. In this way, since the framework is focused and  
11 uses these reactor cornerstones, it integrates guidelines  
12 for both defense-in-depth and safety margins, and it  
13 integrates in both a qualitative and a quantitative fashion.

14 The framework guidelines particularly for the  
15 defense-in-depth has promoted a balance between prevention  
16 and mitigation, so we are considering both accident --  
17 prevention of core damage and mitigation of the effects, and  
18 having a balance between those two concepts, not just  
19 focusing on one of them. And in looking at the safety  
20 margin, it recommends that best estimate calculations are  
21 performed with the margin as part of the acceptance  
22 criteria.

23 The framework also uses risk insights to  
24 generically address core damage prevention and containment  
25 performance, and, as Ashok related earlier, we are

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1 considering both early and late failures. In this manner,  
2 when we look at the framework, we feel the framework is  
3 risk-informed, it is not risk-based, and the quantitative  
4 risk insights are not the only input in the basis for  
5 identifying for risk alternatives. So, consequently, it  
6 blends and integrates the insights with traditional  
7 engineering practices.

8 As the risk-informed alternatives are developed,  
9 we are looking for opportunities to make them  
10 performance-based, and we will show you a few examples when  
11 we get to 50.44.

12 Last, when we take this framework, we are testing  
13 it. Our first test case, of course, is 50.44, but we are  
14 testing it against 50.46, the special treatment requirements  
15 and the PTS rule, pressurized thermal shock.

16 Can I have the next slide, please?

17 In looking at the work to date, there are numerous  
18 activities that are underway in Option 3. First, we have  
19 developed a framework that is risk-informing the regulations  
20 and their technical requirements. This framework was sent  
21 to the Commission in our April status report on Option 3.  
22 As part of the framework, we have developed criteria for  
23 initializing -- for initial screening and prioritization of  
24 the regulations. This is focused on whether the regulation  
25 dealt with accident prevention and mitigation, and, as a

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1 result of this effort, 50.44 and 50.46 were identified as  
2 high priority regulations to undertake.

3 Part of this screening prioritization is looking  
4 at the anticipated operational occurrences, and these were  
5 not identified as a high priority. These particular events  
6 are routine, they commonly occur. Plants are generally  
7 designed against them and we are not proposing to make any  
8 changes to the acceptance criteria associated with these  
9 events, events such as, for example, loss of feedwater, your  
10 transients.

11 We have received a letter from NEI to the  
12 Commission back in January, and it indicated general  
13 agreement, you know, with our prioritization in terms of  
14 identifying 50.44 and 50.46 as top priority candidates.

15 We have undertaken 50.44 in detail. This  
16 particular regulation addresses the concern of combustible  
17 gases in containment and their ability to challenge  
18 containment integrity, and we plan to send alternatives,  
19 risk-informed alternatives to the regulation, to the  
20 Commission by the end of August.

21 We have initiated review of 50.46. This  
22 particular regulation provides the acceptance criteria for  
23 the emergency core cooling systems, and it is intricately  
24 tied to the large LOCA design basis accident. This one is  
25 much more complex than 50.44. We got into 50.44 and saw the

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1 complexity with it, and nothing compared to when we get to  
2 50.46.

3 In regards to our work on special treatment  
4 requirements, we are going through the requirements, we are  
5 identifying places where we can potentially combine and  
6 simplify these requirements. Right now we are in the very  
7 early stages of this particular effort.

8 In looking at the results from the PRAs, we are  
9 also trying to identify where there may be potential holes  
10 in the regulations. So, we are looking at the results from  
11 the PRA and we are identifying risk-significant concerns  
12 that are not covered by the current regulations, and,  
13 therefore, identifying if there are any potential safety  
14 enhancements that may be warranted. And I will give you an  
15 example of one that we have identified with 50.44.

16 We are closely coordinated with Option 2. The two  
17 biggest common issues, again, is the PRA quality and the  
18 safety categorization with structures, systems and  
19 components.

20 Lastly, we have an ongoing parallel effort in  
21 risk-informing the pressurized thermal shock rule. The  
22 framework is also being applied to this effort, and the  
23 Commission should be receiving a paper on this work in the  
24 very near future.

25 Can I have the next slide, please?

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1           In looking at 50.44, again, 50.44 is our first  
2 test case in risk-informing a Part 50 regulation. In  
3 applying the framework and developing risk-informed  
4 alternatives, we have taken two approaches, and this two  
5 approach concept is the same thing we will be doing on 50.46  
6 in other regulations.

7           First, what we do is we look at the current  
8 requirements in the regulation, and then, using risk  
9 insights, we are determining if these are the most effective  
10 requirements in addressing the concern, determining if these  
11 requirements need to be modified, if they need to be  
12 eliminated, or perhaps even be enhanced. So, we start with  
13 the actual requirements in the regulation.

14           The second part of the approach is we start with a  
15 fresh look and determine if there are alternatives to  
16 address the concern, and this comes, looking as if we had no  
17 regulation, starting with a fresh piece of paper, and if we  
18 were going to write a risk-informed rule from scratch.

19           Either approach is very complex, and this  
20 complexity comes back to the point that you can't just look  
21 at a regulation in isolation. There are numerous related  
22 regulations and implementing documents, and sometimes it is  
23 in these where you start imposing other requirements. And I  
24 will try and give you some examples as I through 50.44.

25           As we start with 50.44, and if you start at a very

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1 high level, there are six basic requirements associated with  
2 50.44. The first, measuring hydrogen concentration, that is  
3 the actual requirement. Ensuring a mixed atmosphere.  
4 Controlling combustible gases after a LOCA, this is the  
5 recombiners. Inerting your Mark I and Mark II containments;  
6 having high point vents; and having hydrogen control systems  
7 for Mark IIIs and ice condensers, the igniters, to address  
8 your 75 percent metal-water reaction.

9 However, I can't just stop at that point, because  
10 if you look at, for example, how these requirements have  
11 been implemented and been met by the licensees, it is not  
12 quite so simple. And if I just look, for example, at the  
13 requirement of measuring hydrogen concentration, in meeting  
14 this requirement, licensees have installed safety grade  
15 continuous monitors. 50.44 does not say install safety  
16 grade continuous monitors. And you get to that requirement  
17 because of associated regulations and because of the  
18 implementing documents. So, when you go back again to  
19 risk-informed, you have to look at this, I call it the  
20 iceberg, and you have to look below the surface.

21 So, in developing the alternatives for 50.44, we  
22 are trying to use the most current research regarding  
23 hydrogen and hydrogen combustion. We plan on performing  
24 calculations to develop a more realistic hydrogen source  
25 term, and we are looking at risk insights to help us

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1 identify where the risk concerns are associated.

2 And on the slide, I have listed some examples of  
3 the technical considerations being examined. For example,  
4 we are considering eliminating the need for the safety  
5 classification of the hydrogen monitoring, eliminating the  
6 need for requirement for recombiners, but also requiring  
7 that the hydrogen control systems for the Mark IIIs and the  
8 ice condensers be operable during station blackout. PRAs  
9 and current research has identified this as a place of risk  
10 concern not currently covered by the regulation.

11 So I have given you kind of a very quick overview  
12 of 50.44. To get into the details would probably take a  
13 whole day, but just to give you a feel for the complexity of  
14 the process.

15 If I can go to the next slide.

16 In looking at the stakeholder interactions, we  
17 have implemented several different activities to ensure that  
18 we have stakeholder interaction. In fact, we have the  
19 February SRM from the Commission asking us to facilitate  
20 greater stakeholder involvement, and we hope that we have  
21 met request.

22 To date, we have held two major public workshops.  
23 They are well attended by the public. We had one last fall  
24 where we presented our plan and our approach, and we had  
25 another one this past February where we presented our

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1 framework and preliminary thoughts on 50.44. We plan to  
2 have another public workshop later on this year.

3 We have also held several public meetings. We had  
4 some in March and again in May of this year, and these have  
5 addressed the framework, 50.44 and 50.46, and these also  
6 have been well attended, and we have several more public  
7 meetings scheduled throughout the remaining of the year.

8 We have also created a website. On this website  
9 we place all our information. The website is also  
10 interactive, it allows the public to offer us comments.  
11 They can ask questions via the website. In addition,  
12 everything that we do place on the website, we put into the  
13 public document room, and we notice it for those people who  
14 do not have access to the Internet or don't have computers.

15 We have also received feedback from stakeholders.  
16 This feedback has included which regulations to risk-inform,  
17 comments on framework and overall general comments on the  
18 whole risk-informed regulatory process.

19 We have had several meetings with the ACRS. We  
20 presented our framework and we are scheduled to meet with  
21 them in detail next week just on 50.44.

22 And at this point I will turn it over to Mr. King.

23 MR. KING: All right. Thanks, Mary.

24 To complete the briefing, I want to talk about two  
25 things, one, where are we going from here? And, two, what

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1 are some of the potential issues coming down the road that  
2 the Commission is likely to be faced with?

3 If I could have slide 8, please?

4 Slide 8 briefly summarizes our future plans over  
5 the rest of this calendar year. What we are talking about,  
6 what you have heard Mary talk about, is work in progress.  
7 So, there are still activities underway in all of the areas,  
8 and the reports you get later this year will reflect an  
9 evolution or refinements that take place between now and  
10 then.

11 What we are doing in completing our work on 50.44  
12 and beginning on 50.46 and the pressurized thermal shock  
13 rule is we are using that feedback to help refine the  
14 framework document. We expect to finish our feasibility  
15 evaluation of 50.44 and provide recommendations to the  
16 Commission in August, as Mary had mentioned, but, also, in  
17 that paper, we would expect to include any policy issues  
18 associated with 50.44 and the framework in general, as well  
19 as provide a revised framework document that reflects this  
20 refinement that is taking place.

21 We are going to continue our work on the ECCS  
22 rule, 50.46. We plan a workshop in September of this year  
23 to discuss where we stand on that. I do want to note that  
24 we have been working closely with the owners groups,  
25 particularly which is led by Westinghouse owners group.

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1 They have been taking the initiative to look at 50.46 on  
2 their own, providing us with useful information. We have  
3 had several meetings with them. It has been a very  
4 cooperative, very productive effort, and I did want to make  
5 sure you are aware of that.

6 We owe another report to the Commission in  
7 December of this year, and that will include recommended  
8 priorities and schedule for any remaining evaluations.

9 Now, let me make a couple of important points  
10 about these activities this year. One, the recommendations  
11 that you are going to receive are going to address the  
12 feasibility of the proposed changes. They are not going to  
13 be a proposed rule, it is not going to be rulemaking plan.  
14 If the recommendations are approved by the Commission, then  
15 we would proceed into the next step of actually developing a  
16 rulemaking plan and proposed rule and regulatory analysis  
17 that goes along with that.

18 As Mary mentioned, based upon our experience so  
19 far, it takes a substantial amount of effort to track down  
20 all the interrelationships between the rules. She talked  
21 about 50.44, and we have to go down into the Reg. Guides and  
22 the Standard Review Plans. The interrelationships on 50.46  
23 are even more extensive and are going to require more  
24 coordination and integration than has taken place on 50.44.

25 Therefore, the December report will likely not be

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1 a complete effort on 50.46 and will likely be a partial  
2 report on where we stand on that particular rulemaking.  
3 Also, as Mary mentioned, the pressurized thermal shock rule  
4 work is proceeding in parallel. We would -- right now are  
5 scheduled late in 2001 to provide the Commission a  
6 recommendation on that. And we are also developing  
7 communications plans, in general, for the whole  
8 risk-informed regulation activity, but included in that will  
9 be our communications plans for dealing with the Option 3  
10 effort. And we owe the Commission our next update of the  
11 risk-informed regulation implementation plan in October, and  
12 we would expect to have the communications plan piece, at  
13 least the draft of that, in that next update.

14 If I could have slide 9, please.

15 On the final slide, we wanted to take the  
16 opportunity to provide early identification of issues that  
17 may be coming before the Commission as part of the Option 3  
18 effort. This slide lists them as policy and technical, but  
19 I think, clearly, the technical issues may also have  
20 elements of a policy nature and may need Commission  
21 attention as well. And I would expect all or most of these  
22 to be discussed in our August paper.

23 What I want to do is briefly summarize the  
24 questions related to each of the issues, recognizing that  
25 the issues are still being refined in preparation for the

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1 August paper. Let me start with the first two under policy,  
2 selective implementation and role of the backfit rule, and I  
3 will talk about these together because they are  
4 interrelated.

5 A ground rule for all the risk-informed activities  
6 has been that the alternatives developed would be voluntary  
7 on the industry. The industry could decide whether they  
8 want to go with a risk-informed alternative or stay with  
9 what they have today.

10 Selective implementation refers to how much  
11 flexibility should be allowed for licensees to voluntarily  
12 pick and choose among the risk-informed alternatives. This  
13 issue is discussed in SECY-98-300, the original SECY paper  
14 that proposed Options 2 and 3. And at that time the  
15 Commission said it was premature to address that issue until  
16 actual rulemakings had been proposed and stakeholder  
17 comments had been received.

18 However, I think we are at a point where we are  
19 intending to do a preliminary test of our recommendations  
20 against the backfit rule. We have to get into certain  
21 aspects of the selective implementation issue. Namely,  
22 should all the proposed changes within a rule be considered  
23 as a package, or should they be considered individually?

24 This approach will affect the outcome of the  
25 backfit analysis, but could also define how much flexibility

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1 licensees could have to select alternatives within rules or  
2 can they just select the rule as an entire package. In  
3 addition to the above, two additional considerations are  
4 related to the backfit issue. One, do all alternatives have  
5 to pass the backfit test? And, two, should backfit  
6 considerations include future plants, or should it be  
7 limited just to the current fleet of operating plants?

8 The third issue under policy, which we call  
9 application of risk-informed guidelines, Ashok talked on  
10 that issue in his discussion on slide 3, but it basically  
11 boils down to we are using the safety goal subsidiary  
12 objectives in laying out the risk-informed guidelines that  
13 we are applying. This means that as we go through and  
14 develop proposed alternatives or proposed changes for the  
15 Commission, these are directed toward achieving a level of  
16 safety defined in the safety goal policy, and will involve  
17 safety enhancements as well as reductions of unnecessary  
18 burden.

19 Technical issues, Ashok again talked about the  
20 long-term containment performance issue. We believe even  
21 though that is not tied to large early release frequency,  
22 which has been a measure that has been used previously in  
23 risk-informed regulation, we do believe it is important.  
24 Containment integrity is important in the long-term for  
25 things like protection of on-site personnel.

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1 We also are developing guidelines for  
2 defense-in-depth and safety margins. Defense-in-depth  
3 includes, as Ashok mentioned, a structuralist and a  
4 rationalist combination. It involves prevention and  
5 mitigation. We have assigned some risk guidelines to help  
6 define what level of prevention and mitigation we expect.  
7 And we are also working on other issues related to  
8 defense-in-depth like what is the role of the single failure  
9 criteria anymore and failures of passive components, which  
10 has been a longstanding open item in Appendix A of 10 CFR  
11 50.

12 Safety margins, we are taking an approach where we  
13 could expect to use best estimate analysis with the margin  
14 in the acceptance criteria and for treating uncertainties.  
15 and then risk guidelines themselves which are being applied  
16 to the framework.

17 And, as I said, all or most of these, we would  
18 expect to address in our August paper. With that, I will  
19 conclude the presentation.

20 CHAIRMAN MESERVE: Thank you very much.

21 Let me turn to my colleagues for questions.  
22 Commissioner Diaz.

23 COMMISSIONER DIAZ: Thank you, Mr. Chairman. I am  
24 pleased to see that the staff has confirmed their early  
25 suspicions that every rule is tied to practically every

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1 other rule. And I am glad that your previous statements  
2 have been confirmed, not surprisingly.

3 I believe that what Mr. King finally said, I think  
4 it comes down to the bottom line, and I am just going to  
5 make a quick point. I think these issues are all being put  
6 together. I think to me it is almost premature to start  
7 making comments or making commitments to it. And I really  
8 look forward to seeing the staff providing us additional  
9 information on all of these issues in a more specific and  
10 more in-depth fashion. And, therefore, I release you and I  
11 have no questions.

12 CHAIRMAN MESERVE: Commissioner McGaffigan.

13 COMMISSIONER McGAFFIGAN: I see Cindy Carpenter  
14 here, and she hasn't had a chance to talk, so I guess I will  
15 give her a chance. One of the points that the industry is  
16 going to make later is that they want to see progress on the  
17 South Texas project, the Option 2 work there.

18 MS. CARPENTER: Right.

19 COMMISSIONER McGAFFIGAN: And I know you reported  
20 in the press recently as to what the schedule was there.  
21 Could you just update as to what you think the schedule is  
22 for considering the South Texas project?

23 MS. CARPENTER: The staff is still looking at the  
24 schedule for South Texas, as well as the schedule for Option  
25 2, which is risk-informing the special treatment

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1 requirements. We know that South Texas is in today and  
2 tomorrow and the staff is meeting with them and going over  
3 details, but we are still looking at the schedule, looking  
4 at various options, what needs to be done to proceed both  
5 with South Texas and with rulemaking. And so, right now, we  
6 will be getting back with the Commission. We do owe an  
7 update to the Chairman's tasking memo, but there is no  
8 update right at the moment on the schedule.

9 COMMISSIONER McGAFFIGAN: It is well into 2001,  
10 though, based on what you said publicly.

11 MS. CARPENTER: Well, what I said was in 2001,  
12 right. That is what it is looking like right now, but the  
13 staff is looking at the schedule. And there are options for  
14 us to consider.

15 COMMISSIONER McGAFFIGAN: There are options that  
16 would advance it compared to there, or delay it further?

17 MS. CARPENTER: There are options. The staff is  
18 just looking at the schedule right now.

19 COMMISSIONER McGAFFIGAN: Okay. You would make a  
20 heck of a Congressional witness, I will tell you that.

21 [Laughter.]

22 COMMISSIONER McGAFFIGAN: This is more an Option 2  
23 question than an Option 3 question, but implied in some of  
24 the testimony we had earlier this year from NEI was that we  
25 would be unlikely to see additional candidates for pilot

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1 plants until we made some progress there. Is that still  
2 what you are hearing?

3 MS. CARPENTER: Right now the boiling water  
4 reactors owners group, and the Westinghouse owners group,  
5 and the CE owners group have indicated that they are  
6 interested in pilots, and we have a meeting with them next  
7 week, and we will be talking to them more about the pilot  
8 activity. But the owners groups are expressing interest in  
9 what the staff is doing.

10 COMMISSIONER McGAFFIGAN: Mr. Thadani, there was  
11 an article in one of the trade publications, I forget which,  
12 recently that had to do with the fact that we were looking,  
13 I guess this is a 50.46 issue, we were looking at something  
14 other than large break LOCA double-guillotine break and all  
15 of that as the basis for design basis accidents. And it was  
16 probably the workshop or the public meeting that the staff  
17 held that provoked the article. But I thought the article  
18 conveyed a misunderstanding of what we were about here.

19 If that analysis doesn't really, the traditional  
20 deterministic analysis doesn't really get at safety issues,  
21 and if we have 25 years now of data from WASH-1400 and  
22 everything thereafter, that is -- we need to think about  
23 other scenarios. I forget how the article characterized it,  
24 but it said we were going to now accept, you know, core  
25 damage. So, would you like to try to set the record

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1 straight? Tom King would be happy to help.

2 MR. KING: I will be happy to help.

3 COMMISSIONER McGAFFIGAN: Well, why don't you go  
4 ahead.

5 MR. KING: This was a meeting between our staff  
6 and the Westinghouse owners group who are spearheading their  
7 industry side effort on 50.46. And what was presented were  
8 some things that need to be looked at when you  
9 risk-informing 50.46. This was presented by one of our  
10 contractors, and they talked about, well, you know, one  
11 avenue is to look at the large break LOCA. Should we, based  
12 upon risk considerations, redefine it? Another was to look  
13 at the analysis methods and assumptions. Are there  
14 unnecessary conservatisms? That is another way to approach  
15 it.

16 Another avenue of approach was to look at the  
17 acceptance criteria, and that is where it got into this  
18 issue of, if we redefine the acceptance criteria, that might  
19 lead to accepting a little more core degradation, but it did  
20 not say we were going to accept core melts. They were  
21 thinking of things like maybe a little more core oxidation,  
22 a little higher cladding temperature, that kind of thing. I  
23 think it got mischaracterized somewhere along the line.  
24 But, no, we are not considering accepting core melts.

25 COMMISSIONER McGAFFIGAN: In one of three options

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1 for thinking about how you are going to approach 50.46, you  
2 got into that discussion. I think, you know, and I will let  
3 Mr. Thadani go ahead, but I think it shows the perils. We  
4 are dealing with very complex, very fundamental issues in  
5 risk-informing Part 50, and there is a terrible danger of  
6 misunderstanding what we are about and, also, since it is  
7 very complex, you know, reducing it to a bumper sticker,  
8 because you don't want to deal with the complexity.

9 MR. THADANI: Yeah, I would like to add, we are  
10 not going to walk away from the fundamental issue of  
11 maintaining core-coolable geometry. Make sure that that has  
12 got to be satisfied. As Tom said, and Mary said, these are  
13 pretty complex issues.

14 Now, then you have to go back to not just risk  
15 analysis tools, I am talking more fundamentals, which  
16 success/failure criteria, that go into risk analysis tools.  
17 Thermal hydraulic analyses, trying to make sure we  
18 understand correlations that are utilized in these  
19 calculations. We know more now.

20 So, again, I think where Tom is coming from is  
21 that we are going to be looking at the technical information  
22 base that has come out of experience and research, and we  
23 have better analytical tools now to see what are some of the  
24 better criteria one can apply. But the objective still  
25 would be to maintain coolable geometry in the end. So,

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1 there has been misunderstanding of this.

2 COMMISSIONER McGAFFIGAN: My last comment, if  
3 there is somebody from GAO in the audience, we had this  
4 conversation with GAO directly, I think at the last meeting,  
5 the woman who represented GAO at that time, I think it was  
6 March. And I made the point, you guys don't have to comment  
7 on it, that we are really inventing something here, and the  
8 sort of -- some of the stuff that we have gotten previously,  
9 but inventing on a schedule, and being able to plan for the  
10 third quarter of 2003, which rule we will be working on and  
11 what the change will be is preposterous given how much we  
12 really are at the first stages of trying to invent  
13 something.

14 Now, the hydrogen combustion, 50.44 is going to be  
15 easier than 50.46. We are able to determine that much, but  
16 not much more at the current time.e So that is just a plug  
17 for allowing the staff the time and the stakeholders the  
18 time to do what they need to do.

19 CHAIRMAN MESERVE: Commissioner Merrifield.

20 COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman.  
21 I guess I should start off by saying I agree with  
22 Commissioner McGaffigan on his last point.

23 In SECY-00-86, the staff stated that during the  
24 workshop that we had in February of 2000, there was general  
25 agreement among stakeholders on the approach and guidelines

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1 relative to the framework. Here we are a few months later  
2 and it seems evidently clear from Mr. Beedle's slides, let  
3 alone Mr. Riccio's slides, that there is not agreement on a  
4 framework.

5 Obviously, we are spending a great deal of  
6 resources on this effort. As was stated, we should spend  
7 the time doing it. But it concerns me that there seems to  
8 be a significant gap between ourselves and some of our  
9 stakeholders at a relatively early point in the process.

10 And so, my questions are, were you aware of this gap or did  
11 you have any inklings of this gap when you provided the SECY  
12 to the Commission in April? And how did we get to where we  
13 are today relative to our perceptions versus those who will  
14 be on the second panel?

15 MR. KING: Let me take -- attempt to answer that.  
16 The words that were in the SECY-00-86 were actually put up  
17 on the viewgraph machine at the end of the workshop in  
18 February, because we did want to try and get some consensus  
19 that, you know, are we characterizing the results of the  
20 workshop properly?

21 You know, there were some issues with the  
22 framework that were raised, that is why we put the word  
23 "general" in. But I think, in general, you know, the  
24 approach to have a defense-in-depth and use risk criteria to  
25 try and quantify that was generally accepted.

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1           We did receive letters later on in April from NEI,  
2 one from Mr. Christie, Bob Christie, later on, I can't  
3 remember the date, that maybe reflects some additional  
4 thinking and, also, some additional, as you get into some --  
5 applying this in some specific cases, you maybe run into  
6 some issues that raise concerns, like the late containment  
7 failure issue. I don't remember that being really an issue  
8 that anybody seemed to be concerned about at the workshop,  
9 but maybe after people went home and thought about it, and  
10 saw how it was applied in the context of 50.44, maybe it  
11 raised a flag. So, I think there is some evolution to this  
12 process as well. But, you know, that is where I think it  
13 stands.

14           COMMISSIONER MERRIFIELD: Okay. While we are on  
15 it, again, going to what we will hear on the second panel,  
16 one of the comments that NEI has is an assertion that our  
17 approach that we are taking here is more risk-based than  
18 risk-informed, and that risk quantification should not be  
19 the sole basis for our regulation. Any comments on that?

20           MR. THADANI: We would completely agree that our  
21 approach should not be risk-based and it should be  
22 risk-informed. In fact, I believe that is the path we are  
23 on. What that -- when I saw that particular chart, what it  
24 tells me is we really need to sit down and make sure we are  
25 really understanding, the two sides understand what is being

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1 debated in this framework. And maybe there is language in  
2 the framework that needs attention and needs to be better,  
3 parts maybe perhaps need to be better characterized. And  
4 that is why we said in the paper to the Commission that this  
5 framework represents work in progress, and it is anticipated  
6 that it may change as it is further evaluated and trial  
7 implementation proceeds.

8 In my view, trial implementation is the key to see  
9 how far we are applying risk insights, how far we are  
10 applying the bottom line estimates that are coming out of  
11 these analyses. My own view is the path we are on is  
12 risk-informed. I think the alternative, the technical is  
13 more mature enough to just depend on it solely.

14 COMMISSIONER MERRIFIELD: The next one is on page  
15 5 of 00-86, it relates to a clarification that the staff  
16 would like to receive from the Commission relative to the  
17 backfit rule. I read that one paragraph talking about  
18 packaging regulatory requirements with regulatory  
19 relaxations, and it troubled me a little bit. And I am  
20 wondering what are you intending out of the Commission in  
21 reference to that particular paragraph?

22 MR. KING: Well, that is the issue I tried to talk  
23 about on my last slide, and it has to do with 50.44, for an  
24 example. When we went through and looked at where the  
25 risk-information suggested we should make changes to it,

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1 there were some things that would fall on the unnecessary  
2 regulatory burden category and there was one thing that we  
3 thought a safety enhancement was justified.

4 Do we look at those individually, one-by-one,  
5 using the backfit rule, and do we let licensees pick those  
6 one-by-one? That is the selective implementation part. Or  
7 do we package that together and say, okay, we are  
8 risk-informing 50.44 as a rule? And there are some ups and  
9 downs in that package. In total, do they come out to pass  
10 the backfit test, or do they not come out to pass the  
11 backfit test?

12 COMMISSIONER MERRIFIELD: But you are not trying  
13 to leave us with the impression that we found all of these  
14 things that are burden release, and, therefore, we have --  
15 we can slip in some additional requirements? That is not  
16 the tradeoff you are talking about?

17 MR. KING: No, no. If they were all burden  
18 relief, it would be all burden relief. And if we find a  
19 mixture, we find a mixture.

20 DR. TRAVERS: So you aggregate.

21 MR. THADANI: I think that is the issue, how do  
22 you put it together?

23 COMMISSIONER MERRIFIELD: Okay. We have spent a  
24 lot of time on that in the fitness for duty rule, so I  
25 guess, as a Commission, we will have to carefully weigh

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1 that.

2 One last question, I know that the owners group  
3 are working on improving their own PRA quality, and I am  
4 wondering if you could briefly talk about any interaction  
5 you have had on that effort. If you have had any  
6 interaction on that effort.

7 MR. KING: We had received, under the Option 2  
8 work, a submittal from NEI. It really represented a  
9 document describing the owners groups' PRA certification  
10 process. Mr. Collins sent a letter back to NEI saying, yes,  
11 we will review that, and had some comments on the scope of  
12 our review. We are just now trying to, in conjunction with  
13 NRR, put together a schedule and a review plan for doing  
14 that. That is really where it stands. We haven't really  
15 gotten into the review. We haven't had any meetings with  
16 NEI on the technical substance at this point, but our intent  
17 is to review it.

18 Maybe Cindy wants to -- it is an NRR lead at this  
19 point in terms of, since it was submitted under Option 2,  
20 for the formal interaction with NEI. But the two offices  
21 are working together on it. I don't know, Cindy, if you  
22 want to add to that.

23 MS. CARPENTER: No, that is about it.

24 COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman.

25 MS. DROUIN: The other thing, though, that I would

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1 also add is that ASME expects to go out any day now for  
2 public review and comment of their Level 1, Level 2 PRA  
3 standard and ANS plans to go out in mid-July on their  
4 external event standard for PRA, so that should be coming to  
5 the staff for review and comment.

6 CHAIRMAN MESERVE: Your slide 9 you raise as one  
7 of the potential implementation issues is treatment of  
8 long-term containment performance. And I notice that that  
9 was an issue that was flagged on the NEI slides as a concern  
10 that was perhaps representing a radical departure from what  
11 we have done in the past. And it is certainly the case, and  
12 we have talked about this in the probabilistic sense before,  
13 we have talked about core damage frequencies and large early  
14 release frequency, not talking about late release. I  
15 presume that is based on the assumption if it is late, then  
16 the emergency plans have had an opportunity to kick in and  
17 minimize the risks.

18 Where are you headed on this, and why has it  
19 provoked the reaction that it has?

20 MR. THADANI: Well, the direction we are headed  
21 towards is to include assessment of potential for late major  
22 failure of containment, late in an accident. And that is  
23 the potential for fairly -- still significant releases.  
24 That is -- there is, I would expect, very good likelihood  
25 that appropriate emergency plans would be initiated,

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1 evacuation, if necessary, would be carried out. But in the  
2 context of defense-in-depth, we felt that the emergency  
3 planning considerations were intended to not be mixed with  
4 design considerations, that that was a layer of  
5 defense-in-depth that the Commission was looking for.

6 If you go back to the history of the development  
7 of emergency plans, that is what one would find, and we  
8 thought we ought to be consistent with that, and we ought  
9 not to ignore potential for substantial releases as part of  
10 risk-informing the regulations.

11 I think this is an example of something that has  
12 come up later in the dialogue that we have had with the  
13 other stakeholders. And so, I imagine that there are  
14 concerns and we would need -- we need to lay out what the  
15 sequences are. We need to make sure we have technical  
16 information on the table, and people need to understand what  
17 sort of consequences we are talking about. That is the path  
18 we are on.

19 CHAIRMAN MESERVE: Is this an issue that arises  
20 with 50.44, that there may be some additional requirements  
21 that relate to late containment failure?

22 MR. THADANI: I would not think that that is a big  
23 issue.

24 MR. KING: It did come up in the context of going  
25 thought 50.44, a long-term hydrogen control issue, and

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1 should there be a requirement on containment performance.  
2 And I'd like to just add one other thing to what  
3 Ashok said. If you look at the reactor cornerstones, there  
4 are seven of them.

5 Our framework deals with the first four, but  
6 there's also one on protection of workers. I forget the  
7 exact wording.

8 But to me, an issue an issue of long-term  
9 containment performance is maybe not so much the people  
10 offsite, the public, because they can be evacuated, but  
11 you've got people onsite that are trying to recover from the  
12 accident, and you need to protect them as well.

13 To me, this issue is tied to that, as well as the  
14 things Ashok said.

15 MR. TRAVERS: Protection of the environment as  
16 well.

17 CHAIRMAN MESERVE: I'm not denying that's an  
18 issue, and this is -- your inclusion of this statement in  
19 the slide has provoked a reaction, and we're going to hear  
20 about it. I'm just trying to sort out where you are, and  
21 maybe it's an overreaction. I don't know.

22 Maybe this is something that we'll see as we get  
23 further down the road, and see in concrete terms, exactly  
24 what the implications are of the work you're doing.

25 The related point is that there is, as I read the

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1 paper attached to SECY 0086, there is -- of course, they  
2 take the safety objectives and peel off of them, various  
3 requirements.

4 One of the things that has provoked a comment by  
5 NEI is that the safety goals and objectives are sort of  
6 fleet averages, and they characterize the quantitative  
7 elements as ones that are -- it's a radical departure to  
8 apply them on an individual plant basis.

9 Then you have various risk criteria for  
10 containment and for core damage that you use and describe in  
11 that attached paper. Is that a radical departure, and how  
12 do you respond to the claim?

13 MR. THADANI: Let me give you my views: I don't  
14 believe it's a radical departure. I do want to make a  
15 comment that the framework paper needs a fair amount of  
16 work.

17 It has different chapters; it lays out some  
18 numerical criteria, which I think can mislead people to say  
19 we're being risk-based.

20 These different chapters need to get integrated.  
21 We talk about uncertainties in a different chapter.

22 And I think we need to work at it. It's a pretty  
23 difficult issue.

24 In terms of plant-specific applications, since the  
25 policy statement of 1995, we've made decisions on a

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1 plant-specific basis using these guidelines in many, many  
2 cases.

3 So it's not a radical departure. It's been  
4 carefully thought through and the Commission has spoken on  
5 this issue.

6 MR. KING: This is an issue that was raised to the  
7 Commission back at the time we put Reg Guide 1174 together  
8 as a policy issue and the Commission approved applying those  
9 subsidiary objectives on a plant-specific basis.

10 CHAIRMAN MESERVE: This is really to pick up on a  
11 point that Commissioner Diaz made about seeing that all of  
12 these regulations are integrated together. I have noticed  
13 that it's expanded in the paper attached, framework paper.

14 All of a sudden, Part 100 is now wheeled out as  
15 being an additional element. Are we going to end up looking  
16 at all of Title X in this process, or where's the end point?

17 MR. KING: Good question. I don't expect us  
18 looking at all of Title X, but there may be some connections  
19 to regulations outside of Part 50, like Part 100. I can't  
20 give you a complete list today.

21 CHAIRMAN MESERVE: Okay. Commissioner Dicus?

22 COMMISSIONER DICUS: It's clear that .44 and .46  
23 were identified rather early on by a variety of methods as  
24 candidates to look at first, the public meetings, what work  
25 the Staff did, together with the January letter from NEI.

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1 But in the framework appendix, there is a listing  
2 of the Part 51s that have been identified. At least I think  
3 you called it your first course analysis, and I think three  
4 or four regulations in Part 100.

5 What is unclear to me is, did you use the  
6 framework, this draft document that we have attached to the  
7 paper, to do that analysis, to identify possible candidates?

8 MS. DROVIN: Yes.

9 COMMISSIONER DICUS: Yes, you did. You used this

10 --

11 MS. DROVIN: The principles of the framework, you  
12 know, is considering accident prevention and mitigation.  
13 So, it was using those two principles and going through Part  
14 50 to do the core screening. And the framework is centered  
15 around those two things.

16 COMMISSIONER DICUS: Okay. And we all agree -- I  
17 mean, you've said, and it's obvious that this framework is a  
18 draft document, clearly stamped draft, and that it's a  
19 work-in-progress, and that you will probably be doing  
20 modifications to it, et cetera.

21 If you did that, would you go back and take  
22 another look at the candidate regs to see if they still --

23 MS. DROVIN: If the changes where that  
24 fundamental, absolutely.

25 COMMISSIONER DICUS: But there is uncertainty that

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1 they would be that fundamental?

2 MS. DROVIN: I'm sorry?

3 COMMISSIONER DICUS: It's uncertain that it would  
4 be that fundamental?

5 MS. DROVIN: It's uncertain, and I personally will  
6 be surprised if it's a rewrite of the whole framework. I  
7 think it's more clarification.

8 COMMISSIONER DICUS: Okay. This follows off of  
9 Commissioner McGaffigan's comment about being able to manage  
10 the workload you may have in front of you. I know that you  
11 have some initial prioritization of which regs you might  
12 look at first and take them through.

13 But still -- and this may be a little early to  
14 bring this subject up, but still you have the possibility  
15 that you wind up with several rulemakings at one time, which  
16 becomes extremely resource-intensive, and this is just a  
17 caution to be concerned about that when you do start  
18 prioritizing.

19 I think Commissioner Merrifield agreed with the  
20 comment that Commissioner McGaffigan had made with resources  
21 and getting the workload. I would just like to follow in on  
22 that and say that this could be a real issue as we get down  
23 the road.

24 MS. DROVIN: Yes.

25 COMMISSIONER DICUS: Thank you.

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1 CHAIRMAN MESERVE: Thank you very much. We very  
2 much appreciate the effort. We have a second panel that  
3 will be appearing as well, as I indicated at the outset.

4 There are two individuals who will be speaking to  
5 us, Mr. James Riccio from Public Citizen, and Mr. Ralph  
6 Beedle, who is Sr. Vice President for the Nuclear Energy  
7 Institute.

8 Welcome.

9 MR. RICCIO: Thank you.

10 CHAIRMAN MESERVE: Mr. Riccio, why don't you  
11 proceed?

12 MR. RICCIO: First of all I want to apologize for  
13 getting my comments to you late. I have been extremely busy  
14 with issues up at Indian Point.

15 I want to thank the Commission for the opportunity  
16 to present our views on risk-informing Part 50, or as we  
17 like to refer to it, the deregulation of nuclear safety  
18 standards.

19 As you well know by now from our previous  
20 stakeholder meetings and things of that sort, Public Citizen  
21 is philosophically opposed to risk-informed regulation.  
22 This deregulatory effort has come about, not because of any  
23 new risk insights, but because the industry has come to the  
24 realization that given the new competitive environment, they  
25 cannot compete if forced to comply with the regulations that

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1 exist on the books.

2 Basically, as far we're concerned, risk-informed  
3 regulation means that the public will be exposed to greater  
4 risks, while the industry is exposed to less regulation.

5 And this is not the beginning of this effort. We  
6 have already seen this where basically margins have been  
7 whittled away, beginning in the early with the requirements  
8 for marginal safety, cost-beneficial licensing actions,  
9 enforcement discretions that have been used to allow  
10 restarts and prevent shutdowns, and the new improved  
11 technical specifications which reduce limiting conditions of  
12 operation by over 40 percent or approximately 40 percent.

13 Now, as far as we're concerned, NEI and the  
14 industry have turned their sights on the heart of regulation  
15 contained in 10 CFR Part 50. However, at the outset, it's  
16 important to know why this initiative is voluntary.

17 Basically, it can't be justified under the rubric  
18 of regulations that you've already established. Basically,  
19 you couldn't meet the backfit rule on this regulation or  
20 this proposed regulatory change, because there is no  
21 commensurate safety benefit to the deregulatory effort  
22 that's underway.

23 According to former Chairman Jackson,  
24 risk-informed regulation was supposed to be a double-edged  
25 sword. Now, I'm encouraged to hear Mary say that they have

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1 actually found some things that make up both ways, where you  
2 have risk insights that may actually lead to better  
3 regulation of this industry.

4         The only problem is, if you try to impose these  
5 regulations on the industry, it's going to have to go  
6 through the backfit rule. Why is it that when you want to  
7 reduce regulations, it doesn't have to meet any standard  
8 whatsoever, but when you want to increase regulation on this  
9 industry, it's going to have to meet the rigors of a  
10 cost/benefit analysis?

11         I understand that that is one of the issues that  
12 has been brought to the Staff's attention, and I appreciate  
13 that they're are going to be addressing it.

14         However, we're still concerned that this only cuts  
15 in one direction. And then we'll get to the list of  
16 regulations.

17         I apologize that I haven't spent enough time with  
18 the draft paper, and I will submit my comments to the Staff.  
19 And so I've only addressed those issues that are before --  
20 that basically -- the list of regs that NEI would like to  
21 see be deregulated.

22         The list of regulations that they wish to  
23 risk-inform is instructive. According to NEI's letter, NRC  
24 and NEI have already begun to risk-inform fire protection,  
25 the tech specs, and reactor security.

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1 Now, you've already -- like I said, you've already  
2 wiped out 40 percent of the reasons to shut down a reactor  
3 that were contained in the pervious technical  
4 specifications. And now, basically, you want to go after  
5 what remains of the 60 percent.

6 The Agency has already indicated that there can be  
7 very little room. At least the Staff has already indicated  
8 that there is little room for burden reduction in that area,  
9 yet we're proceeding ahead with attempts to deregulate the  
10 tech specs.

11 Mr. McNeil, Corbin McNeil, was before the Congress  
12 last week, and he was touting the new efficiency of the  
13 nuclear industry. They're not any more efficient; you guys  
14 are just regulating less.

15 Now, if there wasn't an increase in capacity  
16 factors after you wiped out 40 percent of the reasons to  
17 shut down a reactor, there have been some real problems in  
18 this industry.

19 The list that NEI has provided you with, reads  
20 almost like a list of the most embarrassing regulations that  
21 the industry has to put up with. Fire protection has been  
22 an issue that this Agency has struggled with for going on  
23 two decades now.

24 In 1992, the NRC testified to Congress that  
25 reactor owners would only use temporary measures for about  
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1 six months until the safety problems have been addressed.  
2 Eight years later, we're still using temporary measures to  
3 address fire protection at reactors, rather than basically  
4 imposing minimum safety standards.

5 And now the industry and the Agency wish to  
6 risk-inform those regulations that have never really been  
7 enforced.

8 As far as reactor security goes, I think we're all  
9 quite aware of the problems with the spray tests, and  
10 basically the fact that Mr. Orich has been ridiculously  
11 successful at breaking into nuclear power plants and proving  
12 vulnerabilities to basically terrorist attack.

13 Yet, again, these regulations are again being  
14 subject potentially to risk information.

15 And then we get to the rest of the list that NEI  
16 has provided. We're calling this deregulation-by-dollars.

17 I think that what we see and what NEI has laid out  
18 is, again, a realization that these regulations are tied to  
19 a dollar amount.

20 You know, NRC claims to be a safety regulator.  
21 This is going to have absolutely no commensurate safety  
22 benefit for the public. That comes out of your own SECY  
23 Paper, 88-264.

24 Even if this whole policy is implemented  
25 perfectly, the public is not going to be any safer than they

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1 are under Part 50.

2 And if you look at the list of subject regulations  
3 that NEI wishes to deregulate, it's pretty obvious that  
4 they're looking for an economic benefit here.

5 Although it's not just the deregulation-by-dollars  
6 that disturbs us, what NEI and NRC fail to acknowledge is  
7 that many of these regulatory requirements actually have  
8 substantial impact on safety.

9 You're no longer just whittling away at the  
10 margins; you're basically aiming at the heart of what we  
11 consider to be the basis of NRC regulation.

12 Back in 1993, NRC conducted a review of its  
13 regulations, and for each NRC regulation they asked what is  
14 the contribution to safety? And for the four prime  
15 candidates that NEI has identified, each one of those was  
16 determined to have a substantial impact on safety, yet these  
17 are subject to being deregulated.

18 It just doesn't seem like we're really  
19 concentrating on safety here; we're concentrating on  
20 deregulating regulations that basically are problematic and  
21 that cost the industry too much money.

22 Now, NEI has testified before the Senate Oversight  
23 Committee that this deregulatory effort is possible because  
24 of the improved safety record of this industry.

25 The mere fact that you haven't melted a reactor in

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1 the last 20 years is not a sufficient enough reason for  
2 wiping out the regulatory structure that helped achieve that  
3 performance.

4         Unfortunately, risk-informed regulations are not  
5 being used to improve safety; they're being used to improve  
6 the economics of this failed technology by waiving  
7 inspections, shortening maintenance outages, and avoiding  
8 shutdowns.

9         That's why we've come to the conclusion that  
10 risk-informed regulation means that the public will be  
11 exposed to more risk, while the industry is exposed to less  
12 regulation

13         I thank the Commission for the opportunity to  
14 present our views, and I'd be happy to address any questions  
15 you might have.

16         CHAIRMAN MESERVE: Thank you, we'll come back to  
17 you.

18         MR. RICCIO: Certainly.

19         CHAIRMAN MESERVE: Mr. Beedle?

20         MR. BEEDLE: Mr. Chairman, Commissioners, we  
21 appreciate the opportunity to participate in this update and  
22 status report on risk-informing the regulations.

23         We in the past several months have been impressed  
24 by the Staff's diligence and thoroughness in seeking ways to  
25 risk-inform the Part 50 regulations.

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1 I think that in general the comments that were  
2 made during the question session of the Staff, we would  
3 agree with many of those.

4 There is no doubt that this is a complex issue,  
5 and as Commissioner Diaz points out, when you change one  
6 regulation, you end up changing a whole series of them.

7 And it is one that we've found to be a very  
8 perplexing one, and one that I think is deserving of careful  
9 consideration as we go about this process.

10 I think that at one time we were very optimistic  
11 that we could risk-inform Part 50, and do it in a somewhat  
12 holistic fashion. But I think that as you look at that and  
13 perhaps we'd take a more judicial look at some of those  
14 regulations, we would have not been quite as optimistic.

15 And I think that what we see today is that there  
16 have been a number of things that come up that show the  
17 complexity of it. Not to belabor the point, but the South  
18 Texas Project, in getting some changes in the QA program,  
19 failed to realize the benefit for the plant because of the  
20 other regulations that certainly affect those systems and  
21 components that were involved in that process.

22 And that's one of the issues that we're working  
23 through today that Ms. Carpenter was discussing earlier.

24 Could I have Slide 2, please? As I say, I think  
25 there has been a very thoughtful approach to this

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1 risk-informing the regulation, and one of the things that  
2 has given us some concern, though, is our -- the focus on  
3 the quantification, the development of a number,  
4 establishing of guidelines that deal with those numbers.

5 And I'm not suggesting that the Staff is headed  
6 towards risk-basing the regulations, but it looks more like  
7 risk-basing than risk-informing.

8 And I guess I would -- I take some measure of  
9 comfort in Ashok Thadani's acknowledgement that we need to  
10 rework that framework document to provide the right focus.  
11 That is something that we will certainly be looking forward  
12 to, and willing to participate and provide our industry  
13 experience in that process.

14 So, the risk-based versus risk-informed continues  
15 to be an issue as we go about trying to develop improved  
16 regulations for the safety of the industry.

17 I think everybody acknowledges that if we could,  
18 in fact, quantify all the things, and all of our tools and  
19 mechanisms were precise enough to do that, it would be an  
20 easy matter to regulate.

21 We could look at our risk meter and we could  
22 determine exactly where we needed to go with it. But  
23 unfortunately, that's not the world we live in. We don't  
24 have that ability today, and to put a lot of faith in a  
25 calculation, I think would be a grave risk for us in the

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1 management of the facilities today.

2 We still need to rely on some of that  
3 deterministic, the judgment that's applied by the management  
4 at the facility, as well as the management of the NRC on how  
5 well things are being done.

6 We see that time and time again in our  
7 cross-cutting issues in the oversight process. Those aren't  
8 quantified, but we can all come up with a judgment. The  
9 question is, how does that judgment get applied into the  
10 regulatory process? I think that's, in part, what we're  
11 dealing with some of these risk insights as we go through  
12 this process.

13 Next slide, please. The proposed approach, we  
14 call it an NRC proposed approach. Slide 3, please.

15 The establishment of these quantitative license  
16 bases is an approach that we think is probably not the wrong  
17 way to go -- or, we do think it's the wrong way to go.  
18 We're drawing some inferences, and, in part, from the  
19 framework document that gave us this disbelief in some of  
20 the briefings.

21 So it may be that we may need to do some more  
22 communicating with the Staff on this topic to make sure that  
23 we understand exactly where they're headed on that one.

24 So that's an area that we will have to continue to  
25 work on. Ashok addressed the question of fleet-wide safety

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1 goals, and our recollection was that the Commission did, in  
2 fact, discuss the application of a safety goal on a  
3 fleet-wide basis as opposed to a plant-specific basis.

4 And maybe it's one of those things where we were  
5 listening with a different ear, because what we heard was  
6 that it was a fleet-wide guide, rather than plant-specific  
7 goal, and we will have to go back and review on the  
8 literature on it.

9 We have been operating on that assumption. We  
10 have taken the safety objectives and then gone to the safety  
11 goal and said that's the goal that deals with the entire  
12 fleet, and so to take that and apply it to each specific  
13 plant, I think is providing a degree of specificity to a  
14 goal that is hard to justify on a plant-specific basis.

15 And, again, it belies the underpinnings for our  
16 ability to calculate those goals. So that's something that  
17 we'll need to continue to work on.

18 As we go back and look at some of the history, we  
19 look at NUREG 1150, and we're still persuaded by the  
20 conclusion of NUREG 1150 where the core damage frequency was  
21 judged to be one that provided for safety of the public when  
22 coupled with a look at accident mitigation and the emergency  
23 planning combination.

24 And that was the conclusion, and I think that's  
25 still a valid one today. And we ought not disregard that

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1 conclusion, and, in fact, as we go about the process of  
2 looking at PRAs and the development today, we've got to ask  
3 whether or not we have advanced the technology of PRAs  
4 beyond what was used in NUREG 1150, and can we expect a  
5 different result or one that is more precise in its  
6 calculations in the determination of risk?

7 The other thing that I might comment on here, the  
8 safety goal and the safety objectives or the subsidiary  
9 objectives that we developed, there is a tremendous margin  
10 in there. I'm not sure we've really dealt with that margin  
11 issue, and whether or not that margin is one that makes  
12 sense to us.

13 We've kind of approached this thing as, well, you  
14 can achieve that goal, so we'll set that goal or somewhere  
15 about there, and I'm not sure that that's the right way to  
16 do it.

17 That's a fairly limited goal, too, based on the  
18 internal events in the plant. So as we add more and more of  
19 these calculational techniques and considerations, I'm not  
20 sure that those goals are the right goals. We need to  
21 revisit that one.

22 Preferred approach, I think the -- Slide 4, please  
23 -- the pragmatic versus the theoretical is what I think I  
24 heard the Staff talk about earlier.

25 Looking at generic risk, I think is an important

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1 thing for the industry, as opposed to some of the very  
2 detailed finely-tuned calculations that you might do on a  
3 system or a plant and preserving the risk-informed  
4 philosophy as opposed to the risk-based philosophy.

5 One of the things that has been, I think, a  
6 stumbling block for us in Option 2, is that we try to  
7 categorize pieces of equipment. We spend the majority of  
8 our time focused on not the risk-significant, or the  
9 absolutely risk-not-significant, but those things that used  
10 to be in the safety-related category that are no longer  
11 determined to be risk-significant.

12 We spend most of our time and energy trying to  
13 figure out what to do with them. It becomes a legal kind of  
14 a consideration, as opposed to a risk consideration.

15 How do you take this thing that was  
16 risk-significant, we know it's no longer risk-significant in  
17 light of the PRAs and other insights that we have, and we  
18 have a difficult time to come to grips with the regulatory  
19 treatment of that particular piece of equipment.

20 So that's one of the things that we need to deal  
21 with, and I think we will eventually come to a conclusion on  
22 how to do that in the coming months.

23 Next slide, please. We agree with the Staff's  
24 priority of focus on 50.44 and 50.46. We think that those  
25 offer the opportunity to demonstrate the feasibility of

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1 risk-informing the regulations. I think they're  
2 sufficiently contained that we can deal with those, and  
3 determine what the effect is on other regulations as we go  
4 about this process.

5 And the 50.46, I think, is going to be -- you  
6 know, it's more than 50.46; it's the whole set of things  
7 that have to get factored into this. It is going to be far  
8 more complex than I think we even imagine today.

9 And I think Tom King gave you a brief insight into  
10 some of the complexities that we'll be dealing with in the  
11 50.46 area.

12 The next slide, please. The conclusions, I think,  
13 from the industry's point of view, is that we do need to  
14 work on the framework and figure out exactly what the  
15 framework is, where it's heading, where it wants to head the  
16 industry, as well as the Agency.

17 We need to maintain that pragmatic approach; we  
18 need to focus on the 50.44 and .46, and the South Texas  
19 Project; that's an extremely important one.

20 The question has frequently been asked about why  
21 the industry isn't lining up at the front door to  
22 participate in pilot programs? And I think the answer is  
23 that there is so much uncertainty as to where this is going  
24 to lead us and what it's going to cost for the plant, that  
25 they're conducting a wait-and-see.

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1           They are waiting to see what comes out of 50.44.  
2 Can we deal with that in a rulemaking that would apply to  
3 all the plants in the industry? Can we deal with 50.46 and  
4 work our way through the myriad of regulations that apply or  
5 are affected by it?

6           And more importantly, we look at things like the  
7 late release issue, we look at the South Texas Project  
8 problems, we look at the PRA standard and the framework  
9 document, all as, you know, what does this mean to us if we  
10 leaped into this risk-informing the Part 50 regulation  
11 process?

12           So I think we're in a wait-and-see mode. I think  
13 the comment about the owners groups is very true. The  
14 owners groups are interested in moving ahead. They've got  
15 the technical ability to deal with some of this material,  
16 and they're looking at taking systems. One is a high-risk  
17 system, safety related, and look at that, and examining it  
18 on how you go about risk-informing regulations associated  
19 with it.

20           Another group wants to take a look at one that is  
21 not risk-significant, and determine whether or not it should  
22 be risk-significant or what components of it ought to be  
23 risk-significant, and use those as test cases to determine  
24 how you deal with the plant's physical configuration.

25           So I think there is a lot of merit in there and a

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1 lot of benefit for the industry in terms of our ability to  
2 focus on the thing that represent risk to the plant and risk  
3 to the public.

4 So there should be no doubt in anybody's mind that  
5 the industry is interested in maintaining these plants in a  
6 safe configuration. There is no one that's more interested  
7 in that than the CEOs of these facilities. Because an  
8 unsafe plant is one that represents major financial risk,  
9 and he's not about to take that. So the last thing we want  
10 is deregulation of the safety regulations.

11 With that, I thank you, and I will be willing to  
12 answer any questions that you might have.

13 CHAIRMAN MESERVE: Good, thank you both.  
14 Commissioner Dicus?

15 COMMISSIONER DICUS: Thank you, Mr. Chairman. I  
16 have a couple of questions on Slide 2 and 3 which had to do  
17 with your concerns about being risk-based rather than  
18 risk-informed, and also the quantitative licensing basis.

19 But I think after you heard the comments that the  
20 Staff responded to, the numerous questions that were put to  
21 them, particularly on risk-based versus risk-informed, I  
22 think from your comments, I heard a little bit of comfort  
23 level coming, that you recognize that this is a  
24 work-in-progress and that the Staff is aware of the issues  
25 and concerns, so I'm going to pass on those questions.

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1 I would like to go however, to Slide 4. And I  
2 wondered if you could give me an example of how using what  
3 you call your preferred generic risk insights to be applied  
4 to something, for example, like the design basis accident  
5 assumptions?

6 MR. BEEDLE: Well, I think that in 50.46 when we  
7 look at the loss of coolant accident and the large break  
8 loss of coolant accident, you know, the considerations that  
9 we have today are purely deterministic with a lot of  
10 conservatism involved in that.

11 And if we could look at that from a risk point of  
12 view and get a risk-based requirement for design, and  
13 ultimately operational requirements for the plant, I think  
14 we'd see a significant improvement in the way we deal with  
15 some of our issues.

16 We've got a number of plant operational  
17 requirements that stem from that design requirement on the  
18 large break LOCA. So that's one where you could look at the  
19 design requirement and deal with that one, and that would  
20 have a significant impact on the way you operate some of the  
21 plant's piece of equipment.

22 COMMISSIONER MERRIFIELD: You said risk-based. Do  
23 you mean risk-informed or risk-based?

24 MR. BEEDLE: Risk-informing. That is a major  
25 challenge to try to overcome that.

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1           COMMISSIONER DICUS: And on Slide 5 -- thank you  
2 for that response -- on Slide 5, you have the middle big  
3 bullet and square, focus on areas of greatest potential  
4 benefit. What do you mean by benefit?

5           MR. BEEDLE: Well, clearly, the benefit for the  
6 changes in the regulations, if the industry is going to  
7 spend effort to do analysis work, more PRA, more analytical,  
8 then we need to demonstrate whether or not there's going to  
9 be a return.

10           You don't go to the CEO and say I want to spend  
11 \$10 million on a PRA upgrade in order to save 50 cents. So  
12 we've got to find some way that makes that justifiable.

13           And Mr. Riccio was commenting about in his  
14 discussion about the amount of money that we identified with  
15 these changes in regulations. That's very important to the  
16 industry.

17           If we don't derive benefit from that, then I'm not  
18 sure that we're going to find too many people who are  
19 willing to engage in pilot programs to demonstrate the  
20 feasibility of some of these.

21           So it truly comes to whether or not you do have  
22 any cost/benefit in this case.

23           COMMISSIONER DICUS: I appreciate the comment, and  
24 I appreciate the issue with cost, and, clearly, the  
25 Commission takes that into consideration as well.

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1 I'm hoping, though, as we also use the term,  
2 benefit, we see a benefit to safety, too. So that was a  
3 word I was looking for in there. Thank you, that's all.

4 CHAIRMAN MESERVE: Commissioner Diaz?

5 COMMISSIONER DIAZ: Thank you, Mr. Chairman. Mr.  
6 Riccio, it's always a pleasure to have you here.

7 MR. RICCIO: It's always a pleasure.

8 COMMISSIONER DIAZ: I will try to engage you at  
9 another level first to see if I can really understand where  
10 the concerns are.

11 If we just put down nuclear power plants and  
12 implementation of regulations of nuclear power plants, you  
13 seem to imply -- I probably heard it wrong -- that this is a  
14 particular effort of the Agency.

15 I thought that the entire country is trying, you  
16 know, in this new year 2000, to look at risk as a way to  
17 improve the quality of life of people, to focus on what is  
18 safety, you know, to look at where do we put resources that  
19 are better utilized for the people of this country.

20 And I thought that, you know, in many ways, a risk  
21 is becoming a national tool. We might not even be, you  
22 know, as far ahead as we think, but it's really everywhere,  
23 just to try to say that there are limited resources and  
24 let's use them better for public safety, health, quality of  
25 life.

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1           Is that something that you see happening, or you  
2 don't -- across the national mantle.

3           MR. RICCIO: In a vacuum, in just theoretical, it  
4 sounds great. You know, optimally, these guys should be  
5 able to take a look at where risk is most important and to  
6 be able to focus on that.

7           Unfortunately, that's not the way we're seeing it  
8 implemented. The first time this Agency used 1.174 was to  
9 avoid a steam generator tube inspection -- I'm sorry, that's  
10 not exactly right.

11          You used it to avoid a steam generator tube  
12 inspection, and you're now -- actually the Agency is being  
13 tested right now by the industry.

14          I'm taking a good hard look at what's going on  
15 down at Arkansas Nuclear I. You know, they made a  
16 commitment to take care of their steam generators. They're  
17 trying not to straighten them out, and I think risk plays  
18 into that.

19          Now, the Agency has made a couple of mistakes down  
20 the road in terms of avoiding inspection, and I think that  
21 to be using risk insights to allow for an increased risk to  
22 the public is inappropriate.

23          We're not in a perfect universe. You don't have  
24 all the information. We know there are problems with the  
25 PRA, we know there are problems with the design basis, and  
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1 so from a conservative perspective, we'd like to see  
2 basically a --

3 I wouldn't mind seeing risk used if I thought it  
4 was being used appropriately, and so far I have not seen  
5 that to be the case.

6 COMMISSIONER DIAZ: So it's not the tool, the  
7 overall intention of having people focus more on safety.  
8 You're really concerned that it might not be -- could have  
9 been well implemented, so it's an issue of implementation  
10 more than an issue of the country now has grown, we know a  
11 lot more than before in every field.

12 MR. RICCIO: And it's not -- there are some  
13 philosophical, almost ontological problems with the way this  
14 Agency is undertaking risk-based regulation. It's not just  
15 implementation.

16 COMMISSIONER DIAZ: I see.

17 MR. RICCIO: I believe there are weaknesses across  
18 the board for everything from PRA quality to the quality of  
19 the design basis, to the quality of the effort underway. In  
20 terms of the ones you're selecting to deregulate, I do  
21 believe -- and I understand that the industry needs some  
22 commensurate financial reward for undertaking this effort,  
23 but it sends chills down my spine when I hear the word,  
24 certainty, kicked around.

25 What we're dealing with right here is really

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1 uncertainty, and I don't believe that we can basically have  
2 -- I don't want to see this become a rubber stamp, and I  
3 think that at this point, with --

4 I understand the rest of the country is using risk  
5 insights. Unfortunately, other industries don't have the  
6 capability of wiping out an entire state.

7 COMMISSIONER DIAZ: All right, obviously we, or at  
8 least I believe that we're trying to improve regulation, and  
9 not deregulate. And this is an area where I would really  
10 encourage you to come and sit down, and I'd love to have a  
11 chance to talk with you. I need to understand what are  
12 these specific things? Thank you so much.

13 MR. RICCIO: I'll take you up on that.

14 COMMISSIONER DIAZ: Mr. Beedle, there is a series  
15 of things in here that obviously the industry is not  
16 precisely pushing the NRC to become more risk-informed.

17 Contrary to what Mr. Riccio said, you obviously  
18 think that it is time to consider, you know, where we are,  
19 how do we do it, making sure, as you stated, which I agree  
20 with, that this is not one tool, but many tools.

21 However, you know, there is an issue related to --  
22 say, take 50.46. And I will be willing to bet a glass of  
23 water --

24 [Laughter.]

25 MR. BEEDLE: Or Gatorade.

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1           COMMISSIONER DIAZ: Or Gatorade. To see how that  
2 if you really risk-inform 50.46, and you make it fully  
3 compatible with the rest of all of the other regulations,  
4 not truncating it at some point, which, you know, you will  
5 have to; not propagating it to everything else, which, you  
6 know would force someone to, you would find that there is a  
7 tie-in.

8           And by resolving ECCS, you are going to have to  
9 resolve all of the other thermohydraulic issues associated  
10 with it.

11           Risk information, in and of itself, is an integral  
12 technique that will tie into the other things. So, it is in  
13 truncation that you make approximations. It is in  
14 propagation that you become encompassing.

15           And what I was hearing -- that's why I didn't ask  
16 any questions before -- is that we are at a point where  
17 we're trying to determine, where do we truncate; where do we  
18 propagate? And that, I think, is almost premature to say  
19 where can we truncate and where can we propagate from rule  
20 to rule.

21           And I gather that from you, but I'm expressing it  
22 in a different manner. You are presently saying that there  
23 seems to be some benefit from a couple of issues, resolving  
24 those.

25           But those issues do propagate into other issues,  
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1 unless you truncate them.

2 MR. BEEDLE: Absolutely, sir. And I think that  
3 was the essence of Tom King's response when he talked about  
4 the various elements of 50.46 and what you have to consider.  
5 I mean, are you looking at changing -- risk-informing the  
6 design requirement itself, or are you risk-informing some of  
7 the ultimate fuel cladding characteristics that you have to  
8 deal with?

9 I mean, it is not an easy choice, and we're going  
10 to have to go examine each one of them and find out what it  
11 means in terms of ultimate effect on other regulations and  
12 on plant safety.

13 COMMISSIONER DIAZ: Since I surrounded by lawyers,  
14 I rest my case, Mr. Chairman.

15 [Laughter.]

16 [Discussion off the record.]

17 CHAIRMAN MESERVE: Commissioner McGaffigan?

18 COMMISSIONER McGAFFIGAN: Mr. Riccio, I'll start  
19 at the philosophical level where Commission Diaz was. You  
20 talk about the improved standard tech spec conversion  
21 program that we've been underway with for several years, and  
22 it really, I think, predates any gleam in the eye of  
23 deregulation of the industry.

24 I mean, we were, I think -- the trouble is that we  
25 dispute the starting facts. But in the case of the improved

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1 standard tech specs conversions, we did get rid of a fair  
2 number of limiting conditions of operations that I think the  
3 Staff's judgment was had zero or close to zero -- I'm not  
4 sure how many decimal points -- effect on safety.

5 Now, if you take that example, if we start off  
6 with the regulatory framework that has a bunch of things in  
7 it that really don't contribute to safety, why shouldn't we  
8 get rid of the things that don't contribute to safety, if we  
9 can calculate that?

10 Is the deterministic analysis over?

11 MR. RICCIO: I will disagree with your premise.  
12 To get these regulations on the books in the first place,  
13 they had to be of some commensurate safety benefit.

14 COMMISSIONER McGAFFIGAN: Well, that is not  
15 necessarily the case. To get many of our regulation on the  
16 book took a vote of three Commissioners in either the AEC or  
17 the NRC, with regulatory analysis that may well have been  
18 somewhat suspect, at least given what we know today.

19 They were taking guesses based on conservative  
20 engineering analysis as to what might contribute to safety.

21 MR. RICCIO: And those were premised on  
22 conservative analyses.

23 COMMISSIONER McGAFFIGAN: Extremely conservative.

24 MR. RICCIO: Right, and you've been whittling away  
25 at the margins ever since.

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1           COMMISSIONER McGAFFIGAN: But you're not whittling  
2 away a margin if you determine a rule has zero benefit. The  
3 margin has been reduced by -- if I have a margin of X, and I  
4 reduce it by zero, X minus zero is still X.

5           MR. RICCIO: Maybe for your one tech spec, but  
6 marginal safety, cost/beneficial licensing actions, we can  
7 go down a list of a series of attempts by this Agency and  
8 this industry to reduce the regulatory burden.

9           And I think that NEI will --

10          COMMISSIONER McGAFFIGAN: Yes, unnecessary. What  
11 we've been trying to do -- you know, we always put the word  
12 or the adjective, unnecessary, in. I mean, we're trying to  
13 reduce unnecessary regulatory burden that does not have a  
14 commensurate safety benefit, and I think its incumbent on  
15 you not to talk generally.

16          But if you take the tech spec case, to say, which  
17 of the limiting conditions of operation Public Citizen --  
18 that were eliminated -- in all honesty, we have Revision 2  
19 to tech spec -- Improved Standard Tech Specs that's about to  
20 go out.

21          You can take a look at that, and we have  
22 risk-informed. All of the stuff we did the first time  
23 around, I don't think we claimed was risk-informed. There  
24 is a separate risk-informed tech spec effort that's  
25 underway.

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1 But if you take that, it's incumbent on you to  
2 say, well, I really think that you're giving up this -- this  
3 LCO is going to cause a problem and force us into some sort  
4 of a process to justify, if we haven't already.

5 I assume our reg analysis will justify why we  
6 think there is zero benefit.

7 COMMISSIONER MERRIFIELD: Commissioner, if you  
8 don't mind, if I could just say one thing, Mr. Riccio said  
9 we used to use a conservative analysis, and the change means  
10 that it's -- suggests that it's more dangerous.

11 In fact, some of the conservative decisions made  
12 by this Agency were because we didn't have the information.

13 COMMISSIONER McGAFFIGAN: Right.

14 COMMISSIONER MERRIFIELD: We didn't have the  
15 scientific basis upon which to establish the regulations.  
16 We spend now \$40 million a year on research to find a lot of  
17 this out, and in the subsequent time period, we have,  
18 because of that scientific information, a better ability to  
19 more accurately predict what's going to happen with these  
20 reactors to more appropriately establish a regulatory basis.

21 I just thought I'd mention that.

22 MR. RICCIO: I don't mean to harp on Indian  
23 Point, but if that was actually the case, then you wouldn't  
24 have had the problems at Indian Point that you've had.

25 COMMISSIONER McGAFFIGAN: Well, Indian Point is a  
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1 good example. I'm glad you raised that, because Indian  
2 Point -- I'm not saying that we made a mistake at Indian  
3 Point. I think we will have to wait and see what happens.

4 MR. RICCIO: You do not?

5 COMMISSIONER McGAFFIGAN: I'm not willing at this  
6 point to say that the Staff made a mistake in granting the  
7 extended time. We'll see what happens in the analysis that  
8 we're going to do in the future.

9 But that analysis was deterministic.

10 MR. RICCIO: Right.

11 COMMISSIONER McGAFFIGAN: You criticized the  
12 Farley analysis, and Farley was probabilistic.

13 So you have an analysis that was probabilistic,  
14 and I'm sure you think it was just --

15 MR. RICCIO: I think you were taking risks, yes.

16 COMMISSIONER McGAFFIGAN: But the analysis that  
17 was relied on at Indian Point 2 in deciding that we could  
18 extend the period before the next inspection of the steam  
19 generators was a deterministic analysis. There was no  
20 probabilistic element to it.

21 So all I'm telling you is that deterministic  
22 analysis is not infallible.

23 MR. RICCIO: I know, but I just think that  
24 deterministic analysis at this point seemed to be more  
25 conservative than the risk-based approach that this Agency

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1 and the industry would like to take.

2 It just doesn't -- I -- you know, maybe I see the  
3 glass half empty and you see it as half full, but when I --  
4 I see that, you know, Haddam's next emergency core cooling  
5 system wouldn't have performed its function for the 28 years  
6 that it operated. I have a hard time understanding why you  
7 want to go back in and deregulate ECCS analyses.

8 COMMISSIONER McGAFFIGAN: I think you're  
9 simplifying it grossly when you say that Haddam wouldn't  
10 have -- the emergency core cooling system --

11 MR. RICCIO: May not have been able to perform its  
12 function, and that comes from your own press release.

13 COMMISSIONER McGAFFIGAN: May. And then you get  
14 into whether it's, in fact, operable.

15 But let me just ask Mr. Beedle. You actually both  
16 are -- sitting here as a Commission listening to the two of  
17 you is, I think, as Commissioner Merrifield said earlier,  
18 you're both urging, go slow and let's take this one step at  
19 a time. There is actually some commonality between you.

20 [Laughter.]

21 COMMISSIONER McGAFFIGAN: I may have gotten Riccio  
22 in trouble.

23 MR. RICCIO: I do think you should go slowly.

24 COMMISSIONER McGAFFIGAN: For different reasons,  
25 you guys are saying go slow. I mean, there are economic

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1 reasons here, and there are alleged safety reasons there.

2 The Staff made the point, Mr. Beedle, in their  
3 discussion about this alleged radical departure from the  
4 current approach -- they went back to Reg Guide 1.174 where  
5 we did. I mean, at least this Commissioner thought he was  
6 approving the application of that ten to minus five for core  
7 damage frequency, ten to the minus six for LERF or for  
8 deltas in looking at a specific licensing action.

9 I was doing that on a plant-specific basis. So  
10 why, if I approve 1.174, and that was a conscious act on my  
11 part, isn't this just very similar, what the Staff is  
12 proposing?

13 MR. BEEDLE: I think you were doing it, if I  
14 recall, on specific licensing actions.

15 COMMISSIONER McGAFFIGAN: Right.

16 MR. BEEDLE: So if a plant came in and asked for a  
17 change --

18 COMMISSIONER McGAFFIGAN: The delta.

19 MR. BEEDLE: -- to the license --

20 COMMISSIONER McGAFFIGAN: Right.

21 MR. BEEDLE: -- then you would look at that as  
22 the delta as the criteria. But I think we're looking at the  
23 core damage frequency applied to each plant, specifically,  
24 and I think that would pose some problems for us.

25 I see the core damage frequency at ten to minus

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1 four for the entire, different than each individual plant  
2 meeting that.

3 COMMISSIONER McGAFFIGAN: But we actually aren't.  
4 One of the papers we have before us at the moment is a  
5 Safety Goal Policy statement where the Staff listened to  
6 both of you. I think there was unanimity on the part of the  
7 public and the industry that we should not elevate core  
8 damage frequency or are early release frequency to safety  
9 goals.

10 MR. BEEDLE: Right.

11 COMMISSIONER McGAFFIGAN: And I don't think this  
12 paper necessarily does so, either. I mean, we're rejecting  
13 in terms of changing the safety goal policy statement, we're  
14 not, I don't, think, secretly pushing in through this  
15 risk-informed Option 3 approach.

16 MR. BEEDLE: Well, we saw that creeping into maybe  
17 the framework document and some of the discussions where  
18 those numbers are used.

19 COMMISSIONER McGAFFIGAN: Okay.

20 MR. BEEDLE: Once they get used and fixed and  
21 pretty soon they get used again, and all of a sudden you've  
22 got a specific criteria to deal with.

23 COMMISSIONER McGAFFIGAN: The last comment I have  
24 for Mr. Beedle, the person who writes your comments on a  
25 strategic plan, could you make sure that he talks to you

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1 before he writes the next set of comments?

2 Because in the NEI comments on the strategic plan  
3 there was the search for a clear, concise definition of  
4 safety when it comes to reactors.

5 And I think that the only clear, concise  
6 definition that anybody has around is what ACRS puts forward  
7 which is about ten to the minus three, ten to the minus four  
8 core damage frequency, which is exactly what you have  
9 testified against on numerous occasions with me. But I  
10 think you may want to clarify with NEI and straighten it  
11 away so that we don't get those sorts of comments in the  
12 future.

13 CHAIRMAN MESERVE: You don't need to respond.

14 MR. BEEDLE: Thank you very much, Mr. Chairman.

15 CHAIRMAN MESERVE: Commissioner Merrifield?

16 COMMISSIONER MERRIFIELD: Thank you, Mr. Chairman.  
17 Turning to Mr. Riccio first, obviously I wouldn't expect you  
18 to come in here and be a cheerleader for the nuclear  
19 industry, nor is that our role.

20 One of things you said, I guess on page 2 of your  
21 statement, is that the nuclear industry is not operating  
22 better, the NRC is just regulating less.

23 MR. RICCIO: Yes.

24 COMMISSIONER MERRIFIELD: You stated that, and you  
25 were quoting Corbin McNeil, that overall ability and

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1 capacity factors are not necessarily a good indicator of  
2 operating with better and improved safety, and that's fair.  
3 I wouldn't disagree with that comment, necessarily.

4 I think there are some other indicators that would  
5 show that perhaps they are operating better. Radiation  
6 exposure is down and that's a good thing. The time between  
7 scrams and the number of scrams out there are both pretty  
8 good indicators that they are operating the plants more  
9 thoughtfully.

10 And then, finally, you have refueling outages that  
11 have decreased in the amount of time, which David Lochbaum  
12 has been quoted in a number of instances as saying that in  
13 some instances, does indicate the fact that licensees are  
14 planning better and may indicate they're doing a better job.

15 So I think there are things out there that  
16 indicate that the industry is being more thoughtful. Now,  
17 for our part, we have changed the way we do some of our  
18 regulation.

19 I think the new inspection and oversight process,  
20 which has, for the most part, been supported by a number of  
21 people, those indicate from the inspection standpoint that  
22 there are areas where we have not inspected as much as we  
23 should have, and we're doing more; and some areas where we  
24 have spent a lot of time, from a risk perspective,  
25 justifiable, that we're doing list.

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1           So I think that is a case where we're doing a  
2 better job. So, you know, I lay that out for what it's  
3 worth.

4           But I want to go to another comment you made. You  
5 quoted our former Chairman as saying that risk-informed  
6 regulation can be a double-edged sword.

7           MR. RICCIO: Right.

8           COMMISSIONER MERRIFIELD: I agree with that, and  
9 it should be. You stated in your oral testimony that you  
10 were perhaps a little bit encouraged by some of the comments  
11 of the Staff that we may have identified some things where,  
12 indeed, we may need to increase our overview.

13          MR. RICCIO: I was encourage that they  
14 acknowledged that problems exist.

15          COMMISSIONER MERRIFIELD: Yes. Well, they talk in  
16 their slide about issues relative to hydrogen control  
17 measures for Mark III and ice condenser containments as  
18 being one where they're going to take a look at it.

19          So I guess, you know, that it may be that we  
20 haven't gotten completely out of the starting blocks on  
21 this, and it may be too early to draw a conclusion as to  
22 whether this is a useful effort or not.

23          I just thought I'd give you an opportunity to  
24 respond to that.

25          MR. RICCIO: The problem is that if you try to  
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1 impose a new regulatory requirement on this Agency, you're  
2 going to have to go through a risk-based --

3 COMMISSIONER MERRIFIELD: Risk-informed.

4 MR. RICCIO: Pardon me. You're going to have to  
5 go through a cost/benefit analysis commensurate with the  
6 backfit rule. To deregulate, you don't have to do that.

7 And I find that to be a stark disparity. It's  
8 permissible to reduce regulation, but it's not permissible  
9 to actually -- I don't want to say ratchet-up, either -- but  
10 to add additional requirements.

11 It's a bit of a problem as well with the new  
12 oversight process. The new oversight process handcuffs the  
13 regulator. It doesn't regulate the industry. It says when  
14 the Agency may actually regulate.

15 And I think that is an inappropriate stance for  
16 the regulator. I think the regulator should be -- when the  
17 regulator sees something that is important to safety, that  
18 they should be able to act upon it without having to go  
19 through the machinations, especially if you're going to  
20 allow them to deregulate.

21 I believe in equal treatment. If you're going to  
22 allow the deregulation to occur without any safety analysis  
23 -- sorry, cost/benefit analysis, then the same should be  
24 said for imposing new regulations under this rubric.

25 COMMISSIONER MERRIFIELD: Yes, okay, I see your

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1 point, but I think -- I don't think that you necessarily  
2 want to leave the impression -- maybe you do -- that  
3 reducing the regulation is analogous with reducing safety.

4 One of our cornerstones and one of the  
5 requirements is that we maintain the level of safety. You  
6 know, I can have a different form that's two pages, and I  
7 rewrite and I make it one page and I get the same  
8 information. Just because it's a shorter form doesn't make  
9 it less effective.

10 MR. RICCIO: I understand that.

11 COMMISSIONER MERRIFIELD: Being longer and more  
12 complex isn't necessarily a good thing.

13 MR. RICCIO: My concerns are stemming from the way  
14 I see 1.174 used; they're stemming from the fact that you  
15 allow another rewrite of 50.59 and for the first time this  
16 Agency actually allowed an increase, although minimal, you  
17 allowed an increase in risk.

18 And that is an indicator to me of where,  
19 potentially, this whole program is heading.

20 COMMISSIONER MERRIFIELD: Well, that's certainly  
21 not the direction we want it to go. I think -- I want it  
22 to go. I want to end, at least for my questions for you, by  
23 stating that your comments are valuable. Having your input  
24 certainly keeps us aware of a differing view, and I  
25 certainly hope you continue to provide us with your

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1 insightful comments.

2 Turning to Mr. Beedle, I saw the slides, and we  
3 have clarified a little bit about your concern that we were  
4 going to a risk-based approach, rather than a risk-informed  
5 approach.

6 Obviously, risk quantification should not be the  
7 sole basis for our regulation. But there's obviously a gap.  
8 We've had some information issues. You know, your  
9 perception of where we're going with Option 3 and the  
10 framework that we laid out in 0086, wasn't quite where you  
11 felt it needed to be.

12 How is that we've got this gap in terms of  
13 communication between ourselves and you and this difference  
14 in where we're coming out on this?

15 MR. BEEDLE: Well, I think one of the reasons is  
16 there are an awful lot of people working on this. I think  
17 Research has got a different approach to regulation changes  
18 than does NRR, as does the industry, and so we are looking  
19 at different groups within RES that are working on this  
20 project along with other things that they are working on,  
21 and they are trying to balance their work on this effort  
22 along with other things that they are doing and those kind  
23 of spill over sometimes.

24 If your focus is on getting a PRA standard that is  
25 quantifiable through the ASME process and you are also

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1 working on this, then it seems to me logical to think that  
2 that is going to kind of feed in here and some of the  
3 thought processes that are over in that camp are at play in  
4 this one, so I just -- I think it is another demonstration  
5 of the complexity of trying to deal with regulation changes  
6 where you are getting down at some of the fundamentals of  
7 why the regulation exists.

8 Now the question -- if I may -- just to kind of  
9 footnote this, the comment about slowness, I am not  
10 suggesting that we go slow. I am suggesting that we focus  
11 on some identifiable regulatory changes that we can come to  
12 grips with and use the lessons learned from that to go ahead  
13 with other proposed regulatory changes.

14 I think the two, the .44 and .46, represent good  
15 ones to do that because one is I think relatively contained,  
16 the hydrogen issue, and the other one is pretty  
17 far-reaching. Depending on how we treat that, as Mr. Diaz  
18 suggests, how you truncate that will have a lot to do with  
19 the success you have in making that change. I think that  
20 is a valuable lesson.

21 Now if we can do that by next week, I think that  
22 would be great.

23 [Laughter.]

24 MR. BEEDLE: But I think it is going to take  
25 longer than just a few weeks and my suggestion is that we  
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1 prosecute those, not just go slow but prosecute those, so  
2 slow as opposed to all-encompassing. That is the issue.

3 COMMISSIONER MERRIFIELD: I appreciate that. I do  
4 want to make one mention about one sideline you did say.

5 I am aware that there are efforts on the parts of  
6 various owner groups to do a self-analysis on the PRAs out  
7 there.

8 I think that is a positive thing, more time spent  
9 on making sure those are of the highest quality I think is a  
10 good thing. I hope, you know, a pure economic analysis  
11 isn't being made on that project in terms of an individual  
12 plant by plant or owner by owner decision for that because I  
13 think that work is meritorious at all plants for a variety  
14 of reasons and certainly -- I don't know if you have any  
15 thoughts about that but certainly I, for my part, think that  
16 that is money well spent.

17 MR. BEEDLE: Well, I think that there are two  
18 things that are at play in the owners group effort.

19 One is certainly the self-assessment by the  
20 utility of their PRA, but perhaps more importantly is the  
21 peer review that is conducted by individuals that are  
22 knowledgeable and experts in that field, and there is  
23 nothing like the peer review process to kind of identify  
24 shortcomings in the way you do your work, and it has been  
25 very valuable.

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1           It isn't a case of the peer being lenient or  
2 accepting of low standards. They are pretty exacting in  
3 their process. You know, they did it this way. It really  
4 stood the test of time from their point of view. They want  
5 to see everybody benefit from that experience.

6           COMMISSIONER MERRIFIELD: Hopefully, the monies  
7 will be invested to take advantage of those peer reviewed  
8 comments.

9           Thank you, Mr. Chairman.

10          CHAIRMAN MESERVE: Good. Thank you. Mr. Riccio,  
11 there is one point that you made of the several of the  
12 issues that you have raised that others have asked about,  
13 there is one that I wanted to pursue a little bit.

14          At the very end of your testimony you talk about  
15 the fact in 1993 there was the NRC evaluation of its  
16 regulations and that .44 and .46 were ones that at that time  
17 were identified as having a substantial impact on safety and  
18 you basically criticize us and NEI for the fact that those  
19 are candidates for examination in this risk-informed  
20 process.

21          Let me say, I think that the comment sort of  
22 misses the point of what we are trying to do. I don't think  
23 that anyone here is suggesting that 50.44 or 50.46 don't  
24 address important safety issues or that anyone is suggesting  
25 that they be eliminated or that they be repealed in some

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1 fashion.

2 I think that the thrust is whether we can do a  
3 better job on those regulations and that the very fact that  
4 they have a substantial impact on safety is and that  
5 identification is why they are worth looking at, to make  
6 sure that they are focused correctly.

7 MR. RICCIO: I was at the meetings, the workshops,  
8 and it was my -- and given my own bias -- but it was my  
9 impression that the reason they were selected is because  
10 that is where they feel that they could get the greatest  
11 burden reduction.

12 I would prefer to see, since this is really a, you  
13 know, this initiative is fresh out of the box, I would  
14 prefer to see that it be implemented in things that are less  
15 risk-significant. I know this may not garner as much  
16 benefit to safety, but if you screw up, the downside isn't  
17 nearly as great, I would think. That was why I was  
18 concerned that we are taking, you know, we are setting our  
19 targets on those issues that were at least in terms of your  
20 own reg review are considered to be substantial, to have a  
21 substantial impact on safety.

22 CHAIRMAN MESERVE: That is a fair point, that I  
23 suppose if there were other regulations that were not as  
24 safety-significant, but where there is significant  
25 advantages to revising them, maybe in burden reduction,

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1 maybe in other things, that you wouldn't have the  
2 consequences. Is that the point?

3 MR. RICCIO: That was the point that I was  
4 attempting to make.

5 CHAIRMAN MESERVE: Okay.

6 MR. RICCIO: That I think you can be focusing on  
7 some different regulations first. Quite honestly, I don't  
8 believe this process is sound and I guess otologically,  
9 philosophically I believe there are some serious problems  
10 with it.

11 The entire premise is based upon the fact that  
12 each plant has been constructed, operated and maintained in  
13 conformance with its design basis, and over the years I have  
14 been thoroughly convinced that that is just not the case.

15 So, you know, I see problems with what you have on  
16 the ground. I see problems with the quality of the PRAs. I  
17 see problems with the fact that the PRAs don't reflect  
18 reality. They were talking 1 in 10,000, 1 in 100,000, 1 in  
19 a million. Your core damage frequency in this industry in  
20 the United States is 2 in 2500 and that excludes the test  
21 reactors that you have also melted down, so core damage  
22 frequency is 2 in 2500.

23 I am trying to just get the point across as to why  
24 I have serious philosophical problems with risk-basing the  
25 regulations.

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1           When I met with Chairman Jackson several years  
2 ago, she asked what is your goal in engaging this agency,  
3 and it was to keep the regulatory fence as high as possible  
4 so that we might prevent another meltdown in the United  
5 States, and thus far we have -- the industry and the agency  
6 have achieved that, and I am afraid that with this new  
7 effort that that may no longer be the case.

8           CHAIRMAN MESERVE: Let me suggest that the proof  
9 of this -- we are in a very early stage of this process --  
10 and probably the proof of where we are headed and why we are  
11 doing it and what the impacts are would be better tested  
12 when we have a more concrete proposal that is in front of us  
13 rather than the sort of general strategy we have and that  
14 I'd suggest that maybe it would be useful for everyone to  
15 defer judgment on how this process is going to work --  
16 certainly the industry is deferring judgment as to whether  
17 they even want to participate in it -- for the opposite  
18 reasons of you, because they are not sure where it is  
19 headed.

20           I think that having this in a somewhat more  
21 concrete form would be helpful to everyone to assess that.

22           MR. RICCIO: I think I agree with you. My only  
23 concern is I heard the word "certainty" kicked around --

24           CHAIRMAN MESERVE: Uncertainty.

25           MR. RICCIO: No, no, "certainty" -- the industry

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1 wants certainty in this process.

2 The last time I heard that was with license  
3 renewal and I am afraid that after, you know, Yankee Rowe is  
4 shut down when it attempted to extend its license, that  
5 certainty became the dominant factor in the rewriting of the  
6 rule rather than public health and safety.

7 Let's hope that that doesn't happen again with  
8 this new performance based initiative -- I'm sorry,  
9 risk-informed initiative -- can't keep them straight.

10 CHAIRMAN MESERVE: Mr. Beedle, there was one  
11 aspect of the SECY paper that you didn't mention that did  
12 catch my attention of something that the Staff is trying to  
13 do, and that is the Staff perceives that there may be  
14 something they call "holes" in the current regulatory  
15 system, that there may be some things that we should be  
16 regulating that we are not regulating.

17 They flag as an example I think there are sealed  
18 LOCAS in PWRs and I guess the other one was a melter of  
19 containment liners in BWRs as being an area where they may  
20 be some problems.

21 Has the industry looked at those issues, and do  
22 you have any perspectives on that?

23 MR. BEEDLE: I don't know how much work the owners  
24 groups have done on those specific issues but as a general  
25 comment I think this is precisely the area that Chairman

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1 Jackson was talking about on it cuts both ways.

2 We may find some things where we don't need to  
3 regulate because they aren't all that safety significant,  
4 but there are other things where there are no regulations  
5 and you do need to impose regulations in those areas.

6 We are finding that as we go about the process of  
7 examining our systems in light of the PRAs. We are finding  
8 systems that are not safety-related that really do have a  
9 safety impact, and we are prepared to move those things into  
10 a category that represents the kind of treatment that is  
11 deserving of a safety significant component.

12 By the same token, we are finding things that are  
13 safety significant categorized that are not in fact true  
14 safety significant and we would like to move those down into  
15 a category where we don't have to spend so much time and  
16 effort trying to deal with them.

17 If there are holes, and Mary mentioned those, as  
18 we go through this analysis and we find holes, then the  
19 first one to stand up and say we ought to plug that hole is  
20 the group of people that are operating these plants.

21 We are not the least bit interested in running a  
22 plant with a significant safety risk and I think you will  
23 get that from every one of our executives.

24 As went through, starting in the '88 timeframe,  
25 when we did the IPes, up to today, as you find

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1 vulnerabilities or opportunities to reduce your risk in  
2 those PRA processes, we have been putting in place  
3 procedures and equipment to modify our plants in order to do  
4 that so I think we are not going to balk at trying to  
5 improve the safety of the plant.

6 What we really are looking for is a more rational  
7 approach to some of the issues that we deal with that we  
8 don't think represent safety risk.

9 CHAIRMAN MESERVE: Let me just say I am very  
10 pleased to hear that, because -- that surprised me, but I am  
11 very pleased to have you tell us and to tell the audience  
12 that here today because it does seem to me that our capacity  
13 to go forward with this whole effort is where we look at the  
14 risk significance and call them as we see them, and if there  
15 are opportunities for us to reduce regulatory burden where  
16 there is no benefit from having the regulation we should do  
17 it.

18 On the other side, where we are not regulating  
19 where we should be, we have to step up to the plate and up  
20 the ante on that, and both of those things go together, and  
21 we won't succeed in this effort unless that is our single  
22 objective.

23 That is my final question. I think that we have  
24 come to the end of the day. I would like to thank you both  
25 and to thank the Staff for their presentations today. I

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1 think that it is clear that we have a long and difficult  
2 task in front of us. I am hopeful that as we get into the  
3 more concrete work that it will help to crystallize these  
4 issues and make them easier to resolve than perhaps they  
5 have been and to deal with them on a generic basis.

6 The proof will be in the pudding as we go forward.  
7 Nonetheless, I think this has been a very helpful briefing  
8 and appreciate the input that all of you have provided.

9 Let me turn to my colleagues and see if they have  
10 a closing comment.

11 [No response.]

12 CHAIRMAN MESERVE: If not, we stand adjourned.

13 [Whereupon, at 3:35 p.m., the briefing was  
14 concluded.]

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