UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON PROPOSED RULEMAKING TO
ADD NEW SECTION 10 CFR 50.69 (SSCs)

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Nuclear Regulatory Commission

One White Flint North

Rockville, Maryland

Thursday November 21, 2002

The Commission met in open session, pursuant to notice, Chairman Richard Meserve, presiding

COMMISSIONERS PRESENT:

GRETA J. DICUS, Member of the Commission

NILS J. DIAZ, Member of the Commission

EDWARD MCGAFFIGAN, JR., Member of the Commission

JEFFREY MERRIFIELD, Member of the

Commission

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

Secretary CARL PAPERIELLO, Deputy EDO

JON JOHNSON, Deputy Director, NRR

DAVID MATTHEWS, Director, Division of Regulatory Improvement Programs

GARY HOLAHAN, Director, Division of Systems Safety & Analysis

TIMOTHY REED, Senior Project Manager, Policy & Rulemaking Program

JACK STROSNIDER: Deputy Director, Office of Research

THOMAS SCARBROUGH, Senior Mechanical Engineer, Division of Engineering

DAVID FISCHER, Senior Mechanica Engineer, Division of Engineering: Division of Engineering

JOHN FAIR: Senior Mechanica Engineer, Division of Engineering: Division of Engineering

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

Good morning. On behalf of the Commissioners I would like to welcome everyone on today's briefing on risk informing our special treatment requirements.

As I suspect everyone in the room recognizes, we have been embarked on a long-term effort to re-examine the foundations of our regulatory system. With the advent of the tool of probabilistic assessment and its development and several thousand reactor years of experience with plants, we have deep insights into the risks associated with plants.

And the Commission has sought for a number of years to find various ways in which we use these risk insights to shape our regulatory system in new ways. Option 2 of this effort was to focus on the requirements dealing with safety-related structure systems and components or SSC's as I'm sure they will be referred to throughout the rest of this morning.

And we have the staff's -- we are going to be presenting a discussion this morning on the proposed rule making to add a new Section 50.69 to reflect this matter.

Dr. Paperiello, why don't you proceed?

CARL PAPERIELLO: Thank you, Mr. Chairman. Commissioners, good morning.

The staff is here today to brief the Commission on a proposed rule that would add a new section to Part 50 with requirements for risk-informed categorization and treatment of structures, systems, and components. The proposed rule, as set forth in Secy 02-0176 dated September 30, 2002, has been prepared to be responsive to the Commission's policy statement on use of PRA and the Commission's direction on specific initiatives for risk informed regulation.

With me at the table are Mr. Jon Johnson, deputy director of the Office of Nuclear Reactor Regulation; Mr. Dave Matthews, director of the Division of Regulatory Improvement Programs, NRR; Mr. Gary Holahan, director of Division of Systems Safety & Analysis, NRR; and Mr. Tim Reed, Senior Project Manager from NRR. The presentation will be made by Mr. Reed.

I would also note that while the rule was prepared by NRR, the staff was assisted by the Office of Research, particularly in areas related to the adequacy of PRA, and by the Office of General Counsel.

Mr. Johnson will now provide some opening remarks for NRR.

MR. JON JOHNSON: Thank you.

Good morning, Chairman, Commissioners.

A central challenge that the staff faced in this process of developing the proposed rule was to blend the deterministic requirements with the insights from problemistic risk assessment.

Also, another challenge was to develop the treatment requirements commensurate with safety significance to complement this robust catorization process.

In this development the staff had considerable debate, both external and internally. Several questions arose: What is the correct balance, what level of detail provides reasonable assurance, how prescriptive should the regulations be for low safety significant components?

The staff's position is the proposed rule package. We believe it provides the proper balance, it achieves the strategic goals of maintaining

safety, reducing unnecessary regulatory burden. And we believe it will better focus the staff and the industry on safety.

In developing the staff's position, there were a spectrum of views. This reflects stakeholder inputs over an extended period of time. In this regard, the office was provided, on September 26, with three differing professional views.

The filers believe that the treatment of RISC-3 components is not sufficient to maintain safety and protect the public health and safety. The rule package acknowledges the receipt of these differing views and indicates that the normal agency process would be used.

However, upon reflection, the office director concluded that circumstances were not conducive to convening a normal review panel. The range of views, the level of detail of RISC-3 components were well known and fully vetted during the development process.

Nevertheless, the more detailed version of the rule suggested by the filers has been placed in the Federal Register notice for public comment and review. We believe that the public comment will be valuable to develop the final rule, and it will

provide a better understanding of the staff's position and the basis for the proposed technical requirements.

I would like to note that the filers have stated that there were inconsistencies between the statements of consideration and the proposed rule. And our staff has reviewed these and concluded that there's no change to the rule making package necessary.

I would like to thank the Commission for providing the opportunity for the filers to present their views. We have had a lot of debate, but it's been a healthy debate. And it has contributed to the quality product that you have before you.

We believe that the continued involvement of the public will only improve the product.

Mr. Reed?

TIMOTHY REED: Thanks Jon.

Good morning.

Staff appreciates this opportunity to brief the Commission on the proposed 50.69 rule making package. We will provide a pretty high level overview of the proposed rule making package. We certainly hope it supports you in your efforts to make a decision on whether to publish the package for public comment.

There are issues that remain to be resolved in the implementation guidance. We recognize that. But we think the most efficient way to move forward and get to a final rule filing guidance is to put this thing out for public comment and get the external stakeholder feedback.

Slide two, please.

This slide shows basically what I plan to discuss today. I want to start with a little bit of background and then go to a high level discussion of the proposed rule, discuss some of the significant issues we had to tackle in putting this package together, then summarize and wrap up.

Slide three, please.

Prior to the package that is before you today, there were three Commission papers that pertained to this effort. It started really with secy-98-300. That paper identified what were termed options, as has already been mentioned by Chairman Meserve for risk informing the activities and regulations of the Commission.

We are here today to discuss Option 2.

That's risk informing the special treatment requirements and now, of course, proposed 50.69. Under this framework, licensees or applicants using a risk-informed process to categorize structure systems and components -- and I will refer to them as SSCs throughout this briefing -- can remove these SSCs from the special treatment requirements. Then they come in, of course, under a 50.69. That's how they're addressed.

These special treatment requirements, they reside in parts 21, 50 and 100 of the Code of Federal Regulations. They, of course, are intended to provide a high level of confidence that this equipment is capable of meeting and functioning requirements under design basis conditions.

What are we talking about when we talk about special treatment requirements when we talking about equipment? Qualifications requirements, documentation requirements, reporting requirements. It can be maintenance testing, surveillance requirements, quality assurance requirements ,just to name some examples.

In June of 1999, the Commission directed the staff to implement Option 2 of secy-98-300. We went forward and developed a rule making plan and

advance notice for proposed rule making. We provided that to the Commission in secy-99-256 in October of 1999.

The Commission approved the rule making plan and the ANPR. We then subsequently issued that ANPR in March of 2000.

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The ANPR generated more than 200 comments. The staff looked at those comments and provided its preliminary responses. Those were contained in secy-00-194. That secy also discussed, in a little more detail, our thoughts on the regulatory framework.

We briefed the Commission in conjunction with that secy. That was briefing on September of 2000. And we also discussed our ideas on the framework at that time.

Then in June of 2001, the staff briefed the Commission again. This time it was in support of the issuance of the South Texas exemption review and approval. It discussed both the South Texas review and approval and, of course, the 50.69 framework and our efforts to develop it.

As you are aware, the South Texas review and approval, that exemption request, laid the

groundwork for 50.69 by demonstrating that was, in fact, possible to risk-informed special treatment requirements. Of course, that was an exemption we heard on today on the rule making.

But many of the technical issues that were addressed, or we had to address under 50.69 were, in fact, first addressed under the South Texas review.

Finally, I would like to add that we also met with the ACRS on September 13th of 2002, this year. And we have got the ACRS' endorsement to put this package out for public comment. Now, I say they endorsed putting out the public comment. They didn't agree with all the technical issues. But we need to work some of this implementation guidance out. But nonetheless, the ACRS agreed the best way to move forward was to get this thing out for public comment.

Slide five, please.

Throughout this effort, we have had extensive really interaction with external stakeholders. And it's certainly been constructive.

We have had several workshops in supporting the rule making effort. And additionally, and importantly, the industry, through the Nuclear Energy Institute and the industry group have been very supportive of the rule making effort. NEI, in fact,

has developed implementation guidance in the form of NEI 0004 and the owner's groups use that guidance and actually different draft revisions of that guidance and piloted that as part of our pilot program.

They used the feedback that was generated by both the staff and industry participation in the pilot to improve the NEI guidance. And, of course, we used that feedback also to help us put this framework together, as well as generate our issues associated with the implementation guidance.

So it benefited us as well.

In addition, staff has also issued three versions of the draft rule language, and put that out on external web. And we have got a lot of good interaction and feedback on that draft language.

It helped us to identify and address issues, questions, and certainly helped us improve the language that resulted in the proposed rule language that's before the Commission now.

But I would note that external stakeholders were somewhat handicapped in the fact that we could put the language out but could not put the supporting statement considerations out at the same time. So they really didn't have a good idea of some of the

intent behind the language. So that sort of handicapped their reaction in that respect.

Next slide, please.

I would like to now go to the rule. And we will do that in a pretty high level. But before we jump into that, I want to remind everybody, including the Commission, of course, that proposed 50.69 is only about risk informing special treatment requirements. These are the so-called assurance requirements. I will say this several times throughout this. But what we're not doing in 50.69 in Option 2 is we are not changing the design basis functional requirements.

In fact, this became a key constraint on this entire rule making effort and a challenge we had to overcome. We had to risk-inform special treatment requirements while maintaining design function requirements.

So an overview then, what are we doing with proposed 50.69? We are establishing a risk-informed categorization process in which a licensee or applicant then would categorize SSCs, they adjust the treatment, depending on their categorization to apply that treatment, and then you maintain the validity of that process over time.

So that's basically the way the rule works. It starts off in paragraph A. We define the key language. You will see there the risk-informed safety classes or RISC. That's the acronym for risk-informed safety classes. RISC-1, RISC-2, RISC-3, and RISC-4. These are the bins into which the SSCs are categorized. And this is dependent on where is SSC is coming from and where it's going to. And as a deterministic regime. These SSCs are defined as either safety related or nonsafety related. And, of course, in 50.69, we are going to take them and we are going to move them into safety significant, low safety significant and that results in the four boxes.

Real quickly, these RISC-1 SSCs are safety related safety significant SSCs. That's the bin for those. RISC-2 are safety significant nonsafety related SSCs. Down at RISC-3 we are looking at safety related low safety significant SSCs. And finally, RISC-4, we are talking about nonsafety related low safety significant SSCs.

The rule goes on to define safety significance function. And we define that as functions whose loss of degradation could have a significant adverse affect on defense in-depth,

safety margins or risks. And this was chosen to be entirely consistent with the philosophy of Reg Guide 1.174. And that's a philosophy I think you will find embedded throughout this rule.

This language is then linked back into the definition of RISC-1 risk categories because, in fact, safety significant SSCS are SSCs that perform safety significant functions.

Next comes paragraph B. What we were trying to do in paragraph B is really three things, trying to identify to may implement 50.69 first.

Secondly, we provide you a list of special treatment requirements for which 50.69 offers an alternative.

Finally, we identify there what a licensee or applicant must do to start the process in terms of making a submittal that the staff then reviews, looks at it, and approves it, versus the paragraph C requirements, then does that prior to the implementation.

First, regarding who may adopt this rule. This is a voluntary rule. It may be adopted by your holders of reactor licenses, that includes both your standard or part 50 licenses as well as the renewed part 54 licensees. It may also be adopted by

applicants, and that includes both traditional part 50 applicants, as well as applicants for the part 52 licensees.

Secondly, in paragraph B we have the list there of the special treatment requirements. I won't go through the entire list. You can read it, of course, for yourself. It starts with part 21. There's numerous regulations noted there. Like 50.55(a) pieces, appendix B, Part 50, just to name a couple.

Finally, the third thing we are trying to do in this paragraph again is to identify what you have got to do as an applicant or licensee to start the process and get it going.

Licensees must submit a license amendment application, following the provisions of 50.90. That's the license amendment provisions. And any information you would provide to us is identified in paragraph B. But essentially what it is, it's a description of the categorization process, a description of the measures taken to ensure PRA quality, the results of any PRA review process done, and then a description of the evaluations that are going to be conducted to show that the paragraph C

requirements are met. The requirements I am talking about here are the requirements that show that you have a small change of risk associated with implementation of 50.69.

Staff will then review that against paragraph C requirements. In fact, if they meet that, then we will prove it, and that allows you to go forward and implement the rule.

Applicants basically will do the same thing. They submit the same sort of information as part of their application. The NRC would then act on that as part of its action on the license application.

Next comes paragraph C, what I view as the heart of proposed 50.69. These are the categorization requirements.

Fundamentally, implementation of proposed 50.69 categorization requirements involves the establishment of an integrated decision making panel. It's a panel that, in fact, ultimately determines whether SSCs are safety significant or low safety significant.

This panel often is referred to as an expert panel, and it essentially provided all the relevant information pertaining to safety

significance, and that comes from both the old deterministic world of qualitative information that's available as well as any information you have from a PRA, quantitative type information you may have.

And this also includes information from such assessment tools as seismic margin analysis, shut down analysis, vulnerability analysis, like five, for example, what you have available. In other words, it gives you an idea of safety significance.

As such then, what you will see in paragraph C is you have got the PRA requirements, the categorization requirements, the requirements to have this expert panel. And notably requirements to show with some reasonable confidence that the change of risk associated with the implementation of this rule is small.

And we talk about what small is in the SSC. And we talk about terms really -- the terms we use for risk are CDF, core damage frequency or large early release frequency, LERF.

With regard to the PRA requirements, you need a plant specific PRA which at a minimum must model severe accidents scenarios resulting from internal events at full power. So you need an internal events full power PRA. This PRA must have

been subjected to a peer review process against a standard or a set of acceptance criteria accepted by the staff.

And the categorization process itself must address basically everything, internal and external events and all operating modes, regardless of what your PRA is restricted to.

So I just mentioned maintaining with sufficient confidence the small increase in risk as measured by changes in CDF and LERF as a key requirement to 50.69. In paragraph C we require the licensees to conduct the evaluations to support their conclusion that this requirement is being satisfied.

In paragraph C also places a limit on the freedom to selectively implement 50.69. And although you have to implement the entire regulation as a whole, you can't pick pieces of it, we have developed a regulation to have significant flexibility in terms of you can implement it for any or all of the special treatment requirements that are listed in paragraph B and you can implement it for any number of systems in the plant.

What you can't do, and where the restriction is, you can't implement it for a component within a system. And we have reasons for

that. Essentially, we want to make sure you identify all the functions, for all the different modes. If you do it on a systems basis, we think you capture that.

Next slide, please.

Next we come to paragraph D. These are the treatment requirements.

What we do is apply, of course, treatment requirements to each of the risk categories. Starting with RISC-1 and RISC-2 categories SSCs -- again these are the safety significant SSCs. First, they remain subject to any special treatment requirements that are applicable. We haven't removed any special treatment requirements from either box. Of course, most of them are on box one, RISC-1 SSCs.

But in addition if you look into the proposed rule, you will see a requirement in D-1. And that is to have requirements there to ensure that the SSCs perform their functions consistent with the categorization assumptions.

Since current special treatment requirements are more than sufficient, in fact, provide a high level of confidence, to ensure that these SSCs perform their design basis functions, the focus here is really on assumed performance beyond

design basis conditions or situations.

Specifically we want to make sure that the treatment applied to these SSCs is sufficient to support the key categorization assumptions that pertain to SSC performance as credited and beyond design basis situations.

Now, RISC-3, going down to the RISC-3 bin now. What we have there is high level requirements to implement processes to provide what we refer to as reasonable confidence in the capability of RISC-3 SSCs to perform the safety-related functions.

In developing this portion of the role, we took a more performance based approach that recognizes the low safety significance of the SSCs to which these requirements apply. We have established the minimum requirements that provide this reasonable confidence in the capability of RISC-3 SSCs.

It should be noted that the treatment applied to RISC-3 SSCs needs to be sufficient to support the evaluations that I previously mentioned that were performed up in paragraph C that showed the small changes of CDF and LERF. So that's another constraint on the RISC-3 treatment.

Given the low safety significance of RISC-3 SSCs, there's a reason to ask why we, in fact, have

requirements in the proposed rule on these SSCs. Individually, RISC-3 SSCs are not safety significant. In other words, they wouldn't get into this bin if they were. But we need to recognize that collectively they can be safety significant.

So it becomes very important there to maintain the design basis function requirement. So this goes back to this whole idea of maintaining design basis, at least design base function requirements that was built into this framework.

So as a result, and you look into this, you will see we have problematic requirements in D-2 of the rule. They go to design control, procurement, maintenance, inspection, testing, surveillance, and corrective action.

And the proposed framework relies on the licensee to develop and implement programs that meet these high level requirements. Unlike the approach that was taken for the categorization requirements, which, in fact, we have a review and approval built into the framework, here we are not reviewing and approving the RISC-3 treatment programs. Our primary regulatory focus is on the safety significant SSCs and associated activities. And, of course, this is principally on assuring robust categorization. And

we have a reduced focus on RISC-3 activities associated requirements.

And this is how we think it should be. This is the risk-informed focus.

Next comes paragraph E.

This is another key piece of the rule. And this paragraph incorporates monitoring and process feedback requirements. There is another key piece of the framework. And they are the means by which you maintain the validity of the categorization process over time.

Licensees are required, basically, in E-1, to provide any kind of data that can affect the PRA model itself. This can come from design changes, procedure changes, operational experience, even industry operational experience that can affect the model itself. That's what E-1 is trying to do, bring that data back into the process. It's done on a periodic basis.

E-2 and E-3 are basically feeding back in performance data. E-2 is the performance data for RISC-1 and RISC-2. In fact, it's requiring you to monitor these RISC-1 and RISC-2 SSCs and feed this data back into the process, the categorization process.

E-3 is requiring you to consider the data that's actually collected under D-2 of the rule. If you go into D-2, you will see a maintenance protection inspection testing surveillance requirement. The court requires you to collect data.

Okay. That data then will be looked at in E-3. What you are doing there is you are really examining data to determine whether, in fact, an evaluation for delta CDF and delta LERF remains valid. That's what E-3 is doing for you.

All of this data is being fed back in the categorization process. The process itself must be adjusted to maintain its validity.

That means you have got to do one of two things, essentially, either change the categorization or change the treatment. But you have got to maintain the validity of the categorization process. That's the way paragraph E works.

Next comes paragraph F.

Paragraph F of 50.69 specifies requirements for documentation and change control. Licensees are required to document the basis for the categorization of SSCs and are required to update the FSAR descriptions in accordance with 50.71 to reflect the progress and implementation of 50.69.

With regard to change control requirements, we haven't developed any unique change control requirements. So we would be relying on the processes that exist today.

Finally, this paragraph provides relief from 50.59. And this is relief for those changes that are in the FSAR that are direct results of the changes in treatment as applied to SSCs that fall out of this process, recharacterization.

Again, any changes that involve nontreatment aspects of these SSCs must go under all the normal design change control requirements. That includes 50.59. So anything outside of treatment gets the normal design change control. Again, we are not changing design basis functional requirements of 50.69.

Finally, the rule ends with paragraph G. This paragraph specifies the new reporting requirement applicable to events, conditions that were prevented in RISC-1 and RISC-2 SSCs from performing a safety significant function and that are now otherwise reportable under current requirements that are in 50.72 and 50.73.

Now, 50.72 and 50.73 are more than adequate to address anything within the design basis. So what

are we looking at here? We are really looking at beyond the design basis safety significant functions. And that's what we want reported here. And you would follow basically the provisions of 50.73 paragraph B. And I am submitting a LER in this regard.

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Actually, Jon Johnson has already mentioned this a little bit. So, I will just hit it again here. This slide is really discussing some of the challenges that we have had to address as we have come along here in 50.69.

As I'm sure the Commission is aware, this has been challenging, it's been time consuming. It's truly, I think a first of a kind rule making in developing this framework. We wrestled with numerous technical issues. These issues really are all related, and I kind of view them in a sense as a tug of war. What we tried to do is balance categorization requirements on one side and treatment requirements on the other.

We have really driven this thing to be toward the robust categorization. In other words, we want the requirements in the rule to be such that a licensee implementing processes to comply with it, it will be a robust categorization process. And by

robust I mean you will have a high confidence that the SSCs are being put into the correct bins.

So we have tried to derive on the categorization process. We think, of course, we are there.

On the treatment side what we have tried to do, well, if it's safety significant, we keep all the special treatment requirements. We have a requirement basically to maintain the validity of the categorization process for beyond design basis. We think we have the sufficient treatment requirements there.

And what have we done down in the low safety significant SSCs? We have tried to be performance based to the maximum extent possible and have the minimum requirements that basically provide a reasonable level of competence so that these SSCs maintain their capability of design basis functions.

Of course, throughout our base our major concern is safety. We think this framework maintains safety.

Additionally, we think we have got the right balance here in terms of robust categorization and our treatment on the other side of the issue here.

We also think it's also consistent with what we have told the Commission in previous secy papers we are going to do, and we think it's consistent with your expectations of what you are looking for from the staff in this effort.

A key piece, of course, is this delta CDF and delta LERF issue, this piece of it. We don't want a, of course, implementation of 50.69 to result in any more than a small increase in risk. Really, the technical challenge here is evaluating this due to implementation. In other words, assuming a performance change in RISC-3 SSCs that results from some change of treatment and then having a basis to support that. We are going to have to continue to work with this. This is really an implementation guidance issue. This would be something that would be addressed in NEI 0004.

We are going to have to continue working with external stakeholders in the industry to get there on this one. But we think we are going to do that and get to the final rule and reg guide and have this issue addressed.

But the bottom line is, the staff feels that it has achieved the proper balance in these technical areas in the proposed rule package.

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In summary, the staff believes it has developed a rule making package that the proposed 50.69 that first successfully risk informs the special treatment requirements.

Secondly it's consistent with our agency goals and most importantly, it maintains safety.

Thirdly, we think it's consistent with our previous statements to the Commission and Commission direction to us on this effort. So we think it meets expectations.

We recognize that there are issues that remain to be resolved regarding the implementation guidance and the associated draft regulatory guide. And we are going to continue to work in interactions with stakeholders and industry to get those issues resolved as we go through with the rule making process.

But we feel at this point and time, it's important to get the entire proposed rule making package issued for external stakeholders feedback, and we request that the Commission decide accordingly. We, in fact, believe this is the best, most efficient way to get there to the final rule and final reg guide.

Thank you for your time and patience today.

CARL PAPERIELLO: This concludes the staff's formal presentation.

CHAIRMAN RICHARD MESERVE: Thank you.

We can see the size of the package that we have in front of us. This is obviously a very complicated matter.

Let me say that one of the challenges, I think, that we all have is that there is -- I perceive that there's sort of a special vocabulary that's been developed by people who work this field. So there's a problem of communication that we have to deal with.

Let me say that my reaction, my question here may reflect some misunderstanding of vocabulary. We have -- the whole point of the categorization process is, of course, is to be able to bin the SSCs, with the new elements here being particular the RISC-2 and the RISC-3 categories.

RISC-2 categories are the ones that, of course, that you have determined as a result of this process, are the safety significant things that are not captured under existing rule.

And as I go through 50.69 as to those items, safety significant items about which we have -- don't have, don't capture under existing special

treatment requirements, the only thing we impose is a single sentence that is on page 139 of the rule making package.

Let me read it. It says the licensee or applicant shall ensure that RISC-1 and RISC-2 SSCs perform their functions consistent with a categorization process assumptions by evaluating treatment being applied to these SSCs to ensure that it supports the key assumptions in the categorization process that relate to their assumed performance.

That's a difficult sentence to interpret. And that's maybe probably a vocabulary issue here. But I take it to mean that the treatment -- you have certain assumptions in the PRA part of this process, that is, certain assumptions that you have made as to these components, these SSCs and you need to make sure you have treatment that is sufficient to -- that is at least self-consistent with your assumptions in the evaluation process as to their availability.

As I look, I think that's all there is in this rule for RISC-2.

You made a point on RISC-1 that we felt it necessary to go through and to retain everything that exists in part 21, part 50, and part 100 for the

RISC-100 category.

So I would like to get some comfort on RISC-2. I mean, this is a new element here that we have said -- these are safety related things that we are not capturing now. And we have basically a self consistency requirement that is a certain degree of vagueness associated with it. And I'm a little puzzled, quite frankly. And I would direct this to the DPVers who have a lot of focus on the RISC-3 categorization and concerns that we are being too vague in how we are dealing with that. Whereas it seems to me that their concerns, if anything, are greatly amplified or ought to be greatly amplified, unless I'm misunderstanding this, with regard to the RISC-2 category.

I would appreciate it if you could give me some comfort that we are really dealings with the RISC-2 category in a serious way. This is one of the new elements of this process, is that we have learned something about some things that we are not treating today as being safety significant that we have learned that are safety related, that they are very important. And everything is hinging on one rather difficult short sentence.

JON JOHNSON: Because those two are not

part of the PRA evaluations that proceed the categorization, I think the answer is probably best answered by Tim but I'm sure Gary would like to add something.

TIMOTHY REED: I can start and then Gary can add.

I think that dividing it into two pieces into box two SSCs -- we are maintaining any special treatment requirements over in box two, for example, maintenance rule. There can be part 100 requirements there. There can be other requirements on box two. I'm not going to go through all of them but there are some. There are not nearly as many as box one.

So if there's anything in design basis that there's for those, it's going to be maintained.

Now, what about beyond the design basis issue? And that's where you are going to.

If you are taking credit for these things in your PRA, then you need to maintain that credit, okay. And make sure that you feedback monitoring data to maintain that credit, and that your treatment -- and that feedback, by the way, is in E-2 -- and that your treatment in D-1 is sufficient to maintain it.

I think Gary can go into a lot more detail

about how you do that. But what we are really saying is, in a sense, in a broad sense is that whatever your risk is today is acceptable. We are not trying to lower the risk or enhance safety here. Your risk, basically, you are assuming in your PRA or you are having in your PRA is basically a function of how you are accrediting these SSCs.

Now, I'm not going to enhance the treatment here. I'm going to make sure you maintain it, essentially lock it in place. And that's really what is going on here. There is an awful lot to this, but I will let Gary take it here in a second.

But really to me I think it comes down to, are your assumptions and your PRA actually valid. And this will make sure, in fact, they are valid.

JON JOHNSON: Gary, you can add to that.

GARY HOLAHAN: The statement of consideration attempts to expand on this thought somewhat.

CHAIRMAN RICHARD MESERVE: If you look at page 105, which describes this. It says, as to this point, for SSCs categorized as RISC-1 or RISC-2, all existing applicable requirements continue to apply. This includes any applicable special treatment requirements. Which says to me that for RISC-2 you

get what's there, which is maybe minimal and not anything else, other than what you get from D-1.

GARY HOLAHAN: I think also if you look at page 22 in section 33-1, it talks about what assumption it is in the PRA that we are talking about in the categorization process. It refers to availability, capability and reliability of equipment. So what it's doing is it's bringing two new aspects under regulatory control.

It's bringing, first of all, a severe accident function of this equipment. And in the past we have really only controlled design basis requirements.

And it's also specifically addressing availability, reliability and capability, which are really key elements that the PRA uses to judge the safety significance of the equipment.

What it doesn't do is it doesn't prescribe to the licensees how they should maintain the reliability, availability and capability. So it's much more a performance oriented approach.

But it does bring under regulatory controls a number of aspects of the RISC-2 SSCs that were not there before. Even the existing maintenance rule, which addresses some of these components, doesn't

really cover availability and reliability. It only covers maintenance failures or maintenance related activities.

CHAIRMAN RICHARD MESERVE: Well, let me ask the question this way then.

If you have emphasized that the real focus of this rule is make sure the categorization process is robust and you have a process that's operating, are we -- does the staff believe it's necessary to see what is proposed to handle the RISC-2, to meet this RISC-2 obligation? As part of this process, do you anticipate you get any filing that's subject to review and subject to oversight on that issue or not?

GARY HOLAHAN: No.

The staff would not get a submittal on the treatment of RISC-2 components. What it would get is the assumptions would be in the submittal.

Then, if you remember as Tim mentioned, section E of the rule has a feedback and monitoring requirement so that, in effect, in a performance based approach, the licensee has a flexibility to meet those assumptions that are in the analysis. Then they have an obligation to have a monitoring program in place to ensure that those assumptions are really coming true in practice.

And I think what the staff has said is we are satisfied that if the feedback process is showing that the assumptions are correct, we don't need to involve ourselves in exactly how the licensee made that come true.

CHAIRMAN RICHARD MESERVE: Well, that may well be a completely satisfactory answer. But I'm a skeptical member of the public, I might ask the question, well, gee, if you found it necessary to maintain all of these specific requirements for the RISC-1 category and the RISC-2 categories are the same degree of safety significance, how can you justify the inconsistency?

GARY HOLAHAN: I think the inconsistency or the difference in treatment comes because this is option 2 and it treats the design basis with a certain level of respect. And, in fact, that is why RISC-1's get more treatment than RISC-2's. And RISC-3's get more treatment than RISC-4's. And it's really the design basis aspect, and a desire to assure people that we have not abandoned the design basis that calls for even the high level of treatment for RISC-3 components. It's the reason that they are not done on a performance based approach.

So I think it's really the design basis

concept that drives both RISC-1 and RISC-3's to have a certain level of prescription that we are willing, on RISC-2's to treat in a more performance based approach.

TIMOTHY REED: I think I would also like to add, you mentioned that they are basically the same, RISC-1's and RISC-2's, because we call them both safety significant. In fact, they really are not. When you look at the boxes, they kind of lead you to think they are the same.

If you look over in box two and you ask yourself is there anything over in box two that if I didn't have requirements on it would result in loss of adequate protection? And you find that there isn't anything over there. Because if there were, we would have imposed requirements to achieve adequate protection to 50.59.

What you will see over there is stuff like station blackout or whatever, is requirements that were imposed to safety as enhancement, cost beneficial enhancement type requirements.

So, in fact, how I look at it is, if you give me box one, you give me the principal product barriers, the engineered safety features, the protection system, I will save the world. You won't

even get close to losing adequate protection.

Now, box two stuff does certainly make it safer. It lowers your risk. And if you are crediting your box two stuff in the PRA to get that level of risk, what we are saying is, as Gary said, essentially locking that into place. You are saying now you are going to have to maintain the validity of that, and you have to treat it accordingly. You have to feed back data into the process under E-2 and maintain that over time.

So it's actually a lot. That's a pretty big requirement that's there. Maybe it's a short sentence, but it carries a lot.

CHAIRMAN RICHARD MESERVE: I have a lot of other questions. This is in light of the time, I'm not going to pursue them now. On another occasion I will.

Commissioner Dicus?

COMMISSIONER GRETA DICUS: Let's continue on the RISC-2 issue.

In light of the fact that we are bringing some new requirements in or potential new requirements in, particularly with severe accidents and mitigation of severe accidents which you have mentioned, which should provide an increase in safety, but it

also, presumably, provides some increase in burden, potential regulatory burden. Tell me what kind of feedback we are getting on this from our stakeholders, industry and public, et cetera? Or has that gone into this?

GARY HOLAHAN: I think the best feedback, the most direct feedback we have gotten is from the South Texas experience, where they have not implemented this version of the rule, but they have done something similar enough so that we can make some judgements about the relative burdens, conceptually of how much additional analysis is necessary, how much additional monitoring is necessary, versus the savings in procurements, maintenance, activities. And the net savings reported by South Texas project, even through relatively modest implementation over the first year, has been substantial.

Both reduction in cost and a reduction in dose to the -- you know, industrial dose to the workers, primarily from the reduction in the amount of valve testing that needed to be done.

You know, some of us were at a meeting a week or so ago where South Texas made a presentation that, in fact, they were able to replace some

components which they normally cost $17,000 for basically the same components for $431.

So the net savings for many components in the RISC-3 category is substantial. Okay. There are additional burdens, both to analysis and monitoring. But the fact that there are many more RISC-3 components then there are RISC-2 components, I think, tilts the balance very much in the direction of reduced burden, dose and dollars.

COMMISSIONER GRETA DICUS: So even though we are adding something in RISC-2, we haven't done -- the savings in RISC-3 offsets it?

GARY HOLAHAN: Yes.

TIMOTHY REED: I would also like to add to what Gary said. If you look in the regulatory analysis, the Westinghouse owners group was kind enough to do a lot of work here and get into a lot of nuts and bolts on the potential cost and cost benefits of implementing this. And this is now for Option 2, and this is getting away from South Texas, which is a little unique three-train plant. So this is a little bit better, I think, from what we are talking about here today.

Certainly the set-up costs are substantial. I think you will see numbers in terms of about 2 to 3

million to set this up. And setup, it can be very expensive in terms of procedures, the PRA, the submittal, the review, as well as actually conducting this thing. It's costly.

But then you look at how much you are saving. You are getting savings roughly on the order of about a million a year. So this thing pays back pretty quickly, on the order of two to three years.

Of course, that work was done using a draft language. The people, unfortunately, didn't have the benefit of the real language in the SOC. And I hope, in fact, that they go back and look at that and adjust it and see where we come out.

But at this point and time it looks like, from all the information that's available to me, that this is actually very cost beneficial, even considering the additional burdens that pieces of this rule doesn't apply.

COMMISSIONER GRETA DICUS: So the STP experience seems to be positive. But what about the industry overall? Or are we hearing about this yet and will we hear about it when the rule goes out?

TIMOTHY REED: I'm very confident that we will hear about it.

COMMISSIONER GRETA DICUS I think we will

hear about a lot of things.

TIMOTHY REED: So far it does seem to be pretty positive.

COMMISSIONER GRETA DICUS: Let me go to RISC-3 components and one of the issues before some of the DPV authors and their concerns that they will raise with us in the next panel.

It seems that we are dealing here with two options. One option is to put the language back in that was in an earlier version or not to put the language back in.

Are there other options that could be considered? And could someone tell me something about what they are and what the merits would be?

TIMOTHY REED: You can do this a lot of different ways.

COMMISSIONER GRETA DICUS: I'm looking at two or three in particular.

TIMOTHY REED: You can adjust this thing a lot of ways. This is going to that last slide about how we think we drove this process towards robust categorization, and I think it's something like 15 pages of issues with the implementation guidance.

And we tried to remove detail in RISC-3, as you can see, really "how to" requirement detail out of the RISC-3 and

became much more performance based there. At least a little bit more performance based I should say.

That's where we are now.

Now, the previous version, I think, had more how to or detail then RISC-3. And at one point in time we didn't have those 15 pages of issues associated with implementation guidance, so we were not as robust.

Now, you could put more treatment in RISC-3 and allow more SSCs to go down into the box. And not be so robust so your safety net is, in fact, that you are not really changing too much treatment, but you are allowing a lot to go in there.

COMMISSIONER GRETA DICUS: So you are trying to do this balance between categorization and treatment?

TIMOTHY REED: Exactly. There's a lot of ways to do it. We have put together a way that we think meets the expectations. And this is why it's a good reason to put this out for public comment, this piece, because there are more than one way actually to adjust this framework.

And I think we will get some good stakeholder feedback on this.

JON JOHNSON: We have had a tremendous

amount of dialogue. And we used our new initiative to put the draft rules on the web site to get some reaction, as Tim indicated.

This is the -- I think -- correct me if I'm wrong -- I think this is the first version of the rule that we have been able to get all of our division directors' concurrence in, get concurrence from the Office of Research and get support from the ACRS. We have had several meetings with the ACRS to discuss a lot of the issues.

So I think to answer your question, there is a balance. There's a trade-off. And at this point, we think we have a very good product.

COMMISSIONER GRETA DICUS: Okay.

I want to follow up then on your statement about the ACRS because I'm not real clear based on what you said on what the ACRS has said.

You say they agree that this language and they disagree with the differing opinions?

JON JOHNSON: I will let Tim discuss that. They have recommended that we publish this for public comment.

DAVID MATTHEWS: Their focus was not associated with anything on alternative language. As you might imagine, their concern was the PRA quality

issue and its use and how it's embraced in the rule to address issues of PRA quality. And the sensitivity studies that we were expecting to be done to show the impact of alternative treatment.

But they were not focused on the rule language associated the treatment. I don't even remember getting a question in that regard.

COMMISSIONER GRETA DICUS Fine.

Thank you, Mr. Chairman.

CHAIRMAN RICHARD MESERVE: Commissioner Diaz?

COMMISSIONER NILS DIAZ: Thank you, Mr. Chairman.

I'm trying to put my thoughts in order here. Let me see, because I had some of the same concerns and I'm trying to get them. Let me see if I -- please interrupt me if I say something that is not correct.

First, this rule is a risk-informed and performance based rule. Is that -- no, I mean -- I'm saying, I'm asking is it this type of rule?

DAVID MATTHEWS: Yes.

JON JOHNSON Yes, sir. In part.

COMMISSIONER NILS DIAZ: See, that takes two hours.

GARY HOLAHAN: What I mean by that is clearly, there are some prescriptive elements in the proposed rule also.

COMMISSIONER NILS DIAZ: But if you were generous, you would call it a risk-informed and performance based rule?

GARY HOLAHAN: Yes, sir. I would join you in that generous description

COMMISSIONER NILS DIAZ: Okay. Thank you very much.

Second thing is the main constraint in how to deal with RISC-2 and RISC-3 is the preservation of the design basis with consideration of beyond design basis. Is that correct?

GARY HOLAHAN: Yes. That's correct.

COMMISSIONER NILS DIAZ: I'm trying to get myself right.

DAVID MATTHEWS: Maybe if I poll the panel each time to give you the appropriate answer.

COMMISSIONER NILS DIAZ: Could you please. I don't mind.

TIMOTHY REED: I think you described it accurately.

COMMISSIONER NILS DIAZ: So the fundamental issue between RISC-2 and RISC-3 is, we cannot make

RISC-2 part of the design basis because they are not right now. And we cannot abandon RISC-3 functionality because they are part of the design basis. So you are dealing with trying to make the best of this thing. Okay.

Now, my next question is a little more complex. And the next question is I know that, you know, we have these goals of maintaining safety. But I really believe that we are going to make a major rule and a major change that the net have to be a little better than maintain safety.

So this is the question. If we really consider and pay more attention to RISC-2, even if they are not in the design basis, and therefore there has to be an effort to systematically make RISC-2 structure systems and component fit some categorization that they have been undergoing and we take RISC-3 components, maintaining the design basis, have design control, document control, all of the things that are appendix B, but we don't do it at the appendix B level. We do it at a functional level, and this is done well -- let's assume we have a super utility and this is done well. Is the net result going to improve safety or just maintain safety?

GARY HOLAHAN: There's no question in my mind that this should make an improvement to safety.

There's also no question that we probably cannot calculate many of those intangible benefits to show what the net improvement would be.

DAVID MATTHEWS: Or challenge the licensees to articulate that improvement.

COMMISSIONER NILS DIAZ: I understand that.

But I need to see this. I mean, if we are just going to do this thing, I just don't see going through all of this, because the reason -- and I believe this, that we have undertaken risk-informed regulation and now put them together. Remember, I keep saying that and it is a very, very difficult risk informed and performance based.

We are now going a step forward and we are saying, we can have -- and by the way, I don't like the word "robust." You know, my English is very limited. I like the word, "rigorous," because robust is just a little better, more complete. But rigorous has a different meaning to it. So I call this a rigorous treatment. You call it robust, but I call it rigorous.

It has to be rigorous, because if it's not rigorous, then your categorization is not sufficient

to justify the change in the rule.

So if it's a rigorous treatment of the categorization process, that requires, of course, a PRA quality. How are you going to address the PRA quality in a manner that RISC-2 -- see, I'm more worried, like the Chairman was in RISC-2, that RISC-2 is actually going to contribute to enhancing the safety of the plan, which I think should be, you know, a consideration when we go to this rule.

GARY HOLAHAN: I think there are four aspects of this. One is that the rule language itself calls for a certain level of scope and depth of review.

Second, and probably more importantly is that we don't today have -- but we are very firmly on the path of -- having guidance documents, regulatory guides, ASME standard, not so far in the future, an ANS standard, the industry peer review process, all of these contributing to the quality of the PRA and the -- a comfort that is being used appropriately in this process.

Thirdly, there's the staff review and approval process for which I think we have been very successful over the last few years, both through training and staffing to have very high quality staff

who are very capable of doing these reviews.

And lastly, there is the process built into the rule where there is a feedback process. Where if something isn't quite done right, the update and feedback process should be able to capture those on a periodic basis.

So I feel comfortable that this is a rigorous process.

COMMISSIONER NILS DIAZ: How much time do we have, Mr. Chairman?

RISC-2. We did some sparring about performance base. The treatment of RISC-2 is essentially performance based. There's no deterministic component on that.

GARY HOLAHAN: Yes, sir.

COMMISSIONER NILS DIAZ: Okay. All right. I stand corrected. Go ahead.

GARY HOLAHAN: No. Yes, sir. You are correct.

DAVID MATTHEWS: Let's be clear. There's none imposed by this rule that are deterministic.

But those components may find themselves under the maintenance rule. So there are other -- and the certain category of appendix B requirements is applied them as part of their quality assurance

plan.

So there are deterministic requirements that are components in the plan, they are important, but they haven't been treated as safety related within that context of our regulations up to this point and time.

COMMISSIONER NILS DIAZ: I understand. I know I'm repeating something that the Chairman on a couple of things, because I have a cold I'm a little slow today.

Would you repeat how once you establish some expectations of performance for RISC-2 system, how are you going to ensure that the licensee meets those performance expectations, since there are no deterministic requirements?

GARY HOLAHAN: Well, if you just look at section E-1 of the rule and E-2 of the rule, specifically, with respect to RISC-1 and RISC-2 SSCs, it requires the licensees shall monitor the performance of RISC-1 and RISC-2 SSCs.

The licensees shall make adjustments as necessary to either the categorization or the treatment process, so that the categorization process and result are maintained valid.

That's a direct quote from the wording of

the rule.

COMMISSIONER NILS DIAZ: How do you manage the treatment with the categorization?

GARY HOLAHAN: Each time the licensee does a categorization, it makes some assumptions about reliability, availability and compatibility of the systems.

In fact, our expectation based on the quality PRA is that those are not arbitrary judgments. Those are based on plant specific or generic data that support those.

And so periodically, the licensee is going to monitor those same assumptions, the reliability and availability -- they may or may not have actually beginning experience on the capability of the system for severe accident role. But they are certainly are required to have information on the reliability and availability of those systems down to the competent level.

COMMISSIONER NILS DIAZ: And how do we monitor?

GARY HOLAHAN: The rule doesn't require the staff to look at that. It would be part of the normal reactor oversight process.

COMMISSIONER NILS DIAZ: So instead of the

reactor oversight process, that has to come in and fill in for monitoring that RISC-2 systems are being treated consistent with the categorization?

GARY HOLAHAN: I would think so. We haven't really laid out in any detail how that would work.

COMMISSIONER NILS DIAZ: You would expect that it would?

GARY HOLAHAN: I would expect to. This would be my expectation.

And because the reactor oversight process is, in fact, a risk-informed process, it seems to me that that would be quite consistent with the approach that we are already on.

COMMISSIONER NILS DIAZ: Is that something that you believe should be spelled out in the final rule to some extent?

GARY HOLAHAN: I think the staff needs to work it out as an overall plan for implementation. Perhaps not in the rule but in the guidance process.

COMMISSIONER NILS DIAZ: All right.

Thank you, Mr. Chairman.

CHAIRMAN RICHARD MESERVE: Commissioner McGaffigan?

COMMISSIONER EDWARD MCGAFFIGAN: Thank you,

Mr. Chairman. Like everyone else, we have more questions than we have time. So I will just try to get to the heart of a couple items that perhaps help the next panel as well.

One of the issues that the three DPVers raise is the July 31st draft included the following requirements: RISC-3 treatment processes must meet voluntary consensus standards which are generally accepted in industrial practice and address applicable vendor recommendations and operational experience. The implementation of these processes and the assessment of their effectiveness must be controlled and accomplished through documented procedures and guidelines.

Why was that dropped?

DAVID MATTHEWS: As one of the first management level reviewers of that rule, when I read those portions and then discussed it with the executive team, it was clear to me that that was a how as opposed to a what with regard to these rules. We were focused on developing performance based requirements.

COMMISSIONER EDWARD MCGAFFIGAN: One of the troubles with performance based rules is you can't enforce it. I mean, we have had staff testimony to

that in the past. It's very difficult to enforce vague requirements when everything is tossed into guidance.

DAVID MATTHEWS: Again, sir, my expectation wasn't that we would be attempting to enforce treatment requirements. We would be attempting to respond in the oversight process to performance problems that were generated by failure in RISC-3 components if they were to occur and result in a problem.

COMMISSIONER EDWARD MCGAFFIGAN: Well, doesn't that affect -- I mean, we are chasing -- in the oversight process, one of the dreams was once that we would somehow get ahead of those issues. That guarantees that we are always behind issues.

I mean, if there's a failure, the oversight process identifies it and we go after it.

DAVID MATTHEWS: We would have trouble justifying, I believe, enforcement resources relative to treatment for RISC-3 components by virtue of the fact that it would be inspection recourse dedicated to the lowest significant components in the plant.

So therefore, it seemed appropriate to put a performance based requirement relative to its treatment that would be responded to in the event

that you did have subsequent failures. And hopefully they would be indicated in a trend.

COMMISSIONER EDWARD MCGAFFIGAN: I'm going to get short answers, because I'm going the ask the question for each of the three.

And if you have already read the viewgraph I won't read it. But it bears on the need for ASME 2, class 2 and class 3 SSCs parts must either meet the requirements of the ASME Boiler & Pressure Vessel Code or other generally accepted voluntary standards that are in industrial practice, et cetera. Why was that all dropped?

DAVID MATTHEWS: For the same reason.

Essentially, the answer is the same for all of them.

COMMISSIONER EDWARD MCGAFFIGAN: So these are all how-to's for stuff you don't think is very important?

DAVID MATTHEWS: Yes.

COMMISSIONER EDWARD MCGAFFIGAN: And therefore, we don't need to have how-to's for things that are not important?

TIMOTHY REED: Let me just also add with regard to the use of risk-informed code cases, ASME standards, what have you. We talk about this in the

SSC. We recommend that these are -- these are, in fact, approaches that would, in fact, comply with our role requirements. So if you put yourself in a licensee's seat what do you see?

I think you see that from a licensing risk would I adopt these? Of course I would. And the NRC has told me that this is what it complies with.

Would I adopt them from an engineering perspective? Absolutely. By the ASME saying this is a good way to go, I feel a lot better from an engineering perspective.

And I think as NEI has indicated, they are going to suggest to the industry in their guidance that goes out to industry, not submitting to us, that in fact they follow these standards and cases.

So do I expect a licensee to do this? Absolutely. It's available. It's probably the most cost beneficial way to go.

But it is, in fact, a how-to. I think I fully expect them to do it. I don't think we need to get into the how-to's here. I think we can be performance based. It's kind of difficult.

JON JOHNSON: It is difficult, you are right, to inspect performance base but it's our understanding that's the Commission's policy.

COMMISSIONER EDWARD MCGAFFIGAN: The Commission's policy -- I think on risk informed, there's a policy statement. On performance based, we have been pretty --I don't think there's any definitive guidance that we are always going to seek to be flexible.

I, for one, think the deterministic requirements are just fine a lot of the time. So, it's performance based to the extent appropriate, I think are the words. You are determining that this is a place where you think it's appropriate for performance specific.

I will go back to the Chairman's question on RISC-2, you are being pretty performance based there as well on some things that are allegedly very high safety significance. You know, environmental qualification for RISC-1's we have all sorts of rules and they follow them, et cetera.

For RISC-2's, I guess when something fails in the performance monitoring thing, since it is high safety significance and if they didn't have an adequate environmental qualification thing and we determine that's a problem, what? They get a yellow or a white finding or something at that point?

What is it that they actually have to do

for environmental qualification of a RISC-2 system?

GARY HOLAHAN: Well, I think they have to continue to do corrective action to put that component or system in a condition that's consistent with the categorization process. So they may need to take corrective action.

COMMISSIONER EDWARD MCGAFFIGAN: Did you ever consider saying, if something falls into RISC-2, then all of the prescriptive requirements elsewhere in the regulations that would apply to the RISC-1 system hereby apply to the RISC-2 system?

GARY HOLAHAN: I think we did think about that. There's a fundamental problem with doing that, and that is RISC-2 components are important from a severe accident point of view. And most of the special treatment requirements are not targeted to severe accidents. And they serve better, they work better in the RISC-1 box where they were originally intended then they would serve in the RISC-2 box.

So what we thought was, you could do that and I think it would provide you perhaps some higher level of assurance. But it would be a rather heavy burden. And we thought that we could more directly target what was really important from a severe accident point of view, capability, reliability, and

availability of equipment to provide a better balance between what's required and what the safety benefit was.

COMMISSIONER EDWARD MCGAFFIGAN: Thank you, Mr. Chairman.

COMMISSIONER NILS DIAZ: Can I just for a minute -- if the rigorous categorization process were to determine that somehow one of the system that is RISC-2 should really be RISC-1, we would move it to RISC-1?

GARY HOLAHAN: I think what would happen is, if such thing were identified, certainly it is possible, the backfit rule is available. And we could certainly impose additional requirements in that case.

COMMISSIONER NILS DIAZ: So there is a difference between RISC-1 and RISC-2? And the difference is that RISC-1 have to deal with the entire set of design basis accidents, plus severe accidents. And RISC-2 really doesn't have to deal with the entire design basis, it's just beyond design basis?

GARY HOLAHAN: Yes, sir.

CHAIRMAN RICHARD MESERVE: Is that right?

TIMOTHY REED: It stems from the fact of safety related versus nonsafety related.

CHAIRMAN RICHARD MESERVE: Is it possible to conceive that when you do a PRA, that you will find that there is some nonsafety related component that, in fact, is important for a design basis accident?

GARY HOLAHAN: It would not be necessary for a design basis requirement.

CHAIRMAN RICHARD MESERVE: Would it be possible to find such a component -- SSC, excuse me?

GARY HOLAHAN: It wouldn't be impossible to find one that might provide some additional protection for design basis requirements. But it wouldn't be possible to find one that is necessary for a design basis requirement, because the complete set of those is included in RISC-1 --

CHAIRMAN RICHARD MESERVE: We need to understand these things well enough to be able to say that.

GARY HOLAHAN: And if we were to find that the design basis were deficient, I don't think that a voluntary rule of 50.69 would be the appropriate way of dealing with it.

COMMISSIONER NILS DIAZ: We will say, fix it.

That's what my question was.

GARY HOLAHAN: We want to keep RISC-1 and RISC-3 as the design basis requirements. They should be fully capable of fully addressing all of the design basis requirements. And if they are not, they need to be fixed separate from this.

COMMISSIONER EDWARD MCGAFFIGAN: I want to ask one question if I can. The cost of these RISC-2 system structures and components, you know, something finds itself in RISC-2 -- you have a lot of data, you pointed out on Westinghouse owner's group about how cheap things become if you can just get away from the current requirements for safety-related systems structures and components.

Do you have any idea what the extra cost is? I mean, is it a cost free something? Something gets into RISC-2 but it doesn't cost them anything other than having to monitor it? Or are they actually going to have to have some additional requirements in terms of the quality of that part or component? Is there any data on that?

GARY HOLAHAN: I don't know. I don't believe we have seen any data.

COMMISSIONER EDWARD MCGAFFIGAN: We always have this double-edged sword stuff. And if the sharp edge of the sword is actually cost free to these

guys, other than monitoring and paperwork -- which would cost something -- then what is it that we have done?

GARY HOLAHAN: I judge the sharpness of the safety edge of the sword by the safety improvement not by the cost that it has imposed on a licensee. So, some may, in fact, be low cost.

But if they have a net safety benefit, I would see that as supporting this as a safety rule.

COMMISSIONER EDWARD MCGAFFIGAN: But the reason the safety equipment costs so much is it presumably goes through a lot of extra testing, certification, whatever. And we are saying we don't really need to do that stuff for the RISC-2's.

GARY HOLAHAN: That's right. And from the examples that we have heard, it's not unusual for the cost to differ by a factor of four or five or so.

TIMOTHY REED: Remember, in RISC-2 what you are looking at is how they credited that SSC in beyond design basis situations. So if a licensee is crediting something to operate in beyond design basis conditions and the treatment isn't there, in other words, to support the capability of the component to do it, then that's basically, either they get that treatment up, which would be costly, or they change

the assumption in the PRA and take a risk hit.

So that goes to the requirement that Chairman Meserve was looking at. So it could be costly. So some of these costs that you are talking about would be really in the front end, looking at your PRA, and whether in fact it's valid. Those are the kinds of things we look at in the submittal, the peer review findings, the output of that, and how valid it is. So there could be substantial costs.

But having said that, if someone has a PRA that has a lot of invalid assumptions, are they going to try to pick that up Option 2? I don't think so. I think the people that are going to pick this up are people with good PRA's. They wouldn't have a substantial additional amount of cost involved for bringing them up to what we have said is a very high standard on quality really for this application.

GARY HOLAHAN: I think it's fair to say that we don't expect licensees to be spending a lot of money adding new components to the plant in their RISC-2 area in order to reduce risk.

The examples we have seen have to do with existing equipment in the plant for which they can now determine some severe accident role. But it can be worked into the accident management guidelines.

It's available.

So the costs are mostly analysis costs, monitoring, and upkeep costs. They are not so much, you know, new construction type costs.

DAVID MATTHEWS: Or dramatic changes in the way they have been treating these.

CHAIRMAN RICHARD MESERVE: Commissioner Merrifield. Sorry to take so long in getting to you.

COMMISSIONER JEFFREY MERRIFIELD: No problem. Thank you, Mr. Chairman.

Two quick comments I want to do up front. Frequently, on this side of the table I have made comments about the need to make sure that our presentations to the staff are in plain English. It would be only fair to give a credit to Tim for providing what I think was a very good plain English presentation this morning that worked through a lot of acronyms, a lot of descriptions, but did so in a way that I think stakeholders could understand through our video streaming and everyone here in the audience. So I wanted to credit that.

The other comment I wanted to make, various commissioners have made comments about RISC-2. I need not add to that. And I think part of what the staff made take from this is a need for perhaps some

additional clarity in explaining what it intended on RISC-2.

I do want to counterbalance that by the notion that brevity is -- and, comments made by the Commission, the staff feels sometimes that it has to bring us a rock. The issue of brevity is not necessarily a bad thing in and of itself.

And I use as an example President Lincoln's Gettysburg address, which was known as probably one of the more shining examples of speech in certainly our history if not world history versus the presidential address of William Henry Harrison, which had 8,000 plus words, which were known to lead to his death of pneumonia some 30 days later. So I caution the staff, lots more is not necessarily better.

A significant portion of what the staff and what we are attempting to accomplish here does require a very robust living PRA to take advantage of the categorization process.

There are, I think, a couple things associated with that. One, it's my understanding that the staff is still working on a draft reg guide to address PRA quality. And I wanted to get some sense of the status of that. Because that is certainly a key in this process.

I am also aware of a significant effort on the part of NEI and its membership to go through a peer review process of existing PRA's. So I would like to get a little better sense of how all of that works together, because this obviously is significantly interconnected with that.

JACK STROSNIDER: I can attempt that. Jack Strosnider, deputy office director in research.

With regard to the draft reg guide, 1122, our expectation is that we put that out for public comment within the next month or so and that it's on a parallel track for final issuance on the same sort of schedule as 50.69.

The current reg guide would reference ASME standards, also some NEI guidelines on how to do peer review relative to those standards.

It would also -- there would be update of this reg guide to include -- future updates to include some other areas such as fire, external events and low power and shutdown risks.

And I would just comment that in the research concurrence for putting this package out for public comment, that we also commented that we think this area should be addressed, perhaps more thoroughly, with regard to the upcoming changes and

how they are incorporated.

But as was stated earlier, we do expect those, the standards to be -- guidance to be available, consistent with the schedule for 50.69.

COMMISSIONER JEFFREY MERRIFIELD: What about our interaction with NEI and its efforts to peer review the existing PRA's?

JACK STROSNIDER: There have been a number of meetings on that and perhaps Gary can give more detail on that.

GARY HOLAHAN: I think it's an integral part of our draft reg guide 1122 that Jack mentioned. There have been a number of meetings. My recollection is the staff members did observe a number of the peer review activities. We sent staff out for a week or so to actually observe how they were being done.

I think all of these things are steps in the right direction. You know, we are not at a point where we are done and can declare victory on PRA quality. But I think they are all very fundamental steps being taken in the right direction.

And I think the Office of Research has played an absolutely pivotal role in getting where we are and where we need to go.

COMMISSIONER JEFFREY MERRIFIELD: Thank you.

On page 48 of the Federal Register notice, it talks about removing RISC-3 SSCs from the scope of requirements associated with appendix B, a topic which I have spoken to the staff about and in public on various occasions.

What standards -- is there a sense that we are going to? Is there an ISO type program? And can you clarify for us -- Commissioner McGaffigan talked about the issue of some of the cost differences in the inspection requirements, is there a significant difference in the manufacture of these products at the end, or is it more a function of meeting our quality assurance requirements that drives the cost of -- appendix B requirements that drives the cost differences that are associated with the information that has been provided to us by Westinghouse?

TIMOTHY REED: I will take a shot at the last piece first. I am probably not the best person. You probably ought to be talking to an industry person involved in procurement who can certainly give you a better answer. But I think it's a combination of two major factors, at least, that really drive up costs.

One, appendix B and the other is part 21 requirements. Those drive up those costs enormously. Of course, equipment qualifications, seismic qualifications are also other aspects that can drive up this.

So all of those would come off and that would reduce the cost substantially of procuring a replacement piece.

As far as ISO 9000 or something like that, a licensee would utilize -- I'm not sure what licensees might utilize in their commercial programs today. But I do know I put the programmatic requirements right into 50.69(d)2.

What I'm concerned about from my perspective in the 50.69 centered universe is that they meet those requirements. And if ISO 9000 meets them, fine. Whatever it takes. That's why we basically established what are called a floor of requirements in D-2.

If your commercial program is good enough to do it, great. If it is not, you are going to have to bring it up to a level that does meet it. That's the best I can do with ISO 9000.

Did anyone else have anything to add on that?

GARY HOLAHAN: Can I just add a few points?

What it looks like is when there was procurement of essentially identical components, there was a substantial cost associated with quality assurance and documentation process. And it can be a factor of two or four or more on the cost.

There is a sensitivity to components which look similar or might, in fact, be identified with the same number. And I think when you hear from the staff on the next panel, I think they can speak to this issue as well.

We do have a sensitivity to replacing, you know, metal components with plastic components, something that would, in effect, change the design, although it would be done in a subtle way and might not be noticed, which could, in fact, impair its function.

So the substitute of nonappendix B components for appendix B components needs to be done in a way that preserve the design basis. I think we all share that concern.

But a substantial difference in the cost is associated with appendix B itself, not necessarily that this is a cheaper, you know, modified version of the components.

COMMISSIONER JEFFREY MERRIFIELD: I think

part of what I was trying to get through with that question -- and we have seen any number of examples coming out of the Pentagon, the substitution of commercially available component does not necessarily result in a component that has a lesser quality.

Is that a fair assumption?

GARY HOLAHAN: I think that's a fair statement.

COMMISSIONER JEFFREY MERRIFIELD: I want to go to the STP experience.

Obviously South Texas put a significant amount of time, effort, and money into going through the effort that they did on the exceptions. And I'm wondering if I can get a couple of different observations out of this.

One, is there a -- we viewed this in the comments. We viewed South Texas as a proof of concept prototype for the rule making.

Are there any significant differences in terms of where we went with South Texas versus what we have before us today? And do you all consider that effort a success? Was that pilot a success and a model for how we might do things in the future or not?

TIMOTHY REED: I can start.

Comparing South Texas to 50.69, of course they were exempt to rule making, it goes without saying. But some other significant differences between the two efforts. South Texas' PRA was reviewed in substantial detail by the staff. Of course, we are going to rely on PRA reviews, the PRA guide and a focus review in that respect.

South Texas ultimately ended up with a detailed FSAR, there were pretty strict change controls on the FSAR and put them basically in a box. What do we have? We have a regulation instead.

South Texas never even requested, because they didn't need it, relief from appendix B, design control, that Criterion 3 and 15 and 16 which go to corrective action.

So those are some of the substantial differences between South Texas and Option 2.

Now, I'm forgetting, I think, the rest of your question.

COMMISSIONER JEFFREY MERRIFIELD: Was it worth it? Was that pilot a success?

TIMOTHY REED: Yes. I think proof of concept is the good word not pilot.

One of things that happened with South Texas is I think we were searching for what Option 2 was. They came in early. We were first.

They tended to be a little bit more toward Option 3 early on. And I think some of the things they were looking for were really bordering on design changes. And we kind of dialed them back. And you see that through the history of dealings with South Texas.

It certainly was successful in helping us to work through a lot of issues. We had a lot of excellent dialogue. And a lot of stuff that we considered in South Texas really helped us to put this package together.

You may not see it explicitly, but certainly, working through the thought process helped us enormously in putting this together.

GARY HOLAHAN: Let me say that I think it was a success. It was a valuable thing to do.

But because it was done without this level of guidance or requirements, it was some sort of thinking out loud being done. And some of the things that South Texas suggested, especially early on, as Tim mentioned, I think were inconsistent with Option 2. And to a certain extent, some of that discussion process made the staff very nervous about what is South Texas really trying to achieve and how well this all worked out.

So in part, that issue of discomfort for what South Texas was really achieving and the working through of, you know, how much treatment and what's in and what's out, I think it came out at a good point.

But going through that process, I think, made some people nervous because, they saw that, if it weren't for some of the staff's decisions, then, in fact, South Texas would have chosen something that probably would have been incompatible with Option 2. So I think that, in part, has lead to some of the staff's concerns.

COMMISSIONER JEFFREY MERRIFIELD: Well, there was a dynamic process. That was understandable.

My final question for the last couple of minutes, we are going to hear from the DPV panel in a moment. And there are two, it seems to me, significant things that they will be raising, at least in the presentational materials that we received beforehand. One is that there were significant changes made after the July 2002 version of the proposed rule.

And the other one is that there is an issue associated this proposed rule regarding common-cause

failures.

And I was wondering if the panel would like to have an opportunity to comment on those issues?

DAVID MATTHEWS: I will take the first one. I think Tim can address the common-cause failures.

We have focused on that aspect of our concern -- I mean of their concern, and now it is our concern with regard to common-cause failures of those three components.

With regard to the first issue about the significant changes between the August, I think, 2nd version of the rule which has been presented to the Commission, the August 2nd version has been misrepresented, I think, as representing some sort of uniform consensus. The consensus only existed only at the working staff level with regard to there being a risk management team who considered alternative approaches to this rule and basically came out with a universally -- by them -- accepted compromise.

And when it began management review and concurrence review, it was greeted with, good job, wrong answer. By virtue of the fact that we didn't believe that it was consistent with direction that the Commission had given us in SRM's. And so we worked with the team that was leading the concurrence

process to put into concurrence a package which hopefully balanced out for the purposes of gaining Commission and public involvement the concerns that had been expressed and tried to be alleviated by this, quote, compromised position.

And namely, to put out a rule that we thought was responsive to Commission direction and, at the same time, appreciated that there was a tension in the staff over this step forward, and that that tension is represented primarily, not solely, but primarily by the treatment of RISC-3 components.

So we decided to put out the alternative ruling and be very up front in the Federal Register notice with regard to the fact that it represented an alternative view for which we were seeking public comment.

That is the package that we forwarded to the division directors finally and to the other offices for concurrence, and it did gain concurrence. And the EDO forwarded us the staff's recommendation.

But, you know, there were two different versions of the rule. The August version differed primarily from the current version in front of you in that RISC-3 treatment area, although there were several other changes that were made during the

concurrence process to improve clarity and to focus the wording associated with this evaluation process that needed to be done to ensure that your categorization process remained valid in the face of changing reliability of all classes of components.

So we did make some other changes.

I think they can be summarized in four areas. But the major one was treatment of RISC-3 components.

TIMOTHY REED: As you point out, the common-cause failure is at the heart of the concern here. And if you remember back when I was talking about, from a specific SSC basis, RISC-3 SSCs are important. They can fail.

What you get concerned about is when you have a lot of them failing. And common cause is the one way to get a lot of them failing. And so, what you look at naturally you want to look at common-cause failure and making sure, in fact, that's not an issue in RISC-3, because you can get to a safety issue. So, that is the heart.

So when you look at that, what have we done in this framework? If you recall, in paragraph B, there's a submittal requirement. The submittal requirement is to look at, to tell us in part, what

are you doing as far as evaluating this delta CDF, delta LERF? And a piece of that is looking at what kind of degradation can be effective to RISC-3 SSCs, and what that means in terms of time and cost.

So right up front we are going to have to have the licensees think ahead proactively about this whole issue and their submittal.

Then after that, if you look at that actual CDF and LERF sensitivity, you will find that what we do is we change the reliabilities, making them less reliable for all of these RISC-3 SSCs simultaneously. But we also increase the probability of common-cause failures all simultaneously, each in their own system at the same time.

Now, is that cross system CCF? Of course not. But it's sort of a way of getting there. We don't actually look at cross system common-cause failures. And there's actually a good technical reason not to. That's why a lot of it is not modeled in the PRA.

To get into a situation where you have a common-cause failure, you need common cause. So when you look at SSCs across systems, what do you see? You are going to see different susceptibility to common-cause failures. And you need inputs.

I'm thinking in terms of identical

environmental conditions, identical service conditions, identical human actions in terms of procedures and maintenance. When these all add all, you can get the common cause.

Well, in a sense when you look at the equipment we are talking about in box three, what are we really reducing this thing down to? We are really looking at stuff that's not self-revealing in terms of its failure. If it's operated and it fails you are going to know it.

You are looking at the stand-by design basis equipment down in this box and whether in fact you can get cross system common-cause failures. If you look at that closely, from a purely technical perspective, is it all in the same environment, does it all see the same service conditions? Does it all get the same procedures, maintenance and what have you? And that's from a purely technical perspective.

Nonetheless, we still looked at this in terms of the CCF and -- okay, I just mentioned that delta CDF and LERT. And remember, when you get these failures, you have got to feed this data back into the process in E-3.

E-3 then would bring this data back in.

If you are getting these kinds of failures that's not going help you at all. It's going to hurt you. It is going to also potentially indicate you are out of whack with what you told you were doing in this submittal. You are probably out of the delta CDF and LERF risk sensitivity that you did. So, in fact, you are going to be in trouble with complying -- in fact, you are not maintaining the design basis either in D-2.

You are probably not complying, frankly, with about three different provisions of the rule. And you can probably in a programmatic issue here as far as programmatic breakdowns so our reactor oversight process would get involved.

All of that are very, very good reasons why licensees do not allow common-cause failure to develop. And I think we have the right provisions in place to address that.

And then I have also spoken to the technical reasons why I think it wouldn't develop. I'm not sure if that get to --

JON JOHNSON: One last thing I would like to add --

COMMISSIONER JEFFREY MERRIFIELD: You may but I do have to apologize, because I didn't expect

to get quite this answer. But it's useful to know.

CHAIRMAN RICHARD MESERVE: We do want to leave time for the DPV.

JON JOHNSON: I do want to point out that I think our management team could do a better job providing expectations at the beginning of these efforts. Our leadership team has initiated a three-year initiative to improve how we understand risk principles, how we use them, how we communicate them measures. And it doesn't just affect our rule making efforts, but it also affects our inspection efforts and so forth.

And I think we have made a lot of progress in this area. And we will continue to do so.

COMMISSIONER JEFFREY MERRIFIELD: Thank you, Mr. Chairman.

CHAIRMAN RICHARD MESERVE: I would like to thank the staff. This has obviously been for all of us a very interesting discussion. I appreciate your work.

We have a second panel this morning that consists of three staff that have filed differing professional views. And we will ask that they come to the table.

They are Mr. David Fischer, Mr. Thomas

Scarbrough, and Mr. John Fair. All of them are senior mechanical engineers with NRR.

And let me say that I have no idea how the Commission is going to proceed with regard to the proposed rule, but at the outset, I want to say that I very much appreciate the effort that you all have put into submitting your views.

It's very important that we have an open climate in which we are prepared to think outside the box and to deal with issues as they come forward. And this is the process as it should work.

So I would like to thank you all for the obviously very substantial effort and thought that you put into this activity.

PARTICIPANT: Chairman, I would like to add that these three senior engineers have extensive NRC experience. They are all members of the mechanical and civil engineering branch in our division of engineering. They are valued members of our team, and they have participated considerably in the development of this rule making. And they would like to share their views.

THOMAS SCARBROUGH: Thank you Tom.

My name is Thomas Scarbrough. And with me are David Fischer and John Fair.

We appreciate this opportunity very much to meet with you to discuss our safety concerns regarding the 50.69 rule.

Could we have the first slide up there, please.

It's a little background, Mr. Fair, Mr. Fischer and I are senior engineers in the mechanical and civil engineering branch at the NRR Division of Engineering. Each of us have served the Commission for over 20 years.

In our engineering assignments we have evaluated a wide range of licensing activities related to competence and performance, including implementation and risk-informed testing programs.

In particular, we were the principal reviewers in the division of engineering for the South Texas risk-informed exemption request. And we are currently the principal DE reviewers for the Option 2 rule making effort.

Next slide, please.

We talked quite a bit about the Option 2 and what it is. I will just add there that, as discussed in the Commission papers describing Option 2, licensees will be required to maintain functional capability of the RISC-3 SSCs.

And an effective categorization process will ensure that RISC-3 SSCs have low safety significance on an individual basis. However, small groups of RISC-3 SSCs can have a significant impact on plant safety. And because of the robust nature of nuclear power plant design, experience with risk-informed programs has suggested that up to 80 percent of the safety-related SSCs may be categorized as RISC-3.

For example, RISC-3 SSCs might include most valves used to provide containment isolation, feed water, service water, residual heat removal and air to start the diesel generators. And RISC-3 SSCs may also include the pumps and values used for containment spray and the spent fuel pool systems.

As we have discussed this morning, treatment can have a widespread affect on comparability and reliability. Sensitivity studies typically assume a general increase in the equipment failure rate to evaluate whether treatment reduction will cause a significant increase in core damage frequency. Nevertheless, sensitivity studies continue to assume a high reliability for RISC-3 SSCs.

For example, motor operative valves assume

to have a reliability of 99.9 percent in the PRA might be assumed to have a 99 to 99.6 percent reliability in the sensitivity study.

Some aspects of equipment capability cannot be evaluated based on performance monitoring alone. We talked about performance based this morning. But it all can't be monitored using sort of performance monitoring techniques.

For example, seismic and environmental capability will not be evident during the daily plant operation. Therefore, it's not possible to rely solely on feedback of performance information to validate the effectiveness limitation of the treatment process.

We believe that the 50.69 rule should contain a minimum set of treatment requirements that provides reasonable confidence that RISC-3 SSCs will be capable of performing their safety functions under design basis conditions.

Clearly understood requirements are important because the staff does not plan to repair implementation guidance for the treatment of RISC-3 SSCs nor to conduct inspections of the effectiveness of the RISC-3 treatment processes.

Next slide, please.

Our safety concern is that, as currently written, we believe that the proposed rule does not provide sufficient requirements to make a determination that its implementation will maintain adequate protection of public health and safety. Our basis for this belief is that key lessons learned from performing plant specific risk-informed reviews, including proof of concept efforts at South Texas, is the need for clear requirements for the treatment of RISC-3 SSCs.

Next slide, please.

Over a year long period, NRC's technical staff developed a draft rule, dated July 31, 2002, based on several factors. First, RISC-3 SSCs receive sufficient regulatory treatment such that they are expected to meet functional requirements, albeit with reduced assurance.

Second, there are different levels of compliance -- different interpretation of treatment requirements.

For example, the proof of concept licensee initially interpreted general requirements in a manner that would have led to ineffective treatment processes. The staff resolved these issues with the licensee through specific provisions included in the FSAR and the NRC safety evaluation.

Third, a recent generic study of commercial practices in nuclear plants and equipment vendors described in NUREG 67.52 found a wide range of practices that applied to nonsafety-related equipment, depending on its perceived importance.

For example, stand-by equipment might receive attention only if a problem is identified. And RISC-3 SSCs use for accident mitigation would likely fall into stand-by category.

Fourth, the staff placed drafts of the rule on NRC web site and conducted public meetings to allow stakeholders to have early input into the rulemaking process. The technical staff considered those comments when preparing the July 31st draft rule, provide a minimum set of treatment requirements to eliminate unnecessary burden where possible.

Finally, the technical staff applied its experience in component engineering and from its participation in generic industry activities, such as ASME code.

Following the development of the July 31st draft rule, the proposed rule deleted several significant treatment requirements. No technical reasons were provided for the deletions except a simple assertion that categorization enhancements had

reduced the importance of RISC-3 SSCs.

Based on our review, we have concerns regarding the deletion of certain treatment requirements. We are also concerned that the statement considerations do not reflect the requirements of the rule.

We would like this morning to briefly discuss the deleted requirements related to consensus standards, design control, and corrective action. And this is the bulk of our concerns.

Next slide, please.

The first area that we would like to discuss relates to consensus standards and documentation. These treatment requirements in the July 31st draft rule were, RISC-3 treatment processes must meet voluntary consensus standards which are generally accepted in industrial practice, and address applicable vendor recommendations and operational experience.

The implementation of these processes and the assessment of their effectiveness must be controlled and accomplished through documented procedures and guidelines.

Next slide, please.

The staff based these requirements on the following factors.

The industry develops voluntary consensus standards through the participation of hundreds of technical experts. The NRC staff participates in this effort and reviews numerous standards itself. The result is the establishment of well understood treatment methods for plant equipment.

With risk-informed methods, ASME has been developing standards in this area for over 10 years.

On the other side, industry -- individual licensees do not have sufficient expertise to develop appropriate treatment for RISC-3 SSCs in areas of design, construction, installation, operation, testing, repair and replacement as part of the categorization process.

With respect to operating experience and vendor recommendations, the staff has found that licensee attention is necessary in these areas to prevent common-cause problems from impacting multiple SSC functionality.

For example, the staff issued several generic letters in response to operating experience with valve performance, and similarly, the staff has

issued numerous information notices that addressed vendor information with common cause implementation.

Finally, the proposed rule includes almost no requirements for the documentation of the treatment of RISC-3 SSCs. For example, there are no requirements for documenting the design, procurement, installation, testing, repair, or replacement of RISC-3 SSCs or any related procedures or records.

The proposed rule also does not include any requirements for self-assessment of the treatment process by licensees. As a result, in our opinion, it will not be possible to rely on licensee internal programs to manage, document and audit the treatment process.

Next, John Fair will discuss some design control requirements that were deleted from the draft rule.

JOHN FAIR: Next slide, please.

This slide just shows the design control requirements that were deleted from the July 31st draft. The reason that we had a number of design provisions in that draft were that several provisions included within the scope of 50.69 also addressed the design requirements. Most of the language shown on this slide address these design requirements.

For example, the first item contains a requirement that replacements for ASME components meet a single standard in its entirety.

The second item requires replacement components meet fracture toughness requirements.

The third requires documentation. And I underline documentation that SSCs meet environmental and seismic design requirements.

And the last item just lists elements that should be controlled by the process.

The next slide provides the basis for including these requirements in the rule.

Next slide, please

These requirements were based on the following considerations.

The proposed rule allows licensees to replace ASME section 3 components with nonASME section 3 or commercial components. Since the ASME code contains design criteria, it's necessary to include requirements in the rule to provide a reasonable confidence that the replacement components are designed using acceptable criteria.

There appears to be some staff confusion regarding the actual rule requirements for these replacement components. Mr. Reed stated earlier that

licensees must maintain design basis functional requirements as part of their rule. But he did not say that the licensees must maintain design requirements.

The current rule language does not require the use of ASME code design criteria or any other design standard for these replacements components.

South Texas proposed to replace ASME section 3 components with commercial components and perform no further evaluations. This would result in a commercial -- component constructed to a commercial standard and qualify to ASME design criteria.

The staff found this proposal unacceptable because there would be no basis to establish functionality or reliability of a component designed to such a hybrid criteria. The purpose of the July 31st language was to ensure that replacement components meet a single standard in its entirety. The current rule language does not provide this assurance.

The second item requires replacements for ASME class two and three components to meet fracture toughness requirements. The staff considers fracture toughness requirements important to preclude potential brittle failure of components done to

the design basis events such as earthquakes, which would give you a very common-cause event. These fracture toughness components are part of the ASME code requirements.

The statement of considerations indicates that the fractured toughness requirements continue to apply. The statement is clearly inconsistent with the rule which does not require compliance with any of the ASME code requirements for these replacement components.

South Texas did not propose to meet ASME section 3 fracture toughness requirements for replacement components. Retention of fracture toughness requirements was required by the staff before the licensee was granted the exemption. We would not expect licensees to meet fracture toughness requirements if the rule does not contain this requirement.

The third item requires licensees to have documentations to demonstrate their SSCs can perform their safety-related functions for environmental and seismic design conditions. Documentation is necessary to show the design requirements have been met.

Our experience with the South Texas review

indicated that the licensee did not intend to perform any evaluation of the replacement SSCs to determine that environmental and seismic requirements have been met based on the assumption that commercial experience has demonstrated adequate performance.

However, staff discussions with component vendors found that some commercial components were not suitable for environmental and seismic design conditions.

Licensees cannot simply replace safety-related SSCs with commercial SSCs and just assume they will function. There needs to be some documentation to show that these SSCs meet environmental and seismic design criteria.

And the final item lists several important elements that should be included in the design control process. These elements are similar to those proposed by stakeholder comments on previous drafts of the rule language.

The July 31st language allows licensee complete flexibility on implementing these aspects of design controls.

Next, David Fischer will discuss corrective action requirements deleted from the July 31st draft rule.

DAVID FISCHER: Thank you, John.

Next slide, please.

Good morning. I would like to talk briefly about the corrective action portion of 50.69.

The proposed rule would replace the corrective action requirements of appendix B criterian 16 with this statement, conditions that could prevent a RISC-3 SSC from performing its safety-related function under a design basis condition should be identified, documented, and corrected in a timely manner.

This proposed rule language only requires the specific degraded or failed RISC-3 component be repaired or replaced. The proposed rule does not require that potentially generic common-cause problems be evaluated and corrected.

The July 31st draft rule included a requirement that, in the case of significant conditions adverse to quality, measures shall assure that the cause of the condition is determined and the corrective action is taken to preclude repetition.

This language would require licensees to address potentially generic common-cause concerns. We believe that licensee's treatment processes must

guard against common-cause failures, because experience indicates that changes to treatment, such as change to maintenance, test, and inspection practices can have a significant and widespread effect on component capability and reliability that might invalidate the safety analysis performed to justify the changes.

The proposed rule needs to more clearly require monitoring, corrective action, and feedback to address potential common-cause concerns, to re-establish treatment if treatment related performance problems are encountered and to ensure that changes to core damage frequency and to large early release frequency are maintained acceptably small.

We discuss these concerns in our DPV's in more detail.

Thank you very much.

Now Tom Scarbrough will discuss our conclusion and recommendation.

THOMAS SCARBROUGH: Thank you. Thank you, Dave.

Slide ten, please.

In conclusion, we believe that the proposed

rule as written does not contain sufficient regulatory requirements to provide reasonable confidence that licensees implementing the rule will establish effective processes for the treatment of RISC-3 SSCs.

We believe that the proposed rule should be revised to incorporate treatment requirements sufficient to make a determination that its implementation will maintain adequate protection of the public health and safety.

We recommend that the proposed rule be revised to incorporate the July 31st draft rule that addressed ASME, NEI, and other stakeholder comments. We do not believe that adjustment to this statement of consideration will be difficult, because the SOC was originally prepared for the July 31st draft rule.

Rather than simply including the draft rule language in the SOC as currently done, we consider it important that the proposed rule represent the best judgement of the technical staff.

Public comments could then be requested on the July 31st version of the proposed rule with specific requests for suggestions to further improve the rule language.

Thank you. And we will be happy to answer

any questions you might have.

CHAIRMAN RICHARD MESERVE: Thank you very much. I very much appreciate your views.

Commissioner Dicus?

COMMISSIONER GRETA DICUS: I'm going to just ask one of the questions that I put to the first panel. That has to do with, we are looking apparently, at two options here. We put the language in or we don't put the language in. And I'm wanting to think there is a third, a fourth, or a fifth option. And there are other possibilities.

Would you like to discuss what you think they are and what the merits of them would be, including the NRC looking at these on a case-by-case basis?

THOMAS SCARBROUGH: Well, one of the areas that would be possible would be to conduct some type of limited review of the submittal. There already plans to be a very detailed categorization review when it comes in.

You could do something where you had a much more simplistic rule language, but then with the idea that licensees when they did come in to ask for this 50.69 usage, we could do some limited type of review through engineering to make sure that there's an

understanding.

Because one of the things we found was that there was quite a bit of misunderstanding among the staff members, depending upon which division you are in as to component engineering, testing, and things of that nature.

I think we have seen that with the fractured toughness and the understanding of what that is, and component engineering in terms of what type of testing, where there's been a suggestion that -- attempted to be suggested that just a simple type of stroke time would be adequate... because these were low risks. Well, those components may not work properly.

So you need to have -- you can go that route and then have a very focused review through the engineering staff that would allow us to simplify the rule language quite a bit. And there might be some interest in industry to do that rather than having language that they would have to interpret because we don't plan to have any guidance in terms of how to interpret this high level language. And there might be interest in doing it that way.

JOHN FAIR: Can I add one comment to that?

In the previous Commission secy paper

discussing the 50.69 -- that's 00197 or something like that -- there was a discussion that said that staff was developing implementation guidance for the treatment. And that was subsequently dropped at a later team.

So there was an alternative that was originally proposed a while back.

COMMISSIONER GRETA DICUS: That was the second part of my one question.

A possibility that guidance could clarify this.

THOMAS SCARBROUGH: If you develop the language --

COMMISSIONER GRETA DICUS: With the language staying out that's out now but guidance clarifying the issue.

THOMAS SCARBROUGH: Well, part of our concern with that is that, as we mentioned that there's very little requirements for any documentation on things. What we were trying to do when we wrote the statement of consideration for the July 31st draft rule, was to flush out some of the language that was in the rule that was very high level.

But we felt it necessary to have rule

language that at least had a way to reference that guidance to. Because if there's not a tag to something that's in the rule, there's not a real clear indication that utilities would interpret the same way that we would.

So I think that's possible. I think we could probably cut down -- we have like eight specific requirements that were taken out that we had a concern with. I think we could probably adjust that if we had a way to have a regulatory guide of some type which flushed out the high level requirements.

So I think that's possible.

CHAIRMAN RICHARD MESERVE: Commissioner Diaz?

COMMISSIONER NILS DIAZ: Thank you, Mr. Chairman.

Let's see. I'm trying to understand the depth of your concern having read your comments.

You don't have any problems with rigorous categorization process, the way that it's stated in here?

THOMAS SCARBROUGH: No, sir. We believe that the categorization process does very clearly indicate the level of importance of various

components. It does indicate very clearly which components, on an individual basis are less important than the others. We think its does a very good job of doing that.

COMMISSIONER NILS DIAZ: So you believe that a rigorous categorization process would actually tell you which are those structure systems and components that belong on RISC-3?

THOMAS SCARBROUGH: Yes, sir. We have confidence in the PRA staff with that.

COMMISSIONER NILS DIAZ: So those components going to RISC-3 are not necessarily -- although they are classified as safety, relate a safety significant issue that is only on the treatment side? You do believe there is significant benefit in the categorization process as far as understanding the safety of the plant?

THOMAS SCARBROUGH: Absolutely.

COMMISSIONER NILS DIAZ: Fine.

I was listening to you attempt -- and I read the document, and I think the issue comes into what is a high level requirement regarding the treatment, right? Because if I read on page 23 of the proposed rule, it says at the bottom here, the proposed rule contains high level requirements for the

treatment of RISC-3 with respect to design controlled -- clearly stated -- procurement, maintenance, inspection, test and surveillance, and corrective action.

So those elements, I think, are good elements to have. But the issue is, what is a high level requirement? And the high level requirements that the staff is considering, you do not believe it meets your expectations of what a design basis structure system component should have?

THOMAS SCARBROUGH: Our concern is that these categories -- and we helped to develop these four or five categories. And we agree that that is the major categories. Our concern is that a lot of times they may just say, have design control or have maintenance and test surveillance.

There are times when it doesn't give you enough information for a licensee to interpret what is that minimum. And we found, through South Texas, that there's quite a variation and interpretation of a high level requirement. What is reasonable to one person may not be reasonable to another.

And only through a lot of discussion with South Texas were we able to come up with some level of understanding of what we meant. For example, South

Texas, at one point, was going to eliminate all of their commitments related to RISC-3 SSCs to the low risk category based on risk alone.

They weren't going to look at what were those commitments, regulatory commitments they made relative to the functionality. They thought, well, they are low risk. We can just push them away.

JOHN FAIR: There's a little more than just treatment.

If you look at design control area where we have a number of concerns, again, it was the fact that several of the rules that are included in 50.69 also cut across the design area. And what we are trying to do with the ruling, which is to make sure we maintain adequate design levels in these areas.

DAVID FISCHER: And what I wanted to add is having a high level treatment objective that simply requires that licensees ensure that their equipment remain functional under the design basis condition, that alone does not provide a technical basis that would ensure the functionality of a component. Whereas, if you had something like -- used voluntary consensus standards, that is a technical reason to believe that licensees will, in fact, ensure functionality.

But just requiring that they maintain them functional doesn't give you anything to hang your hat on really.

COMMISSIONER NILS DIAZ: So it is an issue that, you know, you think the lack of specificity, combined with the potential for misinterpretation are not following by the licensee? So it's an issue of the capabilities of the licensee to deal in the design control space that gives you the most concern?

THOMAS SCARBROUGH: I would say several areas.

One is we thought there were design requirements that were inadvertently deleted. Like fractured toughness, and we pointed that out.

Another is, we want to make sure that licensees understand what the requirements are so that there isn't any misinterpretation.

And lastly, we want to make sure that when the review is done, it's done in a way that's appropriate for component functionality. And we did not want to push this into where you had a team of people, sort of deciding, well, is this good enough for now.

We really wanted to make sure that the component engineers understood what the

assumptions for the reliability was up front in the PRA.

So they can say, if we are assuming this is going to be 99.6 reliable, we just can't go back and just stroke time this stuff or do something like that or never test it. We have to have a mechanism to be able to maintain that functionality at that sort of roughly at that sort of level.

COMMISSIONER NILS DIAZ: At the regional appendix B level or at the level that is commensurate to the RISC-3 categorization?

THOMAS SCARBROUGH: The RISC-3 category.

We went through appendix B and said, if we were trying to break this down from all the criteria of appendix B down to what we would think would just be appropriate for RISC-3, this is sort of the groups that we came up with. If we just had these, we think we would have less assurance in appendix B but we would still have this sort of this minimum floor that we could go in and say yes, we have confidence that licensee, if they follow this approach, they are going to have reasonable confidence in the capability of this equipment.

JOHN FAIR: I just want to add again, on the design control area, when we did the proof of

concept review and were trying to grant the exceptions to these rule requirements, we found that the licensee without guidance and requirements from staff were going to implement processes that the staff found technically unacceptable. And we would not accept them in the South Texas review.

And these are a number of the items that we essentially put into the rule requirements in 50.69 that were in the July 31st version.

COMMISSIONER NILS DIAZ: Well, I want to thank you for coming and briefing us. I personally appreciate your comments. I've gone through them.

Thank you, Mr. Chairman.

CHAIRMAN RICHARD MESERVE: Commissioner McGaffigan?

COMMISSIONER EDWARD MCGAFFIGAN: Thank you, Mr. Chairman.

I do also want to compliment you. I think its a very good thing that you have done, to bring these issue to light. I think you have all learned a lot of lessons from the South Texas project, that experience, and not all positive I'm sure. And you are trying to bring those into this rulemaking.

You answered earlier, Mr. Scarbrough, that you were confident in the PRA staff and this

categorization process. Speaking as one Commissioner, when it comes to PRA and its application, I don't have as deep a confidence. I see SDP's that get changed by a factor of 10, 100, 1,000, as we wonder through a process. And I don't trust any of these delta CDF's better than a factor of 10.

You also mentioned seismic. I mean, as I understood Mr. Strosnider's answer, we are going to have guidance for this ASME thing, we are going to have guidance for the ASME code or whatever for PRA quality.

But that's only internal events. Whereas you are with more external events, earthquakes, things like that, it's not all mode. And I don't know when we are going to have categorization guidance available that captures all modes, both internal and external events. Maybe it's all going to come together.

All I heard is that internal events is going to come together in time for the final rule, not the whole thing.

But is part of this that you all -- I mean, have some concerns about the categorization process? I read some of the documents. One of the issues

that came up in SDP was the shades of RISC-3, high versus low RISC-3.

How confident are you in the categorization process that it's going to give -- you know, all of these things are going to be well identified?

THOMAS SCARBROUGH: John, do you want to take that first?

JOHN FAIR: Yes.

I think Tom was saying he was confident that categorization process did a good job of doing a relative risk ranking. The reason that we have technical concerns is we don't think that the categorization process by itself can cover all aspects of treatment.

The reason we are trying to maintain some treatment requirements is to give us some assurance that the reliability of these components is not going to be significantly altered such that these assumptions that are going into the categorization process such as sensitivity studies are somewhat valid.

DAVID FISCHER: I'm pretty confident in what the staff is doing. They said, the previous panel said that they thought they did not need as much treatment requirements because they have this

very robust categorization.

But the robust categorization isn't really in the rule. The robust categorization is in the draft reg guides, and it's in these other documents that are under development.

And I think it's important for the Commission to understand that that's kind of like betting on the future. And I think that you should consider keeping some minimal treatment requirements in the rule before you say the categorization process is so robust that I don't need to say anything more than the equipment needs to function.

COMMISSIONER EDWARD MCGAFFIGAN: The ACRS itself, is -- at least members of ACRS have emetic words about high quality level to all mode, internal and external event PRAs as something that you sort of need in order to do this rule, haven't they?

I'm not sure whether that's a consensus ACRS position, but I think I have heard it from at least one member.

THOMAS SCARBROUGH: Yes, sir. They raised some of those concerns.

One thing I did want to say, I wanted to say in response to Commissioner Diaz's comment was we are not anti-PRA. We are not pure deterministic

folks who won't believe in anything else.

We have been doing risk informed in service testing programs and such, motor operated valve programs, risk informed, for many years.

So we have confidence. We have watched the groups do some of that in terms of risk ranking.

But we are also aware of the weaknesses of it and respect that in terms of the common-cause aspect. There have been studies on how to deal with common cause. Some of that is have procedures, guidance, design control. That's how you get around the concern of common-cause problems.

So with that, we think marrying the two together of categorization with all of its strengths and weaknesses and a minimum level of treatment will allow us to go forward with a rule that we can say yes, we are stepping out a little bit here, but we think we have enough checks and balances that we think we will be all right.

COMMISSIONER EDWARD MCGAFFIGAN: And in the South Texas process, in the end, you got the checks and balances that you felt were appropriate through the FSAR changes; right?

THOMAS SCARBROUGH: Yes, sir.

COMMISSIONER EDWARD MCGAFFIGAN: But some

of those checks and balances that you got in South Texas are not in this rule?

THOMAS SCARBROUGH: They were taken out.

We had them in the July 31st rule with the explanation and the SSC, the two together, but they were taken out at the last minute.

DAVID FISCHER: And our management thinks that some of this level of detail, these eight minor areas, including them in the proposed rule would be inconsistent with the Commission guidance.

And my reading of the previous secy paper doesn't say that including use of consensus standard is inconsistent with the Commission's previous standards.

COMMISSIONER EDWARD MCGAFFIGAN: There's a law to the effect that we should encourage the use of consensus standards. The 1996 Technology Transfer Act.

I will tell you. There is a tendency, that I have seen here in the six years to sort of project what we say in some delphic SRM -- sometimes there's a lot of projection that goes on that they slip -- there's something in a paper buried on page 35 of appendix B that wasn't highlighted. And because we did not object to it, therefore, it's Commission policy.

I just say once again, it isn't Commission policy if our synapsis are not connected on the matter.

CHAIRMAN RICHARD MESERVE: Commissioner Merrifield?

COMMISSIONER JEFFREY MERRIFIELD: I think the flip side of Commissioner McGaffigan's comment, though, is that there are opportunities where individual members of the Commission who had an opportunity to weigh in on specific provisions of an SRM do have an opportunity in our discussions with management to refine and reflect on what we have said. Knowledge which isn't necessarily available and open to the staff. That cuts both ways.

That's why we have a management around here to do some of these things.

COMMISSIONER EDWARD MCGAFFIGAN: But that does lead to individual Commissioners interpreting what the SRM means.

COMMISSIONER JEFFREY MERRIFIELD: It's not an instruction. It certainly defines an understanding of the basis of why the elements were in there.

On slide nine, you have got the last line that talks of design control, including selection of suitable materials, methods, and standards,

verifications of design accuracy -- no, just a second.

I'm on page 7. I apologize.

On slide nine, you have in the case of significant conditions adverse to quality, measures shall assure that the cause of the condition is determined and correction action taken to preclude repetition.

Now, that language is very similar to the last lines of appendix B, criteria 16. And I'm wondering if you can elaborate a little further on your concern regarding the current proposed rule language as it relate to the corrective action requirements related to RISC-3 SSC.

DAVID FISCHER: I think that we intentionally took the language from appendix B because we felt this was an important aspect of the corrective action program.

It was an aspect that South Texas project licensee felt was so important that they decided they did not want an exemption from this particular aspect of the regulations.

And it is the piece of appendix B which broadens the licensee's responsibility for looking beyond the failure of the individual component.

Because this regulation deals with treatment, which is really -- treatment is one of the mechanisms you use to guard against common-cause failure. Because of that, we felt it was important to include this piece in the proposed rule so that licensees would be required to go look for, you know, significant problems to make sure that they did not apply to similar components of the plant.

Say, you stop greasing a motor operated valve as part of their maintenance program. They should decide whether that's equally applicable to other components of the plant. Because if your maintenance practice goes around -- and the previous panel suggested that they had to have identical service conditions, identical this. It almost painted it to be an incredible scenario to have common-cause failures across system boundaries.

When you are dealing with special treatment requirements and practices which go across systems boundaries, it's not incredible to have common-cause problems develop. In fact, it's extremely possible to have common-cause problems develop because you are mucking with things that go right across the system boundaries. And to try to say the current way of dealing with common-cause failure in a PRA where you're looing at

failures within the system, it really -- and that's a part where licensees that read the current proposed rule, they are going to see, dealing with common-cause failure, they are not going to click to say we have got to go and consider across system boundary.

JOHN FAIR: There's a history behind that.

What we are trying to get at in that language is if a licensee finds something that's failed or there's an identification of some generic problem, to go look and see if it's generic at their plant, not just fix the specific problem they found.

We tried alternative languages at various points in the development in the rule. And we got criticism back it was even more restrictive then appendix B or required you to do more than appendix B.

So we eventually said, okay, the only way to do this is to put the appendix B language in so we don't get criticized for being more stringent than appendix B and still do what we want to do.

COMMISSIONER JEFFREY MERRIFIELD: The language on slide 7, your preferred rule language for RISC-3 design control requirements as outlined, that seems to be reflected in the alternative treatment

requirements that are included in 50.69(d)2, and D-2 I.

If you can reflect for me what you perceive are the significant differences and why what is proposed here does not adequately address your concerns?

JOHN FAIR: Well, in the area of design, one of the things you are allowed to do in 50.69 is to replace an ASME component with a nonASME component. You are saying you don't have to use the ASME code for replacement.

The current treatment requirements do not have any requirement on what you do with these replacement components. You could fabricate them at the shop or you could buy them at the hardware store or do anything you wanted based on the current rule language.

The attempt here was to get some kind of criteria, alternative criteria in here for replacing these components.

The other aspects, as you go down there, there's an aspect for documentation on meeting design requirements. And we are not doing anything different, except for requiring them to have some documentation that they meet the design requirements

on seismic and EQ.

Because if you don't have any documentation, how's anybody going to ever go back and determine whether you do or do not need them? And there's been problems in the past and I will bring up an example of it.

Diablo Canyon, when we had significant design deficiency which required a licensee to go back and reverify the entire seismic design of the plant. If you have a bunch of components changed out, then you have got no design documentation whatsoever, how does anybody ever accomplish this, how does the staff go back and look and see if what they did was right?

COMMISSIONER JEFFREY MERRIFIELD: What I don't understand in that answer. You reference the notion that you could -- you know, that a licensee could fabricate something in a shop or somebody go buy something off a hardware shelf. Even with that, your alternative treatment requirements under D-2 are going to require the licensee or applicant develop and implement processes to control the design, the procurement, the inspection, maintenance, the testing, the surveillance, and the corrective action to provide reasonable confidence in that RISC-3.

Why doesn't that -- it seems to me that that captures a process, a confidence greater than you just go basically fabricating it in the shop and not worry about it.

JOHN FAIR: It captures a process, but the process won't do anything more than what you put in it. If you don't put anything in the process for the design of these components, you are not controlling anything.

The reason we put it in -- and we cited the example of South Texas in this particular area, when South Texas was applying for the exemptions, they proposed to do things within these processes which we found were technically not acceptable. And that's what the specific rule language is trying to get at, is to prevent that from happening on people implementing 50.69.

COMMISSIONER JEFFREY MERRIFIELD: I want to join the other Commissioners in thanking you for participating in this. The DPV process is an important one. It's one that we are highly supportive of. I think the staff who participate in it ought to be congratulated and certainly highly regarded for their willingness to do that. I want to translate that as well. Thank you.

Mr. Chairman.

CHAIRMAN RICHARD MESERVE: in light of the hour I'm going to keep this to just one question.

At least one of your major concerns is that there's the rule that has been presented to us, that there's not enough in the way of prescriptive requirements that give you confidence that the right things are going to be done.

Let me ask the question as to why you don't have the same concern with regard to the RISC-2 components which has a very , very broad statement?

THOMAS SCARBROUGH: There's a lot of discussion regarding RISC-2 as we started down the process of Option 2. There was significant discussion regarding that. We did have concerns in that area.

Part of our resolution or our decision that, okay, let's sort of try this approach was, one, some of the -- we thought about what were some of the areas that might fall into the RISC-2 category and what we believed was the ATWS equipment, station blackout, would be in this category.

And the rule does not apply to those. So whatever requirements that are currently under the 50.62, 63 requirements would still be applicable to

that RISC-2 equipment, whether it's RISC-2 or RISC-4, if it happened to fall down to RISC-4.

We said that's good. That's a good idea. We tried to get some similar adjustment in 50.49, but we weren't successful.

So those were two areas that we wanted to make sure had happened.

The other place was in the SOC itself, one example we had was the PRV block valves, where they might go into a feed and bleed flow. And those valves are typically designed for steam flow.

In this case, with feed and bleed, you can be putting water through them and they are not designed to handle that. Or the block valve -- MOBs are not designed to open and close many times in just a few minutes, if you get to that mode where you are operating in that way.

So in the SOC there was language put in based on some comments that we had made that they need to deal with that. If you have valves that are dealing with water flow, you need to understand what the function of that is for RISC-2 and deal with it.

So we thought, overall, you know, we had some concerns in that area. But we thought that the small amount of equipment that's going to fall into

the RISC-2, the use of the 50.62, 63, sort of nonexemption that they get, and also the language that we tried to put in the SOC, we thought, well, this is good. Let's try this approach, let's see what happens, let's see where we go from here.

That was sort of how I reconciled my own mind of why we did not raise to the level of DPV with the RISC-2 equipment.

JOHN FAIR: There's a little more to it. The RISC-2, there's nothing being reduced on RISC-2. And so, you know, if there was a concern on the level of treatment currently on RISC-2, we should raise that now rather than with 50.69.

But with RISC-3, we are planning on making major changes to the treatment of a vast quantity of components which we don't know whether we have adequate data to support some of the reliability assumptions if we don't keep a certain level of floor treatment there.

CHAIRMAN RICHARD MESERVE: Well, again, I appreciate the effort you have put into this. This has been very helpful. Thank you very much.

With that, we are adjourned.