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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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OFFICE OF NUCLEAR REACTOR REGULATION

RISK-INFORMED PART 50 OPTION 2

SPECIAL TREATMENT REQUIREMENTS

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WEDNESDAY,

NOVEMBER 7, 2001

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GAITHERSBURG, MARYLAND

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The Workshop took place at 8:00 a.m. in the Goshen Room of the Holiday Inn, Two Montgomery Village Avenue, Timothy Reed, NRC Project Manager, presiding.

PRESENT:

TIMOTHY REED

EILEEN McKENNA

SAM COLLINS

FRANK GILLESPIE

GARY HOLAHAN

TOM SCARBROUGH

JACK STROSNIDER

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(8:04 a.m.)

MR. COLLINS: Good morning.

I'd like to welcome you here this morning. My name is Sam Collins. I'm the Director of the Office of Nuclear Reactor Regulation. And with us today we have the representatives from the executive and the leadership team of NRR to discuss what before September 11th was one of the biggest projects that we had going in the Office of Nuclear Reactor Regulation and in the NRC. It's the key cornerstone to part of our risk activities, and I'll get into the details of that in just a moment.

The reason I bring up September 11th is because I think we have stay focused on our core business as well as be aware and give appropriate attention to the activities that are driving us since the tragic events of September 11th of this year. Risk informing activities is a major part of the operating plan for the Office of Nuclear Reactor Regulation for fiscal year 2002, of which we're almost a quarter through at this point. I can get into some of the events that are driving us post-September 11th in the question and answer period if that's of interest to individuals.

Let me start by saying that we want to welcome to the workshop. And I know that it's taken some effort for people to travel. How many people are from out of town? We consider Washington being out of town up here. This is what's known to us as up county. Anybody heard of up county? Up county is when you can still park without paying a fee.

I know some of us have had trials and tribulations. I think Steve was telling me he had an accident on the way here yesterday. So, that's a testimony to the resiliency of NEI? I understand you're traveling later on this afternoon also. Best wishes with that.

The purpose today is to bring together interested stakeholders to talk to those challenges and those opinions that we have on how to move forward with the risk-informing Part 5§50 Option 2. And I think I want to compare and contrast. Most everybody here, I think, is pretty well familiar with the NRC initiatives in this arena. But, of course, Option 2 is one of our focuses. And Option 3, which is more of their partnerships in research lead, is also of interest also.

Talking earlier to some of the members of the audience here to try to cross over a little bit

into some of the other initiatives that we have, particularly the framework that's being looked at for the future reactor initiatives. And as Cindy was saying it's necessary that we keep in context this particular product in the range of options that are being looked at with other product lines to be sure that they're compatible; and if they're not, there has to be a good reason for that.

And we have some experience, of course, with our stakeholders at the South Texas plant with the proof of concept exemption that as issued this past August. And that was certainly a challenge for the staff, and I know it was a challenge for the industry. There is some experience with the implementation. I think that will phase on out over a period of time, perhaps years, in which we can look at the categorization and the treatment experienced at South Texas and blend that back into the further initiatives that have to do with Option 2, and as appropriate Option 3.

Is that better? Okay. Was there static before? Interesting. You can't hear it up here. I guess my wife would say maybe that's normal for how I communicate.

So we view this workshop as an important

part of the regulatory process. Why is that? Well, we have the four performance goals that we're operating with as at the Nuclear Regulation Commission, and specifically as the Office of Nuclear Reactor Regulation. So what do we want to do with this effort?

We want to maintain safety, that's clear. We want to improve the efficiency and the effectiveness of the organization as far as how we define this work product and it's rolled out as an opportunity for the industry. We want to reduce unnecessary regulatory burden where it's appropriate, and "unnecessary" is the optimum word there. And we want to improve public confidence in the NRC as a strong credible regulator by the way that we move forward with this product.

NRC management and staff are focused on this. I think as indicated by the presence of Gary Holahan, Jack Strosnider, we'll have other representatives here throughout the day, we want to be sure that the message to our stakeholders is that this is, in fact, important to us and it is receiving the attention not only of the competent staff that you'll be hearing from with the details, Tim and his team, but also there are certain decisions to be made as we

move through the process, like we did on South Texas, that will engage the leadership and the executive levels of NRR.

And as always, we're amenable to discussions throughout the process, sensitivities of the stakeholders. And those inputs will be considered as we move through.

More to the point, as we translate the lessons of South Texas and as we move forward to the exemptions of risk-informing Part 50 Option 2 there are going to be challenges, and I think some of those will be brought forward in Tim's definition of success for the meeting itself. But clearly there are some boundary conditions that we have to take into consideration as we move forward with this initiative.

We'll be talking and focusing predominately on low safety significant structure systems and components, and trying to focus on the treatment of those.

Categorization, I think as we learned earlier with the South Texas, is a little more straightforward. The treatment challenges of those that we have in front of us today.

We are dovetailing this type of initiative in with the Commission's view that we should put

information out early to the industry into our stakeholders to provide for early engagement. And Tim will go through the product that comes out of this type of a meeting with its input. And the key there is to make the draft rule language available as early as possible to the stakeholders to engage on that draft rulemaking language.

We received continually feedback. We had a stakeholder meeting within the last month, and the feedback from that stakeholder meeting that our rulemaking process continues to be viewed as somewhat cumbersome. As a complimentary effort, I want to acknowledge the Cindy is heading up a task force that is actually looking at our rulemaking processes. This effort to provide and share the draft rule language early to our stakeholders is part of that, but the overall scheme is to look not only at what other efficiencies are available within the existing body of guidelines that we have for rulemaking that we can take advantage of, but is there a better way to in fact do rulemaking. And that, we have our Office of General Counsel engaged as well as the other program offices that do rulemaking. And we'll be moving forward with that effort in parallel with the product line for Option 2.

So, although you'll hear about some process improvement as the result specifically of the Option 2 initiatives, I want to assure you that we are also looking at other product lines and other framework issues within the Office of NRR itself.

As most of you are aware, the challenge for RISC-3 treatment will be one of the major discussions today. And I expect that that will be a lively discussion. Our purpose is not necessarily to agree, but to understand here today and to receive the input from the stakeholders and understand the basis for that, and then move that forward into the product line.

You have green index cards in front of you. Those are available for asking questions or taking notes. We'd prefer they be used for asking questions. You can pass those forward, and I think there'll be a process by which they'll be collected. And those questions can be entertained during the course of the discussions this morning and this afternoon.

The focus today is to look at establishing the minimal requirements that are necessary to maintain RISC-3 design bases. All right. And once we understand the minimal requirements are, then I think

we can use that to move forward. But clearly maintain safety is the performance goal, and we want to use that as the definition of minimal requirement.

Any the alternative approaches today that should be discussed are certainly welcome. And I think NEI and other stakeholders have an opportunity to express those.

Success for the workshop is really the interaction. It's the constructive interaction around the topic. We need the feedback in order to move forward. We need that in order to develop a proposed rule to be efficient and effective.

We encourage you to provide written input following the workshop. There'll be an opportunity for that. But clearly any input this morning would be valuable also.

Before I turn to Tim and ask him to provide a more detailed overview of the workshop, the objectives and the agenda, I have time to respond to a few questions or I'll provide an update on where we are with some additional programs.

Are there any questions? Early at this point. Early in the morning or early in the presentation.

Let me take just a couple of minutes to

update on where we are with some other initiatives.

Future reactors. We're working extensively with our stakeholders to identify the range of options and the range of product lines with future reactors. We have a SECY paper that has been issued in the past two weeks that covers those range of options. And it's clearly a challenge for the NRC to work the stakeholders to identify those areas to focus our initiatives to move forward, not only in the design certification but also in the pre-certification reviews and the early site permits in the combined operating license area. So we have four or so areas that we're focusing product lines on. Those are identified in the SECY paper as we move forward.

There is, of course, a number of technologies that are under consideration for the future as well as a number of technologies that are currently under review, such as: The PBMR, which is in the pre-certification review; the AP1000, which is in the pre-certification review; we're hearing a little bit about IRIS; we're hearing about other gas designs. We're looking at the number of early site permits either in conjunction with combined operating licenses or as separate initiatives.

We're looking forward to making a decision

concerning the certification of AP1000 and that, of course, is a Westinghouse decision of whether to move forward with that.

And there is some discussion that's continuing with the PBMR sponsors on the combined operating license submittal in fiscal year 2002/2003, depending on how the schedule lays out that way.

We have to balance that against the resources that are available. I think that if you look at the combined universe of the number of opportunities that we have, we have to narrow those down because of the resources that are available. I think some of that will happen naturally. Some of that will be first come/first served. Some of that will be based on the most feasible product line.

We're working on refining Part 52. We have some rulemakings that are proposed. We have some petitions for rulemaking to move forward with those. And I think that that process is available today, but it can be refined and we're continuing to work on that initiative.

Post-September 11th, as you know, we have our Incident Response Center manned 24 hours a day/7 days a week. Same for the regional Incident Response Centers. And we are in an event response mode and an

event response methodology as far as reaction to those events are concerned.

We're issuing a number of advisories to our licensees. Those of you who represent operating licenses here are aware of that. Those advisories keep licensees up to date on the current challenges that are perceived to exist as well as those actions that are determined to be necessary of consideration in order to provide for strong robust safeguards and security measures.

We have the task force, which is well underway. Always a product by the end of November to the Commission that will provide a framework for going forward with the review of existing security requirements against those challenges of September 11th.

We're in a very challenging period right now as far as the threshold of information. You know we've gone through the shutdown of the website. We're doing an update of the website at the same time, so as we move information back into the NRC website, we're doing it in a different format.

We're sensitive to plant vulnerabilities. Some of those thresholds and definitions are yet to be clarified.

We're working right now with a number of stakeholders which before September 11th didn't necessarily exist in an active sense. Many of those names are familiar with you: Homeland security; critical infrastructure. Those are not insignificant influences, in our way of thinking, on where nuclear power and where the assets of generating electricity for 20 percent of the demand, where they fit into the framework of government and business, and critical infrastructure. Those are very important decisions yet to be made, but they are influences that will determine how the NRC programs are defined, how much information is available, how was it categorized and what type of assets are brought to bear in the protection in a reactive and in a standby sense for nuclear power plants.

So, much of that is yet to play out. We're engaging the stakeholders to the extent we can, and again that's a threshold of information issue. The effort currently underway as tasked by the Chairman is very important for us as far as looking forward to the future of defining security, defining the design bases, defining the roles and responsibilities for protection. And those will play out not only at the end of November, but there will be

subsequent white papers that will be written on each of the policy issues. And right now we're looking at four or five of those in the short term for the Commission. And we'll move those forward in a public sense to which we can, and engage the stakeholders in those areas.

So that's future licensing, and that is safeguards.

Lastly, let me just talk about a couple of issues that we're wrestling with with maintaining safety. Many of you are aware of the CRDM cracking that's taken place. We've had correspondence and a set program with CRDM cracking that's been out in the industry for quite a length of time dealing with axial cracking for CRDMs. Now we're experiencing circumferential cracking. The first instance of that of note was to the Oconee station.

And we're seeing a fairly constant discovery of cracks with the BMW manufactured heads. And those that inspect are seeing cracking of one sort of other, either axial or circumferential. All of them to date, I believe, has been at least axial and about 50 percent of the BMW heads has discovered circumferential cracking. Jack's the expert in this area, so I have to look for Jack to nod his head as I

spout these numbers off.

And, as you know, we have issued a bulletin in O1 to specify those actions that the staff believes is necessary in order to provide for continued operation of the plants while we look at the frequency and depth of inspection.

Those plants that are most susceptible are those that are within a certain effective full power year range of the Oconee station, because that's the benchmark we currently have for plant cracking and for crack growth rate. And as we work down towards plants that have inspected and will inspect, we're narrowing down the number of plants that we believe are susceptible to cracking, but have not yet inspected within a time frame that's consistent with a crack growth rate in an effective full power year basis for benchmarking of the Oconee station.

So we will continue that, but we are coming up to the end of December 31st. We're continuing to work with a few stations as far as the information that's been submitted, and we will make regulatory decisions on the need for those plants to do inspection, probably within the next two to three weeks.

It's premature to indicate which plants

those are or what the regulatory action will be, because we have not completed our reviews. But this is not only a 2002 issue. We're only dealing now with the most susceptible plants. As we move out beyond '01 and into calendar '02, we'll be dealing with the other plants that have more time based on the current model in order to do these types of inspections. But this will be a continual issue until we either understand better the crack growth rate and can do a better job of predicting or the heads are replaced, depending on the options that are available.

So that to us, and we have to keep those issues right in front of us, because those, actually, are maintained safety issues as far as the plants are concerned.

Okay. I just wanted to cover those points generally. They may be of interest.

Any questions at this point?

Okay. Let me turn the forum over to Tim, and Tim is going to get into the details of the discussions as well as a more refined definition of success in the agenda.

I'll be around most of this morning and you can catch me during the break.

MR. REED: Good morning. I'm Tim Reed, I'm

the lead project manager for the Option 2. Eileen's here, also. She's the co-lead project manager. I think almost everybody here knows us.

Before we get rolling into the meat of this, I think everybody's aware of this. We have a court reporter here today, so we'll have a transcript. We'll make that publicly available.

There's mikes, I think everybody's aware of that. And, you know, we really encourage you to come forward and, you know, express opinions, views, whatever. Come to a mike. If you would, if you could, you come to the mike please state your name. I think the recorder can see with supersonic vision what's on these little cards on your chest. So that way we'll know who is speaking. If you don't feel comfortable with that, that's fine, you don't have to.

Let I mentioned before, we'll have a transcript of this. We'll have meeting minutes. We'll put those out.

Let's go to the agenda. We already Sam give the opening remarks. I'm just going to do a little bit of an overview of what we're going to try to accomplish today and go over the agenda right now. That's what I'm doing now.

The morning, as already been mentioned, it

will be focused on the RISC-3 treatment area, that portion of the draft rule concept that we'll put out on the web. Tom Scarbrough's going to go through the three different ways of structuring the regulatory framework, discuss the boundary conditions and those alternative approaches. That'll probably go through -- my guess is it'll probably go up to about the break.

And then after the break NEI would like to come up and throw a couple of slides down and give their views of where they think this thing ought to go as far as RISC-3 treatment. Of course, then we'll open it up to everybody, anybody else's ideas and views are certainly welcome at that point. But I think after the break we'll probably get to that point of the agenda.

Then prior to lunch, with those little green cards or if you just want to come forward and talk to me or Eileen, or whoever, we'll try to get a list of the topics people want to discuss on the rest of the draft rule. And we'll just take those during lunch and we're prioritize those, and we'll just try to plow through them with the time available in the afternoon the best we can.

I know we already have, Ken Balkey's here

from Westinghouse. He's going to give a status on the ASME code cases, so we have that. That's about 15 minutes of this afternoon. And I know there's interest in other parts of the rule, so we'll just take those topics, again, prioritize them and then try to plow through them this afternoon.

And then we'll wrap up in the end, Steve West, my section chief, will give a little presentation of where we go from here. And adjourn at 3:00.

So that's what we plan to run through today on the agenda.

Sam's already done a real good job of discussing what we're trying to accomplish today. I'll just reiterate a little bit more on that.

This is a workshop and what we want here is constructive interaction. The staff's going to try to provide our views and personal opinions are fine from everybody involved. We're just trying to get a lot of ideas out there and use that information the best we can.

So we want staff to give our views, but we also want the stakeholders here, we're interested in your views, too.

And with all that input then, what we want

to do is take that and move forward expeditiously to try to get a draft rule put out. And we want to put that on our rule form as soon as we possibly can. And we're trying to move forward this whole effort in an expeditious manner.

This draft rule out -- putting it out for public comment. I think it's already mentioned. We're trying to respond, the Commission's SRM last August which was the shared draft language with the stakeholders. And that's what this is all about today.

Okay. Just try to get everybody on the same page. I'm not going to go into a lot of the details of the rule concepts.

And let me just stop for a second. I'll probably use draft rule language and draft rule concepts interchangeably. We don't have any of our friends here from OGC, but I'm just going to -- Office of General Counsel didn't do a detailed review of this and they'd probably be upset if I was calling it draft rule language. They're really just concepts and until they go through it and they approve the process a little bit more and get involved a little more, we probably shouldn't call it draft rule language.

What we plan to put out after this will be

called draft rule language.

But nonetheless, for those of you who saw this, some of you I think are probably a little bit overwhelmed. It's a pretty big rule. It goes through up to H in different paragraphs. And I just wanted to talk a little bit how we structured it.

The heart and sole of this rule is really paragraph (c), which is the categorization requirements and paragraph (d), which is the treatment requirements. But the rest of the rule is really there to support there.

Of course, we have some definitions in paragraph (a). Those are the RISC-1, 2, 3 and 4 definitions. I think most people are familiar with those, I won't go into a lot of detail on that.

Paragraph (b) is the standard piece of rules, it's the applicability paragraph. It's basically saying that this will be voluntary rule that any power reactor licensee or applicant, no matter how you come by that either that's a nice license, renewed license or combined license or current license, can adopt this voluntary initiative.

As I already mentioned, paragraph (c) is the categorization requirements and the draft rule concepts that were placed out there right now give you

kind of two ways of going; either to adopt Appendix T, which would have basically no prior NRC review and approval, or to adopt paragraph (c) requirements, which are much more high level, that would be supported with a submittal and a prior NRC review and approval, which would focus of course on the PRA quality issues of scope, level of detail, technical acceptability as well as the categorization requirements. It would, in fact, comply with paragraph (c) if you have a robust categorization process. Because I think we said many times this thing is based on a robust categorization. So that's paragraph (c).

Paragraph (d) now is the treatment requirements on the different bins. You know, RISC-1, 2, 3 and 4. And real simply Boxes 1 and 2 if there's any special treatment requirements on there, they continue. If you're assuming this system structure and component outside the design bases and you're taking credit for it in the categorization process, which is probably everything in Box 2 basically and it may apply some system structures of the components of Box 1, then we want you to make sure that's a valid assumption and we might want you maintain those assumptions. And I know the words monitor the

condition and performance of those SSCs to make sure you maintain the categorization functions.

So that's Boxes 1 and 2 basically.

Boxes 3 or the focus there is maintaining design bases functions. And that's what we're going to talk about mostly here this morning. How do we structure that? Of course, we want the minimal requirements to accomplish that, and that's what a lot of the discussion that Tom will be going through, so I won't talk too much about that.

Boxes 3 and 4 also have this same characterization statement in it. Again, if you're taking credit for anything, general principle in the categorization process, we want you to monitor that and make sure that those assumptions are valid and are maintained valid.

Paragraph (e) is basically the linkage between §50.69 and special treatment requirements which reside, basically in Parts 21, 50, 52, 54 and 100. So this is the link. This basically tells you okay these are the requirements that we're going to lift off of Boxes 3 and 4, okay. So it's critical certainly from any licensee who wants to implement this to understand what those are, and from a legal aspect it's critical that that's a very clean

interface and nothing falls through the cracks.

Paragraph (f) that's the submittal requirements. That supports paragraph (c). Okay. If you want to basically come in and meet just the high level requirements, categorization requirements in (c), then we'll be having a submittal that will focus on the PRA in the categorization and make sure that, in fact, that your categorization process establishes a robust one. And the PRA is sufficient for this application. So that's really what (f) is focusing on.

(g), the change control requirements. And some of this might be actually a little bit redundant with some of the other parts of the rule, and I suspect we could get comments to that effect today. But what we're trying to do here is: (1) maintain the configuration such so if you change the facility that your categorization process basically is you're maintaining safety significant functions, and that's really maintaining those assumptions, again, of the categorization process and/or take a risk if the risk is acceptable. And that piece, I think, personally is probably redundant with the requirements. But the other piece is controlling the changes to the categorization and treatment processes.

Now, this is a little bit different rule. It's a little bit different rule than what we've done in the past. We're kind of approving a process.

In the past when we've done, you know if you go way back to the '60s and '70s when we did the original classification safety related and nonsafety related, we looked at basically lists of equipment throughout different systems. Well, we're not doing that here today in this approach. What we're doing is approving a process that will be implemented through time as you go through system after system.

It's important to have that process, basically, somewhat understood and contained and not, you know, change too significantly without the NRC being involved. That's the idea of that, to control that.

And then finally (h) is what I like to think of as really the administrative requirements, if you will. Going to what kind of description you would have. Probably have some sort of FSAR description to support this. What kind of records you keep, records for the life of the plant kind of thing, what's in there now. And what sort of reporting requirements we'll have. If there's a safety significant function, if you have a hit on that in some way, then it should

be reported provided in §50.72 and §50.73 if you don't already report under that. So those are the ideas there.

That's a very, very quick brief overview. I think that was really just intended to try to get everybody on the same page here this morning before we jump in to Box 3.

I'll take any comments. I don't want to get too much into details here. I think as we go through the workshop and the different pieces of rule, we can get into the real nuts and bolts of each section and have more of the experts in those sections address the issues. But I'll try to take any questions you have right now.

Yes, Bill?

MR. BURCHILL: Bill Burchill, Exelon.

Can you clarify the terminology "take credit for"?

MR. HOLAHAN: That's a good question.

MR. REED: Yes, it is. I'm looking at -- that's an excellent question. That's an excellent answer. Okay. Go ahead. I'll give you the division director.

MR. HOLAHAN: Did you call for an excellent answer or just an answer?

When you put something in your PRA and it effects the bottom line risk numbers and it effects the importance, not only of what you model but in fact it effects the importance of all the other components, I think that's what Tim means by "taking credit for."

So, for example, if you have a piece of equipment and it's in the PRA, it's effecting, you know, that overall analysis. If you didn't include it, you would have gotten a different answer, it would have effected the importance of other components, it would have effected the delta CDF and a lot of other things that go into the decision making process.

So to a certain extent how much credit you take for a given component effects how it ought to be treated and effects how other equipment ought to be treated, too. And I think to a certain extent that's a matter of choice.

If you decide not include some piece of equipment in the PRA, it will make other equipment look more important. You can, in fact, effect the amount of equipment that goes into category 1 and 2 versus 3 and 4 by how much "credit you put in modeling equipment."

MR. REED: Go ahead, Bill. Bill Burchill again.

MR. HOLAHAN: Right, Bill?

MR. BURCHILL: Right, Gary. Bill Burchill again, Exelon.

Well, the reason I asked the question is for two years now we've been discussing, you know, progressing towards this rulemaking, or close to two years. And the differentiating line has been safety significant or not safety significant. So above the line in Boxes 1 and 2 or below the line in 3 and 4.

And generally we've considered that more attention should be paid to this equipment that's safety significant. And in the draft language that we saw, concept that we saw, it seemed like this is a new concept about this "take credit" for. And when I hear you say that for equipment that we're talking credit for we need to do performance and condition monitoring, and I know that some of that equipment we're talking about is in Boxes 3 and 4, now I start to wonder are we focusing on safety significant versus non-safety significant or are we focusing on some entirely new population that we haven't really been discussing before.

You know, we put a lot of things in the PRA, but the PRA is a tool to help us understand the importance of different equipment and differentiate

safety significant from nonsafety significant.

I could put a whole lot of things in my PRA, particularly at a detail level, and I'm not sure what the value would be of "looking at that as I'm taking credit for it," and now I have to do a performance and condition monitoring.

MR. REED: In fact, I think what you're going to, Bill, is that would discourage you from putting a lot more detail in the PRA?

MR. BURCHILL: I would not want to say this.

MR. REED: That's why I said it.

MR. BURCHILL: But you're correct.

MR. HOLAHAN: Hey, Bill, you sure you want to sit all the way back in the third row?

I think the question of what is appropriate monitoring for low safety significant items is something that needs to be discussed. You know, most by their nature if the performance of low safety significant items changes, it's not going to have a big effect on answers. And I think that ought to influence whether or how much monitoring ought to be involved.

So, we ought to require monitoring if the monitoring itself is important.

MR. BURCHILL: All right.

MR. HOLAHAN: And we ought not to require it if it's not.

MR. COLLINS: Yes, Bill, I think the challenge I hear at the level I operate, which is really high, is -- and I want to be sure I'm reading you right. Is the staff looking at imposing additional requirements on low safety significant issues even at during the lower tier of the boxes that would discourage equipment from taking credit for, if you will, because of the burden that's imposed with that type of routine monitoring, and is that commensurate with the value that's gained by moving forward with the process. Am I getting that right generally?

MR. BURCHILL: I think that's very accurate. And that really then brings into question the concept of "taking credit for" because --

MR. COLLINS: Right.

MR. BURCHILL: That's what I'm trying to understand.

MR. COLLINS: And is there a graded approach?

MR. BURCHILL: Yes.

MR. COLLINS: Based on the categorization?

Okay.

MR. REED: We certainly want people to do good PRAs to model a lot of the plan and more detailed the better, right? And we certainly don't want to discourage that.

MR. COLLINS: Right. And so the challenge is what's the value of that additional information for those types of categorized components, structured systems and components.

MR. HOLAHAN: I'd like to add one other thing. This is not a new issue. There is a performance monitoring section in reg guide 1.174. As a matter of fact, it's one of the main safety principles.

And in that context it doesn't say you should monitor everything that you put in your PRA. It doesn't say you should monitor everything regardless of its importance. I think it focuses on monitoring those things which were most critical to the regulatory decision that was being made. And it suggested licensee ought to, in those cases, identify what is the critical information, something that can and should be monitored. And the monitoring would be targeted to the things that are most important to the decision.

And it seems to me since we said that an Option 2 rule would be based on the same set of principles, it seems to me the monitoring concept would be the same. Not that you should monitor everything, but that you should identify those things that were critical to the decision and find some appropriate way of monitoring those.

MR. STROSNIDER: I'd just like a little clarification on this point, because it seems like that as the discussion evolved here, it's focused on low safety significance. And it wasn't clear to me when you first raised the issue that that was the case. Is this concept of taking credit for, is it just in the low risk significant components that you're asking that question, because the same concept applies across the board in figuring out where it is. And it seems that that's where the conversations evolved to, but I'm not sure if that's exactly what you said when you first raised the point.

MR. BURCHILL: The genesis of my question is that over the period of time that we've been engaged in dialogue on this proposed rulemaking, the principle differentiating factor for SSCs has been safety significant or high safety significant and low safety significant or none safety significant. And so

our focus has been, and of course the ultimate result of all of this is treatment. I mean categorization just puts things in different boxes and then the treatment is what's really important. That's where the difference in focus of attention or reduction or regulatory burden or whatever you want to call the objective really achieves what it's objective is.

And so now if we have high safety significant and low or safety significant and none, then we differentiate what we're going to do in treatment based on that. Now we have a new term, in my view.

I acknowledge, certainly, that 1.174 talks about this performance monitoring. But we now have a new term in the language that's been put out that says "take credit for." Now I hear being stated that the take credit for means anything that's in your PRA. Well, those are things that are both safety significant and nonsafety significant.

MR. STROSNIDER: Just to help with the clarification there. That concept appears not just -- in fact in appears for the high safety significant --

MR. BURCHILL: Well, no, I understand that. I don't quibble with that at all.

I guess what I'm driving toward is our

principle differentiating metric has been the safety significant. Now there appears to be a new differentiating metric, and that is whether or not we "take credit for it" in the PRA. So now I've got the high and I've got the low, and now I've got this take credit for. It's not clear to me how that fits into the equation.

MR. REED: Any other questions before we move on to Tom.

MR. COLLINS: I think that's a take away for the discussions that we'll get to.

MR. REED: Absolutely. We're going to have to figure out what "take credit" means. I think you've got some ideas where we're going with it.

MR. SCARBROUGH: Good morning. I'm Tom Scarbrough in the mechanical engineering branch of NRR. And I'm going to briefly walk through the boundary conditions and the alternatives that we derived that are sort of branch, go across the range of possible alternatives that we could come up that would possibly meet these types of boundary conditions. But I want to first walk through and provide a discussion of each of those.

In your meeting notice announcement you received a letter, September 27, 2001, which went into

quite a bit of detail regarding the boundary conditions, the bases for them, the alternatives, the issues related to alternatives and rule concept and regulatory guidance type of concept that would follow along with each of those alternatives. And I'm not going to go through that in detail. That's something that you all can read in your leisure, and hopefully you had a chance to read it before you came.

But just to sort of set the stage for the discussions today, I'd like to go through briefly the high points of that meeting notice package so that we can have sort of a common understanding of where the staff was coming from in terms of developing the boundary conditions and the alternatives.

The first boundary condition, and let me just read it for you here, "Licenses are required to maintain the design functions of safety-related structures, systems, and components with functions of low safety significance (categorized as RISC-3 SSCs) at the conditions under which the intended functions are required to be performed as described in updated FSAR. RISC-3 SSCs must meet their existing functional requirements, including capabilities (e.g, under pressure and flow) and design conditions (e.g., loads imposed by a seismic event or harsh environment.)" So

that's the boundary condition that we came up with.

Now the basis for that boundary condition comes straight from the Commission papers that were prepared to describe Option 2 of the risk-informed Part 50 initiative.

For example, I won't go through all the litany of papers that we had, but just for example SECY paper 98-300 several years ago indicated that the staff in Option 2 did not address change in the design of the plant or design bases accidents. And we talked about grading the special treatment requirements based on risk important, but that RISC-3 SSCs are expected to be capable of performing their design function without additional margin assurance or documentation associated with the higher safety significant SSCs.

Then in 99-256 Commission paper we stated that the criteria for preservation of functional capability at a reduced level of assurance will be developed and incorporated into 10 CFR §50.69

And then most recently in SECY paper 00-194 we stated that there are no design changes that could occur under Option 2 that would also not be acceptable under the current regulatory framework. And we noted that licensees were required to maintain the design functions of RISC-3 SSCs at the conditions

under which the intended functions are required to be performed.

So in describing that we talked about the replacement of SSCs must continue to meet existing requirements, including capabilities under pressure and flow and design conditions, for example loads for a seismic event and harsh environment.

We also talked about the boundary condition in terms of acquiring a function under applicable environmental conditions with various factors, temperature, pressure, humidity and so on. And then also applicable seismic conditions including seismic inputs and design load combinations.

So that's where the boundary condition came from in terms of the fundamental Commission papers that were developed to describe Option 2.

Now, we've interpreted Option 2 to allow licensees to use national standards other than the ASME code for repair and replacement activities on the low risk ASME code class 2 and 3 safety related SSCs with certain conditions. For example, we would continue to require fracture toughness data to apply.

Now, this interpretation we used in the South Texas, which you may be familiar with, in the exemption process.

Now, we've talked a little bit about, this morning, we've got a little bit touched into this equipment and why do we care. I sort of got that impression from some of the comments that came from the audience. The treatment practices and the continued functionality are important for these RISC-3 SSCs, because the categorization process can be significantly effected by the equipment redundancy and the initiating event probability.

And another aspect is what we found that RISC-3 SSCs perform a wide range of safety functions. We did not get into the details of what those safety functions were during the South Texas exemption review, but as part of sort of follow up and the review of the risk-informing and service testing program, we have learned that some of the types of equipment that are included in the low risk category. They still have safety related functions, but they're low risk in terms of a PRA perspective, such as the diesel generator air start valves, the spent fuel pool system pumps and valves, the main steam isolation valves, feedwater isolation valves. So there's a wide range of components that get grouped in RISC-3 for a number of reasons. Sometimes it's the redundancy of the plant or the seismicity of the area, things of

that nature. So you can have some components with safety related functions that you would normally consider to be important from a perspective that they have a safety function, but necessarily they are low risk from a PRA perspective because of the redundancy and things of that nature that occur at the plant.

So finally regarding this boundary conditions, the changes to the plant design bases and removing specific safety functions are not part of Option 2, but that's part of the Option 3 process that's the longer term. And so that may remove and change this boundary condition significantly once going into Option 3. But for right now for Option 2 this is where we are with the boundary condition.

Okay. Our first boundary condition.

MR. STROSNIDER: Before you move on, Tom, do we interpret no comments as yet? Everybody understands and agrees with that boundary condition? Just trying to solicit some --

MR. PIETRANGELO: I'd interpret that as not. We'll have another presentation later that into it.

MR. STROSNIDER: Okay. So you want us to walk through the boundary conditions and then we'll come back to discuss them? Okay. That's fine.

MR. SCARBROUGH: All right. Okay.

PARTICIPANT: One question.

MR. SCARBROUGH: Okay. Sure.

PARTICIPANT: Could you define boundary condition? I mean, is that a fixed, immutable, not-to-be deliberated? I mean what does boundary condition actually stand for?

MR. SCARBROUGH: Boundary condition is when we sat down to say okay, in terms of developing a rule for treatment for under Option 2, what are the constraints that the staff has in terms of coming up with a rule that meets the intent of Option 2? What constraints do we have here?

And we came up with three boundary conditions in terms of whatever rule we come up with, it had to fit somewhere within these perimeters, and these are the boundary conditions. They're what we developed and they're certainly up for discussion; the whole boundary conditions and the alternatives are open to discussion this morning. But we wanted to sit down and say okay, why are we thinking the way we are? What constraints do we feel are in place to come up with a rule that is not only acceptable to the NRC and the industry, but also to the public in terms of meeting all of the perimeters that will be appropriate

for a rule that is treatment for low risk safety related pieces of equipment.

MR. STROSNIDER: Jack Strosnider.

I just provide this perspective on it, too. The important, obviously, is if we start at this high level and have a mutual understanding and agreement on what the objective is, you could characterize these boundary conditions in that context also. Okay. Then that drive where you go to in terms of treatment and categorization and those activities. All right.

But, frankly, the notion was there had been a lot of discussion going on about well how should we treat this equipment or that equipment. And there was a lot of discussion on that, and I'm not sure it was clear to everybody well what's the goal we're trying to accomplish with that.

And so the idea here is to say here's the objectives or the boundary conditions that we're trying to meet with this rule. And that's why I say it's extremely important that we have a mutual understanding of that, because it then plays out into what the rule would actually look like and what the treatment would actually be.

MR. SCARBROUGH: Thanks.

The second boundary condition it's that the treatment process must maintain the functionality of RISC-3 SSCs consistent with the reliability and availability assumptions in the categorization process. And the basis for this boundary condition is derived from the assumption in the categorization process that the SSCs will have a certain level of reliability. And we've talked about some of the categories of RISC-1, 2 and 3 and 4 and how this may be accomplished is there a sensitivity study that varies the unavailability of the RISC-3 SSCs might be used to assess the potential change in risk resulting from the reduction in RISC-3 treatment?

For that study to bound the potential risk increases caused by reduced treatment for RISC-3 equipment and to insure the categorization process remains valid, the treatment must provide reasonable confidence that the SSCs will remain functional at the reliability and availability levels assumed in the PRA.

For example, since I'm familiar with mode operative valves quite a bit, in terms of the failure rates and such that are assumed typically in PRAs, we're talking about 10^{-3}. And so that reliability is what you're looking in terms of you change a treatment

associated with that equipment, how does that change that failure rate assumption in the PRA for that equipment.

Also, the RISC-3 treatment must provide reasonable confidence that common cause failures that might not be modeled in the PRA, such as intersystem common cause failure are not inadvertently introduced by reduction in treatment; things that may have been captured by a procedural process in the past, if the treatment reduces that procedural process, is there a potential now for intersystem problems that may occur that may not have been there before because of the procedural controls that were placed over the treatment and the maintenance of that equipment.

So a challenge in preparing §50.69 is that data and evaluations necessary to quantify these changes in reliability do not exist and are difficult to develop.

And also, the staff has typically considered a categorization process, and this was one of our perimeters internal to this boundary condition, is that the process, the categorization process itself is fixed, is relatively fixed in its approach to categorizing SSCs based on their safety significance. So we didn't try to go in and try to adjust the

categorization process.

So, therefore, the treatment for RISC-3 SSCs may be the focus on the reductions in the current treatment while maintaining the reasonable confidence in the SSC capability, availability and reliability consistent with the categorization process assumptions.

So that's where we came from and that's the basis for why we developed boundary condition number two.

MR. PIETRANGELO: Could I ask you one quick question?

MR. SCARBROUGH: Sure.

MR. PIETRANGELO: Tony Pietrangelo from NEI.

When you talk about maintaining the reliability and availability assumptions in the categorization process through treatment, that's essentially what we do with the maintenance rule when we monitor reliability and availability and do the balancing. Okay.

MR. SCARBROUGH: Am I supposed to respond to that.

MR. PIETRANGELO: Well, that's a fact. I mean, you can respond to it if you want, but that's a

fact.

Now maintenance rule is a special treatment requirement, okay. And the current draft concept/language the scope of the maintenance rule, the special treatment requirements associated with the maintenance rule would not be applied to RISC-3 and 4. So when I see number two here and what you just went through, and I see what's in the rule, it's like, well, yes, this is out of scope for maintenance rule, but you still have to monitor the reliability and availability to assure the assumptions in the categorization process. So I'm not sure what the staff intends here.

MR. STROSNIDER: Yes, Tony, Jack Strosnider.

Just talking about the maintenance rule for a second. Does the maintenance rule the way you apply it, does it address the design bases conditions, the severe environments, the seismic events, etcetera.

MR. PIETRANGELO: It looks at reliability, availability, it use the PRA of the technical bases and it does go beyond design bases, also. And if a design bases function is safety significant, it monitors those functions.

But functionality in the maintenance rule,

and we've had this discussion on our definition of -- common definition of unavailability, looks at the risk significant function. And it happens to be design bases, the answer is yes to your question but it goes beyond design bases also.

MR. STROSNIDER: And that's probably something we need to understand better, because that's -- frankly, it's not consistent with my understanding with regard to how the maintenance rule is implemented in terms of addressing harsh environments and seismic conditions and the conditions that a lot of the special treatment rules are, in fact, written to address. So I think we just need to understand that better.

MR. PIETRANGELO: If we just look at the monitoring, if we just look into monitoring. I mean, the maintenance rule doesn't do all of the rest of the design bases requirements. Just from a monitoring standpoint.

MR. STROSNIDER: And that's the question, is does it monitor to assure that the components would perform their design bases functions under the design bases conditions. And typically what it's looking at is feedback from normal operating conditions.

MR. PIETRANGELO: And testing.

MR. STROSNIDER: All right. And if that does -- the question is does it get you there. And I think it's a good point, and I think it's something we need to understand.

MR. PIETRANGELO: A quick answer to your question is that it's not that frequent to test that design bases conditions in the plant.

MR. STROSNIDER: That's good.

MR. HOLAHAN: Let me see if I can sharpen up the question and the answer, because I think if we had a copy of the maintenance rule, I would read it here.

My recollection is the introduction to the maintenance rule does refer -- oh, he's got the book. It refers to the fact that the maintenance rule is in fact is supposed to show that equipment does it design bases functions. Okay. It is to assure the design bases and it means for the design bases conditions. Okay.

Now, obviously, in its implementation you don't take the plant to the design bases conditions to do those testing. Okay.

But, Tony, you said one thing that I wish were exactly correct. The maintenance rule, my recollection, it requires licensees to monitor

functional failures related to maintenance as opposed to reliability and unavailability. And that sounds like a subtle distinction but when we're talking about the PRAs and in this context reliability and availability related to all causes as opposed to maintenance related are what's important.

And I understand that some licensees, maybe all licensees monitor availability and reliability, but the rule doesn't exactly use those concepts.

MR. PIETRANGELO: That's correct.

MR. SOWERS: I'm Jerry Sowers from Palo Verde.

I wanted to move up a few thousand feet instead of moving down to the maintenance rule, but I will say, Gary, that you're right on. You do have to monitor all functional failures if you want the maintenance rule to work for you. And I think most plants do do that. I know we do that.

When I looked at the boundary conditions, the first thing that struck me was boundary condition 2 is fundamentally different from 1 and 3. One and 3 concern a result that needs to be obtained. Boundary condition 2 actually is a specific method that is outlined in order to obtained a desired result. And

the desired result I think was implied that the categorization remain valid.

And then there's another result. Is that any changes in risk associated with the implementation of this be small.

And we can talk a lot about 2, but I think the fundamental problem with 2 is it's at too low a level. We need to agree when we talk about boundary conditions first on the results that we're trying to obtain, and then we can talk about different ways to obtain that result.

So, I'd just suggest that we relook at this boundary condition 2 and try to recast it in terms of those two fundamental results that we're after. One, that the categorization process remain valid after the implementation of this rule. And that any changes in risk be acceptably small. I think that's the appropriate place to start.

And then we can talk about what you need to do to provide the assurance that you will achieve those two results. I think this boundary condition starts too low.

MR. SCARBROUGH: Good. Thank you. That's good feedback. Appreciate that.

As you can tell, the boundary conditions

are sort of grouped in areas. You know, the first boundary condition relates primarily functionality. You know, what's functionality and why do we care?

The second boundary condition relates to the categorization process in terms of how this equipment is assumed to operate within the categorization process, and is there a relationship between treatment and categorization? And there is.

And the third boundary condition I'm going to talk about now has to do with the bigger picture of NRC's mission and level of assurance.

The third boundary condition states that the NRC must maintain a level of regulatory assurance regarding the continued functionality of RISC-3 SSCs consistent with its mission to ensure adequate protection of the public health and safety. And the basis here is sort of explained right in the boundary condition itself, is that we need to remain consistent with our mission.

For example, in SECY paper 99-256 staff stated that the RISC-3 SSCs need to receive sufficient regulatory treatment such as these SSCs are still expected to meet functional requirements, albeit at a reduced level of assurance.

We also noted that the purpose of the

rulemaking is to develop an alternative regulation framework that enables licensees using risk-informed process for categorization to reduce the unnecessary regulatory burden for low safety significant SSCs. And that would be by removing them from the scope of special treatment.

So, there's a dual concept there in terms of what we're trying to accomplish.

And in addition to the broader picture of the mission Sam mentioned in his opening remarks, is that Option 2 approach must be evaluated using the staff's performance goals, including the most important goal of maintaining safety and then also reducing unnecessary regulatory burden, increasing public confidence and making the NRC activities more effective and efficient. So that's the third boundary condition.

So those are our boundary conditions, and I appreciate the feedback we received so far. And what we'll do is after the break and when we have a chance to have other presenters talk about the boundary conditions and alternatives and such, we'd like to sort of sit down and walk through the boundary conditions and have that type of feedback where we can obtain information on where it might be appropriate to

try to address these boundary conditions and it might allow us to move toward a rule that it is more effective in terms of what we're trying to accomplish.

So, I appreciate that feedback.

We took those three boundary conditions and derived three alternatives. And you could have numerous alternatives. At one point I think we had five, and then we kind of narrowed down. But we tried to get a number that's manageable for discussion purposes. We rolled it down to three alternatives.

The first one is what was referred to as commercial practice, just pure commercial practice. And the other two also are basically commercial in a way, but this the one we just have labeled commercial practice.

The rule concept under alternative one would be that the rule would require licensees to provide reasonable confidence that RISC-3 SSCs are capable of performing their safety functions under design bases conditions including the environmental and seismic conditions throughout the service life through the application of commercial practice. That's sort of how the rule would look in concept wise.

In terms of the statement of

considerations and the regulatory guidance, the statement of considerations would specify the expectations regarding commercial practice in implementing treating the RISC-3 SSCs. If commercial practice is adequately defined, the statement of considerations might rely on that definition for sufficient regulatory treatment. However, the statement of considerations would need to provide a technical bases for reliance on that commercial practice to provide RISC-3 reliability, once again consistent with the categorization process assumptions.

And this would involve a technical bases that would require development of data or evaluations that would support the RISC-3 reliability and availability assumptions.

And, as we talked about, this data is involved with the design bases aspect and not just the operational aspect. Because operational aspect of performance data would not necessarily be sufficient to demonstrate design bases reliability.

And also, we'd also be interested in quantifying the changes in reliability results from the use of commercial practice.

As a result, in terms of this alternative,

we focused on the reduction in treatment requirements while trying to maintain a reasonable confidence in SSC functionality. Now, the regulatory guide that might go along with alternative 1 might reference NEI document 00-04 for an implementation of commercial practice if it could be worked out that an acceptable definition is developed for commercial practice.

Okay. So that's alternative 1.

MR. HOLAHAN: Tom, would you clarify that in effect what you're saying is when you say there are three alternative, and you said that there could be others, you're saying any one of these alternatives could meet the intent of the rule and the boundary conditions, but each one of them has a certain amount of baggage associated with it in order to make it work properly. Okay. But if you do, you know, those other things, any one of these options would be acceptable?

MR. SCARBROUGH: Correct.

MR. HOLAHAN: Okay.

MR. SCARBROUGH: That's right. And, thank you.

Because now I'd like to walk through the issues related to alternative 1, and I'll do the same with the others as well. But these are the issues that we found when we went down this path to say,

okay, now if we approach a rule from this direction and are able to meet the boundary conditions, what are the issues that need to be resolved. And that's why we wanted to lay these out for your consideration and information that you may be to provide some input such that we can cross these bridges.

The alternative 1 issues, the first issue relates to the lack of a sufficient definition of commercial practice for uniform implementation of a minimum level of treatment to provide reasonable confidence that RISC-3 SSCs are capable of performing their safety functions or the design bases mission throughout the service life consistent with the categorization process assumptions. And that's sort of a key theme all through this talk are those key points in terms of providing that reasonable confidence.

There's an NRC sponsored study conducted by the Idaho National Engineering and Environmental Laboratory which was recently completely which identifies a widely varying level of commercial practice between nuclear power plants, but also within specific plant programs. And the results are described in NUREG/CR-6752 which will be issued shortly. We thought it would be out by this date, but

there's some last minute sort of administrative aspects to it that have to be finalized.

For example, of the range of commercial practices, you know, some balance of plant equipment might be purchased without specific design controls and received without specific inspection, and installed without specific procedures, assumed to function without any sort of monitoring and maintained after it actually is found to have failed. On the other hand, some balance of plant SSCs are purchased with very stringent requirements, almost to what you might call Appendix B type of level. So there's a wide range of commercial practices out there.

And in some cases the commercial practice might allow the design inputs for seismic analysis to be modified whereas in other cases those seismic inputs are very stringently applied to the equipment.

In terms of the changes in the design bases conditions, we believe those should be processed under §50.59 as opposed to the §50.69 process. So there's already a process in place for handling design changes, and that's the §50.59 process.

So, the issue we have here is without a sufficient definition of commercial practice, there's a problem with alternative 1 in terms of meeting the

first boundary condition.

The second issue related to alternative 1 is that sufficient data and evaluations do not currently exist to support functionality and reliability of SSCs under design basic conditions relying only on commercial practice. For example, operational data available on the reliability of SSCs do not typically consider consideration of operation under design bases conditions.

There has been a study that has been referred to in the South Texas exemption review which did suggest a reliability of SSCs procured and maintained in the commercial practice were those similar to those under special treatment, but it didn't consider performance necessarily under design base conditions and there wasn't information regarding how that data was collected in terms of the quality controls placed on it.

So, as a result, issue two is that we have a concern regarding alternative 1 with respect to boundary condition 2 in terms of the PRA. So in terms of trying to resolve this, we've looked at is it possible to develop data or evaluations to demonstrate commercial practice would provide reasonable confidence that the SSCs have the reliability and

availability consistent with the PRA assumptions.

And we've talked a little bit about in terms of the boundary condition in terms of the treatment, we cannot allow it to cause significant increases in the failure rates or common cause interactions within and across boundaries that might change the PRA assumptions. So, therefore, what were boundary condition 2 needs to be addressed in terms of this assumption of reliability and availability.

The third is regarding alternative 1 is that the reliance on commercial treatment without any means to detect degradation or failure prior to being called upon to function for a design bases event would not provide a level of regulatory assurance sufficient to conclude that the treatment would be consistent with NRC's mission. And in that case, we wouldn't meet our performance goal of maintaining safety.

So, it all boils down to the definition of commercial practice. What does it mean in terms of the widely varying levels of commercial practice that are out there today? And because of that, you know, we also have the concerns of writing the other performance goals as well. And so that brings us back to a definition of commercial practice.

The fourth issue is that the current

guidance that's out there, NEI document 00-04 doesn't provide a level of treatment that's uniform, significantly uniformed that we could reference. For example the guidance might allow implementation of commercial practice that would allow changes in seismic design inputs that are specified in the FSAR. It also might allow changes in commitment regarding functionality without an adequate technical bases.

So, an issue there is that the guidance that's available to us, we would need to work with industry to try to come up with guidance that satisfied the boundary conditions.

So those are the four issues related to alternative 1. Now the potential impact of alternative 1 related to moving this rule forward is that there might be a significant delay in the completion of the rulemaking package to define commercial practice that receives a widely held agreement in terms of its necessary language, and to develop data and evaluations that support the reliance on commercial practice. So that's the input -- that's the impact that we have.

In terms of examples, in this package you did receive the language that -- in terms of the concept for alternative 1 and in terms of the boundary

conditions would be related to in the discussion here in terms of the issues would be where we came from in terms of the statement of considerations and a guidance that we would develop for that.

That was alternative 1. Okay.

Alternative 2. On alternative 2 the rule might state, talk about concept that we were thinking about, is that licensees must provide reasonable confidence in the capability of RISC-3 SSCs to perform their safety functions under design base conditions throughout their service life and that this reasonable confidence would be provided through implementation of treatment processes for design controlled procurement, installation, maintenance, inspection tests, surveillance, corrective action, management oversight and configuration control. And it would specify high level objections for reach of these treatment processes.

Now, the statement of considerations would discuss the expectations regarding implementation of the rule and would discuss the basis for each of those objectives, including why the objectives are necessary to meet the boundary condition.

Now, the regulatory guidance would describe general methods for effective implementation

of the rule and it might be possible to reference industry guidance in terms of a regulatory guide.

Now the issues related to alternative 2 is that alternative 2 would satisfy, in our view, the boundary condition one by specifying in the rule that licensees are required to provide reasonable confidence, and so on. And as part of that, the treatment described in §50.69 itself would not effect design input. So it's a separate process for that.

And this alternative would also satisfy boundary condition 2 because you have high level treatment objectives that provide a reasonable confidence in functionality. And it was satisfy boundary condition 3 by maintaining a level of regulatory assurance consistent with NRC's mission.

And we also feel that it would meet the performance goals of maintaining safety by allowing licensees to focus their resources on the most significance SSCs without allowing the treatment of the less significant safety related SSCs degrade such that reasonable confidence would not exist for their safety significant capability.

We also feel that it would reduce unnecessary regulatory burden by removing special treatment requirements and allow the licensees apply

commercial practices where they meet minimum treatment objectives.

Also in terms of increasing public confidence in would demonstrate that NRC regulations can be modified to focus on the most significant SSCs, but would retain adequate record for control over the less significant SSCs. And making NRC activities more effective and efficient by allowing regulatory review and oversight be focused on the most significant SSCs.

An issue with alternative 2 is that the specification of the high level treatment objectives in the rule might provide less flexibility than referencing a commonly agreed upon definition of commercial practice.

Another issue relates to alternative 2 related to the need for guidance that provides an acceptable approach for meeting those high level objectives. And we've talked about the current guidance out there that might allow changes in design, you know, seismic inputs or changes in technical bases regarding commitments. So to allow the guidance to be referenced, we would need to have some adjustments to it such that we would have an acceptable approach for satisfying those high level objectives.

A potential impact regarding alternative

2 is that the guidance would need to be revised, the guidance that's currently out there, or the staff would need time to develop guidance on its own.

In terms of examples of the rule concept for alternative 2, in the meeting notice package you did receive kind of a complete rundown of sort of a concept language of alternative 2. But, for example, for design control process you might have one line which says that design input shall be maintained and applied to ensure that RISC-3 SSCs are capable of performing their safety related functions under designed bases conditions.

Now, for procurement, it might say more simply in one or two sentences that the rule would specify that RISC-3 SSCs must be procured to satisfy design inputs required by design controlled process, and it might then require suitable methods to be used to support documented determinations that the procured SSCs will be capable of performing there safety related functions on design bases conditions including appropriate environmental conditions and including seismic. So those are rough examples of the rule concept language for alternative 2. And there's more in your September 27th meeting notes.

The statement of considerations could

indicate the licensees might be able to meet the rule for implementation of existing procurement practices. Because we have seen in terms of our reviews of practices out there in industry, there are commercial practices that satisfy this. It's sort of in the middle range of their commercial practices at the plants.

The regulatory guidance would describe possible approaches to implement the high level objectives, such as describing acceptable procurement methods.

So that's our vision where alternative 2 would end up.

Alternative 3, this one is the more detailed of the three alternatives. In terms of, you know, the title as you can see, the high level objectives and then the minimum treatment attributes.

So with this concept of alternative 3, the rule would require reasonable confidence of functionality of risk for the RISC-3 SSCs on design based conditions throughout the service life, but would also specify minimum treatment attributes similar to the provisions in the updated FSAR for the South Texas exemption request.

The statement of considerations would

discuss the expectations regarding implementation and indicate the bases for the minimum treatment attributes.

The regulatory guidance would provide a detailed discussion of the acceptable methods to effectively implement the minimum treatment attributes.

The issues related to alternative 3 is in this case basically one issue. We do feel that alternative 3 would meet the boundary conditions 1, 2 and 3 similar to what we talked about in terms of alternative 2, but would provide much more detail. And that goes to the issue related to alternative 3.

It would also meet the NRC performance goals along the similar line that alternative 2 did.

The issue is that alternative 3 would provide less flexibility than alternative 2 or 1 for licensees in implementing the rule because there's much more detail in the rule and the NRC staff in monitoring its implementation with these minimum treatment criteria that are specified in the regulations rather than the high level objectives in the regulation.

So, an issue is that the staff would need to develop rule language in more detail the

implementation guidance that might be perceived as reducing stakeholder input in terms of the specific regulatory requirements that would be in 10 CFR.

Now, the potential impact of alternative 3 is that the schedule might be delayed by the development of the rule language and the more detailed regulatory guidance. And examples, once again, the meeting notice that you received, and the concept would be similar to those in the updated FSAR for the South Texas exemption request. So if you saw the FSAR section for South Texas, you would sort of see the FSAR in terms of how they updated it to describe their program for low risk safety related equipment, and that's what the sort of concept would be.

And the discussion in the safety evaluation in terms of effective implementation methods and things of that nature would be the type of guidance that would be in the regulatory documents, the regulatory guidance documents for alternative 3. So that is a rough idea of where that alternative would take us in terms of the language of that particular type of rule.

That's all I wanted to say at this time regarding the laying out, the boundary conditions and the alternatives, and the issues related to them.

We wanted to allow individuals to have a chance to speak. I know NEI had asked for some time, and if there's anyone else that wanted to make a presentation from up here or from the audience, that's fine too, in terms of laying perspectives of the boundary conditions and alternatives. And then we can do that, and then after the break we could go through and have it more of an exchange where we walk through the boundary conditions one-by-one and bring up those good points that have been regarding them, and see what areas that people would like to respond to or provide us input that we could use in trying to focus those boundary conditions, such that when we go back and we try to come up with a draft rule language, that we're able to have a good solid set of boundary conditions.

Any questions. Tony's going to come up.

MR. PIETRANGELO: Thank you, Tim.

And before we begin, I want to commend the Commission and the staff for having this meeting in the first place. I think this is terribly important to the industry. If we had waited to get to the proposed rule stage to have the kind of discussion we're going to have today, I think we would have had to submit quite a few comments. And to the extent we can have

the discussion now and see if there's some common points of agreement, it should make the rulemaking go smoother later and meet the Commission's objectives. So, again, appreciate the opportunity to have the meeting today and provide some stakeholder feedback.

We've kind of broken our presentation into two separate topics. What I'll cover this morning is treatment as well are the regulatory framework for §50.69. Probably this afternoon when you get to the other issues associated with the rule language, Adrian will come back and have some other comments that our task force developed on specific rule language.

We do intend to provide some written comments following the workshop. I don't know if we can get them in time for the ROP meeting that's scheduled next week, but we hope to do that and for you all to have that perspective when you go through your deliberations on the feedback you get today.

By way of overview, we're going to start with the definition of industrial treatment. I think one of the things we saw in the September 27th document that was made public was that several places there it cited a lack of a definition of industrial treatment.

We have stricken the word "commercial"

from our lexicon. We are not going to mention commercial anymore. It's industrial treatment.

So the first thing we want to start with is our proposed definition of what industrial treatment is.

Secondly, I want to cover why we think that's adequate; applying that type of industrial treatment program is adequate to assure the functionality of low safety significant SSCs or RISC-3 SSCs.

And finally, I want to talk about the licensing framework for implementation of §50.69.

I think our initial take on this is that in going through §50.69 we didn't want to have to invent any new associated change control processes or how you would handle this thing within the licensing basis. And really as a first premise, use the existing regulatory framework that we spent the last several years trying to fine tune with §50.59 and FSARs and design bases guidance, and use that as our starting point and see how the §50.59 requirements could be fit into that structure. And I'll have a proposal in that regard.

And then there's issues -- again, that's our other input on the rule language in §50.69 that

Adrian can address this afternoon.

This is our proposed definition of what we'll call nuclear industrial treatment. We put nuclear there because even industrial treatment in a nuclear power plant is going to be different from any other industrial enterprise, just because of the nature of the beast. And I'll just read it very briefly.

"Practices that provide adequate confidence that the required functions will be satisfied under conditions as intended." This is kind of a paraphrase of a lot of what was in Tom's slide on the boundary condition for basically maintaining the design bases.

"Such practices are defined in applicable national, local and industry codes and standards, vendor recommendations, and plant guidelines and procedures." Now the scope of this program would include: design, procurement, installation, inspection, testing, maintenance, assessment and corrective action.

Now the only difference you'll see in the elements that I think under alternative 2 in the September 27th document is you don't see configuration control in our elements here. And basically we

include that under the design element in it, so we don't think there's a marked difference in terms of the elements, the commercial or industrial treatment program should address. We think we're on the same page with the staff in terms of what elements need to be added.

Again, and we would not have a significant issue with breaking out configuration control in a separate element either. It's how you package it. So, we don't see that as a significant issue.

One thing I wanted to mention before I left this slide, was that one thing we noticed from the safety evaluation report on the South Texas project exemption was that in reading through that package, the staff seemed to be looking to make a finding on the adequacy of each individual element of South Texas' proposed treatment. And we really see this as a combination of the elements, not as each individual element having to assure functionality for the design bases going forward.

Probably one element, in and of itself, is inadequate to do that. And I'll get into more detail in a second when we go through our adequacy discussion. But we think it's the combination of the elements, not hanging your hat on each individual

element being the one that assures functionality going forward. It's the combination, it's the whole industrial treatment program and it needs to be looked at in that context.

MR. HOLAHAN: Tony, before you leave that.

MR. PIETRANGELO: Sure.

MR. HOLAHAN: There were just two things on that slide that are a little vague to me. I think, you know, we know what national, local and industry codes are, and we know what the standards are. Vendor recommendations are something you could look up. Plant guidelines and procedures, it doesn't add anything that I can tell. I mean, those guidelines and procedures are written what? To implement those other things or, you know, any procedure that's written? I mean, those seem to be different from the other things on the viewgraph, they're kind of fuzzy and they don't seem to add much.

MR. PIETRANGELO: Yes. The intent there was that we don't operate on the balance of plant side without any guidance to plant staff on how to do design, procure, install, maintain, inspect, test and so forth.

In addition, I think what goes into those guidance comes out of the codes and standards, and

vendor recommendations on what to do. So, really, the plant procedures and guidelines take input from the applicable national, local codes under recommendations and they're really the implementing documentation to do the eight elements in the industrial treatment program.

MR. HOLAHAN: Okay. So it's an acknowledgement that things are done through proceduralized process as opposed to ad hoc process?

MR. PIETRANGELO: Yes, that's correct. And also I think, and we've talked about this a little bit yesterday with our task force, there's a gradation within that, and I think this is maybe what the staff saw in the study that was done by INEEL. Depending upon the complexity of what you're doing and to what in the balance of plan, there may be a gradation of how you apply those elements in terms of the level of detail of the procedures and instructions to the plant staff on how to do a particular element of that treatment.

If it's something very simple, it may be going down to get an electrical component that's, you know, UL listed in a catalogue, part number, all that as opposed to a more complex design change on the BOP where you'd see a lot more procedural instruction and

guidance. So I think there's a gradation within industrial treatment depending on the complexity of what you're doing.

MR. HOLAHAN: I may just be having a problem which sentence you put those phrases in. Nuclear industrial treatment does these things. Such practices are defined. It seems to me that they're not defined in the plant guidelines and procedures. They're implemented through guidelines and procedures, but their definition seems to be that other part of the list.

MR. PIETRANGELO: Okay. I understand that better.

Go ahead, Eric.

MR. JEBSEN: Eric Jebsen, Exelon.

As an example, as part of the meeting yesterday we had with the task force, I had brought along two non-Q mod packages just as an example of okay, what do you do in a non-Q mod. And as part of the -- one of the checklists you kind of have to go through to make sure you cover all your bases, there's a section called "What's the Classification and Applicable Codes and Requirements."

And in this particular mod which has to do with the off-gas system, one of the applicable codes

for the piping is this B.31.1. But then also it says "All work shall be performed per the latest revision of this Nuclear Station Work Procedures specification," which is an internal specifications, "Nuclear Electric Installation Standards, NEIS, Electrical Installation Work Specification." And then there's another number. "As well as other applicable Exelon approved procedures."

So the point here was that the national local codes and standards may have many requirements which are applicable, but that over the history of building power plants, not just nuclear power plants, but way back when a lot of these companies started and, you know, late 1800s, early 1900s where there was no particular applicable requirement that seemed to cover probably a problem that came up at one time or another, these internal specifications, design specifications would have been developed internal to utility or internal to vendors, A&Es, that are called on to do design. So that's really the reason we worked on getting that in there, it's a whole body of things, not just necessarily even nationally or locally recognized standards. But internal to a company you have general work practices to protect people and equipment that have evolved over time.

MR. HOLAHAN: While you're there, can I ask a question? My recollection is that power plants are exempt from some codes, things like some electrical codes, my recollection. Is this also a way of dealing with some exemptions?

MR. JEBSEN: I can't really answer that.

MR. HOLAHAN: Okay.

PARTICIPANT: Explain yourself, Gary.

MR. HOLAHAN: Well, my recollection was that when you're talking about national and local codes, codes for things like fire protection and electrical codes don't always apply to power plants. Frankly, some of them are directly exempted. And so the power plants are doing something else to deal with those sort of situations.

MR. JEBSEN: Well, let me address that.

I think that at least for, you know, have a whole body of NFPA codes, for example, some of which exempt, like you say, some portions of power plants.

Now, again, to cover situations that fire protection engineers are interested in in protecting life and safety and equipment, I think while you may be exempt from some portions, it's been my experience there's usually some other code. You know, one code might save except for a power plant, but then there's

another code or portion of a code that says this is for the power plants.

Now, in terms of I would say these internal guidance cover places where there doesn't seem to be any guidance. There seemed to be at least internal to a company, a hole or a problem came up. And so, okay, we'd better write a rule, they have the safety rule book, for example. Okay, we're going to write a rule to cover that one. Now, whether anybody else does that is beside the point. But we have ours.

Now, I would say that there are probably typically any utility would have a collection of these that have been internally generation.

MR. HOLAHAN: Okay. Thanks.

MR. STROSNIDER: Tony, before you go. This is Jack Strosnider, could I ask a question, too, on the slide?

MR. PIETRANGELO: Sure.

MR. STROSNIDER: In the first sentence at the end of the sentence where you talk about we'll be satisfied under conditions as intended. If we were to insert in there under design bases conditions as described in the updated FSAr, which I think was the language you saw in the staff, is that consist or --

MR. PIETRANGELO: Yes.

MR. STROSNIDER: Okay. All right. Thanks.

MR. PIETRANGELO: Okay. Now, I want to turn to the adequacy of this industrial treatment.

We are working on putting together a white paper, if you will, that fully discusses these three elements. And, again, this is beyond the eight elements that are in the industrial treatment program. Those are the what you do things. These are really aimed at why that's good enough or why that's adequate to support functionality of the design bases going forward for the RISC-3 SSCs.

MR. HOLAHAN: And when would we expect to see such a thing?

MR. PIETRANGELO: Perhaps within the next week, Gary.

MR. HOLAHAN: Okay.

MR. PIETRANGELO: If we can finish it in time.

Now, the three principle base -- I'll have a slide on each of these. The first one is there's no change to the functional requirements. I think this equates with boundary condition one. We will maintain the design bases going forward.

The second bases is historical performance

data. There's an STP report that was submitted as part of the exemption request. There's also some other industry experience that we're gathering now to bring to bear how is the performance of safety related equipment compared to similar SSCs that are non safety related, and try to look at the failure rates, i.e., reliability of those components over time.

Third, there's what we call functional monitoring and corrective action. And I think this will end up getting at boundary condition two when we get into this. But what does that entail, what are you looking at, how is it different from what we currently do under the maintenance rule? But that we view as another leg of the stool here in providing the basis for why the industrial treatment is adequate.

MR. HOLAHAN: Bill, did you want to comment on number three?

MR. BURCHILL: No, I'll let him go ahead.

MR. HOLAHAN: You'll let him go? Okay.

MR. PIETRANGELO: I've got way too many papers up here and not enough room.

Okay. Again, consistent with boundary condition one, §50.69 does not change the design bases of any safety-related SSC, or non safety related SSC for that matter. There are design bases requirements

that apply to non safety related SSCs. So this slide really should say both safety related and non safety related. If you want to write that in on our handout. That's an omission on our part. But that is the boundary condition and that must be maintained going forward.

Secondly, the engineering and procurement specifications and processes, those elements in the industrial treatment program will preserve those design bases requirements.

I think a key point to remember here is that we're not starting from scratch on when we do either replace equipment that's obsolescent or has worn out, or needs to be refurbished. We have a design out there, that's been approved, that meets the design bases. We know materials are in the current design. If we can't find those materials, there's a wealth of engineering data on which to draw to compare different designs that meet the same functional requirements.

The important point here is this is not a start from scratch exercise. There's a wealth of experience across the industry on how to design to meet the design bases requirements.

And that's really the third alternative

here. When you can't either find a like-for-like or an equivalent replacement, you may have to draw on a different design to still meet the same design bases functional requirements. And I think that's where maybe some of the discussion is going to fall today is how do we assure that those alternative designs still meet the design bases functional requirements. But, again, the functional requirements don't change, they're preserved by design control and procurement process going forward. So we see that as the first piece of why the industrial treatment, which includes those elements, provides adequate confidence.

The second point is on historical performance data. And, again, we believe there's quite a bit of generic equipment performance data that indicates over time the robustness of the industrial treatment that's been applied SSCs. I mentioned before the STP report that was provided as supporting material for the exemption request. That looks at 74 billion hours of both safety related and non safety related operation of SSCs.

The component types are categorized and classified into 33 different component types, and really no significant differences in the reliability between what's safety related and non safety related

component performance was observed.

Now, it is a fact that not all that operating history was done under design bases conditions. In fact, probably the vast majority of it was not. And that's why you cannot hang your hat alone on one element of the process. But certainly that provides some insights in terms of how treatment, industrial treatment has resulted in equipment performance. Again, when I get done we'll put the three elements together and see whether that's comprehensive enough to provide adequate confidence.

The second point I wanted to mention here is that there's just been a tremendous improvement in the industry's average capacity factor in the last decade. And the industrial treatment programs are being used to achieve that level of performance. We're at a 90 percent industry average. Many plants are well above 95 percent capacity factor. We could not achieve that level of performance without treatment programs that are very highly reliable in terms of maintaining the functions of equipment. And we think there's a lot of data to backup this assertion.

So our conclusion from all this is not to say one is better than the other, but basically the

industrial treatment results in comparable performance of non safety related SSCs.

MR. STROSNIDER: Tony, this is Jack Strosnider again.

MR. PIETRANGELO: Yes.

MR. STROSNIDER: I have to make my standard obligatory comment on your study.

MR. PIETRANGELO: Go ahead, Jack.

MR. STROSNIDER: And I appreciate the fact that you point out that, you know, the conditions under which these tests were run --

MR. PIETRANGELO: Right.

MR. STROSNIDER: You know, it's unlikely that they included, you know, high temperature steam, high radiation, seismic and such. So we recognize that. So there's some good information here in terms of maybe being necessary but not sufficient. And sufficient in the terms of, and just back up a second and look at this from a bigger picture. When we talk about the special treatment rules that we're talking about relaxing, all right, that go to environmental qualifications and seismic qualifications specifically, number one, it's not a surprise there's not a lot of data there because, as you said, that doesn't happen, we don't want it to happen.

MR. PIETRANGELO: Right.

MR. STROSNIDER: Also it shouldn't be surprise that there's not a lot of testing that's done in service to capture those ideas. They never were captured even under the existing special treatment rules.

MR. PIETRANGELO: Correct.

MR. STROSNIDER: So we shouldn't be looking to say well we're going to do tests now that capture something that wasn't even captured under the existing rules.

MR. PIETRANGELO: Right.

MR. STROSNIDER: But I think, if I can follow where you're headed with this, it is important that the engineering procurement and other aspects provide assurance for those areas.

MR. PIETRANGELO: Right.

MR. STROSNIDER: Because you're not going to get there through testing. And if these components were showing lower reliability under the conditions you're talking about, obviously that would be a problem. But the fact that you have this higher reliability doesn't necessarily address some of the specific areas we're trying to relax.

MR. PIETRANGELO: I understand. It's

input to the finding at the end of the day on this, and again it has to be considered with all the other things we bring to bear. No, your comments are exactly right.

Glenn?

MR. KELLY: Glenn Kelly with the NRC staff.

If you could go back to functional requirements for a second.

MR. PIETRANGELO: Sure.

MR. KELLY: And perhaps you've talked here about maintaining the design bases function. And one of the other areas that we've also considered is the fact that these SSCs are considered in the PRAs and there are certain functions or assumptions that are made in the PRA. I don't see any discussion here about for the RISC-3 SSCs whether there needs to be any consideration of somehow maintaining any of these functions. Perhaps you could talk to that.

MR. PIETRANGELO: Yes, I'll get to that in the functional mod slide. That's our third leg of the stool here. And why don't we go to that now.

First of all, we thought it was important to state right off that we do not expect to see a change in the RISC-3 SSC performance given that we're

maintaining the design bases functional requirements, given that we have data on the reliability of those SSCs over the long term.

And the second point here is that is we believe it's important to do functional monitoring and take corrective action when those functions are not met to assure SSC capability.

Let me take a moment now to kind of distinguish what we view as what the maintenance rule does with regard to tracking reliability and availability. That's not what we intend by this bullet. All right.

When we say assure SSC capability, we're looking at things like pump flows, vibration, electrical data on motors, start times, etcetera. Those are done -- this is more akin to condition monitoring that is also done to some regard with respect to the maintenance rule. But we do not envision tracking, demands, reliability and availability hours on low safety significant SSCs. The maintenance rule is a special treatment requirement that's been -- that we're now excluding from the scope of the RISC-3 SSCs.

And there's two reasons why we think that's okay to do. The first is if you had a

degradation in the performance of a low safety significant SSC, what would be the impact on the categorization process? Individually if you had a lower performance on a degraded performance on a low safety significant SSC, the first result would likely be that the high safety significant SSCs are of even higher importance.

Secondly --

MR. HOLAHAN: And more of them are high, perhaps?

MR. PIETRANGELO: More of the high are higher?

MR. HOLAHAN: No, no, no. Some of the lows could become high?

MR. PIETRANGELO: Well, you're right. And that's why we do an aggregate impact sensitivity study to demonstrate that we have an adequate margin of safety. At the end of the day when the categorization process does this relative ranking of the importance of SSCs, we take all the low safety significant SSCs, assume a significantly increased failure rate simultaneously to see if we still have adequate margin of safety. Or, in other words, do not have a significant impact on the risk profile of the plant. That addresses some of the common cause things that

Tom raised earlier in terms of if you apply this industrial treatment program across the board what could happen.

Well, this sensitivity study is designed to see what would happen. Now, provided that we still do the functional monitoring and when you don't meet the equipment specification, you need to corrective action, that's an element of the industrial program. We believe that is sufficient to assure that the categorization assumptions are maintained over the long haul. And I think that was what Gary was getting at before, there's more than one way to skin the cat on providing assurance that the categorization assumptions will be preserved.

Any questions on why we think what we think on this?

All right. Let me move to a very important point here on the reg framework.

For the most part when we talk about treatment for RISC-3 SSCs and the trick here is providing adequate constant confidence of the functionality for the design bases requirements going forward. Really the level of safety significance of the SSCs does not come into play in trying to do that.

Where we do believe it comes into play is

how you treat this thing in the regulatory framework. First of all, we do believe that §50.69 should specify industrial treatment for RISC-3 SSCs including a list of the elements of the treatment program. So we are not for alternative 1. We believe that definition is too skimpy.

As an alternative, and I'll term it 1.5, we believe we should identify our commercial industrial treatment program and list the elements that we get consensus on should be in an industrial treatment program.

Now, that is only the upper tier of the regulatory framework. Okay. And, again, our principle going forward of the premise here is that we try to stay within the current regulatory framework and rules that have been set up and not have to invent something new for §50.69.

Now, these descriptions of what these industrial treatment elements are we would not place in the rule language, and I'll get to the rational for that in a moment. We believe those summary descriptions of what those elements entail should be captured in the QA topical report that's referenced in the UFSAR. Right now that QA topical report describes how the licensee's QA program meets criterions one

through 16 for safety related SSCs. Given that §50.69 will have alternative treatment for several safety related SSCs, that's what needs to be amended in the licensing basis. It's a different treatment for those RISC-3 safety related SSCs.

So this QA topical report needs to be amended to capture what the industrial treatment will be for the RISC-3 SSCs. And we have a changed control mechanism in the existing regulations that deal with changes to your QA topical report, and that's 10 CFR 50.54(a).

That's kind of the middle level of the regulatory framework here. There's a third level, and that is a licensee commitment to a regulatory guide on how to implement §50.69. Now, it's our objective to get NRC endorsement of NEI-00-04 as a way to implement §50.69. A licensee would commit to that reg guide, hopefully, endorsing NEI-00-04.

Now, that guideline contains a complete description of the categorization process and also has the additional description beyond the summary description that would be in the QA topical report and the FSAR, additional guidance on how to do industrial treatment.

In our current guideline I think we have

an Appendix of about, an Adrian correct me if I'm wrong, 10 pages on how to do EQ going forward in industrial treatment, and about another 10 to 15 pages on how to do seismic going forward in industrial treatment. So there's that additional level of detail, and we believe that it would be properly captured in the licensee commitment to the guideline. And that would be controlled through NEI-99-04, which is our commitment management guidance, which has also been endorsed without exception by the staff.

Now, what is that okay? This is our rational for this structure.

MR. HOLAHAN: Before you leave that, can I stick at the middle level for a minute?

MR. PIETRANGELO: Okay.

MR. HOLAHAN: The licensee commitment, is that in the QA topical?

MR. PIETRANGELO: No.

MR. HOLAHAN: Or that's a --

MR. PIETRANGELO: No. What would be in the QA topical is the summary descriptions of the industrial treatment program elements.

MR. HOLAHAN: Okay.

MR. PIETRANGELO: Regulatory commitments, there's no requirement to put a regulatory commitment

in the FSAR currently in the framework. Let me go through --

MR. HOLAHAN: I understand.

MR. PIETRANGELO: This next slide explains the rational for that.

MR. STROSNIDER: Tony, I hate to interrupt.

MR. PIETRANGELO: Sure.

MR. STROSNIDER: Just one comment because maybe then you can address it as you go through this.

MR. PIETRANGELO: Okay. Okay.

MR. STROSNIDER: And what I'm struggling with a little bit here is if I follow the logic here, you're talking about a rule, for example, that would say go do industrial treatment without the rule defining what that is.

MR. PIETRANGELO: Well, it would list the elements.

MR. STROSNIDER: Okay. So the rule would list the elements. Okay. So the attributes or the elements would be --

MR. PIETRANGELO: In the rule.

MR. STROSNIDER: -- in the rule?

MR. PIETRANGELO: That's correct.

MR. STROSNIDER: And essentially they

define what you mean by industrial treatment? Because that's what I was -- not in the level of detail that is in these other guidelines, but what I was struggling with is if from the regulator's perspective it's very difficult to write a rule that just says go do industrial treatment without some explanation of what that is.

MR. PIETRANGELO: Right. Right.

MR. STROSNIDER: All right?

MR. PIETRANGELO: I think, and I should have mentioned this before, really this is boundary condition number three we're talking about here. How do you provide the regulatory assurance going forward. All right. And the regulatory framework has hierarchies and different levels, and I think it goes to what change control and how those different levels are treated and what kind of flexibility a licensee gets.

This next slide attempts to put in perspective why we think what we proposed is sufficient for §50.69. And we do that first by way of comparison to what's in the current regulatory framework. If I take what's in alternative 2 in the September 27th document, you have a paragraph that says this is industrial treatment and it lists the

elements, and then what follows is a summary description of each of those elements. All right. That is the current alternative 2 that's in the paper.

That is basically exactly the same as what's in Appendix B today that governs safety related SSCs. You've got the 16 criterion in Appendix B and about a paragraph that says "measures shall be established to assure ..." you know, installations done well, and all those things. All right. So that's the regulatory treatment today in rulemaking space for safety related SSCs.

Our argument here is that given that these a low safety significant SSCs, all right, still safety related but low safety significant SSCs, they shouldn't receive equivalent treatment in rule space. i.e. what's in Appendix B today. Therefore, you just list the elements, you don't have the paragraph description in the rule of each of those elements. Rather, you use the other elements of the licensing basis, i.e. in the QA topical report you would provide those summary descriptions of the elements, all right, and it has a change control mechanism established with it. And third you make a regulatory commitment to the guidance that lays out the categorization process as well as provides additional detail on the key elements

of treatment that speak to maintaining the design bases functions going forward.

All that is part of the licensing basis for §50.69. It doesn't have to just be captured in the rule language.

So, we think that makes sense given the robust of the categorization process. It does not make sense to us to treat in rule space how the current safety related SSCs are treated. And that's where -- so the categorization isn't about maintaining functionality going forward, that's not an important point. Where it is an important is how you lay out the regulatory framework for implementation given that safety significance. And it should look different than what we do for safety related SSCs today.

MR. STROSNIDER: Tony, this is Jack Strosnider.

Your observation's interesting because I will confess that our discussions internally were Option 2, it ought to look something like Appendix B in terms of its -- capturing the elements of the program, but it should not be Appendix B because, obviously, just as you point out, that's not the expectation.

MR. PIETRANGELO: It can look a little bit

like Appendix B. But not a lot.

MR. STROSNIDER: Yes, and I think that maybe there's some details there that --

MR. PIETRANGELO: Right.

MR. STROSNIDER: You know, it's a level of how much goes in there that needs to be discussed.

MR. PIETRANGELO: Yes. And that's why our point is given the low safety significance it shouldn't look exactly like Appendix B does today for the safety related SSCs.

MR. STROSNIDER: Right. And the comment I'm making is, actually I think we had a little bit, from my perspective, of success because you say, hey, that looks like Appendix B, and that's what we already thought.

MR. PIETRANGELO: You did, though.

MR. STROSNIDER: But if you think it reads exactly like Appendix B, then that was not our intent and we need to understand that.

MR. PIETRANGELO: Yes. And what we're thinking about for the summary descriptions that would go in the QA topical report, it may not be the exact words you have -- in fact, we'll stipulate that it's not the exact words that you have in alternative 2 here. All right. But it's about that level of detail,

i.e. a couple of sentences or a paragraph, it's a summary description of what that treatment element is all about.

Bill?

MR. BURCHILL: Bill Burchill, Exelon.

Jack, I think the point isn't so much just the words. I mean, Appendix B, I think one of my colleagues observed that if you took Appendix B home to his dinner table and read it to his wife and children and said "We're not going to do this," they'd be alarmed. You know, they would say "Gee, that doesn't sound bad." You know, Appendix B sounds reasonably benign. But we all know in this room, because of our experience, what has happened through implementation.

And what we're suggesting here is that we don't need to replicate that language even in a paraphrased form in the rule which then, I think, provides a platform for the same sorts of implementation problems that we've seen with Appendix B.

And what we're suggesting is there other established vehicles where the controls relative to that treatment can be defined and controlled under the existing regulatory framework.

So, it's not that we're quibbling over little words. We're quibbling over how they are applied.

MR. STROSNIDER: And this is Jack Strosnider again.

Just two things that occur to me. One is what I mentioned earlier in terms of what's the content of the rule in defining the program. Call it whatever program you want to call it, industrial program, whatever, but without some explanation of what it is it's not clear what we're proving or what we're saying in the rule. You can't just say go do an industrial program. So you need some explanation of what that means. And the intent in the language you were putting together was described to make it more performance based. Here's what you want to accomplish with each of these elements.

Now I understand what you're saying is that it's not perhaps with each of these elements, but here's what you accomplish with the elements in total.

MR. PIETRANGELO: Right.

MR. STROSNIDER: But, you know, I think it gets back to -- you can actually relate it back to the boundary conditions in terms of, you know, the rule language which says here's what you're trying to

accomplish, and enough that's in there to capture those conditions, which is why they're very important that we agree on those at the beginning. But those are two thoughts that I had with regard to what you're suggesting.

MR. PIETRANGELO: Yes. And I think the first question you asked me I had the industrial treatment definition up, substituting the words maintaining the design bases for going forward, that's what you're trying to accomplish. That should be in the rule. We have no issue with that at all.

And these other things are really -- do we need to get to that level of detail on the rule for the eight different -- on what each element is trying to accomplish or should the rule state the overall goal and let the rest of the regulatory framework and licensing basis that's implemented flush out what you do to accomplish that objective?

MR. STROSNIDER: Should the rule state what the performance objective is, like I said, trying to put it into a performance -- that's a question for discussion, I think, is should it say, you know, here's the program, here's what you're trying to accomplish with it?

MR. PIETRANGELO: I think at a broad level

it should, and that's maintain the design bases functionality of the RISC-3 SSCs. Isn't that what we're trying to do? And I don't see a need to go in rule space to an additional level of detail beyond listing what those elements are, and the rest of the reg framework would do that in successive levels of detail.

We believe that when you add up the combination of the elements in the program and when you go through the technical bases with not changing the design bases requirements with getting the insights from the historical performance data, and doing the kind of functional/condition monitoring, and taking appropriate corrective action which is included in the industrial treatment program, that these programs will provide adequate confidence that the design bases will be maintained going forward for a licensee that implements §50.69.

And the reason we separate it out in a bullet here is because we knew, just based on the September 27th document that we didn't think we were on the same page with regard to boundary condition in terms of what a licensee would do to assure that the categorization process results remained valid. We don't think it ought to be the type of reliability and

availability monitoring that's going to be done for the RISC-1 and RISC-2 SSCs allow the maintenance rule.

And finally, there was a purpose to §50.69, all right. And South Texas was an exemption from the special treatment requirements, and that exercise is a proof of concept for this rule.

The main purpose of §50.69 is for not to have all the other licensees have to go through an exemption request process. §50.69 was supposed to exclude the current special treatment requirements from the low safety significant SSCs. That's the main purpose of §50.69.

Now there's an additional element of what -- and I think it's captured in the boundary conditions about maintaining the regulatory assurance that the design bases will carry forward. All right. But it doesn't -- it shouldn't have to define, and I guess I said this at the Commission briefing in July, if this thing -- if this alternative treatment or this assurance entails something radially different or -- it isn't even enough to be radically different. If a licensee has to maintain multiple programs based on this new categorization, the benefit of doing Option 2 quickly goes out the window.

So, what we're trying to do is -- and

really I think we had a realization yesterday, and I'll share this. That in defining our industrial treatment program, I think what you're going to end up is more of an augmented quality program of what you're currently used to today for important to safety SSCs. The fact that this will go into the regulatory framework will make it an augmented quality program, because it'll get more attention that way, as opposed to the -- and then I'll say commercial treatment that's currently done on the BOP.

So this necessarily gives it a different flavor. And I guess anything -- there's almost a Box 5 here. We talked about this yesterday. You could either split Box 4 up or just say Box 5 is something that doesn't fall under any regulation or regulatory scope. And when we had the discussion of whether you put the important -- which column do you put the important to safety SSCs, by leaving it in the right hand column it made Box 4 continue to be relevant to the design bases requirements that are entailed by some of the SSCs in Box 4.

So, at the end of the day this program we're describing is more akin to an augments quality program.

That's all we had for now. Again, in this

afternoon's discussion on the specific rule language, Adrian's got a number of slides to go through in this package. But at this point, I think, it's enough.

MR. STROSNIDER: Tony, this is Jack Strosnider. I did have one last comment on this last slide, which there's -- well, we've had a lot of discussions or some focus, if you will, on functional monitoring and surveillance testing, that sort of thing. And certainly that's an issue that we've had discussions about with regard to, for example, to valves and that sort of thing.

But I want to point out again that when you look at some of these special treatment rules, again, in the area of EQ and seismic qualification, we never have done testing to -- it's not performance based, it's not -- you're not going to make it performance based because you're not going to fill the containment with steam and you're not going to shake it like an earthquake.

MR. PIETRANGELO: Right.

MR. STROSNIDER: So you're not going to do that. All right. So that the first bullet is very important there where you talk about the industrial controls. And for some -- you know, we've always -- some of the special treatment rules were directed

exactly at that where you're designing, procuring, maintaining gaskets and things like that. Okay. So I think it's a very important area to focus on in terms of what relaxation can you accomplish from the existing rules to the less safety significant components, but still maintain that design bases functions. And that's where we get into, I think, some interesting discussion about actually what those elements have to accomplish. You get into some more of the how as opposed to the what.

But I just wanted to make sure we focus on those differences between what we're trying to accomplish in terms of the controls, if you will as you defined it there, versus testing and performance feedback.

MR. PIETRANGELO: Okay.

MR. REED: I think we're all set. Why don't we take a 15 minute break.

MR. CALUO: You proposed three programs, that's what I hear you, is that correct? The one where the commercial practice that you're going to use for the balance of the plant and upgrade program you call industrial treatment for category 1, is that what you're saying. You proposed three programs?

MR. PIETRANGELO: No, it's not exactly

that. What I meant to say is that through this process of defining industrial treatment and these elements, and this summary description that will go into SSC, it is our BOP program. But the fact that you put it in regulation space will make a difference.

MR. CALUO: I don't care how you slice the salami, you still got three programs, right? Three set of books?

MR. PIETRANGELO: No. The other way to look at this, and again I think we kind of identified an item for ourselves to go look at our guidance again, there's a different level of complexity with things you do on the BOP. Some that are relative straight forward where you might see all those elements exercised if it's a very simple thing that you do versus a more complex design change; taking out a heat drain pump or some of your cyclical heat exchangers, that kind of that. And we've got examples of that with some of our members here. I'll give you the package that shows you what licensees do on the BOP for a change like that. Okay.

So, I think we already do it, it's just this formalizes it to a certain extent and it just kind of looks, smells, feels like augmented quality as opposed to the balance of plant.

MR. CALUO: Okay. Thanks.

MR. REED: Pete? One more question and then we'll go to break. This is the last one.

MR. BALMAIN: Yes, I'm Peter Balmain, NRC.

I just want to clarify one of your last bullets, the second one on the last slide. RISC-3 functional monitoring assures equipment capability, and then you say the maintenance rule monitoring's not necessary.

In the case when a unexpected failure or occurrence happens that does on RISC-3 item that does effect RISC-1 or 2, at that point the treatment for that one particular item would transition to the RISC-1 or 2 space, I assume. Is that correct?

MR. PIETRANGELO: I don't think we said that, and I don't think it's in the guideline. I would expect that the corrective action associated with that failure would be looked at in much greater detail because it had an impact on the RISC-1 and RISC-2.

MR. BALMAIN: Right.

MR. PIETRANGELO: Or RISC-2 components.

MR. BALMAIN: Okay. Is that type of fluidity, I guess, is part of your framework?

MR. PIETRANGELO: Yes, you'll see that when Adrian gets to a slide this afternoon on

reporting. I think you'll see an element there that if there's an impact on a safety significant SSC, it's picked up in the reporting.

MR. BALMAIN: Okay. Thanks.

MR. REED: Why don't everybody try to get back here in 15 minutes. Sharp.

(Whereupon, at 10:21 a.m. off the record until 10:38 p.m.)

MR. REED: Okay. I'd like to try to get the show on the road again. Try and take your seats.

Just a reminder to everybody. Before lunch we'd like to try to kind of roundup the topics that people want to discuss this afternoon. I know NEI's got some slides that they want to go through, and I know Ken's got a set of slides on the ASME code cases, the repair and replacement code cases.

If anybody else has got some topics, if you could, either tell David Diec back in the back or myself, or Eileen, or write on the card and bring them up, we'd appreciate that. And then we'll look at those over lunch and see, you know, prioritize them and try to go through them this afternoon.

Also, David's got a hand held mike. We can pass that around if you've got any comments that you won't have to get up and knock everybody out of

the way. You can go down the aisles, get to the mikes. So that's a little more convenient.

At this point we'd just like to offer an opportunity for anybody else that would like to either make a presentation, a couple of slides, or go to a mike or has any other ideas on how to address the -- or how the structure of the framework for RISC-3. If anybody's got some ideas like that, feel free to come forward. If not, then I think what we'll do is we'll have Tom come up and we'll work back through the boundary conditions, the alternatives and then we'll get back to the NEI's 1.5 or 1.75, whatever's notice.

Does anybody have any other, any alternatives that they'd like to discuss. If not, I'll turn it back to Tom and you can feel free to comment as go through it again.

MR. SCARBROUGH: Okay. Thanks.

What I want to do is put up the boundary conditions again. What I'd like to do is sort of look at the boundary conditions. I know we had some comments regarding them this morning, see if there's some suggestions on specific wording that might be appropriate to try to tighten them up if folks think that would be good. And then we'll sort of walk through some of the other alternatives.

Okay. Our first boundary condition, as we said, focuses on functionality. Were there any specific suggestions regarding the language in terms of what it's trying to accomplish that anyone might have regarding this one? It didn't sound like it from NEI's presentation that there was any significant misunderstanding.

Yes, Tony?

MR. PIETRANGELO: My suggestion would be to simplify it. I mean, it's pretty long right now and I think what the sum total of all those words means is licensees are required to maintain the design bases of SSCs going forward.

We don't need to duplicate in this rulemaking what's already in the regulatory framework. We've got guidance on design bases, it's been endorsed by our regulatory guide; that's precisely what we mean. There's an interpretation of it that's been -- that we worked on for several years that's been endorsed. Why don't we just use that and simply say licensees must maintain the design bases going forward, because it includes all that stuff that you have in there?

MR. SCARBROUGH: One of the reasons that it's a little longer, it has a second sentence,

because we wanted to emphasize that the design inputs would also be part of this functionality. That you wouldn't be changing design inputs under §50.69. There's a whole different process for changing design inputs and design bases. So that's one reason why it's a little longer than probably it should appear it should be.

MR. PIETRANGELO: Well, and as part of the definition of design bases and guidance associated with it, I think it's recognized that the design bases is a subset of all the design inputs. And our intent, even with §50.69, some design inputs may change provided that the functional requirements are still met. And that's function under the conditions as required. That includes that.

So, when you say all design inputs are maintained, I think that's too broad for §50.69 because the design bases is a subset of those inputs.

MR. SCARBROUGH: Can you give us an example of where you might see the design inputs changing?

MR. PIETRANGELO: Well, if you cannot find a like-for-like or equivalent replacement, you may in fact have a different design that meets the design bases functional requirements. It might be a

different material. It could conceivably have a different -- some different characteristics of the design. And I don't have a specific example to run by you now, but it's certainly conceivable that -- especially in a lot of the I&C areas different gasket materials, it may be a whole different technology when we talk about analog to digital.

MR. STROSNIDER: This is Jack Strosnider.

I think we're talking something a little different here because I thought, Tom, and correct me if I'm wrong, but you were talking about design inputs, you wouldn't change the time, temperature, history or you wouldn't change the seismic inputs, the accelerations and that sort of thing. Certainly I would think, yes, you could procure a component that has different material in it, might be even a different shape or whatever. But when you put it in, it's still expected to meet those inputs and --

MR. PIETRANGELO: The design bases functional requirements.

PARTICIPANT: Is that a term that's defined? I notice you didn't define it in the rule. Is there a standard definition for design inputs?

MR. STROSNIDER: Well, actually, I think the -- I mean we're using the word "design inputs"

here, but actually in the boundary condition we talk about the conditions under which the intended functions are required as in the updated FSAR, and that's -- and again, Tom, correct me if I'm wrong, but I think that's what we meant by the inputs.

MR. SCARBROUGH: Yes. We're talking about the load, seismic loads, especially the G factors and things of that nature.

PARTICIPANT: You talking about physical perimeters? These are physical expectations of how the conditions in which the equipment needs to operate? I mean, I'm just trying to understand. It's a term I haven't -- until this rulemaking came about, I didn't see the term design inputs banded about too much, and now we see it all over the place. I still, you know, I'm just trying to understand what you're after there.

MR. SCARBROUGH: Yes. We're talking about design criteria in terms of that lower level of seismic seismicity in terms of the G factors and such. We're not at the level of operates during an earthquake. We're talking about operating an earthquake of this acceleration and things of that nature. That's the level we're talking about. Design criteria as opposed to a broader statement that it

meets -- it functions during an earthquake.

MR. FAIR: This is John Fair with NRC.

We had a lot of discussions on what it meant to maintain the design bases. And the reason we put this sentence in is we want to make it clear that for design bases events such as environmental and seismic that just saying that experience shows that these things will function is not adequate. That you have within our FSAR and within your design basis, specified loading conditions which are maintained under this Option 2 approach. And some way you have to show that you're able to withstand those loads and not say in a general sense it's okay

MR. SCARBROUGH: Thank you.

MR. SOWERS: Gerry Sowers from Palo Verde, again.

It's hard to think of an example. I can think of one that may be trivial. But I'll try to illustrate what difficulties come when you talk about design inputs.

Tony talked about design bases requirements being a subset of design inputs, and that's exactly right. I can have a safety related valve, it can be a manual valve, it will have lots of design inputs associated with it. For instance, the

weight of the valve, which is very important for the seismic response for the piping that's in there. And that's clearly part of the design bases.

I also have a design input that I have no left-handed operators on valves in our plant. It's a good practice. It's a design input. It doesn't have any relationship to this whatsoever.

So when you start using words like that, they're words that actually have a very specific meaning to people out there that practice in this industry. And the meaning is much broader than I think you perceive. So using that word is fraught with difficulty.

And I'll agree, we need to stay with words that we know, we know what the design bases is. It's clearly defined. It's had a lot of discussion and it includes functioning under design bases conditions. We know what that is. So we need to stick to that and avoid the other pitfalls we are prone to jump into by changing vocabulary at the last minute and trying to do something different when we don't have to.

MR. SCARBROUGH: And I agree with that. I think it's a good point. The reason why some of these words came up and these extra words is our experience is that where we might have used design bases in our

interactions with licensees before in terms of this risk-informed area, what the licensee perceived maintaining design bases was different than what our perception of design base -- maintaining design bases was.

And so based on that experience is the reason why this more elaborate boundary condition was developed is to try to make sure that there was a common understanding of what we were intending when we meant meet the design bases. Because we have had that experience where we were just talking past each other with the licensee in terms of what we expected in terms of maintaining design capability, in terms of seismic and seismicity and harsh environment and what the licensee perceived in terms of meeting the design bases.

So part of this is derived from that concern from previous experience.

But those are good points. I think we have to make sure that whatever we come up with in terms of our boundary condition, that it's clear what we mean and that we don't expand off into left-handed operators.

MR. STROSNIDER: Yes. I'd like to comment on this, too.

I think the last comment about, you know, be careful using phrases like design input. Actually, I think it means different things to different people. Okay. We got one question what is it, and we got somebody else that says I know what it is and it's this big, not this big.

But to tie it back to Tony's original comment on should we shorten this boundary condition, you know, this expression of design inputs was an attempt to use some shorthand to capture this, and I think that's part of the danger in trying to shorten things too much. I think we need to use terminology that's in the regs that we're all familiar with, understand what it means and if it ends up being a little longer, so be it.

But the other thing to come back to Tony's comment is to think about what the purpose. How are we going to use these? I mean, we did talk this morning about well the boundary conditions ought to help us to focus on what the content of the rule is, what the content of the treatment is. This is the expected outcomes. But also, and I could envision some of this and not getting into too much detail now, but you know, there's going to have to be statements of consideration that go along with this rule. And some

of this sort of language would probably find its way into there eventually explaining what is meant by the rule.

And so it's important that we use language and we use as much or as little as we need to make sure we all understand. Of course, it's always harder to write something short than long and capture everything.

So, I had just a couple of thoughts on that.

MR. DIEC: We have a comment in the back.

MR. HEYMER: To take up on what John Fair of the NRC just said, I just want a clarification. We can used experienced based methods today for seismic, correct, for RISC-1? So why couldn't I use it in RISC-3?

MR. FAIR: The statements didn't intend to say that you couldn't do that. The statement intended to say that you had to demonstrate by experience data you met the loads that were specified at the plant in the FSAR. And it was able to function --

MR. HEYMER: But does that mean that the SQUG methodology doesn't apply?

MR. FAIR: Well, it means what I just said. That you have to get a methodology which you

could demonstrate would satisfy the design loads at the plant. And in some cases, I don't believe the SQUG methodology by itself is satisfactory for plants that have design bases that include multiple events and things like that, unless you have demonstration that it does.

MR. HEYMER: So, are we reopening the SQUG issue now?

MR. FAIR: I don't believe this is coupled to SQUG. If SQUG is a design bases of the plant, obviously that is your plant design bases.

MR. HEYMER: If I have experience data that shows I can withstand the design bases event, be it seismic or temperature or humidity, why can't I take credit for that?

MR. FAIR: As I tried to say, it has to meet the design bases that's in the licensing FSAR. I mean, I don't know that the SQUG data meets every licensing FSAR in the country.

MR. STROSNIDER: The point here is, as John said, not challenging the use of experiential data. I think the point is whatever is in, and that's why we had the language here, in the updated FSAR. If the updated FSAR has some specific seismic inputs and says, you know, the plant is designed to satisfy these

seismic inputs, then you need to satisfy them. If you can demonstrate it through experiential data, I guess you can do that.

If your licensing basis is for some of the older plants, you know, the SQUG type approach, then you need to maintain that. All right.

So it's tied to what your current licensing basis is, the whole point being that if you want to change that, you're not changing in this rule, you go do that under §50.59. And whatever changes you could make there under §50.59, then you could address those appropriately through this treatment.

MR. SCARBROUGH: Thank you.

MR. STROSNIDER: And I think there's another issue that comes up here that certainly, you know, outside of this rule in terms of acceptability of experiential data and the databases that exist and whether they really, you know, meet the mark to do that sort of thing. That's something we're working on, you know, different venue.

MR. CALUO: Jose Caluo from the NRC.

I believe in our discussions it was only those design inputs where we required to satisfy the functional requirements when they're confronted with the design bases event. So if you want to have other

design inputs in there that you want to add it, for whatever reason, if those are not required to ensure the functional requirement -- when you're confronted with seismic event, you don't have to bother with those. But those that are required to insure functional requirement, that's what we thought of design inputs.

MR. SCARBROUGH: Thank you.

MR. DINGLOR: This is Mo Dinglor.

I agree with Gerry -- from Wolf Creek, Mo Dinglor from Wolf Creek.

Is we've got the document of design bases, §97.04 that you guys endorsed. We need to use those definitions that we've already agreed on in this new, not try to develop and do new rules and rehash some of those things that we already have worked on and come to agreement on. And I'm seeing some of these definitions, he may not be using those in the way that we all agree to in §97.04.

So all I guess is my caution is let's pull out the existing documents that the industry and the NRC endorsed, use those definitions, because we all agree on those. I don't want to come in with another one and then have you guys or us define our plant what does design function mean, and when we already defined

it and it might be something different.

So I guess as Tony and then said, we want to build on existing stuff but not reinvent the wheel every time.

MR. SCARBROUGH: Okay. Thank you.

MR. STROSNIDER: And could I interpret that as saying that we need to add something to this definition which, for example, referenced to the §97.04 as opposed to shorten it? Just a question.

I understand your point and I think, you know, the big picture I think there's agreement. We don't want to invent a whole bunch of new definitions or terminology here and we want to make sure that what we're using is clear and well defined for everybody. So that is a good point.

MR. SCARBROUGH: Good. Thanks.

Okay. The second boundary condition we talked about, we did have -- Gerry had some good points that he was making during the talk. Where's Gerry. Did you want to come up. Did you have some specific suggestions regarding to tighten this boundary condition?

MR. SOWERS: Yes, it's pretty simple, actually.

I view this second boundary condition as

targeted at maintaining I would say the integrity of the categorization that we went through. So somehow I'd restate it so to say that. The treatment process must not change, lead to changes in the categorization. If I can expound on this a little bit, and I understand the staff's reason for wanting the categorization to remain valid so you make sure you have the appropriate treatment.

I can also add that from our side we not only have an interest in the categorization remaining valid, but we have a very strong interest in making sure that it's robust and does not change. It's very expensive when you start thinking about changing the categorization periodically. So the categorization process has to also lead to a result that cannot be effected by any expected changes in plant performance. Otherwise, this whole thing becomes unmanageable.

It's going to be difficult enough to do the categorization once. Doing it forever is completely unthinkable. And I believe the categorization process that we've chosen does that. With all the sensitivities we've put in there, I have some comfort that I can go through the categorization and as I go forward in the future and make updates to my PRA, which will happen, that the categorization

will not be radically effected. And it has to be that way.

So I think maybe for different reasons we have the same interest, but that's what this should say is that the categorization that you came to remains valid. Whatever treatment you decide to apply, it can't effect the categorization. And that's how I look at it.

MR. SCARBROUGH: Thank you.

MR. BURCHILL: Bill Burchill, Exelon.

Let me just build on that. I think that the concern with the way this is stated is the focus on only two particular aspects of the PRA at a very detailed level. And the use of the terms reliability and availability implies a go forward monitoring program, which we frankly in some cases don't even do today for many of these components.

I think what you would do is if you could change that to say consistent with the results of the categorization process, that would accomplish exactly what Gerry suggested. That it's the result of the categorization that's of interest here, whether or not a component suddenly shows itself to be more risk significant than the categorization process originally showed. That's of keen interest to all of us, of

course. But on the other hand, as Gerry said, we would hope that the categorization process would have sufficient sensitivity evaluations to assure that that wouldn't happen.

I mean, if we found through the sensitivity process that a particular component that was originally classified in RISC-3 really had a significant influence, we'd be foolish not to reclassify it at that time. That's part of the whole purpose of the sensitivity exercise.

MR. SCARBROUGH: And some of this was -- and it comes out in the bases for discussing sensitivity studies and making sure the sensitivity studies are sufficiently robust to capture changes in the reliability of equipment and across systems. Because PRAs aren't as strong in that area.

And if you change treatment drastically across -- for a whole series and sets of equipment, and you go across systems, how do you treat that in sensitivity study. And those are some of the things that we were exploring here in trying to make sure that the treatment will support the categorization. However, part of the categorization assumed this equipment would function and what reliability that the treatment supports that.

And so, yes, I agree. I think there's areas that we could do to adjust this boundary condition, and I think both of them are good suggestions in terms to look at. So we'll go back and look at that and see if we can do some adjustments to this boundary condition to see if we can improve it in those types of areas.

But that's where we were coming from because of the tie between. And we wanted to make sure there is the tie between treatment and categorization.

Any other -- yes, sir?

MR. JEBSEN: Yes. This is Eric Jebsen with Exelon. And I have a couple of thoughts that came to me while you were talking, and as a result of our discussions yesterday. And so some of this is just thinking out loud or on paper. So, I just want to form a couple of comments.

The first one, I think, deals with sort of the flavor or the sense I'm getting. I'm hesitant to say this, but you know the sense I'm getting is that there's a feeling, at least, that the current testing regimes are, in part, inadequate to confirm design bases performance. And if that's true, I think that has no place here. That's another concern and should

be separated from Option 2. I don't know if that exists, but that's just kind of a sense I'm getting. If that's a misperception --

MR. SCARBROUGH: I wouldn't take that perception away. That's not the intent.

MR. JEBSEN: Okay.

MR. SCARBROUGH: We're not challenging current testing regimes. You know, we're looking at we're removing special treatment requirements for a large percentage, the vast majority of the safety related piece of equipment in the plant. That's the goal. And what do we do that? You know, now that we've taken it away, where do we go from there? What assurance do we continue to have. And so the third boundary condition we just take away, what level of regulatory assurance now do we still have.

MR. JEBSEN: Okay.

MR. SCARBROUGH: So that's where we are.

MR. JEBSEN: Okay.

MR. SCARBROUGH: We're trying to say where do we end up with that action that we're proposing.

MR. JEBSEN: Okay. Because I was thinking there might be some testing regime which would be, I mean be very similar in some aspects to what you do now that would give you the assurance of what function

-- so if it's good enough now, it might be good enough then.

MR. SCARBROUGH: Absolutely. Yes, and part of when I went through the alternatives I tried to indicate, but there was a lot of material there to absorb, that all three of the alternatives is basically what used to be called commercial practice, it's just different levels in terms of which level are you looking at and in terms of how much assurance do you need, and is there a way to try to focus it such that -- so that NRC has the regulatory assurance, the public has the assurance and the industry has a level of assurance, but not the level of Appendix B. I think that's what we're all trying toward that same common goal.

MR. JEBSEN: Okay. I just have one, maybe two more.

The other thing I wanted to mention is that I think specifically mentioning here reliability and availability consistent with reliability and availability assumptions. And, again, it says categorization process, but I think I've heard here people are sort of saying and are mentally picturing PRA when they see categorization process. And I think it's a mistake to limit this to a point value that

happens to be in a PRA for certain specific equipment when, in fact, we've done a sensitivity showing that in fact the reliability could be zero in some cases and still have virtually no impact on the calculated risk to core damage or large early release frequency.

So, I think what you want to say in there is consistent with the risk sensitivity study or consistent with the risk bounds demonstrated, the results or, you know, something like that, specifically mentioning reliability and availability. Because I can just picture being questioned about that. Okay. What was the reliability in the PRA at that time, your full power -- you know, initiating event PRA at the time you did this study or what is it now?

Well, it almost doesn't matter because I just showed you could be zero and it's still okay.

MR. SCARBROUGH: But usually it's zero for on individual component basis. I mean, we're not talking about -- the concern here is that treatment cuts across the whole 75 percent of your safety related equipment. So it's a broad question in terms of what's the change that takes place.

But I think if we said we don't care if 75 percent of the safety equipment doesn't -- I don't

think we'd say that. I think we do care.

MR. JEBSEN: No. And actually, that gets to my third point. This is sort of a segue into my third point.

The third point is the way I'm picturing this working it would be gradual bootstrapping to the 75 percent or whatever it is, so that as you're moving along, this sensitivity study includes more and more things working maybe initially at a model zero but then maybe you couldn't tolerate zero, you'd have to tolerate something -- I'm not sure which way is greater or less, but you know more reliable than zero. And so over time you get a picture of these components how many you incorporate into your §50.69 program and so this sensitivity study becomes broader and broader and broader until you start to see, maybe, impacts on the numbers, at which point you might have to go back and look at this reliability. But until you get to that point, I mean obviously you have some huge margin you're working into and then you get to the point where the margin's been reduced in a way in this program. And so now you have to sharpen your pencil and see where that it is.

MR. SCARBROUGH: Right. And for operating plants that true, I would agree. But this rule is

envisioned to apply to new applicants as well. So it would be like right off the start design of the entire set of equipment that would be covered. So we're in the rule that's going to cover a broad -- you know, it's much more broad than just operating the plant now.

I agree that, you know, as you slowly work into it if you have a way to sort of monitor these changes in reliability, availability, however you do that. But the rule also is going -- intended to be applied to new plants, which would be right off the board all the new design control and things of that nature.

MR. STROSNIDER: I think there's a very important that we need to deal with on this boundary condition when I listened to this discussion. Because we're reading this as a very quantitative boundary condition when the fact is when I listen to this discussion when you talk about reliability of components under the conditions I've been talking about earlier, you know, the high steam, high radiation seismic events, etcetera. And quite frankly, I don't think we have good numbers on that now, all right. And I doubt that we're going to have good numbers in the future because, you know, that's

not the conditions under which these components are tested throughout the life of the plant.

You're really relying on the programmatic aspects to assure that they'll do their function. All right. So, I mean I think we need to be very careful here and understand that there's some qualitative judgment that's involved in maintaining the reliability and availability.

Yes, if we had a PRA, all right, where we knew this was the reliability of a particular components under those harsh environments, etcetera, and we were somehow monitoring that through the life of the plant, the periodic tests. I don't know what you'd do. Take it out of service? Go test it in an autoclave, or whatever. All right. That's not what's happening and that's not our expectation, either.

So I think we need to be very careful in establishing some sort of quantitative expectation that you're actually going to be able to tie this to quantitative numbers coming out of PRAs. If you can do it, great. And to some extent you can based on operational data and availability, and nonavailability and that sort of thing. But some of these other conditions, I don't think you're going to get there in a quantitative sense.

MR. SCARBROUGH: Those are all really good suggestions.

MR. BURCHILL: Can I add one more?

MR. SCARBROUGH: One more. Good.

MR. BURCHILL: One more. If there's one myth I'd like to dispel before we end this meeting, and that's the myth that all plants are going to run around and drop 75 percent of their SSCs that are safety related down into Box 3. I mean, that's not the case.

I mean, it's going to be a spectrum. And perhaps your recent experience has been with a situation that had a very high number or a high fraction, but I can tell you a large number of plants there's going to be a struggle to find a substantial population that will drop.

So, I think there's a calibration here of apprehension that's unfounded and needs to be carefully re-examined.

MR. SCARBROUGH: Well, I guess we're going on our one data point.

MR. BURCHILL: I understand that.

MR. HOLAHAN: Bill, was that meant to reduce my apprehension? That's not the way I took it.

MR. BURCHILL: Perhaps it didn't reduce

your apprehension, Gary. I think that the statistical characterization as to the number of components in a plant that are going to now under go dramatic change in someone's view of treatment, I think is unfounded.

MR. HOLAHAN: I understand.

MR. BURCHILL: And, frankly, if they were in fact low safety significance, I don't know why we'd be so worried about it anyway. But that's our fundamental philosophic problem.

MR. HOLAHAN: Okay. So I shouldn't be concerned about a large change, because some plants are already there?

MR. BURCHILL: That's a good way to put it.

MR. HOLAHAN: Okay.

MR. DINGLOR: Did that help you out there, Gary?

MR. SCARBROUGH: Okay. Thank you.

Why don't we move on to the third boundary condition. We're going to take all this back, that's why we have the transcripts. We can go back. You know, I'm not taking notes furiously. But we can go back and look at all the suggestions and try to come up with a real tight of boundary conditions that we can use as we go forward.

The third boundary condition is our level of regulatory assurance, our broad mission. Any suggestions on regarding that boundary condition?

MR. HEYMER: Adrian Heymer, NEI.

I guess when I read this, I just struggle with -- I'm dealing with low safety significant SSCs and we're to get there with one sensitivity study that increase the failing rates by factors of 3 or 5, or whatever. And so if the level of assurance has got to be consistent the protection to public health and safety, are we saying then that a failure of a RISC-3 can effect public health and safety? Because in my mind the very fact that they're low can't really effect public health and safety. So, I'm struggling with this whole boundary condition.

MR. SCARBROUGH: Well, on an individual basis for these components, I would agree with you, or maybe on a small set. But when we're talking about groups of these small -- this equipment. I mean, you're talking about the main steam isolation valves possibly, feed water isolation valves, diesel generator start valves. I mean, if you start looking at these in the aggregate, or groups of them, you know, they would become significant to public health and safety.

MR. HEYMER: But I believe, and there are more PRA people here that are more knowledgeable about that subject than me. But I believe that when you do the sensitivity study you do look at the aggregate.

MR. SCARBROUGH: From sensitivity studies, but you raise the independent failure rate by three to five, and then you have -- then you still have -- but you still have a common cause potentials across systems and things of that nature.

So it's still a randomness. I mean, you still have a randomness factor there that these are going to fail. You're going from 10^{-} -- I'll say valves, because I'm familiar with motor operated valves. You're going from like 99.9 percent reliability to a 99 percent reliability for this equipment.

So, you may -- on an individual component basis, absolutely, I would agree with what you're saying. But the whole concept of treatment is across the board, and that's what raises the issue here is that you're talking not about an individual, you're talking about the entire set. And that's why this raises -- but in terms of this boundary condition, I mean this boundary condition we feel is just a fundamental. We still have to have a regulatory level

of regulatory assurance. What that level is, I mean is still -- we're still working on to trying to reach that level that everyone has a comfort level with. But in terms of the concept of this boundary condition, it's basically that we still have to be consistent with our mission.

I mean, so that's the point here. So we're not saying what level it is, we're just saying that there has to be a level that still supports the mission.

MR. HOLAHAN: I think part of the confusion under 3 is if you do 1 and 2, you've done the technical item necessary, right?

MR. SCARBROUGH: Right.

MR. HOLAHAN: It seems to be that item 3 is a matter of regulatory requirement needing to have other attributes, not how much safety they imply. But regulatory requirements ought to be clear and understandable and establish a basis that people, you know, can understand how and why the decisions are made.

So, it seems to me that item 3 doesn't provide the adequate protection. Items 1 and 2 ought to providing adequate protection. Okay. But the process of documenting that in an understandable

public way, I think, is what 3 is calling for. And there ought to be attributes that -- you know, the attributes of a good regulation, maybe we need to clarify what those are.

MR. ALADJEM: Yes, good. That's a good point.

MR. STROSNIDER: One other thought on it is just to sort of look at it from the other perspective, which is you could say, well, are we just taking these components out from under regulatory control period. Right. The message is here, no, they're not out from under regulatory control, that's consistent with the framework that was set up as there was some level of regulatory control. There needs to be discussion about what it is, just as we were talking about earlier. But I think at least one of the important messages is it's still under regulatory control. We get into other options if we start talking about, you know, saying this doesn't need to be under regulatory purview at all.

MR. TRUE: Doug True, ERIN engineering.

A couple of things about this sensitivity thing.

First of all, just to make sure it's clear, the sensitivity study does also address the

common cause failures and increases those failure rates consistent with the independent failure rates. So we are looking at the common cause potential increase to this part of the sensitivity study.

The second thing is that I think there seems to be this preoccupation with the numbers and how the reliabilities are going to change. And this process, and I think Gary tried to say this and so did Bill, is a lot more robust than the numbers in the PRA. I mean, there's a screening process the PRA is used for. All it does is screen. It identifies components that have potentially significant impacts.

At the point it falls out of the screen or comes through the screen, the PRA is no longer important. Then we have to go through and look at defense-in-depth, safety margins. We have to look at other hazards which are deterministically handled almost in most cases. And then we've got to make a past the threshold of the IDP. And so we're looking at a lot more than some reliability number that's going into a PRA model. And I think the focus on trying to assure that those stay the same is really missing the point of what we're trying to do in the categorization process.

The second thing is that there seems to be

a lot of concern hearing from you about the intersystem common-cause bogeyman. And we need to get that out on the table or open the closet door and find out there really isn't a bogeyman there. Because that's going to bring this whole thing to a complete stop. And I've heard you bring it up about four or five times. It's just -- we can't go there because if we start talking about intersystem common-causes, then everything about the design bases goes away.

Design bases in fact ignores common-cause failures, all common-cause failure including those within a system.

So, I think we need to just be careful how we proceed down that path.

MR. SCARBROUGH: Good. Well, the reason why is that the design bases has a very robust Appendix B process for design control and such, and so it's never really dealt with that. The whole concept of treatment was developed without that in terms of original treatment. So it focused on the pedigree of all this equipment so you wouldn't have that potential. And then you had the PRAs develop. But it's something to remember because this goes straight to across systems. I mean, this is the -- about as fundamental across systems as you can be when you

start talking about treatment for the entire plant in terms of safety related equipment.

So, you know, this is a fundamental area. So this is something to remember, this is why -- one reason why we say okay we have to -- this equipment is treatment is important for, because if your -- you're not talking about treatment of one piece of equipment. You're talking about equipment, vast amounts of equipment at the plant in terms of treatment. So that's one reason why I keep raising this intersystem issue is that because that's the inherent nature of the treatment process that we're looking at.

MR. TRUE: I'm going to say this, and I know I'll regret it, because I helped devise the categorization process. But if that is your concern, then we have the wrong categorization process.

MR. STROSNIDER: This is Jack Strosnider.

I just want to comment on this, because I'm not sure that it's the categorization process. And I think it's a lot less the discussion about the quantitative sensitivity studies that draws the concern. You know, try to talk with a more tangible example.

If you go out through the procurement process and you procure a piece that goes in a

component, like a pressure transmitter or sensor, or something like that, and you procure a bunch of those and they're sitting in the warehouse and you weren't careful when you procured them to understand the environment that that thing was going to work on, and then you go out and you start putting them in place. You know, at some point you could end up with a large number of them whose failure probability didn't change by a factor of ten, but whose failure probability is one in the worst case.

All right. Now, what's the protection that you have against that? All right. I mean, that's the scenario you can conjure up, and that's when I come back to, you know, what we were talking about, sort of the more qualitative parts of the program and that the procurement, the intent of the procurement aspects or the design when you go select the material that it's going to preclude that from happening.

And even though this is low safety significant now, the argument is you still need to maintain that functionality, so you need to have something in place to stop that from happening.

And I guess the final comment with regard to the quantitative aspects of it is if you were to take that extreme example and say here's a number of

these components that are going to fail at probability one, I don't think the sensitivity studies support allowing that sort of thing to happen.

And I'm not saying that there's a bogeyman out there. All we're saying is that you need to have enough control in the program to make sure that it doesn't go to that sort of situation.

MR. TRUE: And I don't think we had a lot of disagreement, at least in my interpretation of the discussion, on item one about making sure that we had the right functional requirements, we call them attributes, in our categorization process identified for even the low safety significant components. In fact, categorization process has you go through a step of keeping track of that so you make sure that you keep those design bases attributes attached to those RISC-3 components.

I think Tony's presentation tried to say we're trying to maintain that function as part of our process and not introduce the potential that we have the wrong design for a component, and on top of that we have this assurance that the reliability is going to be good and we're not extrapolating that much farther than we are now from the existing tests and the existing design bases. That's what gives the

reasonable assurance.

MR. STROSNIDER: Right. And then to come back to, and I think maybe we kind of bounced between boundary conditions 2 and 3 here, but the question is boundary conditions capture that consensus. I'm hearing that we have agreement there, and that's what we were trying to capture in these boundary conditions.

MR. TRUE: I'm just a guy, a contractor at that. I don't actually own plants and make these decisions.

MR. STROSNIDER: Well, in that case --

MR. TRUE: My view of we understand that part of the going forward basis for Option 2, I think Gary made this point in one of the first public meetings on Option 2, that we had to maintain the design bases for these components. And that includes, I remember the conversation we had of that does that mean we have to keep the 10 second closure time on the valve, and we have to make sure we keep the seismic and environmental; I think those things are understood. How you get there, that's what the purpose of I think this meeting was supposed to be about.

So I think -- I don't think there's a lot

of disagreement on that. I think what's troubling me is reliability, availability, numbers, PRA, assumptions and then introducing this whole new specter of intersystem common-causes. We just can't go there. We have to make sure that what we do doesn't get us into that mode, and I think that's what we've tried to do in the NEI-00-04 guidance.

MS. APARICIO: Leigh Aparicio from EPRI.

And I guess my points seemed more relevant about three or four minutes ago, but to your example nothing is going to -- categorization, even classification is not going to prevent us from -- I mean, if you install the wrong part in an application, you're in trouble. And so no categorization process is going to fix that.

I think that an example that you used we have a high temperature environment for non-safety related products that we buy materials that will work in those environments all day long. And so, I mean, I can't conceive, unless there was just a breakdown in the current systems that we use even for non-safety applications, that what you suggested could happen.

It's not like when we buy nonsafety stuff we just throw it in the warehouse and people rummage through and pick what they want that looks like this

and go and install it. We still make a conscious effort for no other reason, maybe, then for business practices to have the right part to install in those applications.

MR. STROSNIDER: Right. And I think the intent here is to make sure that that sort of practice continues. And just when we kind of take a step back and look at what we're doing, we're saying we've got a lot of components here that are currently captured under these special treatment rules. And we're going to say you don't have to do that anymore. You don't have to apply these special treatment rules. And I understand you were talking about non-safety to begin with.

MS. APARICIO: Right.

MR. STROSNIDER: But when you take these things out from under the special treatment rules, what are you going to put them under. And, yes, let's make sure that you got the procurement, you got the design controls, etcetera, to make sure that that continues to happen.

I don't think anybody's saying it can't happen. I don't think anybody's saying that, you know, that we're walking down a path where all of a sudden, you know, you can just, like you say, just

picking stuff off the shelf. But when we try to write a rule that captures that, that's our challenge.

MR. HEYMER: Adrian Heymer, from NEI again.

Just commenting on a couple of things I've heard. We have three programs today. They are Appendix B, augment quality and balance of plant. And by applying those programs, which are treatment in varying degrees, we have obtained an exceptional level of performance. And what we're talking about now is moving a sect of equipment or components into another one of those programs. And we recognize the fact that EQ and seismic needs some additional guidance, and we're dealing with that as best we can. And as Leigh said, we've got a pretty history of where we're going.

So I struggle when you say, Tom, that well, you know, we've got to move all this equipment, which is probably not 75 percent for the average plant. It's probably a lot less. Down into the low safety significant. I'm still going to have that degree of assurance on reliability, and I'm not doing that just picking those equipment from a gut feel. There's a pretty extensive process that I have to go through, including a sensitivity study that says well what's the effect of increasing the failure rate by 5

or 10.

And so when I look at that, I need all those programs to work today to maintain a 90, 95 percent capacity factor, which is a high reliability value. If I move a set of equipment, which I determine is of low safety significance or no safety significance, down into the balance of plant program, why do we think there's going to be a dramatic change in reliability both at either at the plant level or at the component level?

MR. SCARBROUGH: Well, one of the aspects of that is that there are really actually more than three levels. There's a level where the licensee is dealing with to achieve this very high availability factor for the plant, and they do a great job doing that. There's also the equipment that's in standby status that's used for maintenance or just standby type of systems. And from the Idaho study and our discussions with licensees, standby equipment gets a much different treatment than equipment that is used for power generation. And the question is where is this equipment, this bulk of this equipment, whatever, it's 75 or 50 percent let's say of equipment, where is it going to go when it falls down?

A lot of the equipment that is in this low

risk category is the standby safety related type equipment. You got containment isolation valves, which have no function other than in an accident, things of that nature. So a lot of that equipment is going to fall down into this lower level is standby type equipment.

Now, if they apply their normal standby practices, equipment practices to this equipment, it revolves letting it sit there until something happens and it falls off.

I mean, so that's sort of driving the concern. Because there's really more than just two or three levels here. There's a level that is applied for standby equipment, and that's one of our concerns.

MR. CALUO: It's my turn now.

I can understand what you're trying to do. You're trying to -- measurement of how you move -- you're progressing ahead the way you treat these components and the systems, and the monitoring that will ensure you functionality when you're confronted with -- the question in my mind that I had, this is category 3. How about the RISC-1 and 2? What we do today that will ensure ourself that the assumptions in the category 3 for RISC-1 and 2 are being met? What do we measure there? And I just wondered if we

measure reliability. We measure availability? What do we measure today? Not only for Option 2 in any nuclear power plant in the country today what kind of assurance do we have that the assumptions that we use, whatever the deterministic or PRA, that we are being met? And I just wondered.

And if you happen to know what those are, right, you can extrapolate and say well I keep this one, I throw away that one. But some kind of way we talking about the tail end when I think the answer to the question could be at the front end with the RISC-1 and RISC-2. And that's a question. If somebody wants to comment on that.

MR. SOWERS: Can I start with his first?

MR. CALUO: You have my permission.

MR. SOWERS: Well, I wasn't going to talk about the INEEL study. Now I am.

I've actually struggled with this, and I've struggled from the perspective of trying to understand the staff's predicament and what they're trying to do, especially when it came to the conclusions that I saw that came out of the INEEL study.

First, you have to recognize that when you go ask about commercial practices you will find

exactly what the study said: Wide variability even in one plant. I could have saved you a lot of money coming to that conclusion, by the way. Pretty well known fact.

The problem with the study isn't the answer that it came to. The problem with the study is it asked the wrong question. The question you have to ask is are commercial practices sufficient at assuring that the functional requirements for what we call balance of plant components are maintained. If the component is a one inch valve in my domestic water system, you will find the spec says one inch valve. That's it. But that's sufficient to maintain the functional requirements for that valve.

If it's something in my Generx system, you'll find something quite a bit more extensive as far as the functional requirements. But the answer is the same. The controls we apply are adequate for ensuring that the functional requirements for balance of plant components are met.

The problem comes when you look at this one inch valve thing and make the assumption that that's going to be applied across the board, and that's where my struggle was, because I'm going nobody does that. That's absurd. And yet when you read

through, that's the conclusion that's reached.

Well, you go out there and buy anything you can install it with no testing. I'm going, well, you know, you can't do that because if you do that, you don't meet the first boundary condition. You can't assure functionality. Our balance of plant controls apply sufficient requirements to assure functionality.

If we apply those controls to safety related components, they will still result in sufficient functionality. Because you can't just go buy anything and install it without testing and expect to meet that requirement. And that was my quandary, because I'm going okay, we could just state the requirement in the rule, that's performance based, and as a licensee I would have to what's necessary to meet that requirement. So what's the problem? And I said, well, okay, maybe the problem is simply that the staff needs assurance that those things are going to be done. Okay.

So we're going to apply rules now in order to assure a result. Okay. We can do that. We can -- we've certainly done it before where we specified both the result and the rules. And, in fact, if you're talking about RISC-1 components, I would say that's

the right way to do it. But we're not. We're talking about RISC-3 components.

Now, when Adrian talked about three ways of doing things and you talked about more than three ways, you're actually both right. But basically Adrian's right. There are three ways of doing things: Appendix B, augmented quality and the rest.

I could say there's one way of doing things with different gradations and the amount of rigor that you put into the process, and that would also be true.

I can live with an augmented quality description in this rule because I've got an augmented quality program. And that's important. I can't be inventing new programs. So I'm going okay, if we want to describe high level rules, let's do that. But by the way, when we do that let's go look at the descriptions that already exist for all of our other augmented quality programs and make sure that what we write is already consistent with that, because that's what my current programs are designed around. And I can't afford to do something different.

But you have to be careful when you look at the INEEL stuff. It leads you to the wrong conclusion, because it asked the wrong question. I

don't think there was anyplace in that study where they found that commercial practices that were applied were insufficient to assure that the specific components they were applied to resulted in unacceptable functionality. It doesn't happen.

So when you postulate that it may happen, you can postulate it, but simply it doesn't. And the study didn't demonstrate that.

MR. SCARBROUGH: Yes, well I understand your question. Part of the goal of the INEEL study was to respond a suggestion that this proposed rule could simply say we're going to remove all special treatment and we're going to just let the industry go and do commercial practice applying this. And how wold we write a safety evaluation to say that when we didn't know what commercial practice was.

MR. SOWERS: Yes.

MR. SCARBROUGH: And so that was part of the goal. Find out what is commercial practice. So okay, and we reference it. If they had come back and said yes, commercial practice is this, has these sort of attributes and this is sort of what it is, I mean we could have written into the rule, said yes, everyone knows what commercial practice is and this is what you can do.

But what they found was that it varies significantly within individual plants as to what they apply to different pieces of equipment. And for equipment that isn't generating electricity and that balance of plant gets a lot less attention than the stuff that's generating electricity.

So, that was the concern. And the containment isolation valves are not generating electricity, and neither is the diesel generator start valves. And so we're going to go back and say well they're going to apply the same process they applied to standby equipment to the diesel generator start valves or this MSIVs, or their check feedwater isolation valves, all of that equipment; how would be able to say affirmative that yes we have confidence in that equipment when it's going to receive the same attention as a maintenance valve that is never operated?

MR. SOWERS: I understand that's where the question was, and that's why I'm saying it asked the wrong question.

MR. SCARBROUGH: Right.

MR. SOWERS: The right question is for standby equipment, the equipment that is now standby, non-safety related are the processes used sufficient

for that equipment to meet its functional requirements? To assume that you'd use the same process for another piece of equipment that has a lot more complex and involved functional requirements is just fallacious. You can't do that, and everybody knows you can't do that. I think we agree you can't do that.

MR. SCARBROUGH: Right. But where do you have the regulatory assurance, though?

MR. STROSNIDER: I think you make a good point in that. And I followed all of your comment and it's right there saying yes, yes, I agree. I think the point being made that once you've identified what the goal is, if you will, then the treatment you're talking about has been successful.

MR. SOWERS: Yes.

MR. STROSNIDER: In the sense, and that the point was made, you have much better capacity factors. That was a goal, you applied a process and you achieved it. All right. And so from that process it's very successful and the industry should get a lot of credit for making that work. All right.

I followed it until I hear the comment that nothing fails, it just doesn't happen, because the process is working. We've got this high capacity

factor and that demonstrates that everything's okay. And what I come around to then is, yes, but the plant hasn't been challenged under the accident conditions since TMI.

Now, if you identify that your goal is to make sure you're addressing those conditions, and I think we've all agreed to that, then I think what your argument is if we apply the same processes with that goal in mind, we would expect to get the result that we'd achieve that goal; that should we be challenged with that sort of situation, that the components would perform their function. So I think, again, the regulatory perspective. When I hear statements and when I see the study -- I appreciate Tony's comment this morning when we talked about the industry study comparing safety related components and balance of plant components and saying, see, you know, balance of plant components have the same reliability. And the point we're making is but not under -- but would you have the same reliability if you had these other challenges.

That study asked the wrong question also, okay. To some extent it answers part of the question, but it doesn't answer the whole question. All right. And it gets down to if we agree on what the goal is,

and that's why I come back again to -- the boundary conditions, and like I said this morning we call them boundary conditions, we can call them performance goals. You know, they're very important. If we agree that that's what we're trying to accomplish, then I think that what you're suggesting is well the industry's demonstrated you can accomplish the goal once it's established, okay, with these processes.

MR. REED: I think what I hear you saying, Gary, is that you apply on the balance of plant the necessary treatment to meet the functional requirements of whatever the piece of equipment is, whatever application. And if I place in the §50.69 a requirement that simply says you shall maintain the design bases functional requirements, whatever the magic words, under design bases conditions -- we've been through that about ten times today -- and put that in there, that's all you need.

In other words, once I put that in there, stuff goes into Box 3, you know for your balance of plant industrial programs that you will maintain those design bases requirements and apply whatever is necessary. That's what I think I hear you saying. And you're not going to apply what you apply on the standby the balance of plant which you do that for

commercial reasons. You wouldn't apply that to standby design bases equipment.

MR. SOWERS: That's exactly what I was saying. There was a second part, though, that goes along with understanding.

Okay, I know that we'll do that. I recognize the need for you to know that we'll do that, too, which is why I really have no objection to what we proposed, which is putting some specific descriptions of the kinds of things that we all know we have to do in order to do that.

I kind of come from the philosophy that if you know what you need to do, we both should just write it down and do it and not worry about trying to hide it and leave it to choice.

And I think we all know that we have to apply those controls. So let's just write it down and do it and call it augmented quality, which is what it is. And we can do that.

MR. SCARBROUGH: Right.

MR. SOWERS: But we need to be careful with conclusions drawn form that INEEL study. The conclusions that I've seen drawn just don't reflect what the industry does or what the industry would do. And it's wrong to characterize it that way.

MR. SCARBROUGH: Well, the study was intended to answer that question: Can we just simply rely on some reference --

MR. SOWERS: I understand.

MR. SCARBROUGH: -- to commercial practice?

MR. SOWERS: Yes.

MR. SCARBROUGH: And that's what it answered. And the answer --

MR. PIETRANGELO: But you didn't look at the results. That's what Gerry is saying. You don't look at the results to answer that question. You looked at the inputs, not the outputs.

MR. SCARBROUGH: Yes. But what they found was that the range of equipment was such that -- the range of the treatment was such that how they applied it to different types of equipment was such that it would be very difficult just to say that and nothing more. And that was the conclusion that came up.

Yes, I agree, it would have been a good interest to look at that as well.

MR. PIETRANGELO: I wanted to see if I've understood what I've heard, at least with regard with -- as long as we're on these boundary conditions.

My understanding from what you said

before, Jack, was that these are probably going to end up being discussed in the statements of considerations for the rule, or some vehicle like that?

MR. STROSNIDER: To take it as question, I mean there's going to have to be something in the statements of consideration.

MR. PIETRANGELO: Right.

MR. STROSNIDER: And this is the sort of thing I would expect to see.

MR. PIETRANGELO: Okay. The other thing I heard is that these boundary conditions ought to reflect the desired outcome. And so when we look at it in that kind of context, I think maintaining the design bases requirements, however many words you need to say that, is clearly one of the key desired outcomes.

I'll skip the 3 now. I'm not sure this really serves as much of a boundary condition. I agree with what Gerry said before. If you're going to have a level of regulatory assurance, and you have to have a rational for why those levels are where they're at, that's kind of what we tried to propose this morning in our framework. But this -- yes, that's a desired outcome, you want some level of oversight, but in terms of being a go/no go on what you're

considering, I don't think number three helps you very much.

I think you do have to have a rational for why you have the levels established. And, again, we tried to give you one this morning in alternative 1.5.

Back to number 2, I think what I have heard from a bunch of people is that this is at too low a level at a point in the process rather than trying to reflect a desired outcome. And the desired outcome is that the categorization process results from being valid. And that's a more performance based approach than picking an input which was some point values in the PRA. And Doug explained the rest of the process that's applied here. The sort of focus on that really was not in the results context, it was more in the inputs again.

So, you know, that's what I heard. And, again, whether number three can be fine tuned to make it a more decision criteria type thing or desired outcome versus just say you've got to have some; we won't argue with number three. We agree, you have to have some level of assurance. And it's the level and the rational that one puts together to support that level of oversight.

MR. GILLESPIE: Yes, but Jack asked all my

questions.

I want to make sure that I'm going away with the right understanding of what I just heard. Not the answer, but an understanding.

Did anyone hear on any of the tech spec groups, you know, Adrian's and Biff and they gave Bob Deming on our staff a sign one time. And they made him wear it around his neck at a joint meeting and the sign said "intuitively obvious," nothing that it what's intuitively obvious to one party was not necessarily intuitively obvious to the other. And that word was used, Gary used it.

Tony, within the realm of what you explained this morning, some things were just said which are intuitively obvious to the industry but were not to the INEEL people and to us when the study was done, and caused us maybe to jump to a lowest common denominative kind of viewpoint, possibly.

One of the things that's missing from the body of standards and references right now is something that fits, and we I know we didn't want to use Appendix B, but the quality assurance program shall provide controls over activities effecting the quality of the identified structures, systems and components to the extent consistent with their

importance to safety.

It's been suggested, I think, by the industry people here that within your normal augmented program, kind of a power block program, in fact you do have some sense of what's important and you want the important stuff to have a little more control on it than the unimportant stuff.

Tony, with an articulation of that, which is criteria 2 of Appendix B or the meat of it in the middle, anyway, be something you would consider the higher level paragraphs that you were talking about this morning?

MR. PIETRANGELO: Yes. Yes.

MR. GILLESPIE: And I think that that sense of gradation would get us to -- and let me pick relays, for example. You can spec a relay, and you've got a lot of them. As Tom will tell you, you've got a lot of them. And you can order the right relay. You can also order it and require it to be protypically tested. So there's two levels of assurance. Well, how many levels of assurance are needed for -- and this is a tough one Tom brought up -- for a particular relay or if you're going to do it across a class, and how do you do that? Well, you need a process.

I'm not saying detail the process, but what I learned new was that there was sense of having a process, which differentiated important to least important even within the RISC-3, which is low important, is kind of already there.

Now, would your material touch upon that even at a high level, Tony? And then I want to ask Tom, does that help?

MR. SCARBROUGH: Right.

MR. GILLESPIE: Is that going down a path that helps to bring us together?

MR. PIETRANGELO: Yes. We had already kind of run into this yesterday when we were coming up with our definition and recognized that there's -- it's not so much -- it has something -- there is gradations of importance within RISC-3. But perhaps more importantly there's degradation of complexity with the change you're undertaking. It may drive higher levels of treatment, even within the industrial treatment program.

Now, I was thinking of putting that in our guideline to reflect that. And you're suggesting, perhaps, even putting it in the definition, which may even make it more clear, consistent with what's in Appendix B now.

MR. GILLESPIE: But it starts to bring, I think, us all together a little more in a recognition that (1) there is a gradation. And if I go to treatment -- to go to the two, the no one likes because I'm not sure we're really in agreement on the changes to that one, treatment process must maintain functionality. Well, I think we need reasonable assurance of functionality versus maintain, which is a very absolute term. And that assurance of functionality should be in consistent with the importance of the piece of equipment.

And what you're saying is what gets you to defining the treatment would have some proportionality to that component's importance even within industry. Which, I'll give you, is a low risk area so it shouldn't be too complex. Maybe no more complex than you're already doing on the power block anyway.

So there's some sense that there could be a coming together here. Okay.

MR. PIETRANGELO: Right. And I think --

MR. GILLESPIE: Don't make me -- I'm feeling good right now, Tony. Don't blow it.

MR. PIETRANGELO: I'm trying to take it back to what INEEL study actually found, and that would account for what the INEEL study found is that

there's gradations depending on the importance and the complexity of the --

MR. GILLESPIE: It's one of those things, when it starts to rain. Everyone is right from their own intuitively obvious position. But how do we bring this together so that everyone can feel comfortable with that level of regulatory control, as you put, Tony. And I think, Tom, you're coming from that same place. And how many words are needed to say okay we'll have a process that kind of fulfills what criteria to Appendix B says. Okay. That's one level, we'll have a process.

And then you're down into the other comment you got earlier this morning was plant procedures and guidelines. Now, where's the right place from the rule to plant procedures and guidelines to describe the process? I don't think we're going to answer that here, but the idea a reference to a process -- if we could leave here today with that, that would be valuable piece to leave with, without getting it too complicated because these are already low risk things.

Some things we may have to leave until the next meeting of a smaller group.

But anyway, I feel -- did I characterize

it that there is a process there, how much regulatory control or control over process is needed is something we need to discuss?

MR. SCARBROUGH: Right.

MR. GILLESPIE: Okay.

MR. SCARBROUGH: That's something that I think we're working towards.

MR. GILLESPIE: And, Tony, you guys are open to discuss.

MR. PIETRANGELO: Well, we proposed something this morning.

MR. GILLESPIE: Okay. Okay.

MR. PIETRANGELO: And gave our rational for why we think it's the right level per number three.

MR. GILLESPIE: Okay.

MR. PIETRANGELO: And that's kind of our strawman to throw in for consideration.

MR. GILLESPIE: Okay. Great. But that could bring us together instead of arguing over the rightness or wrongness of the INEEL study, how do all these things come together. And the key may be the idea that there in fact is a process. I hate to say this because I don't want to make it too complicated. But there is even within RISC-3 a gradation. Okay.

Now, how do we do that so that everyone wins is the challenge now. Okay.

MR. JEBSEN: Eric Jebsen from Exelon.

This is sort of -- I guess I was thinking along these same lines where I'm tending to think more in terms of a performance based rule where the process itself is okayed at a high level and then the assurance is through the normal course of inspections and assessments, and things like that. So that you say you have to have these elements, whatever they are, the QA program says on an individual site specific basis, the utility basis says here's in general what they mean, here's our procedure on how we're going to do all this stuff. And then through an inspection process someone says "Oh, you made this a RISC-3 showing me how you're verifying that this is okay. We should be able to pull a program, test results, or whatever it happened to be to give us the assurance we are meeting this commitment. And then agree or disagree, you know.

But I'm tending to think of it more in terms of that way where the process is okayed. And, again, I'm thinking more in terms of an operating plant and again, from perspective of -- and this is my intuitively obvious part, is that the 75 percent is a

myth. You know, that I might have like, I guess 3 or maybe 4 systems that I can think of right off, some of which aren't even in the PRA. And I'm thinking of how much am I really going to save and make it worth my while to go through this this trouble and recognizing there are some things, for example, you bring up like relays or bolts, wire, val packing, all kind of consumables. I generally buy all Q anyway just so I don't have the horrible problem of discovering I've put a non-Q thing in a Q application, which would swamp -- the pain of that would swamp any benefit of the pennies I'd perhaps saved on buying a couple of non-Q bolts.

So I understand that okay we want to write the rule for new plants, too, and I would think from a new plant perspective they would almost be beyond this in a sense that they would start with a Q list that's 10 percent anyway. That their PRA would help define what's important to safety. They would live with Appendix P, the PRA helps define what's important to safety and the stuff that's not important to safety as demonstrated through some combination of expert opinion and PRA would already remove all those components and so would not be even necessarily in the program.

MR. SCARBROUGH: That's Option 3.

MR. JEBSEN: And that's my comment.

MR. SCARBROUGH: That would be Option 3 at that point. So I think the complexity of having the new plants in here is -- I don't know. Maybe that's something to go back and rethink should there be something to just keep it to operating plants or also include the new plants as well. So that's something that may have to be thought about, too.

I know it's getting close to lunch, but I did want to mention a couple of things regarding Tony's point and maybe just give Tony to think about during lunch.

But one is regards the alternative to your slide 9, which said it's a draft alternative 2 RISC-3 approach is equivalent to the current Appendix B. And that's really not true, because if you look at procurement, just in the area of procurement just in how it was described for the South Texas, that's not Appendix B procurement. That's what was allowed for South Texas. So it's quite a bit less.

So, there are some areas that would be similar; design control and corrective action, yes, they would probably be similar to Appendix B. But the concept of alternative 2 was not Appendix B. It was

intended to be much less.

MR. PIETRANGELO: Well, what was meant there is that in terms of what language is in the rule. Okay. What's in your draft alternative 2 in the paper is basically the same level of detail that's in the rule in Appendix B. And I didn't mean it to mean anything more than that. All right.

Clearly what South Texas got on their exemption request is less than the commitment to all those reg guides and standards, and all the rest of the kind -- we call it Appendix B at the top of the pyramid and the rest of that stuff that one commits to in the rest of that pyramid, clearly they have something less than that. This was only aimed at the level of detail in the rule.

MR. SCARBROUGH: Okay. Good.

MR. GILLESPIE: Tony, this is another interesting point. It was a good point of bringing things together this morning.

What I got out of what NEI presented this morning was asking the staff to step back and look at being a little more articulate in overall objective to what's intended to be met by those attributes. And therefore, it only lists the attributes versus listing the objective of each individual attribute and

recognize what the integral is supposed to achieve.

MR. PIETRANGELO: Correct.

MR. GILLESPIE: Right? Which would allow more flexibility, I guess, on the industry's part attribute to attribute, or what would go in the level guidance document.

MR. PIETRANGELO: Yes, because what happens, and this is again why we contrasted with what's in Appendix B today, if you put the same level of detail in 50.69 that's currently in Appendix B and you tend to go to the next same level of detail in the implementation, and these are lows versus what was safety related and the most important thing before.

MR. GILLESPIE: But the important thing I got out of what you said this morning was a request that we look at the attributes in the integral.

MR. PIETRANGELO: Yes.

MR. GILLESPIE: And not necessarily one at a time. And you suggested that we might have to actually beef up what the overall objective was of the whole to be more articulate about what the whole treatment thing is trying to achieve for RISC-3 consistent with the fact that it is RISC-3.

MR. PIETRANGELO: Right. I think you've been pretty articulate about that already.

MR. GILLESPIE: Okay.

MR. PIETRANGELO: You want to maintain the design bases requirements going forward for RISC-3. And to me, that says a lot, and that's sufficient from our standpoint. If you feel the need to further elaborate on that, but it still does the same thing, fine. But I think that's what we see as the overriding concern here is that those design bases requirements are maintained.

MR. SCARBROUGH: I did have one last point. Oh, Gerry?

MR. SOWERS: Well, is it time to talk about boundary condition 4?

MR. SCARBROUGH: You have one to suggest?

MR. SOWERS: Well, I just assumed we'd get to that. It's the obvious question after you laid out 3 to ask if that's all there are.

MR. SCARBROUGH: It's supposed to be all there are.

MR. GILLESPIE: Oh, darn.

MR. SCARBROUGH: The last thing I wanted to mention --

MR. SOWERS: I would like to talk about boundary condition 4.

MR. SCARBROUGH: Oh, you have one? Okay.

MR. SOWERS: Oh, yes.

MR. SCARBROUGH: Come forward.

MR. SOWERS: This is Gerry Sowers again from Palo Verde. This is only because I like to spring things on Tony.

MR. HOLAHAN: We should start a club.

MR. SOWERS: There is a fourth boundary condition. And I mention it especially because this rule is a voluntary rule. And it's only going to be adopted if it's judged to be cost effective. And it's certainly a judgment that ever licensee is going to make, and they're going to judge whether the rule is acceptable on that basis.

So if we view these things are our boundary conditions and not just the staff's boundary condition, there is a fourth, and it's very important. And I don't think we should lose sight of it. There is, in fact, words -- and don't ask me what SECY letter -- that talked about this, that the rule should have an expected pay back in X number of years. So there was a recognition that it was voluntary, that an objective of the rule was to result in cost savings without a significant reduction in safety. And I think it's fundamental to this whole thing.

It's fundamental because I'd hate to go

through all of this with your time and our time only to get to an end and have licensees decide it won't work.

So, I'd suggest that we need to add a fourth boundary condition there that normally I agree would not be there, but in the context of a voluntary rule with this stated purpose has to be there. And second, because certainly all the licensees are going to judge the acceptability of this rule making with that as a major boundary condition.

So that's my fourth one.

MR. SCARBROUGH: Thanks.

MR. GILLESPIE: I think that's a good point, and in fact on the current schedule that we're at, that has to be a primary question in the statements of considerations when this go out proposed. Because if the answer is the wrong answer, there's no point in going final.

MR. SOWERS: Exactly.

MR. GILLESPIE: It's not worth the incremental effort. And the sunk cost is what it is. So, that definitely is going to have to be in the first public submission we put out.

MR. REED: That's also a part of the regulatory analysis, Gerry. It's an integral part. We

have to try and understand the cost and benefits because, as you said, we don't want to put together a framework and expend the resources to that that nobody's going to adopt.

And, you know, as part of the pilots we were hoping to get some even -- if nothing else, at least some qualitative information to that, you know, to help us answer that question. And we understand the difficulties of trying to come up with that information. But you're absolutely right.

And it's buried in our process. We didn't pull it out as a boundary condition, although perhaps you could see it as somewhat in the third boundary condition buried deeply in there. But nonetheless, I can assure that the regulatory announcements process will look at that question.

MR. STROSNIDER: It's a good comment and it's one we certainly need to think about. I think I'm also a little concerned about perspectives because, you know, I could write that, and maybe you'd agree with this, but I could write that boundary condition as saying, you know, when we put this out for public comment and we get the feedback from the industry on what the benefits are, if the benefits don't justify it, then don't pursue rulemaking.

You know, it's interesting though, too, because what you pointed out earlier, this will have different economic impacts with different plants depending on -- you know, and so we're going to be relying upon industry input to help support that.

So, I don't know if that's a boundary condition. If that's the way you'd state it or not. That's why I mentioned it. But I guess it's the same concept.

MR. BURCHILL: Bill Burchill, Exelon.

Actually, it's already in all of your literature. The ANPR said reduction of unnecessary regulatory burden, and you know, frankly, it is quite surprising that hat doesn't show up as one of your boundary conditions. Because the reduction in unnecessary regulatory burden was supposed to help you and us, and it was supposed to help us not just in absolute expenditure bases, but in also focusing our attention on the things that really make a difference.

MR. SCARBROUGH: Bill, if you look at the September 27th detailed discussion of the alternatives for boundary condition three, it does go through and indicate a discussion of the four performance goals, and it does talk about unnecessary burden. I mean, that is a discussion point that is in there. And I

did mention it among everything else I talked about this morning, but in terms of meeting those performance goals. And one of them is reduction of unnecessary burden.

So, absolutely, I mean that is part of our consideration in terms of meeting that to try to reduce, remove special treatment for this somewhat percentage of this equipment that's safety related and put it under something else because there's a perception and that can be drawn out from looking at the data and such, is that there's an unnecessary burden here that can be reduced. And that's part of the goal of meeting -- and it is in the third boundary condition.

MR. BURCHILL: As you say, it's extremely well camouflaged.

MR. REED: Actually, not to belabor the point, but you know our four pillars is what we used to evaluate everything these days. And most of these boundary conditions are going after the first one, maintain safety. You mentioned reducing unnecessary burden, but this regulation will also be more effective and efficient by focusing on what's important. This workshop and we're doing is the public domain is maintained, the public confidence.

So we're trying to do all four. Those other three aren't really coming out as being too obvious.

MR. CALUO: I guess I'm a little puzzled that that question comes up now. Because that question that's probably planning there was an understanding by the staff, the NRC and the industry that this is something that you wanted because it's going to help you to focus on safety better, to reduce the burden better. And why you asking that question now?

If your expectations between now and when they issue a rule that there's something in there that you don't get that you wanted to get when you first planned on this, that it will preclude many utilities from not doing it, if only one or two do it and if they -- worth their while to spend their resources on two and not the other.

I think you're asking a question that you should have asked that question before you embark into this tremendous use of resources.

I'm just curious why you bring that now as a fourth condition when that should have been already established before. Anyway.

MR. REED: I think, Jose, we're all

working towards that. You know, when we come up with this draft rule and ultimately get to a proposed rule, we're trying to develop a draft rule everybody can live with. Obviously, that's the first thing we're trying to do. But when we get to the proposed rule and we something out there and we get the public comments, I think we'll get the kind of feedback from industry what we've actually arrived at is truly cost beneficial and will work for them. And we're trying to get there for all of us. You know, we all benefit from that.

MR. CALUO: That's all I have to say.

MR. PIETRANGELO: We're in the middle of the process. We're forming the way it's going to be done now.

MR. HOLAHAN: Jose, all three alternatives may not achieve these goals to the same extent. And so all we're saying is that these boundary conditions and the other goals are the way to judge which is the best alternative.

MR. CALUO: (Off microphone) ... and I know what you're saying, but I guess it come as a surprise from the industry point of view that they're not quite sure whether this cost beneficial or not. I don't know.

MR. STROSNIDER: Well, let's put it on the table. The industry's afraid that the NRC's going to promulgate such a conservative rule that it's not going to achieve that goal. I heard the message, okay.

MR. REED: Tom want to take one more comment.

PARTICIPANT: Nobody can top that.

MR. SCARBROUGH: Back to Tony's point, I wanted to raise this. In terms of your slide 8 where you talked about the rule would have we'll say very high level with a list of attributes there. I think you referenced a QA topical reference in the FSAR should have provided a summary description of the attributes. And I don't really expect you to give an answer now, but something to think about.

Where would those summary description of attributes come from? Would they be generated by the licensee itself or would there be some sort of document generated by NEI or the NRC, or something that would be the document where those attributes would be derived from?

MR. PIETRANGELO: Yes, we talked about that yesterday in our meeting. And as part of the discussions we've had up to now, the thought is to

follow the risk-informed ISI model for implementation of this and develop a template for submittal to the NRC. And in that template you'd see the kind of language associated with the summary descriptions of the attributes.

MR. SCARBROUGH: Okay. Good. Thank you. All right.

If anyone has cards for questions for after lunch on various aspects of the rule, that would be great.

MR. BALKEY: As you run the cost benefit-- I'm sorry. Ken Balkey with Westinghouse. And I've been working on the Westinghouse Owners Group project on the Option 2 effort as well as with the ASME.

The question about well the industry having done the other applications on in-service inspection, in-service testing and tech spec knows that working with the staff moving to Option 2 has tremendous opportunity with it if we all do it correctly and then everybody comes out winning.

We've all known that the only way you can show are you going to get the payback, you have to try it out with what you have. And that's what a number of plants have done in Quad Cities, Wolf Creek, Surry and Palo Verde. And we're at a critical point because

the IDP was just completed at Wolf Creek last week, and now it's time to look at the treatment. And if you stay with one position on how you're going to do treatment, that's going to really change that evaluation. If we can determine what Mr. Gillespie just identified as a case where it allows a compromise between what you've shown here this morning plus what Tony has, then that can be evaluated right now. But if you keep it up in the air, it's going to be real hard to do that cost benefit.

We need to get some direction now at this point, because when fellows like Mo Dinglor have to go in front of the owners group to justify continuation of program, he has to be able to get up there and say we know where we're going and we're going to get the answers. I'm sure it's going to make it difficult to keep going on.

MR. SCARBROUGH: A good point. Thank you.

Be back at 1:15. Thanks.

(Whereupon, at 12:11 p.m. off the record until 12:11 p.m.)

A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

(1:25 p.m.)

MR. REED: Looks like we've lost about 50 percent of workshop here unless I was hallucinating this morning. I thought there were more people here.

PARTICIPANT: They heard everything.

MR. REED: Yes. Nobody takes me serious. It's like 25 after 1:00 and nobody's back yet.

MR. HEYMER: We're still interested.

MR. REED: Okay. That's good.

Why don't we start getting things rolling here this afternoon.

As I mentioned this morning in the agenda, there's a couple of items we're going to try to discuss that I know about this afternoon, and then we'll just go from there.

Ken Balkey from Westinghouse has got a status on the ASME code cases he'd like to go through. And I think Adrian's going to go through some items that NEI have looking at our draft rule concepts.

We have one question here that was provided before lunch, two questions. We can discuss those two. I think we'll take those two after we go through these other presentations. And then we'll go from there. I have a feeling that's going to take us

all the way to 3:00, but you know, we'll see what we can do.

Ken or Adrian? Adrian's got the floor first.

MR. HEYMER: Good afternoon. My name is Adrian Heymer. I'm from NEI.

Yesterday in the task force meeting we went over the rule and the treatment, and we went over some of the draft proposals that were put before us. And we just thought we'd provide you with some input and thoughts at this point in time.

As Tony said this morning, we'll try and give you some written comments if we can next week, but certainly this is just, if you like, a starter.

I think the first one, I'm not quite sure what Tony had for lunch, I noticed his chaveau wasn't on the menu. That's horsemeat, by the way. But I think this horse's just about killed it off this morning, I think. So, we can talk about it some more if you would like, but I think we covered really this aspect of it this morning with regard to design input and design bases. But I think if we do to the term design bases, we just wondered whether or not you still need the phrase "throughout service life." And I guess because we didn't quite fully understand what

design input was, we wondered what was really meant by the term throughout service life. And if you go to the design bases, that terminology isn't that encompassed and doesn't that kind of become redundant. So that was a first thought.

A little bit more specific, if you go to the rule or the draft proposal -- sorry, Tim -- on (c) and it talks about the categorization process, and it says, first of all, the categorization process would either be approved or it would satisfy Appendix T. And if people are going to approve, do we need a lot of detail in the rule? Because the Commission going to approve what the licensee wants to do anyway before the licensee start off.

But if you just look at (1) we say "Use a plant-specific Probabalistic Risk Assessment to determine the relative importance of modeled SSC functions in terms of core damage prevention and mitigation and large early release prevention and mitigation." And in the terms of a PRA we normally talk about core damage frequency and larger early release frequency are kind of the accepted matrix. And we thought that that might be better than coming with core damage prevention and mitigation. So that's one input.

As regards the paragraph -- well, there's a few minor points on item (2), and really they're editorial in concept. And I think whenever we see the next version, we can provide some written comments. But I guess we just wondered about "Consistency with the defense-in-depth philosophy." Not the defense-in-depth philosophy, but just the "consistency with." The categorization process that we've proposed in the guideline incorporates defense-in-depth philosophy. So we just wondered why the term "consistency with" was in there. But we will provide you some additional details when we see the final point.

More important aspect is on item (3) on §50.69(c)(3). When we read through that we felt that the aggregate sensitivity studies really take care of this concern I guess you all are expressing here. And we wondered if that would be better language, or at least words that speaks of that rather a more specific set of words down here, which kind of begin to verge on the how to as opposed to the what. So that's a thought where we are.

We didn't really understand on item (4), and I haven't listed it, is what you were trying to drive at in item (4). The categorization process shall be approved as suitable for this application.

Well, if you're approving the categorization process or if you're meeting Appendix T and Appendix T is there related to §50.69, that is the application. So we struggled a bit about item (4)

Item (c)(5) we've got some language in our guidelines that really speaks to assessing the impact of new information, whether that be failures, operating experience, feedback from the PRA itself into determining when you need to update or rework the PRA. We've also got (a)(4) the maintenance rule and several other activities going on. The PRA standard doesn't actually get into a specific time frame. So we just wondered why you'd selected a specific time frame rather than use the general words that are really in the PRA standard that talks about that you make determination on updating the PRA based on specific criteria.

A number of these we've talked about already. The maintenance rule link, we felt that (d) certainly -- for (d)(1)(i) that's what we're going to be doing for the maintenance rule anyway. I understand the concern that perhaps some people have not -- are only treating maintenance preventable functional failures, but the vest majority of the industry are already getting there, and I think if you

came up with language that was very similar to what's in §50.65. Monitoring programs sufficient to provide reasonable assurance that the intended functions will be satisfied. Well, that's really what we're talking about here, the design bases functions.

So, we felt that §50.69(d)(1) kind of duplicated what we've got in the maintenance rule. And I think I began to understand this morning why you might have put that in there, but I think it's worthwhile just pausing say are we duplicating what's already there. And that really goes for little (i) as well small (iii) there.

I think Tony mentioned this morning about -- when we read this, we seemed to get the impression that you're getting relief from the maintenance rule for RISC-3, but you seem to be putting back in place with some of the other criteria that are written in the draft language. And I don't think that was the intent, but was the flavor that we got the rule. Rather like one those famous books says "The left hand giveth and the right hand taketh away." Or perhaps it's the way around, depending on which side of the regulatory divide on you're on, but that's the impression that we're getting; that we don't have to do the monitoring, the balancing of availability and

reliability, but then when we began to read some of the other words and we spoke that again this morning, we felt that perhaps that was the intent.

The next item I think is something that we really are striving to understand is the need for a license amendment. And we're not quite -- to implement this, it's a rule. When we've looked at similar risk-informed activities such as risk-informed ISI associated with §50.55(a)(3) we haven't had a license amendment. When we implemented the maintenance rule, which is a new rule, it wasn't a license amendment.

We're going to be making a submittal that the NRC staff is going to approve, the licensees will implement the rule in accordance with NRC endorsed guideline or NEI-00-04. So I guess when you go through all that process and bearing in mind that the agency's going to approve it, why do we actually need a license amendment.

And the other thing is that if you look at where we are today, we can change classification of equipment through the existing change control processes, and this might be a little bit more of an extension on that. But I guess when you look at all those three points, we're just wondering why we need

a license amendment. I never think that's entitled with a license amendment just because the regulatory process.

§50.69(g) change control. We think, as Tony expanded on this morning or explained this morning, the processes are already in place and the §50.59 applies to design bases and safety analysis. You can make a change to the design today and then you run that against the §50.59 criteria. You make more changes today and you run that against the §50.59 criteria.

The categorization process would be described or you would seek approval for that process with the agency, and that would be controlled through the commitment management process. And the treatment description that's in the sub would be controlled through §50.54(a).

So, I guess we struggled why you've got item §50.69(g) there where we say "In lieu of the requirements of §50.59, when making changes to the procedures and processes for implementing §50.59(c) and (d), the licensee shall provide a written basis, and maintain it onsite."

That seems to us duplicating what's already out there as regards the control process

today.

And finally, on the reporting requirements, I think we're on the same page, we just wanted to make sure that we are; that the reporting requirements would really only apply to the safety significant SSCs and it would be linked to a failure to satisfy a safety significant function. And just as, I think, §50.73 today; if you have a failure of the component but it's redundant and the equipment can still satisfy the safety significant or the safety function, then it wouldn't be reported. I think that's what you mean, but we just struggled a little bit with that.

Also, you have a statement here that says "Changes to the FSAR report to implement §50.69 do not need a supporting §50.59 evaluation." And we just wondered whether or not that was really necessary for a rule.

Those are, I guess, some of the highlights of some of the comments we've got on the aspects of the rule, apart from treatment. And we're just providing those as input at this time. And with that, I'll look out for questions. Any questions or comments?

MR. PIETRANGELO: I have one.

MR. HEYMER: Tony?

MR. PIETRANGELO: I just want to go back to the one slide on the need to update the PRA, and that's on the categorization of §50.69(c). Make sure that the feedback we're giving you here is understood about why we're making this comment.

The current §50.69(c)(5) specifies a PRA update periodicity, and that's not done in any other regulations. There are other risk-informed applications that rely on the PRA being up to date. And Adrian cited the maintenance rule. There's a statement in the guidance that says that §50.65(a)(4) you have to really continually assure that your PRA reasonably reflects the plant configuration. And that's found in the guidance that was endorsed by the staff.

There are other applications on tech spec AOT extensions and risk-informed ISI where this going to be one of those things that is going to be important for the variety of application, not just one. And so to specify in a single rule for a specific application and update frequency, we didn't think was appropriate in this case.

What we did think was appropriate was the kind of consistent with what we do for the maintenance

rule. There's no information that happens all the time. And what's important -- this goes back to the boundary conditions. You want the categorization results to remain valid so that when there's any new information that has a potential to impact those categorization results, it needs to be considered. And you don't wait 36 months to do that or, you know, whatever somebody would pick as an interval.

We would envision some kind of screening criteria that looks at the inputs that went to the IDP to see if they were changed as a result of any new information that was brought to bear, including the potential update of the PRA.

Use some screening criteria and then decide whether you need to go back in and look at how the categorization results were impacted.

So we thought that was a more flexible way to do this than for this specific regulation on special treatment requirements to speak on behalf of the agency for all the risk-informed applications and mandate a 36 months PRA update frequency. So that was the thinking that went into that comment. And I hope we have a little bit of discussion on this later, because it's kind of some of the things we've talked about in other forms about this isn't the only risk-

informed activity ongoing. PRA quality is an issue across the board for all the applications, not just this one. And so the flavor of that comes into this particular comment.

MR. STROSNIDER: Tony?

MR. PIETRANGELO: Yes.

MR. STROSNIDER: I'm not sure that's completely clear to me. The suggestion that the expectation would be that you maintain the PRA quality continuously. Is that what you were saying?

MR. PIETRANGELO: No. In this particular case that -- and we didn't give you all the suggested changes to the rule language that's in here. We'll try to do that in what we send you by next week, because we had additional comments yesterday.

Clearly PRA quality is a concern for this particular application. But broader than that, and I think consistent with what Doug True said this morning, PRA's only one input into this process. It's really the IDP process that -- the categorization consists of PRA plus a lot of other things, okay. What's important here is that the categorization results remain valid.

MR. STROSNIDER: Absent a specific update frequency, if you replace that with -- our expectation

is that you're going to have -- the categorization process is going to be valid at all times. It seems to me that's somewhat onerous to say. You know, you'd have to have a process in place and anytime anything changes to go back and ask yourself did it change by categorization process. And that's why I'm wondering are you saying --

MR. PIETRANGELO: Yes, that's the right question.

MR. STROSNIDER: I'm not sure how to capture the idea.

MR. PIETRANGELO: That's why I think an implementation space that would probably be some kind of screening criteria that someone could look at to judge new information that was related to the inputs that went tot he ODP and be able to discern pretty quickly with the screening criteria whether a further assessment was going to have to be done to see if the categorization results would change.

I think consistent with what Gerry was saying this morning and then some of our other folks, we think this categorization is going to be pretty robustly done this first time. We don't expect to see a lot of changes unless you have some major, major mod in the plant or some very major performance issue,

that we would expect to see the categorization results change.

So this screening criteria would probably filter most stuff out, but it's another way to skin this cat about achieving the result of the categorization results remain valid.

MR. STROSNIDER: Just to follow up, because I'm just having a little problem.

So how often -- what -- when would you apply these screening criteria?

MR. PIETRANGELO: When you've got new information related to the inputs that went to the IDP.

MR. STROSNIDER: So somehow you'd have to have a process set up where any new information to plant changes, design and you'd have to be on a continuous basis comparing it to a screening criteria? Okay.

MR. SOWERS: This is actually a question that hits me right directly, because I'm a PRA supervisor, so it's my job to maintain the PRA and to assess the impact of any changes in that PRA on any applications. Literally every application that has come along has had that requirement.

It's, frankly, one of the things that

scares me quite a bit. It's one of the tip of the iceberg problems. We don't know exactly where it's going to go. But let me tell you what we do do now that may be different from a common perception.

First of all, the idea of periodic updates, whole updates of the PRA, we don't do that anymore. We, in fact, try to do continuous updates as changes are made to the plant. You might consider that to be burdensome, but in fact it's quite the opposite.

Doing a wholesale update of the PRA is such an enormous task that there's no way you could staff for that task every three years and then what do you do with all those people the rest of the time. So you've got to find a way to spread this task out over time so that it's manageable.

So, what we at Palo Verde have done now is literally to try to reflect changes to the plant; and those are design changes, changes to emergency operating procedures, any of those things that were inputs to the PRA and make that changes to the PRA continuously.

Part of the reason for doing this is paragraph (a)(4) which, in fact, does require that your PRA reflect the as-built as-operated condition of

your plant. So that's a little bit of the motivation that put us there.

Now, there are other things like data updates where it doesn't make sense to do that continuously and, in fact, you wouldn't get enough data in one month to change the answer from the previous month anyway. So those things you will do periodically, and it could be every three years. It could be, depending on what kind of data, the next time the NRC comes out with a report on initiating event frequencies, for instance. That's what drove us to redo those the last time.

But you can't any longer look at the maintenance of PRA and find a real easy to establish periodicity where you say I'm updating it every X often. Because now it's spread out all over the place.

So the first part when you talk about updates to the PRA every 36 months, it becomes problematic for me to go, oh gosh, how do I demonstrate I've done that? I've got X parts to my PRA and some of it I updated last month, and some of it -- well, let's see, I think I did that 18 months ago. It's just impossible for me to do that in an easily identifiable way. That's the one difficulty, with especially putting a time frame in the rule.

It's the wrong thing to do.

When it gets to the second part, which is assessing the impact of changes on any applications that you've done, yes, you have to do that. But you can do that a number of ways. I can make an update to the PRA and just look at the overall results. I can look at some system importances if I want to do that. I can look at the little pie charts that breakdown which initiating events contribute how much to my current risk. I can look at the absolute change in risk. And I can actually draw a fairly valid conclusion fairly easily that if none of those things have changed dramatically, then none of the applications will be effected dramatically. And it's pretty easy to do that.

If, on the other hand, like the last change that really made a change to those was updating the initiating event frequencies based on the changes to the industry data. That, by far and away, had a larger impact on our PRA than anything we'd done before that, including about two years worth of plant changes.

I could also look at that and go, wow, look at the way these fractions on this pie chart has moved. I know that that has to have an impact on

importances, and then it would drive me to the next level where I would go, okay, well, what did I do last time? I used these values when I did my categorization. Rerun the importance values, compare them again, see what's changes. If it changes any of the inputs into that decision process in a way that would have lead to IDP to possibly reach a different conclusion, back I go. But it's also -- I mean, it's fairly easy for me then to take that and decide, no, none of the inputs have changed. I don't need to go back. I can stop there.

So what you end up building is kind of a layered process where you look at the magnitude of the change and you have to screen through it. And you go, okay, I did this update. None of these things changed dramatically. Therefore, my applications couldn't be effected. And I'll admit, you're making some judgment doing that. But I think it's fairly sound judgment. And the more you work with the PRAs and understand what does cause changes in the results, the better you can make those judgments and define quantitatively how you measure those judgments.

But that's what we're faced with, and that's why it gets to be very difficult to write into a rule a periodicity and an assessment of the impact.

Because I don't think (1) that assesses the impact nearly as well as you should be doing continuously so you're missing the objective, which is to judge the impact on the categorization when something changes. And on the other hand, it can also force you to do things when, in fact, you know that there has been no impact. So we need to back up and, again, go back to the objective in the rule.

You have to have some way to assess that impact. And I'm not sure that we could ever decide on a real periodicity. What you have to do is find a way so that you know when it's important to go back and do that.

This is also one of those things, by the way, where I think we haven't done it enough to completely understand how to do that, which makes it more important not to write very specific statements into a rule, because we're going to learn as we go along. And we want to be able to easily take advantage of those learning and incorporate them in what we do. But that's kind of where we're at and why that part's problematic to us.

MR. LEVINSON: Stan Levinson from Frametome ANP.

Just to follow up on Gerry's remarks, I

wanted to point out that Palo Verde's not unique in this. That the certification process requires that the utilities to continuously, you know, examine information that's coming in, assess what the impact might be on the PRA and also look at their previous applications that they've used the PRA. So the experiences that Gerry's relating, you know, should be valid industry wide.

MR. BURCHILL: I'm Bill Burchill, Exelon.

Just to add to what's been said. Two things. One is I wouldn't think there'd be any reason to separate whatever quality of PRA statements you want to make here from those that you're making in other parts of the regulatory framework, and particularly in 1.174 and, you know perhaps you're impending endorsement of, you know, a standard or more standards. I mean, it seems to me that's the context in which PRA quality as far as the regulatory is trying to provide its self-assurance should be addressed. So I don't think there's anything unique here.

The second thing is, actually, Gerry, you and I had this conversation at Amelia Island about what you did about past applications and if you had a PRA update or if you had a plant modification that was

significant. And, frankly, I think we're compelled in these days where we have those types of applications to go back under our own corrective action program. I think that's what we discussed. And, you know, address it in that context and take corrective action.

So if the agency needs to have an avenue into saying whether or not we are maintaining validity of some past risk-informed or risk -- you know, non risk-informed but something that risk and information, this of course would be risk-informed, that avenue is already there. I mean, I don't think that there's a need for something new.

MR. GILLESPIE: Tony, let me follow up both of your points. And the reason, at least I was staying quiet while you were talking, is I could take some of the adjectives and adverbs out and you're writing our statement of considerations potentially for us, depending on how the staff is going. So this is actually very, very good dialogue.

Tony, you made two points and I think you got reenforced by the other people here.

One, that there is some sense of a process you could describe that you're already following. And that the certification process and the other standards that are now in the works would lead you to anyway.

The other one, and now I'm getting into a little more detail, is I think what you've said also is don't put two different sets of works trying to mean either different things or the same things at two different places in the regulation. Do you mean that? They always generate some conflict. I mean, I'll give you -- my prejudice is whenever you've got words someplace else so you can write it down and reference it, then write it down once and have it be universal verses trying to write it down twice and then trying to keep everything even or writing it down slightly different.

But would you propose then that writing it down once might mean, and I guess what I'm going to jump to is something someone said to catch all functional failures; might that mean changing it if the one place was in the maintenance rule to just expand it to include that was in it as part of this rule change?

MR. PIETRANGELO: I would not --

MR. GILLESPIE: I'm just -- I know this is a how, but --

MR. PIETRANGELO: I'm not sure where the appropriate place to make the one universal change is. I don't think we should rely, though, on specific

applications to set policy for all the rest of the applications.

MR. GILLESPIE: Well, I'm real sensitive to what we're doing in tech specs in another venue, which has exactly --

MR. PIETRANGELO: I, too.

MR. GILLESPIE: -- all the same kind of questions being asked. And that's not in rulemaking, so I've got some sympathy for what you're trying to say here.

MR. PIETRANGELO: And we've kind of relied on reg guide 1.174 to a certain extent as setting kind of the regulatory policy for risk-informed type changes. I think this, while not a direct application of the 1.174 guide, it certainly should be consistent with that. And we know that there's no PRA update periodicity specified in 1.174. There is not one specified in the ASME PRA standard, to my knowledge.

The only other thing we have right now is in our 93.01 guidance that says that for (a)(4) the PRA needs to reasonably reflect the operating plant conditions, the as-built condition.

So, I would -- I don't think we should just go back and change because it happened to be the first one by chance, that's where we address this.

MR. GILLESPIE: Okay.

MR. PIETRANGELO: I don't think that's the right way to do it.

MR. GILLESPIE: But if we rewrote it in this rule to try to be more generic, should we go back and take it out of that other one?

MR. PIETRANGELO: Well, it's not in the rule. It's in our guidance, I think.

MR. GILLESPIE: Okay.

MR. PIETRANGELO: That PRA needs to be reasonably consistent.

MR. GILLESPIE: Okay.

MR. PIETRANGELO: You don't see that language in --

MR. GILLESPIE: So it'd be an advantage generally to eliminate confusion is to try to have it written once and just have pointers to that one place, wherever that was?

MR. PIETRANGELO: Yes. And maybe that's--

MR. GILLESPIE: Okay. That's a good --

MR. PIETRANGELO: And maybe it's the ASME PRA standard is the place it should be written down. I'm not sure.

MR. GILLESPIE: Okay.

MR. PIETRANGELO: But I agree with the

concept that one place and reference that one place is better than trying to rewrite 18 different times in the different applications.

MR. GILLESPIE: Okay.

MR. CHOEK: This is Mike Choek from the staff.

I think we need to also remember that we're just not talking about a PRA now, right?

MR. PIETRANGELO: Right.

MR. CHOEK: You're talking about the categorization process to be maintained. The reason I bring that up is because we let things like your five analyses and your seismic margins to be used. And if you're going to do something to invalidate those success paths, I think we need to also update the process itself.

I think this thing here basically what it was trying to do was to say not only do you have to update your PRA at a periodic basis, you have to look at your process to categorization RISC-3 SSCs and make sure that the process to categorization these things have not been changed because you changed your plans.

MR. BURCHILL: Let me just add one more experiential detail, adding to what Gerry Sowers said. And I certainly am not speaking for everyone in the

industry here, but I suspect that you would find similar practices everywhere.

Particularly driven by (a)(4) but frankly already predating that. At all of the Exelon sites we have a common design change procedures. Now this is not a PRA procedure, it's a design change procedure. That every design change that's made has a set of screening questions that must be addressed. I don't want to say it's like §50.59, but it's that type of thing. It's a set of screening questions that says does this design change impact the PRA. And it would look at things like does it -- you know, introduce new initiators or does it change dependencies of important support functions, or does it potentially make a piece of equipment more or less important.

And the design engineers are trained in the use of that checklist, if you will. And at any point where they have a question about what the interpretation would be or what the answer might be, they're compelled through that process to contact their local risk management engineer that we have at each site and determine from him, you know, in an advisory capacity what the impact might be. And furthermore, if it's large enough or if it's thought to be large enough, then to have the risk impact

evaluated as part of the design change process.

And then that actually then feeds -- that's one of the major feeds that we have into the PRA update process.

And Gerry said that they update continuously. I suspect what he does is more evaluates each particular change for importance and if it's important enough, update it immediately. If not, put it in the hopper for the next update period. Because otherwise you'd be chasing a moving target all the time, even under (a)(4). But it does assure that you catch those things that are important enough about changes to the plant, that you reflect them right away in your -- particularly your (a)(4) process.

It also then provides you both convenient and effective avenue of feeding directly into your PRA everything that changes about the plant. So we do that with both the design change process and with procedure change process.

Now, again, I can't speak that everybody in the industry does that. I think if you go to the ASME standards you're going to find something similar to that is called for. And I'm confident that if you go through anybody that's been through certification, they either do that or if they didn't do it, they're

probably thinking real seriously about doing it, because otherwise you simply cannot justify that your PRA is representative of the as-built as-operated plant.

So, you need to know that that kind of infrastructure is out there. And if through the regulatory process you need to endorse that, I don't have any quibble with that. I think that's what your reg guides are intending to do when they refer to, you know, either the certification or the standard, or whatever. But that should be relied upon in the context of what we're talking about here or any other risk informed application. That's part of the infrastructure that assures that this all works.

MR. HOLAHAN: If there's anybody who thinks that 36 months is better than continuous or a continual update, they ought to say so.

MR. BURCHILL: Well, the thing is it's both. As Gerry said, you do some things on a so-to-speak continuous basis. There's certain things like we don't go and reevaluate all our HEPS every day, you know. We won't do data every day. We won't do initiating event frequencies every day. You know, some of those are done with some periodicity makes more sense. But the periodicity might be just when new

information becomes available.

I mean, if I don't have any really new relevant initiating event information, there's no sense in updating it in 36 months, I wouldn't be doing anything.

MR. STROSNIDER: This is not an area that I've been directly involved in, and I'll probably rely on some of Gerry's insights here. But I think that's been a very helpful discussion. Because my gut reaction to this was that it would be, like I said earlier, more onerous to have to go put this sort of process in place. But it sounds like you're actually ahead of the -- where my understanding in terms of what you actually have in place. Although, we recognize this is just a sample of what's out there, I guess, but I think that was very helpful.

MR. REED: Yes. I think I'm hearing Gerry, and these guys can correct me if I'm wrong, that what we put in 36 months, although it sounds like it would be relief, it's actually not a relief. They would feel the obligation to show, demonstrate somehow that 36 months they've updated the entire PRA. Whereas, I hear they're really going to update the PRA as the information becomes available, you know, and as it makes sense to do so. And that's what makes

technical sense.

MR. DINGLOR: Mo Dinglor from Wolf Creek.

That's really the problem, Tim, is how you show that update and the documentation. Because as everybody says, there's some updates and then there's some not and yet there's no change significant, you don't update it. But then we'd have to show that there is that process. So it's very burdensome to us to do that. And this way we can look at it and keep adding and go on. If it's significant like go digital, you're going to update the PRA and the categorization because it's significant to us.

MR. LEVINSON: Stanley Levinson, Framatome.

Following up on what Mo said. I mean, from my experience doing certifications, a lot of the plants have direct input to their PRA group on changes that are being made, you know, in design, in operation procedures, in EOPs. so that's part of the paperwork trail that the PRA group uses to show whether -- when they evaluate those, whether they have an impact. And if they do, then to make a change. And that's built into a lot of the processes. You know, like Bill was saying that Exelon it's just PRA design doesn't matter. It's part of the process and it's built into

the paperwork trail.

MR. STROSNIDER: Unless there's some other discussion on that point, I wanted to come back to something if I could from the presentation with regard to the updating.

I want to make sure we understand. I think part of NRC's logic in looking at this, and Tim talked about this in the introduction this morning, is that we're looking at approving a process. This is a process that's put in place. And if there's going to be changes made to that process, what sort of regulatory controls appropriate? And that was the perspective, and I'm not sure that I understand the comment in that context.

MR. HEYMER: You mean the §50.59?

MR. STROSNIDER: Well, I thought you were making a comment about the fact that in §50.69 there was some discussion about controls and changes, separate -- and what I was trying to understand if you had an issue with that or if there was input that maybe I missed?

MR. HEYMER: Well, we were just wondering if there's any necessity to have change control in there when the current processes are in place, we can handle the change. We will control the changes.

I mean, you've got a specific section, §50.69(g) change control that handles that. And we just wondered why that was in there. If it would make for clarification, it kind of confused us a little bit because we think the --

MR. STROSNIDER: And that's why I wanted to get some discussion on the issue.

MS. McKENNA: Let me just give a couple of comments about why we had those sections in there and then people can judge.

Eileen McKenna from the staff.

And then people can judge whether or not we were effective and what we were trying to do.

In the first section we really had two things. One with respect to changes to the categorization process. And, you know, I think in the past with things like §50.59 really didn't work for something like that because you don't have the right measures, if you will, of when the changes are significant enough that you should go back through some review process.

So we're looking to say, well, okay we want some means of judging, you know, if you're making procedure changes that deal with the categorization process to look through and satisfy yourself that

you're still meeting the rule and have the record of that as some means for the staff to be -- you know, have some way of dealing with that in the future.

The second one was kind of in the treatment process. I think what I hear you're saying, you're proposing to put that in the QA plan and use §50.54(a). I think we were looking at that, we didn't know if we wanted to open up this whole reduction in commitment issue about when, you know, prior review or not prior review, so we kind of lumped that in the same pile of we'll check back, are you still meeting the rule requirements since we hadn't settled at that point how detailed those rule requirements were, whether that's relief or it's more onerous, I'm not sure we can really settle.

While we're on the change control, and something Bill was talking about, our paragraph 2 was really dealing with change to the facility to the extent that they may impact the risk part of things rather than the design bases, §50.59 kind of world; we were looking for some means of you're changing the plant, which I think you were pointing to some of the things that you might impact by changing your facility, and that that be part of the process.

Now, maybe those words don't capture the

best way to do it, but that was what the intent of those different provisions were.

MR. PIETRANGELO: Yes, I think that's valid given that we didn't know what the level of detail and the rule was going to be. I said this morning our premise as a starting point for this was to try to use what's out there now. And if there's a need identified, and there's a compelling reason to go invent something new, that's fine. But there's not, if we can satisfy ourselves that, for example, the current commitment management guidance with regard to the categorization process asks you the questions about what the staff relied on when they approved your submittal, I think it does that. We've looked at it and we think it does ask the right questions that the §50.59 would not.

On §50.54(a) with regard to treatment, it terms of reduction and commitment, that is the current threshold for determining whether prior staff's review is necessary for some change in treatment.

At least at first blush on our part we were thinking if you removed one of those elements that are in the definition of industrial treatment, that probably would be a reduction in commitment, and it's have to be of that magnitude that you take that

entire thing out of your program. It would probably be the level. But, again, given the low safety significance of this and the functional monitoring that continues and such, it most cases you probably wouldn't see a lot of requests for prior staff review and approval on that.

One last point before we leave these things that relates back to the last thing on updating the PRA. In §50.69(f)(iii), which is on the rule language regarding submittal. Okay. It says "A description of the scope, level of detail, and technical acceptability of the PRA used in the categorization process including the measures taken to provide an adequate level of PRA quality."

We had talked about this yesterday and we'll probably provide it to you in the written comments, but I thought it pertained to what we were just talking about. What we were going to suggest is a change to that language to read as follows: "A description of the measures taken to assure that the quality of the PRA used was commensurate with this application." Okay.

That's very consistent, I think, with what the 1.174 guide says. And what we were looking for in rule language was to be able to point to something

that we're already doing that we could rely on to meet that part of the rule. And in this particular case it would be the peer review process.

I think as Stanley indicated before, the peer review process looks at your update process for the PRA and grades you on it. Okay. And, again, we're trying to rely on things everybody's already done and build it into this process. And at the rule it's that kind of PRA quality commensurate with the application, but there's something we've already done we think that meets that particular requirement. And that's how we get efficiencies and implementation without, again, specifying a periodicity up front or in this particular case, regurgitating everything we've all done in peer review.

So, I think this one does relate back to this whole PRA quality update frequency issue, and even though these are in two different sections of the rule.

MR. HEYMER: As we said, what we went over this afternoon aren't the complete comments that we have. We have several others. And although we covered treatment this morning, we did struggle quite a bit with the language that is associated with §50.69(d)(3) on RISC for SSCs. And we're not quite

sure what the intent and where we think we're going with RISC-4. So we might try and give you some feedback on that. It wasn't clear from us what we were trying to say here.

MR. GILLESPIE: I'm going to challenge the staff. Is there anyone who would like to stand up and try to make it clear?

MR. REED: I'll take the first cut. This ought to confuse issue beyond all hope.

There are basically two different ways of handling RISC-4 that are in redline here. The first one is basically the cleanest one, which says that §50.69 isn't going to add anything new to RISC-4. And what that does is by saying nothing new, it means anything in place stays in place unless it's specifically taken out by paragraph (e). Well, that same alternative would take all the special treatments, whatever they are, off of RISC-4.

Now, the second alternative then only takes off the maintenance rule and it leaves everything on. So the question is, well what's going on the staff here, it's schizophrenic. Well, we are, and psychotic and all kinds of others. But what it really goes to, at least it's my feeling and we really people that are on the ground level at the plant to

really give some feedback here, that most of the requirements on RISC-2 are really technical requirements; that the treatment that it gets isn't in the regulation. It may be outside the regulation, but we don't see it in the regulation. So from a purely rulemaking standpoint, we can't see it there.

You know, I agree the reg guides and a lot of other things that people do and maybe they've been armed twisted for 20 years to do these things, I understand that, but when I look at that I see technical requirements. Like there may be some technical requirements for seismic two-over-one. Okay. But I don't see the special treatment requirements. Yes, things got to be supported so it doesn't fall. Or, you know, EQ. Perhaps there are some people out there that are saying there may be a handful of components throughout the industry that actually do have §50.49 requirements on non-safety-related stuff. So maybe there's some stuff there that really falls in this.

But I think the balance of it, the really special treatment requirement that really is on that is the maintenance rule. And that's one we would take off in Box 4. So that's why you see that split.

I don't know if that makes it clear at all

why those two alternatives are there. And really to understand is what's on this stuff over here in 2 when it goes down to 4, we don't want to lose technical requirements in Option 2. We want to maintain the design bases. If the design bases functional requirements down there, of course we want to maintain them. And that's what we're trying to do is put a structure together that tries to maintain those design base requirements.

So did that hopelessly confuse it, or -- Eric?

MR. JEBSEN: Eric Jebsen, Exelon.

Now I am somewhat more confused, but actually I guess it clarified the question for me. So now I'm not sure. One way I could construe what you said is that the staff's not sure what's out there, but they're nervous about saying don't do any of it because we're not sure exactly what it is anyway. Okay. But that's not what you're saying. Okay. So then I'm going to -- okay. Now it looks like I know some -- and I'm not the expert in here for all the systems at the plant at where I work, but I know, say, for ATWS or a blackout you have certain things that are picked out of Appendix B that say you'll do this this way and this this way, and say you might have

like half a dozen things. And so I would expect that, for example, say you found something in part of your blackout diesel, for example, that you had always done a certain way under Appendix B because it was this augmented quality type things, special treatment thing, that it turns out when you did your PRA really wasn't that big a deal. So you want to move that down.

And I would say then it's fair to say, well, all that special stuff I was doing, I don't have to do that. I'm just going to get it and make sure it works. I'm not going to change any design requirement. It still has to open and supply air at a certain pressure or something like that. I'm just not going to use that special treatment part or that Appendix B augmented quality part. I can now procure it under my industrial program.

So that's what I'm thinking of. I like the idea of saying well if it's not safety significant and the reason we had you do augmented quality on some of this stuff is it was important to safety or we thought it would be safety significant, if it turns out it's not, well then don't do that anymore. And since it seems less laborious to list all the possible things and then accidentally miss one that one

licensee might have, it just seems easier to say don't do it.

MR. SHUAIBI: This is Mohammed Shuaibi with the staff.

The question, though, is when you take the ATWS and say important to safety §50.69 equipment that is not safety related, and you drop it to Box 4, then what you end up saying when you say that, you're still going to have the technical requirements and you're going to maintain those. What you end up saying is very close to what you're doing in RISC-3. And that's what we're looking for, is something to -- I think what that portion of the rule is saying is we need something on that to maintain its functionality.

MR. HEYMER: But what you have here initially is alternative 1 which I read along with alternative 1 in the commercial type treatment controls was no new requirements. So that seemed to me that we were going to apply existing requirements so there was no reduction.

Then went to alternative 2 and 3, it said the only requirement that's removed is the maintenance rule. So I got the impression that I was, more or less -- I was in a worse position in Box 4 than I was for 3.

MR. REED: The way alternative 1 works is there's -- it says no new requirements, but then you've got to look down at §50.69(e) the title, and it says the removed from RISC-3 and RISC-4. So everything comes off of RISC-4 and we don't put anything else on.

So alternative 1 is really nothing on RISC-4.

And actually, when you go back to the old SECYs that's exactly what we said. So then we got ourselves in this bind of trying to understand, you know, what is over on this side and the technical requirements -- do we need to something -- maintain the technical requirements. And when we looked at things like ATWS and station blackout, for example, the quality, the augmented quality stuff, at least in our minds, so far we don't see that in the regulations. Okay.

I agree with your concept, at least personally I agree. Maybe not the staff, but I personally agree and Gary can correct me here in a second. But if it wasn't important in there, you could take it out of the augmented quality program.

Okay. He's not stomping on me yet.

And you could do that outside the -- you

don't need a rulemaking to do that. I don't have to do that Option 2 in §50.69 because it's not in §50.63. I think there's a generic plant or something to follow it on to the ATWS rule, so there's sort of a weird reference there and you could almost interpret that one way, perhaps it's in perhaps it's not, but in §50.63 I think it's clear, at least to me -- as clear the regulation could ever be -- that it's really not in there. I know there's a big reg guide that implements that that puts a lot of stuff on there, but that's a reg guide. And you're probably committed to it and there's that change process to that.

Does that help? Gary, did you have any questions?

MR. HOLAHAN: I'm not sure if corrections is the right word.

It seems to me the thing the staff is struggling with is under what you've called this first option. There are two very different sorts of things that end up in Box 4.

There are balance of plant unimportant from a safety point of view and really traditionally unregulated stuff. But also in that box are low safety significance, but things that had rules written about them, like ATWS equipment and maybe station

blackout and a few odds and ends.

So I think the reason there are alternatives there is people are struggling with whether those things, acknowledge that they're all below the line, they're low safety significance -- Box 3 is low safety significance, Box 4 is low safety significance.

If there is ATWS equipment or station blackout equipment of low safety significance ought it to be treated more like Box 3 or should it be treated more like the other stuff in Box 4? And I think that's what those issues are about.

MR. SOWERS: I understand your question, and I think all you need to do is follow it more step to understand what our problem with it is.

If I take the stuff that is currently subject to an augmented quality program, okay, and it's either going to end up in Box 2 or Box 4. If it's in Box 2, I will continue to apply the augmented quality program. If in Box 4 I say well, I'm going to implement something similar to Box 3, oh, but wait, Box 3 we just decided was an augmented quality program.

So, what I come to very quickly is well, shucks, I'm not even going to bother to do those.

Because it doesn't matter whether it ends up in Box 2 or Box 4; I'm going to end up treating it exactly the same. I mean that's where you end up as soon as you decide to put the same kind of controls in Box 4 for stuff that was previously regulated as we put in Box 3. You've decided there is no difference and there will be no change.

So everything that was subject that we called this important to safety stuff just completely gets removed from this equation. And the only way to undo that is to reach the conclusion, and I believe it's a valid conclusion, that when he hung this important to safety label on a lot of things, which actually I think we only define in the EQ rule, we painted with a broad brush. We have a better brush. And if we use the categorization process now, what we're saying is the broad brush was broad and there's some stuff in there that, in fact, is not important to safety and does not deserve any of the controls that we previously applied to them.

If you can't bring yourself to that conclusion, don't bother with it. It's not worth it.

MR. HOLAHAN: In effect what you would do if you moved important safety things from Box 2 to Box 4, you're using the categorization process as the new

definition of important to safety?

MR. SOWERS: That's exactly right.

MR. JEBSEN: It's your tool to define or you have a better way to define important to safety to determine.

MR. BURCHILL: I want to go back to my friend from the morning of is credited and beat this a little bit more. Because the specific statement that's made in the proposed concept language, which might be considered for a rule -- is that good, do you like that one -- is in section or article (d) under (2), which is for RISC-3 (iii) it says: "If a RISC-3 function is credited in the categorization process" and I think what we said this morning was that means it's in your PRA, anything in your PRA, that we "monitor the performance or condition of the SSC." This is in Box 3.

And I guess I'm going back again. I wasn't sure what the conclusion of our discussion was this morning. Are you going to go back and reconsider the use of this "is credited" and the imposition of that whole population having to go under this monitoring? And are we going to go back to just what's above and below the line, or what are we going to do there? I didn't quite understand where we came

to.

MR. HOLAHAN: The answer to the first part of your question is yes, we're going to reconsider that. Are we going to reconsider and resolve it this afternoon? I think the answer is no.

One of the things we're supposed to be doing here is collecting information, you know, various views and our core team is going to have to go back and reconstruct a version of the rule which they think is, you know, the best. You know, meets the goals in the most optimal way and present that, you know, to their management, hopefully next week. Although I see a little disconnect between the staff's next week and Tony's paper of next week. And I'm not quite sure how those line up.

But, yes, I think -- you know, on my little green card I've got basically, you know, two major issues that need to be resolved, and this is one of them. And I have one other one. And Tony knows what it is. It's license amendment versus commitments. It's a big issue, I think.

MR. REED: I think everybody's getting a little itchy. Why don't we just take five minutes.

Excuse me. Let me do that again. Why don't we just take five minutes and try to stick --

MR. HOLAHAN: How long? How long did you say?

MR. REED: Three -- three minutes. Come back and then Ken Balkey will do a little bit of a status on the ASME code.

I have a couple of questions up here. We'll try to get to and get some discussion. And then Steve West is going to give us the next steps. But we have a little bit of time left and it's important to get back real quick. So, thanks.

(Whereupon, at 2:26 p.m. off the record until 2:33 p.m.)

MR. BALKEY: The American Society of Mechanical Engineers greatly appreciates the opportunity to be part of this workshop today on a very important subject. And how we arrived at the information we provided today came from the September 27th letter that came out, and I'm referring to page 6 on §50.69(e) dealing with requirements removed from RISC-3. And the statement in there says RISC-3 SSCs need not meet, and you come down to item (4) it says "Omit 10 CFR 50.55a from the list and rely on ASME code risk-informed code case(s) which would be implemented trough either code relief or by revising 10 CFR 50.55a in the future."

And there's another alternative as well, which is essentially that all the requirements in the low safety significant would be removed other than possibly the repair and replacement, because there's a specific code case being developed for RISC-3 treatment in that area.

And the ASME Board on Nuclear Codes & Standards has a task force that was put together to support risk-informing Part 50 to cooperate with the NRC and the industry on this initiative. And when our task team got this -- I volunteered to ask the staff was there anything we could help for the workshop. And when I spoke with Eileen McKenna and others, statement was that you have a lot of code cases out there, where are they in terms of what do they do, are they approved by ASME, have they been endorsed by the staff already under the current regulatory process, and can they fit into §50.69 or I also added in NEI-00-04 as well, too.

And with that, with a little bit time, I did some interviews with Craig Sellers, whose joined me today. Craig's very active in O&M Committee on in-service testing. Robert Graybill has been working with me on the repair/replacement code case and has been a longtime member of the in-service inspection

group under section 11.

But we put together a status. Had the opportunity to talk with a number of staff members who are active in the codes to get where the staff was in their endorsement of this effort. So the staff here tries to work through §50.69 in this particular requirement that you'd have the latest information we could gather.

The information I'm going to present reflects my opinion based on all these interviews. Jerry Eisenburg of ASME said that the staff does need this in writing, we'll be happy to follow up with an official letter.

We've had three major initiatives in ASME, and I'm going to take them in the order that they evolved.

The first one deals with the requirements effected by ASME Section XI. Section XI is the section of the boiler code that provides requirements for in-service inspection of nuclear plants.

Now, I know a number of folks in the room are familiar with ASME's codes and standards, but for those who may not be, we use terms: Codes, standards, and code cases in our discussion here. I'd like to help clarify what they really mean.

A standard -- an ASME standard provides a set of technical definitions and guidelines that are developed so that items can be designed, manufactured or analyzed uniformly to provide safety and interchangability. The ASME standards are called voluntary because they are used voluntarily and do not have the force of law.

At this time the PRA standard which is nearing completion, I do have a slide on that on its status, the PRA standard is a standard. It can be voluntary at this time. It's not been pulled in as a mandatory requirement into a code of regulation.

Now, a code, when we say ASME code, and the codes we have Section XI and also the OM code, the operation maintenance code. These are codes. They're referenced through 10 CFR 50.55(a). And so when you hear of ASME code, the standard has now been adopted by a government body or a local state or federal agency worldwide. And ASME codes has been adopted in a number of countries and/or states or local jurisdictions enforce those law primarily for boiler and pressure vessels in dealing with fossil power plants, oil refineries and so forth.

Now, a code case. Generally most code cases deal with an interpretation. Somebody has a

question on what the code language meant and a code case is written to sometimes provide that interpretation. The code cases also allow for alternatives to be developed beyond the existing code rules, and particularly for new technology including the risk-informed ISI and the risk-informed IST were brand new technologies or ASME and the code cases have a lifetime of three years. And they're allowed to gain experience from the initial use within the industry, and a decision is then made do we then bring it into the code itself or do we just reaffirm the case, or do we abandon the case. And you can end up in any of those three situations.

So with that background, where we are in ASME Section XI, code cases dealing with in-service inspection and repair placement of pressure retaining items, we have two code cases. Code Case N-577 and N-578. They do two things.

They do categorize the piping segments into high safety significant or low safety significant categories; that's for N-577-1. N-578 uses a different process and categorizes into high, medium and low categories.

And the next piece is once those categories are set identifies how many -- need to be

done within those segments and it also provides the inspection rule.

So, therefore, we are providing both categorization and treatment together in those two cases.

Now, one of the things that was worked out with the staff, we had meetings just like we're having today. We had meetings on this topic about four or five years ago. And the staff said that the code case was written at a fairly high level, but given it was a new technology, they said they needed more guidance than just those code cases.

And the two industry groups Westinghouse Owners Group and the Electric Power Research Institute then developed topical reports that the staff has since endorsed. And at the last count, there's about 80 reactors of 20 are approved, 20 reactors are in for review and there's another 30 or 40 due to be submitted here over the next six months or so. It's one of the most successful applications ongoing right now on a voluntary basis.

But when I talked to the staff about endorsing the code case which would replace those topical reports, the staff is still reviewing that because there's concern that there's not enough level

of detail in those two code cases when compared to the submittals that came in under the -- against those two topical reports which were pretty sizeable documents.

And there is a relationship of this to Option 2, because while plants are doing this under the current existing rules, when you go to §50.69 we take advantage of that application to build our repair replacement case, which is built directly for Option 2.

So if the NRC has an endorsed reg guide, if the two code cases are not yet endorsed in reg guide 1.147 at the time you're doing this rule development, then §50.69 and NEI-00-04 can still reference back to the topical reports which would allow the licensing process for somebody moving into Option 2.

On the repair replacement effort there are two code cases. It's a more complex application. And that's the aspect that we go through all pressure retaining items. We're taking the information we had from the piping segments from the ISI work and have extended that process to the other pressure retaining items so that we can put items into high and low safety significant and put them into the four box scheme.

So code case N-658 provides a link back to the prior ISI code cases and links it to Option 2 §50.69 and the NEI guideline. But there's a second piece to it. The development as a classification, ASME is a fairly sizeable organization and the categorization process came up through the working group on risk-based examination, subgroup water cooled systems. How to change the treatment for the high and the lows and also safety related versus non-safety related was done through the subgroup on repair, replacements, modification. So the two branches developed code cases.

And Bill Holsten's been the gentleman whose been spearheading the treatment effort. Robin and I, and another set of individuals, have been working on the classification case. And we have the cases where they do match up with one another.

The categorization case has already been approved by Section XI, and it was issued for letter ballot to the main committee of the boiler code. That's the highest consensus standard body in ASME for the boiler and pressure vessel code.

That code case is due -- the comments are due in on November 20th. We expect a number of comments back in on it.

The standards committee is made up of just not representatives of the nuclear industry, but it has representatives from the oil companies, chemical companies, fossil power plants and other industrial boiler applications. So they have to buy into this process as well, too.

We expect comments but our task team will take those comments and bring those back through the process.

At the same time, Bill Holsten is working through his subgroup to have the treatment defined and in the RISC-3 area, we do make reference over to the B 31.1 for piping, B 16.34 for valve replacements. We referred to some API, American Petroleum Institute standards for tanks and other pressure vessels, and we also refer to Section VIII, which provides pressure vessels for the fossil power plant industry. And they're working that out.

Now, you just can't lift that code straight over. You have to still stay -- you're meeting all your design bases considerations and make sure you're meeting the function. Where the changes come in is when you look at the installation, the welding and braising; there are differences between what Section XI currently requires in the nuclear

treatment versus what we do in the industry.

But the track record for ASME's boiler and pressure vessels has been outstanding. If you look back at incidents 50/60 years ago to the number of incidents across, it's actually very, very good.

So that is being letter validated as we speak with the subgroup, but there's a meeting coming up in December, and we will have a real good status of how we have these tied together and give a better projection of when we would expect them to be approved.

The ASME Board on Nuclear Codes and Standards, which is the policy group overseeing all the nuclear codes and standards, we have it that we really -- I can't tell how hard people's been working to keep this on track so it matches up with your time, with the NRC's timeline and NEI's timeline. And that includes the NRC staff.

Staff has been -- we've had a number of task team calls from members of Option 2 task team have worked with the ASME task team to resolve issues, particularly on the repair/replacement categorization.

Wolf Creek and Surry are both testing now. Wolf Creek went through it's IDP and used the code case. Had a two hour phone call earlier this week with

representatives who were at that meeting, and they're going to make suggestions to the categorization case based on that trial application, and the timing is very good for that case.

But the thing for the staff to consider is those cases probably won't be endorsed by reg guide 1.147, and you'd probably have to be looking if you want to use it to endorse it in §50.69. And NEI already has it referenced in their guideline, and I think that's the current plan.

Now, in terms of either code cases, the ASME recognizes that we have so many plants implement ISI, it's time to bring it into the code. So the working group on risk based examination for ASME has a new appendix that they've drafted that would be nonmandatory, but it is part of the code an it would bring all the work from code cases N-577 and 578 and the topical reports. It folds that altogether. So they would be in the code and then that, of course, would get endorsed through §50.55(a). But that's more long term and that'll be beyond the time frame we're talking for §50.69.

On IST, the Operations and Maintenance Committee has also been active, and there's about seven code cases they've developed. I won't go

through all of them. The most important one is OMN-3. The component importance working group for the Operation & Maintenance Committee had developed a process, how to use a PRA to put valves and pumps into high safety significant and low safety significant categories and, of course, was tied through the whole movement on reg guide 1.174 through 1.178. And that code case is consistent with reg guide 1.175. But it just does a categorization. And I would feel that the categorization there is also consistent with what's been proposed in §50.69. But the important ones are OMN-4, 7, 10 and 12 because once you put the pumps and valves into a high group and a low group, we knew we had to change the testing. And in the high group it was even -- and those code cases suggest even more enhanced testing, particularly like on pumps to take advantage of lube oil analysis or other advanced vibration techniques to predict degradation. But the low safety significant code cases provide how to extend the test intervals out, but also does require some monitoring and tracking of data in that particular case.

Now, the IST, I was talking with Craig, there's about a half dozen plants who have developed submittals and Comanche Peak had their program

approved. But there's some things to learn from ISI and IST relative to what we talked about today.

In ISI we worked out a process with the templates up front and we also were able to work out well how do we maintain the low safety significant group. Well, ASME has a pressure test with visual exams, and plants do that as part of their code testing. And that suffices to give us information on the low safety significant that we don't have leaks out there and we do have degradation in piping systems that are low.

And also the staff has done an excellent job working with the industry because they developed a program how to roll it right into the -- the ASME code operates on periods and intervals; periods of 3 years we have to get certain percentages of exams completed and then over a 10 year interval you have to have a 100 percent of all of your locations examined at that point. But the staff found a very good way how to let the plants do their work and roll it into the program without making them wait for many years for approval.

On the IST, the issue's not with the code cases or with NRC approval. It comes down to to implement this becomes very difficult. There are many

more plant procedures that have to be changed on the in-service testing. And work has been done at Comanche Peak. Now that they have it done, they say it's very successful. But on Option 2 here we're going to have the case of putting things in the categories, looking at the treatment. But the amount of items that have to be looked to be changed at the plant are pretty significant, but we should be able to learn things from the IST work of how we can make that transition from our current requirements to a risk-informed requirement. And, actually, South Texas is leading the path. They're now looking at implementation, they're looking at all their procedures of how to do that.

And once again, the code cases for OMN, there's been an effort underway now to bring those into a new section of the OM code. It's called ISTE. And ISTE essentially brings all the information in from the code cases that have been in existence for the last 3 or 4 years. But once again, that won't be available until after 2002 and it would be endorsed through §50.55(f).

And the last one I have, I was asked the latest status on the PRA standard. I've identified what the scope of the standard is. It was approved by

the Committee on Nuclear Risk Management which also reports to the Board on Nuclear Codes and Standards. But as the item was approved, it went out for public comment, and the NRC had more comments to provide. But I'll be honest with you, a number of folks rolled up their shirt sleeves and said "Okay, let's dig into these and give them address so we can keep this on track," and that's exactly what was done. A team of folks worked real hard to address the additional comments the staff provided, and the proposed standards are back to the Committee on Nuclear Risk Management for approval. The board has it tracked and we hope to get this thing out in early 2002, within the first quarter.

So if the standard become approved by ASME in early 2002, then the staff will have to look how you would endorse it for everything and you probably would want to address how you want to pull it in. Do you want to pull into §50.69 or NEI-00-04. But that's why we left it to be defined.

Okay. And that concludes my remarks.

MR. REED: Okay. Steve West is going to give us a wrap-up and next steps, and if we still have time, have a couple of questions after Steve. We're running out of time quickly.

MR. STROSNIDER: Well, tim, I just very quickly though wanted to just see if there's any consensus standard being set. NEI-00-04 is already looking to incorporating some of this. I mean, it sounds like, you know, there's some agreement to trying to use the codes and standards in this process. Okay. Which is good. You know, I remind everybody that NRC has a law which basically says try to optimize use of those sort of things, and we do think it's an efficient way to do business.

MR. BALKEY: And ASME has really tried to be responsive. Since you issued the Advanced Notice of Proposed Rulemaking, people have really worked quite hard as volunteers, including staff from NRC that we keep our things approved to be in line with your efforts and NEI.

MR. WEST: Good afternoon. I'm Steve West. Tim and Eileen work for me, I work for Cindy and am involved in the Option 2. I recognize most of you.

I'm going to talk about the wrap-up and next steps, but I think I'll do the next steps first and then thank you for coming.

Believe it or not, all the staff and the managers back at the NRC that are working on Option 2, they really want to demonstrate some progress and put

something out that shows that we're, you know, we're really getting somewhere. There's a lot of activity going on, other things are happening in parallel, but there's not a deliverables. You know, people don't see a lot of progress.

And, in fact, this workshop wasn't a part of our plan. It got planned and then actually we're holding it a little it later than we had anticipated. So we're generally feeling behind schedule.

Our plan is to demonstrate progress by what Sam mentioned this morning, publishing a early or preliminary draft of actual rule language. Not rule concepts, but rule language. And we're looking to do that on fairly quick turnaround from this point. And so that's going to be our major activity, although we're going to do it, hopefully, in a very compressed period of time.

And the plan would be to assess the results of this workshop, the input that we got today -- and we got a lot of good input, I think -- and have the core team do that and go to the RILP next week, actually a week from today, and give the RILP agreement on draft rule language with the objective for the goal of publishing that before the end November.

And when you consider that there's about two weeks of administrative effort required in there to publish a *Federal Register* notice and get stuff to the webmaster and actually published, it means we really haven't left ourselves much time to play around.

In fact, I've been told by an influential RILP member with long hair and a beard that the RILP is expecting the core team to come to them next week with a recommendation, one recommendation, not a series of alternatives, which has happened a few times. And that the RILP should be able to come to agreement on that recommendation or some variation of it in one RILP meeting.

So, this is will be historical if it happens, but if you see rule language out on the web before the end of the November, you'll know that we made history.

Anyway, that's kind of the term or immediate actions that we have planned.

The slide lists some other things that are ongoing, and I think most of you are involved in these, at least some of these, and you know what's going on. But we're continuing with our reviews of the proposed NEI guidance documents and trying to develop

guidance for implementing Option 2 and for what would required for a submittal, an Option 2 submittal, for example. And we're continuing work with the pilot plants. In fact, Eileen and Glenn went down last week or week before to Wolf Creek and observed some pilot activities.

So those things are continuing going along pretty well.

Let me get into the next slide here. What's next and what remains?

As I mentioned, obviously we want to get the draft rule language out, an early draft. This won't be a proposed rule, it will be basically a snapshot of the staff's thinking at the time that it's posted.

We also hope to, along with the rule language itself, post any other supporting information that we may have developed to that point. For example, if we have portions of the regulatory analysis or statements of considerations completed, we would also post those to give you a better idea of where we're at and what's left to go.

So, that's the kind of near term, as I mentioned.

We do, of course, have to prepare a

proposed rulemaking package, the formal package that you're used to under our rulemaking process. And our publish schedule, which you can find in the Chairman's Tracking Memorandum, would call for us for us to have the proposed rulemaking package to the Commission in April of next year. So only a few months away, actually. And that's still our schedule.

We did send a signal to the Commission that that may change based on this workshop and other obstacles we may have to overcome, but at this point we still are working to that schedule. So April time frame.

And after the proposed rule, of course, comes comment period and then the final rule.

For planning purposes, we typically, you know, off the top of our heads would say between proposed rule and final rule is about a year. And I think for this rulemaking we said for whatever reason, 15 months. So that would be our formal schedule at this point, and that would be 15 months from the time the proposed rule is published. You know, we're not sure how much time it's going to take the Commission to act on the proposed rule once we send it up.

Our plan has been up to now, and is still, to with the proposed rule publish the proposed

regulatory guide on how you would implement the rule, the draft reg guide with the statements and consideration in the proposed rule and reg analysis and the other things you normally see with a rulemaking, and maybe even a standard review plan, draft standard review plan if we go with the prior review approach, which is looking more and more like we're going to be doing.

We do have some options. We could, for example, later decide if we get too bogged down in the details of the guidance to go with the approach we used on §50.59 where we pushed the rulemaking through, continue the work on the guidance in parallel with that, but maybe make it a situation where we get the final rule out and then give us some time to finish up with the guidance. And the rule becomes effective some period of time after we come to agreement on guidance. So we do have some options there, too.

Anyway, that's our plan. You saw the real plan, it looks like a real plan, but you know that's our plan.

Any questions on where we're at, next steps? Good.

Okay. Thanks for coming.

No, seriously, as Gary mentioned just a

little while ago, I think we got some really great feedback today. I really appreciate the -- first of all, I appreciate the effort that those of you who had to travel, you know, from more than just around the beltway to get here, I really appreciate the effort you put in to get here and to get home.

And also the effort that you put in to develop comments and to pass information along to us. It's obvious that the working group did a great job in getting some thoughts together, and also the individuals from plants provided some great input. I've already heard some feedback from staff and managers that have been here about how enlightening some of the comments and information have been. I think we really got a lot that will help us shape the draft rule and move forward.

MR. HOLAHAN: Steve, when will these people hear next? What form and in what time frame?

MR. WEST: They should be watching the *Federal Register* towards the end of the month and the webpage for the draft rule language. That would be our next formal communication that we'd put something out.

I'm trying to think -- I don't think anything would show up in the CTM or any place else

before then. That's probably be the next, you know, start looking.

Anybody could always call Tim or Eileen to get the status also where we're at. We have no problem giving you an update if you want to call in. You can call Tim or Eileen or David Diec in the back and we'll be happy to give you an update.

But be looking for the *Federal Register* towards the end of the month, hopefully, if we're on schedule.

MR. PIETRANGELO: If history is made by the end of November, do you anticipate another public meeting in December time frame to bat that around?

MR. WEST: To talk about the draft rule language?

MR. PIETRANGELO: Yes.

MR. WEST: It's possible. That's one of the things we have to decide on is -- I mean, we have options, too, with the draft rule language. I mean, one thing we could just float it out there and not even ask for comments. Yo know, just run it by everybody and see if anybody's interested enough to comment without being asked. Or, we could ask for comments, or we could ask for comments and have a meeting, or have a meeting and then ask for comments.

That's one of the things we'll be talking to RILP about is, you know, for that particular interaction what we want to do.

MR. GILLESPIE: Tony, let me ask, because we are trying to --

MR. WEST: One more thing. I don't think it would happen in December. I'm just kind of guessing.

MR. GILLESPIE: To keep us on schedule and to keep moving, depending on the kind of comments that you guys would send in as an industry, keeping in perspective that a proposed rule is not a final rule, it's the next step, that we're going to have make a judgment or do we feel even with the comments and considering the comments and how we consider them, are we in good enough shape to go as a proposed rule in that context. Even the proposed rule may have one or two open questions still on it, we've published rules before that have two questions.

So as long as we don't try to polish the apple too shinny, we get to stay on schedule and we get to progress to the next level and make some of the compromises Steve's discussed on when are we going to get guidance polished up and finished and everything.

So the schedule becomes kind of important

to us. If you make milestones, then you tend to make progress. And you continue to lay them and have more meetings, then sometimes we don't make the progress we'd like to make.

MR. PIETRANGELO: Yes. This reminds me a little bit of the CLIP process in a way. Because --

MR. GILLESPIE: Don't remind anybody of the CLIP process.

MR. PIETRANGELO: Well, we're trying to do things on the front end to make the backend quicker, okay. You know, one way or another whether you have a meeting or not, we'll give you feedback on whatever comes out of the end of November, and then you've got to go forward and do it. But I think the goal is to try to make the proposed rule while not the perfect comprehensive thing the final rule will be, good enough such that you won't get a deluge of comments that delays the backend of this process.

I guess I was a little bit troubled by what Steve said in terms of normally it's 12 months, but we thought we needed for this, yet we've got this up front process we're using now that in my mind should have shortened that backend.

MR. WEST: Well, we're still using -- I mean, if you look back through the CTM we have the

same schedule. We haven't changed our schedule. So we haven't really factored in this new part of the process, because frankly we're not sure if it's going to help or not. I mean, we're optimistic that it will, but time will tell.

Like I said, we sent a signal to the Commission that we're going to reevaluate the schedule periodically. And I think after this workshop and these RILP meetings we will take a close look at our schedule. And it may be shortened.

And Frank reminded me. I should have mentioned, we also probably will issue more than one of these informal drafts of the rulemaking. You know, once we get one out, hopefully this one this month, we'll be able to issue them, you know, at each refinement if we want. If we think we're making progress and we want to share with the stakeholders where we're at.

So I would expect to see actually more than one over time.

MR. HOLAHAN: Sort of a continuous update process?

MR. WEST: Continuous. Yes. Well, I was thinking we could wait 3 years, but I think that'd go over very well.

MR. DIEC: Steve, this is Dave Diec from the staff.

While continuing to update the draft rule language, we're not going to republish in the FRN at all. We just republish on the webpage only.

MR. WEST: Right. Right. I think the *Federal Register* notice will say keep checking back because there could be a new one up there.

Any other questions? I think, Tim, did you want to try to go through your couple?

MR. REED: We got actually two comments that we haven't gotten to, and we'll give a shot here.

With respect to functionality of RISC-3 components, please discuss what the current treatment practices actually assure regarding design bases, safety function areas to discuss seismic capacity, local load and pressure drop, EDG, loading during design base LOCA.

Is any of my technical want to start this discussion. I mean I'm not sure -- whose comment -- where were you going with this comment? Okay. It's our own guy.

MR. KELLY: I could probably answer some of it. But the reason why I thought it would be important for us to come to some kind of

understanding, a mutual agreement or at least think about what it is that we actually do -- achieve with our current treatment so that we understand if we relax that treatment, at least we understand what that starting point is of what we've actually achieved with the current treatment. And that's the question in essence was saying, you know, can we come to an agreement of what we actually do achieve with it today.

MR. REED: I think Jack's going to probably -- no, Jack's not going to. Well, I've heard Jack give his answer many times.

MR. STROSNIDER: Let me say something just sort of generally, and then I think maybe some of the tech staff can certainly do a better job on this.

But I think there's at least two things. You know, we accomplished some level of confidence in functionality under the design bases conditions. That's the intent of it, okay, to say yes -- as I pointed out earlier in part of the discussions we -- in terms of performance base when you look at some of the special treatment rules, you're really not getting feedback and the rules are written to address things like procurement and design, and etcetera, to make sure that you have that confidence of functionality.

And the other piece of that which, I guess, actually is also related confidence, but there's some documentation, let me put it in that terms, that goes along which provides a trail, okay, that says this is why you have that confidence, which is -- when we've looked at this stuff before, part of the discussion is can we provide the functionality and reduce some of those other things like the paper trail that, you know, is the additional confidence that -- maybe you need some of it, maybe you don't. All right.

So I think at least there's two things that occur to me, and one is the technical here's what you got to to assure yourself some level of confidence that the thing will function and then there's some records of how you -- to provide some assurance that in fact you've done that from a quality assurance point of view, I guess.

So, I think those are two pieces, which have certainly come up in our discussions in terms of how much of each of those do you need. But that's just sort of a reaction, sort of big picture.

John, you were going to say something.

MR. FAIR: Yes. I didn't realize -- John Fair, I didn't realize it was our own staff asking the question. But the current criteria when you get into

things like seismic and EQ have a lot of detailed specified criteria. And in order to show functionality in some cases you do testing. The question is when you take away the special treatment requirements and you go to some other industry standards, is the criteria good enough to demonstrate the equipment actually functions? And so that's the type of question we're looking for.

MR. REED: Okay. I have one more comment. I think we could start the workshop all over with that last comment, so I'm going to jump to the next one real quick here, and I think this is a lot easier.

And the question is please explain the concept of "cherrypicking" and that's by system and/or by role and how can that be accomplished within the language of the rule concept? Must all SSCs be classified regardless of the scope of the implementation, i.e. full categorization? And the answer is the rule's flexible. In fact, if you look close, you can pick whatever rules you want within §50.69(e) and also you can do it for whatever scope of systems you want. In fact, the middle section says you can tell us what scope of systems that you're considering doing this for.

Now, you also have to look at the rest of

the rule because of the rest rule will tell you have to adopt all those -- there's paragraph (c) requirements and categorization of PRA. And so it may look somewhat more flexible than it really is. Because even when you want to categorization something down to Box 3 for a couple of systems, you're really taking credit for a lot of stuff up in one and two, and then you have to start monitoring for those things in your PRA.

So, it's as flexible as we can make it, basically. That's the simple answer to that.

That's all the comments we got.

I think we're all set. Thanks again, everybody, for coming. Appreciate all the input. And I'm sure we'll see you around soon.

(Whereupon, at 3:13 p.m. the Workshop was concluded.)