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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON DESIGN CERTIFICATION ISSUES

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PUBLIC MEETING

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Nuclear Regulatory Commission
Room 1F-16
11555 Rockville Pike
Rockville, Maryland

Tuesday, August 27, 1996

The Commission met in open session, pursuant to notice, at 9:34 a.m., the Honorable SHIRLEY A. JACKSON, Chairman of the Commission, presiding.

COMMISSIONERS PRESENT:

SHIRLEY A. JACKSON, Chairman of the Commission
KENNETH C. ROGERS, Member of the Commission
GRETA J. DICUS, Member of the Commission
NILS J. DIAZ, Member of the Commission

STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

JOHN C. HOYLE, Secretary

MARTIN MALSCH, Deputy General Counsel

JOE COLVIN, President & CEO, NEI

RALPH BEEDLE, Senior VP & Chief Nuclear Officer, Nuclear Generation, NEI

DAVID REHN, President DE&S-Hanford, Duke Power

REGIS MATZIE, Vice President, Nuclear Systems Development, ABB/CE

STEVEN HUCIK, Manager, Advanced Reactor Programs, GE

JAMES TAYLOR, EDO

WILLIAM RUSSELL, Director, NRR

THEODORE QUAY, Project Director, Standardization Project Directorate, NRR

JERRY WILSON, Section Chief, Standardization Project Directorate, NRR

P R O C E E D I N G S

[9:34 a.m.]

CHAIRMAN JACKSON: Good morning, ladies and gentlemen. The purpose for this meeting is for the nuclear industry, represented by the Nuclear Energy Institute, General Electric and ABB Combustion Engineering and the NRC staff to brief the Commission on design certification rules before the Commission for certification.

I would like to welcome the representatives of industry here today. As you might have already noticed, we have a new commissioner with us this morning, Commissioner Diaz, who I am sure some of you may have met.

The Commission will first hear from the industry and then the NRC staff.

The NRC has issued final design approval for two standard reactor designs, the General Electric advanced boiling water reactor, and the ABB Combustion Engineering System 80 Plus and is in the final stages of certifying these designs by rulemaking. We expect that the certification of the two standard reactor designs for which we are currently assessing comments will be completed within the next several months, few months.

Copies of the presentation slides are available at the entrance to the meeting.

Do any of my fellow commissioners have any opening

comments?

COMMISSIONER ROGERS: No.

CHAIRMAN JACKSON: Mr. Colvin, you may proceed.

MR. COLVIN: Good morning.

Chairman Jackson, Commissioner Rogers, Commissioner Dicus and Commissioner Diaz, good morning. I am Joe Colvin with the Nuclear Energy Institute and with me today is Ralph Beedle, our chief nuclear office, Dave Rehn of Duke Power, who chairs the Advanced Light Water Reactor Radiation Working Group for the industry, Regis Matzie who heads up the Nuclear Systems Engineering for ABB Combustion Engineering and Steve Hucik, who is responsible for nuclear power plant projects at General Electric.

We thank the Commission and appreciate the opportunity that you have given us by making public the draft final rule language and the staff paper that summarizes the remaining policy issues associated with certification of the evoluntionary plant designs and we appreciate the invitation to discus the industry's views as well as concerns with the potential impact of these policy issues on future licensees who will reference these certifications.

These certifications are a key part of the improved regulatory framework that is essential to maintain the viability of nuclear energy in our country's energy mix

and that is one of the enabling conditions in the U.S. Nuclear Energy Industry Strategic Plan for building new nuclear power plants.

[Slide.]

MR. COLVIN: We share the Commission's objectives as shown on this slide, enhanced safety and reliability, standardization of designs, the early resolution of key safety issues and finally but certainly not last a stable and predictable licensing process.

As we emphasized in our comments in the proposed rule, the comprehensive NRC safety rules -- safety reviews, I should say, have clearly demonstrated the successful achievement of the first objective. The designs and operational commitments embodied in the design control documents or DCDs offer us the chance to achieve and maintain a remarkable degree of standardization. However, the process deficiencies that we continue to see in the rules concern us because they have the potential to lessen the degree of standardization, to leave unresolved many of the issues that were reviewed and approved by the NRC in the course of that rulemaking and, most importantly, to fail to achieve the stability of the licensing process that the NRC and the industry set as a goal when we began this effort.

Today, we would like to discus four of these key issues that, in our view, remain unresolved. Four issues

that have the significance and the impact on the finality of issue resolution achieved by these certifications and on the stability of these certifications to bring Part 52 licensing process to reality.

Before we get into these detailed discussions, I would like to ask each of the vendors who have their certifications, both Steve Hucik and Regis Matzie, to add their perspectives as the design certification influence on the process made to date and the objectives of Part 52.

I would encourage you to ask questions. I am sure that as we go or --

CHAIRMAN JACKSON: You're just telling us to do our job.

MR. COLVIN: Yes, ma'am. I am sure that won't be a problem, but we would encourage your questions at the time of the discussion or certainly at the end, as you might prefer.

MR. HUCIK: Good morning. I am steven A. Hucik, General Manager of Nuclear Plant Projects for GE's Nuclear Energy. I have responsibility for all of GE Nuclear Energy's advanced designs including the U.S. ABWR design which is the subject of these Part 52 certification rulemaking and the ABWR nuclear power plant projects currently in Japan and in Taiwan.

Although this morning's briefing focuses on

resolving remaining certification process issues, I believe it important to acknowledge at the outset what NRC's Part 52 design approval and certification program has already accomplished through the sustained and interacting efforts of industry participants, the NRC staff and the Commission itself.

From GE's standpoint, the final design approval or FDA issued by the NRC in July of 1994 was a landmark achievement, one which built upon a decade-long developmental effort and which followed exhaustive safety reviews by the NRC staff. The FDA gave staff approval to a design of substantially enhanced safety and economy of construction and operation, a design which holds enormous promise for contributing to our country's energy future.

That promise, I would note, is already being realized in Japan where the first of two ABWR units is now in full power operation and completion and commencement of startup testing for the second unit is scheduled for later this year.

The ABWR, I am pleased to add, has also been accepted by Taiwan Power Company for a two-unit project at its Lo Min site.

Certification rulemaking is the first step in the design approval phase of Part 52. What we seek from this step is a certification rule that will be hospitable to

future use of this advanced design by the U.S. utilities. This requires design stability and licensing predictability, two of the primary objectives of Part 52 and of the 1992 Energy Policy Act.

We welcome today's opportunity to express our views on the process provisions in the certification rules where there is industry-staff disagreement. While today's briefing necessarily centers on disagreements to be resolved, I want to state GE's appreciation for the work done by the senior review group. The public dialogue with the group on July 15 was highly constructive and many of the concerns expressed in prior industry comments would be resolved through adoption of the recommendations in the group's option paper of August 13, 1996.

There remain, however, significant process issues where disagreement persists. Our position on those issues is set forth in the comments submitted by the Nuclear Energy Institute and will be discussed further by the speakers this morning. I would only underscore at this point the concerns GE has in three major areas.

First, applicable regulations. The inclusion in the certification rule of a group of additional applicable regulations remains a strongly disputed matter. While the proposed deletion from Section 4 of applicable regulations covering operational requirements is an improvement, our

basic concerns persist as to the remaining array of design-related applicable regulations in Section 5. There is no safety or other need for these added regulations. Uncertainties are inherent in their deliberately broad formulation and they introduce a design instability which is a deterrent of future utility use.

Secondly, technical specifications. We continue to believe that the technical specifications in the DCD should be accorded finality, a position supported by standardization considerations, by the Part 52 objective of early issue resolution and by the substantial effort expended in their preparation and the thorough staff review leading to their FDA approval.

Finally, de novo or wholly new review for design certification renewal. We categorically reject the proposition that design certification renewal requires a de novo or wholly new review of the originally certified design. As a practical matter, it is very unlikely that a vendor such as GE or ABB is going to finance the cost of a de novo review for a renewal. Moreover, we believe that appropriate issue finality is compatible with Part 52 certification objectives and with the requirements for renewal contained in Sections 52.57 and 52.59.

Conclusion. It has been nine years since GE filed its pioneering design approval application for the U.S.

ABWR. In Olympic terms, this has been a marathon process of GE-NRC interaction. Much has been accomplished as we reach the closure stage on remaining process issues. What is needed now is a rule worthy of the enormous time, resources and effort expended to bring us to this point, a rule which is faithful to the design stability and licensing predictability objectives of Part 52 and of the Energy Policy Act, a rule that will enable this advanced design of demonstrated safety and economic value to make its contribution to our own country's energy future.

Thank you very much.

COMMISSIONER ROGERS: I wonder if you could --

CHAIRMAN JACKSON: Why don't we let Mr. Matzie make his comments and then we will jump right in.

COMMISSIONER ROGERS: Okay.

DR. MATZIE: Good morning, Chairman Jackson, Commissioner Rogers, Commissioner Dicus and Commissioner Diaz. My name is Regis Matzie. I am ABB Combustion Engineering's vice president of Nuclear System's Engineering and I have overall responsibility for the design, development and licensing of the System 80 Plus standard plant design.

First, I would like to also express my appreciation for the Commission appointing the senior review group. Their involvement has helped move the process along

to where there are now a manageable number of policy issues for final resolution.

We envision all of the issues before the Commission today to be just that, policy issues related to process, whose resolution does not impact the safety of the design but certainly will impact the commercial viability of the design.

As you have already stated, the System 80 Plus design was granted final design approval over two years ago. It incorporates many new safety features that comply with the Commission's severe accident policy. These new or improved features provide substantial additional margin against core damage accidents and a wider range of mitigation capacity in the highly unlikely event that core damage does occur.

The System 80 Plus standard plant thus achieves functions and performance levels that exceed current regulatory requirements. In fact, the NRC approved probabilistic risk assessment for System 80 Plus shows that it is approximately two orders of magnitude safer than today's currently operating plants.

ABB Combustion Engineering and the nuclear industry are therefore greatly troubled by the NRC's proposed design certification rules, create additional applicable regulations to capture the extensive effort and

accomplishments that I have mentioned.

We have provided, in accordance with the NRC's own policy for future reactors, a design that is much safer than present plants. It is unreasonable to consequently saddle these safer designs with additional regulations. Furthermore, since these new regulations are not needed for adequate protection of the public, adding them to this rule runs counter to the clear guidance of both the Administration and the Congress to avoid unnecessary regulatory burdens.

The principal result of these increased regulatory standards means more surveillance, more operational expenses, more enforcement activity and thus a less attractive nuclear option despite the fact that we have produced a much safer plant.

Beyond additional applicable regulations, there remain a few other matters of disagreement with staff positions that are also very important to us. Two of these, namely the finality of technical specifications and the status of operational requirements in the design control document are especially troubling. In these, the staff has proposed adverse changes in the finality status of extensive portions of the design control document long after these issues were reviewed and approved and, indeed, very late in the rulemaking proceedings.

ABB Combustion Engineering has expended substantial resources to achieve design finality and these proposed staff actions would undermine finality and licensing predictability to an unacceptable degree.

Regarding the renewal of design certification, the design should have the legal benefit of the doubt that it complies with the rules and regulations in effect at the time that it was originally certified. It has that benefit right up to the time its term expires and there is no reason beyond the additional relevant experience and new information to be considered under 52.59 to conclude that it does not continue to comply. A de novo review would be a major waste of both industry and NRC resources.

We trust that all of the remaining topics documented in the extensive comments submitted in July and last week will receive your serious consideration, even though we only have time to address a few this morning. It is ABB Combustion Engineering's strongly held position that this rulemaking is an essential element to the future of nuclear power in the United States. It will provide the definitive statement of the U.S. regulatory regime that will be awaiting investors when favorable market conditions return in this country.

In conclusion, I would observe that the Commission should take considerable satisfaction that they have

approved advanced designs that provide substantially increased safety. However, from the industry's perspective, it is imperative that the Commission now provide rules that minimize perceived investment risks associated with licensing.

Thank you.

CHAIRMAN JACKSON: Thank you.

Commissioner Rogers?

COMMISSIONER ROGERS: Do we want to talk about anything more broadly in the whole process here? I mean, is this now a general, opening for discussion?

CHAIRMAN JACKSON: Are there other presentations that you plan to make?

MR. COLVIN: Chairman Jackson, we had planned to have Dave Rehn and the other participants go in and talk about each of these four issues in more detail. Perhaps that might be the best time to subject those specific issues.

COMMISSIONER ROGERS: that's fine.

MR. COLVIN: And if there are more general questions --

COMMISSIONER ROGERS: Well, then I have two specific questions to the presentations.

I wonder, Mr. Hucik, if you could elaborate a little bit on -- give me a couple examples of how the

applicable regulations introduce design instability?

MR. HUCIK: The review that was done with the NRC focused on design features and design issues related to the particular designs, the ABWR and the System 80 Plus. Those designs and the bases for those designs were the bases for the Commission and the NRC issuing the final design approval. Applicable regulations present new regulations that potentially open up those issues and do not provide the finality that the FDA does with the designs as given in our documentation.

COMMISSIONER ROGERS: How?

I know you have said it but precisely how would that -- what scenario do you see that would in fact produce that result?

MR. COLVIN: Maybe if I might try, just to get into the discussion a little bit, if you take a look at the applicable regulations as they apply specifically to a design, I think the major concern is that it involves a significant degree of potential interpretation by the reader and by the regulator. I mean, if I pick out of context the rule on shutdown risk and it has four elements, it says the design must include assessments of four issues, the third issue is features that mitigate vulnerabilities resulting from other design features.

I think that is abstract enough and of enough

breadth that we could talk about what assessments ought to be conducted of what features for as long as we wanted to talk about those. As a result, I don't think the rules provide the certainty that that design is fixed in time. That's part of the issue and, in fact, that is provided within the FDA in great, great detail that those features have, in fact, been met and the assessments have been conducted. So I think that's the issue.

Raising new interpretations --

COMMISSIONER ROGERS: Let me see if I understand what you are saying here.

Is your concern that if these applicable regulations are put in place before the design is certified, as a rule, that then they would interfere with the certification, the acceptance of that certified design? In other words, that would lead to a re-review of issues that have already been considered in staff approving the design which is now up for certification? Is that the concern?

MR. COLVIN: Sir, we are at a state today where we -- and the Commission is going to move forward and certify these designs through rulemaking. It will be several years, hopefully not too distant but several years, probably the turn of the century at which time when we, the customers, will be looking at these designs as a viable source of meeting our energy needs.

When we start looking at those designs today and look at the potential risk and uncertainty that's involved in now going back and verifying that design now, today, five years later, meets this applicable regulation that is not well defined, is vague, will cause me, the customer, to question whether or not I've gotten enough certainty and finality in this process to justify the financial community, the investment community and me as a customer moving forward to purchase that design. That's the issue.

COMMISSIONER ROGERS: I think we have to pursue that because I think that's, you know, a scenario that would be fully outside of, I think, the intent of this process. But how realistic is it?

We are talking about, now, a design which will be certified through a rulemaking process and finalized through that process. Now, are you saying that when a COL applicant comes along and wants to adopt this design, that then the applicable regulations could be used to challenge the design? Is that what you're suggesting?

MR. COLVIN: I think there are a number of scenarios that one could posit in this situation. I think what we are trying to do is ensure back with the basic principle that we do not add detail in regulations that is, one, unnecessary and, two, provides uncertainty in the future. I think if you go through the --

COMMISSIONER ROGERS: I understand that.

MR. COLVIN: If you go through these regulations --

COMMISSIONER ROGERS: I'm trying to focus here on how the applicable regulations relate to instability in the design itself. That is what I am focusing on. Now, there are lots of other issues. I am not saying they aren't there. But I am trying to understand how that could come about. And I have trouble seeing that.

MR. COLVIN: If you go to the current Part 52, 52.63, which provides the finality that, notwithstanding any other action in the future, the Commission cannot make a change to the design and a petitioner cannot change in that design unless that is either -- two factors are met, one, that that change is necessary to assure adequate protection or, two, that that change is necessary to ensure compliance with the applicable regulations, the regulations that were in effect at the time of the design certification. I think that is the issue.

If, in fact, this applicable regulation, the excerpt that I read, is in effect at the time of the design certification, then there is -- there is a threshold which has now been at issue with the Commission or the staff deciding that a new change is made to that design three years, five years or ten years in the future based upon not

meeting the current interpretation of what it takes to achieve compliance with that. So it adds not only to instability in the design certification process but into the follow-on process.

CHAIRMAN JACKSON: My understanding is that 52.63 has a fairly stringent backfit standard for the applicability of these additional applicable rates and so that the Commission cannot impose a compliance backfit unless actually three criteria are met, the failure to comply results in a substantial reduction in the protection of public health and safety or the common defense and security, that the new requirements provide a compensating increase in protection not exceeding the level of protection originally embodied in the additional applicable regulations and, third, that the direct and the indirect costs of implementation are justified in view of this compensating increase in protection.

You are saying that that is not enough?

MR. COLVIN: No, I am saying that that is not enough. I think what we have done is achieve a higher degree of backfit protection but in an area that is yet untested. That is a new -- a new --

CHAIRMAN JACKSON: The very fact that you say it's untested, you're saying that the Commission, because it is untested, should not at any point in the future have any

ability under however stringent a set of circumstances to understand, in fact, whether what it thought it was certifying in these designs in fact, you know, is in these designs? Is that what you are telling us? That we should remove that ability?

MR. COLVIN: I think there is a basic -- no I don't. I would not say that you ought to remove that ability.

I think that the Part 52 requirements, though, set in place the tests that ought to be preserved and those tests were very stringent and they were decidedly stringent and developed through the public policy process and that was the principle on which we all went forward with Part 52 and implementation of design certification. That test was that it either had to be compliance with the regulations as they existed today or that it had to meet the adequate protection standard. What we are talking about here is now a different level of new information or new information which changes not either one of those two standards but which adds a third tier category.

CHAIRMAN JACKSON: But the new information, which I guess you mean these new applicable regulations, were the reference -- were the references with respect to which these designs, in fact, were done. Is that not correct? I mean, are you telling me -- that is my understanding of the way

this has evolved. Are you saying that is incorrect?

MR. COLVIN: No I think that is correct and --

CHAIRMAN JACKSON: Let me finish then. So if that is the case, and one has stringent backfit requirements, those stringent backfit requirements are always referenced to some base line standard or requirement. And so what are you suggesting that the Commission use? If, in fact, you are satisfied that the backfit elements are reasonable, what then should be the reference on which they are made?

MR. COLVIN: First of all, I am not sure that I agree that the backfit standards were acceptable.

CHAIRMAN JACKSON: So you think that they --

MR. COLVIN: I would like to take the discussion back, again, to the other point. Let me answer your question, I think, first on this issue.

If, in fact, we said that the applicable regulations certified the design features of these two designs at the time of issuance of design certification rulemaking and that is the test against which all backfit or all potential changes are made, then I think we are essentially in agreement.

The dilemma is that by adding words into a new regulation that leaves open the interpretation of what is compliance and what it takes to achieve that is left open to interpretation between the staff, the Commission and the

industry that is sitting at the time that is reopened, that is the issue. And that the backfit tests that are applied --

CHAIRMAN JACKSON: What is it -- I guess I'm confused. What is it that's being left open to interpretation? Can you be more explicit?

MR. COLVIN: As I say, if you take the example, the shutdown risk says, assessments of features that minimize shutdown risk. The staff has certified that those assessments were done for each of these designs and the staff is satisfied that those have been completed.

Now, is there a new assessment that should be completed to minimize assessment risk three years from now? If, in fact, there is, then that test, that's new information which obviates 52.63. It takes away the standardization that we applied because new information -- the designs were safe and they continue to be safe to meet the adequate protection standard.

CHAIRMAN JACKSON: Well, it is safe as of the understanding today; is that correct?

MR. COLVIN: That's right. And if I kept it narrow to those features that were embodied within the design --

CHAIRMAN JACKSON: As far as one understands that those features, in fact, give the level of safety that one

thinks one is certifying today.

MR. COLVIN: And if they don't then the Commission has provisions to reinforce those to the adequate protection --

CHAIRMAN JACKSON: Well, if we don't, 52.63 is in fact a more stringent backfit situation with respect to that.

MR. COLVIN: I think we are talking about these issues in the sense of adding a third tier of types of regulation. We have regulations that the NRC issues for adequate protection. We have regulations which the NRC issues based --

CHAIRMAN JACKSON: No, I understand what you are saying.

MR. COLVIN: -- upon 51.09. Now we are adding a third tier which adds new regulations for new advanced plants which are intended to be more safe --

CHAIRMAN JACKSON: Right.

MR. COLVIN: -- more predictable, a more stable process but we're adding a more onerous process because --

CHAIRMAN JACKSON: No, it is not more onerous because presumably the designs reference these additional regulations. What you are really -- are you really --

MR. COLVIN: If the design references those, then there is no need for the applicable regulations.

CHAIRMAN JACKSON: Well, yes there is because there are those who come back to us and talk about whether things that are design documents or safety documents in fact have the weight of regulation and perhaps they should be challenged. And so we have had these discussions.

So if one wants overall stability, we want stability for you and we want stability for the Commission.

MR. COLVIN: I agree.

CHAIRMAN JACKSON: And so I guess, again, I am back to Commissioner Rogers's question where I guess I am not sure that I have seen the total picture as to how the application of these applicable regulations which you agree are the referenced ones for these designs that the Commission has given final design -- the staff has given final design approval to, how then, using those as the base line requirement at some future date compromises the design that they are referenced to in the first place.

MR. COLVIN: Let me try an example one more time.

CHAIRMAN JACKSON: Okay.

MR. COLVIN: And let me see if I can try this.

Everybody else can weigh in if they desire but as we look at the process, we went through the process of evaluating the designs through the staff-industry-vendor interaction. We set, first of all, we set a very high standard of what the customer desired in the utility

requirements documents and that's where the decision was made, in fact, to increase the safety level of these plants.

Back over 10 years ago, through the EPRI utility requirements documents, the industry got together and established the safety criteria that we intended to meet in our designs. That's the principle. We then moved forward and through the interactions with the staff and the vendors and the industry reviewed the designs and made the determination that led to the issuance of the final design approval.

In order to meet those and then move forward in the design certification, we then evaluated all these design features and the staff said these design features are adequate and they meet the intent of the rules in all these areas, the applicable regulations, the regulations that were in effect at the time, at the time you issued that.

So now that review has been done and the scope of what has been looked at has been defined and, to the best of the staff's knowledge and the industry's knowledge, we have assured the safety of those plants to even higher levels than was required by the Commission's safety goals.

Now what we are doing is adding a new layer of regulations that is written very broadly and is open to interpretation, so it is not -- if, in fact, we certified the design certification rulemaking and the final design

approval to the features that exist there, then there is no instability.

But if, in fact, we add no regulation that is left open to interpretation that is generally vague by the staff, the Commission or the industry, then we open up the potential at some point in the future for some new idea, information or some other threshold event to question whether that design certification was adequately performed.

DR. MATZIE: Could I take a try at using another example?

CHAIRMAN JACKSON: Sure.

DR. MATZIE: There is an applicable regulation relating to conditional failure probability of the containment and the numerical number used in that applicable regulation is .1. We build the first plant in the United States and we get the as-built detailed design and as-built equipment and put that in there and we run the conditional failure probability calculations as part of the living PRA and it comes out to be .105. Now, what do we all do? Who decides whether that meets it or doesn't meet it?

That is an example of the uncertainty that an applicable regulation in this phase that we are talking about can raise at a very critical point in the process.

CHAIRMAN JACKSON: But if one has an applicable regulation, and I agree the conditional containment failure

probability is an interesting one. You picked a good one. But let's talk about that in two ways.

One is, let's imagine that, in fact, you did a calculation and, as you say, it was .105 instead of .1 and you would be concerned as a licensee or as a vendor that, ah-hah, the NRC is going to jump all over you because it is not exactly .1, try to force some change.

I guess the question then I have is if you look at the criteria that are laid out in 52.63, this what I call more stringent but that has these more stringent backfit elements and not only do they address, you know, margin of safety, they talk about the both direct and indirect costs, are you suggesting it would be impossible to accommodate that small a degree of change such that you would not have comfort that the staff would come along and impose some requirement on you because of that degree of change, given those three stringent requirements?

DR. MATZIE: I don't have confidence that the staff or a potential intervenor would not raise this issue to a fairly high level of pain in the stage where we might discover this when we've got as-built equipment information that is cranked into the PRA.

I think it becomes an issue of the stage at which it is found out and what the both intervention and staff, how they look at it and recognize the point we're talking

about if we sign the contract today is downstream seven years or so. If the plant's delay -- I mean, the first plant comes to contract eight years from now, we're talking about 15 years from now we might be addressing this issue.

Who knows what the environment is within either the staff or the public in terms of addressing this type of issue. And I believe there is an uncertainty. I agree that some of the backfit positions attempt to address that but I don't know what the environment will be in that time frame and that's why I believe that brings uncertainty into the process.

COMMISSIONER ROGERS: That's clearly an uncertainty you have expressed there. It is a little different from the example that was talked about earlier, namely challenge to the design itself. I mean, here you are citing an example, the plant, the design has been accepted, the plant has been built, you're all ready to go and then somebody steps in or at some point, you know, it's yet another kind of uncertainty but a little different from direct -- introducing a direct challenge to the design itself kind of uncertainty.

Well, I think these are very important things for us to understand. If I could just digress for a moment, I think that there are various ways we can look at this situation but my mental image of what has happened is not

that we started out with a set of regulations and design to them. That isn't what happened. What we started out with was an exhortation to the industry from within and from the Commission itself to come up with designs that are substantially safer than those that we have.

We believe that the current designs are safe or we wouldn't be allowing them to operate. However, we all felt that the next generation could be demonstrably safer and therefore ought to be. However, there were no guiding regulations to design to, that would lead to that.

So, in effect, what I think is happening here is, in a sense, we are reverse engineering the regulations backwards from the design to what a regulation might be that would lead to that design and that is where I see the problem.

CHAIRMAN JACKSON: That's where we are.

COMMISSIONER ROGERS: And if we knew how to set those regulations ten years ago or so when we embarked on the design process, then we should have done it but we didn't know how to do that at that time.

So we embarked on a process here that said, go out and do the best that you can and the industry tried to do that and I think successfully did it.

CHAIRMAN JACKSON: Right.

COMMISSIONER ROGERS: And now we are at that point

and it is, you know, it's very, very clear that we could get there because we got there and now we would like to take -- some people would like to take another step and say, well, why don't we codify this in some way in regulatory space beyond the rule that certifies the design itself. It seems to me that that is the issue that is on the table and what are the problems of doing that and I am interested in the assertion that doing that will introduce instability in the design and I am having a little trouble with that itself, just seeing exactly how that might happen.

I also wanted to -- well, it's really, I guess --

CHAIRMAN JACKSON: I think we want to give the other commissioners an opportunity.

COMMISSIONER ROGERS: Yes.

CHAIRMAN JACKSON: You were going to make a comment?

MR. REHN: Yes. Dave Rehn with Duke.

Commissioner Rogers, I believe your characterization of how we got to where we are today is, indeed, correct in keeping with how we view that as well.

Also, on the industry side, as an operator and a constructor of these plants, we have always strived to have sufficient margin between that which is regulatorily required and that which where we try to operate. We do not like to operate right at the margin and, on some of these

applicable regulations, what we have are designs that we all agree go far beyond those minimum standards of safety. However, if we now try to overlay regulations that bump up close to the numbers that we have established, whether derived through PRA techniques or other approaches, those then allow changes in interpretation.

I mean, PRA is not an exact science, per se. Things can change in some assumptions and we can derive slightly different numbers. If there is at least a margin built in between that which we are trying to achieve and that where we are, we minimize the risks to possible design changes.

CHAIRMAN JACKSON: I understand your point, Mr. Rehn, but I think in a way we are on the horns of a dilemma here because the issue is what is that margin and is the Commission being asked to certify what we think is a Cadillac with air bags and ABS and then comes out at the other end and finds out that it's a '57 Chevy? And while people certainly drive '57 Chevies around all the time and no one forces them to trade them in, the issue is what was the Commission's intent when it started out and was it a 1996 Cadillac or a 1996 Pontiac, is that the margin? Or is it a '57 Chevy?

MR. REHN: We fully appreciate your position but we also, I think, must remember that those, to use your

example, those air bags and other safety features are described and contained in tier one and, by definition, they are significant challenges to us if we were to even contemplate a change to those features.

They are there, they have been reviewed and we are very much supportive of those being in the plant when it is constructed and when it is operated. So we believe by having those in the tier one, that certainty is provided.

CHAIRMAN JACKSON: Is there a clear distinction between the design and operational aspects in tier one and tier two?

MR. REHN: Between design and operation, I think there is some combination of both, both in tier one and tier two. That is part of what we were going to discus later.

As you go through any design, there is always an interest in how is it going to be operated, what are the requirements that might be associated, whether tech spec or other operational characteristics? One, sometimes, influences the other.

In this certified design to date, both of those aspects in several areas have been addressed when it was necessary for the reviewer or the designer to stipulate what was the design and, indeed, how would it be used in operation. And it is those hand-in-glove relationships that I think assure not only is the feature there but there is an

understanding and indeed a definition of how it will be used or maintained during the operation of the plant.

CHAIRMAN JACKSON: Last question for you. Suppose one thought that, as you say, in the tier one part, that one were really certifying the car with all the new safety features but, in fact, found out that some new information indicated that that was not the case, what then do you think is a reasonable position?

MR. REHN: Well, we can postulate I think lots of ranges of new information on where we are.

CHAIRMAN JACKSON: No, I agree with that but this is at the high level, at the high level here.

MR. REHN: I guess my deep-seated suspicion is that any new information is unlikely to challenge the overall safety of these to the extent that it would take it down to such distance that we are now impinging upon the original safety margins that are as defined. Clearly, we strive to be many orders of magnitude safer than existing designs and, indeed, those are the reasons for these features to be added.

CHAIRMAN JACKSON: But there should not be a process that gives us comfort that in fact the safety features are what we think the safety features are today?

MR. REHN: Well, to the extent that the best minds on both sides of this have strived to define them and

articulate them in tier one, I think we have done an awful lot to ensure that level of certainty. It is the introduction of what might be characterized as an instability by trying to go further and assign absolute numbers to these, I mean, if there was indeed a standard that was predefined for a probability of core melt frequency or off-site exposures that indeed we would say we needed to exceed, that may have yielded slightly different approaches to this.

CHAIRMAN JACKSON: Commissioner Dicus, did you have some comments?

COMMISSIONER DICUS: No questions.

CHAIRMAN JACKSON: Commissioner Diaz?

COMMISSIONER DIAZ: I think I can add very little to this discussion. I just come in just at the moment in which there is so much information of which I am really not appraised. But, in principle, I think there is an issue that is clear to everybody, that the process was started to diminish uncertainty, both in the design and operation of nuclear power plants and in the regulation of nuclear power plants and I think we are all probably trying to get to that same point.

I cannot really, at this moment, see where the clear differences are. It seems like we are talking the same thing but I like to see a little more regarding how 10

CFR Part 50, Appendix A and B and all the appendixes match into this discussion and then I might be able to be a little more clear in what my comment are.

CHAIRMAN JACKSON: Why don't we go on. Do you have further presentations?

MR. COLVIN: Yes, let me turn it back over to Dave Rehn since he's had it anyway and we will continue.

MR. REHN: Thanks, Joe.

Again, we very much appreciate the public release of the NRC staff analysis of the nuclear industry's comments on the draft design certification rules. Also, along with the recommendations that they have submitted for the Commission consideration.

Overall, we have been very encouraged by the willingness of the NRC staff to hold both public meetings on these important issues and we have found in the public meetings, including our July 15 interaction with the senior management, to be very productive and very useful, not only in clarifying our positions but also in helping us understand the staff's positions as well. I think that has led to a great deal of commonality in terms of what we are both striving to do.

On our overhead, we show a background paper summary. In preparation for this briefing, we reviewed the recommendations that are contained in the August 13 NRC

staff paper. Overall, there seems to be a convergence between the NRC staff and the industry positions on 11 of the 20 issues. Obviously, subject to the clarity of the final rule language.

We see a potential for a convergence in three other areas, provided there is some further clarification. However, we still find there is roughly six areas where the staff and the industry, if we don't diverge, at least we have not yet found that commonality or that middle ground.

Today, what we would like to do very briefly is to cover four of those areas. Our fundamental question, our fundamental thrust in these areas is the question of both finality and stability as it relates to the Part 52 process.

The four issues that we would like to talk about are the finality associated with standardized tech specs, the extent of issue finality that is contained in certification renewal proceedings, the finality associated with operational issues that are reviewed and approved during -- that were reviewed and approved during the certification process and ultimately, once again, to hopefully have a brief discussion on applicable regs, focusing on the finality and stability associated with that.

So to do that, I am now going to turn it over to Regis who will provide a summary on the first issue, tech specs.

DR. MATZIE: Next slide, please.

[Slide.]

DR. MATZIE: The industry is adamantly opposed to depriving the System 80 Plus and ABWR technical specifications of the finality which they deserve. The reasons we are opposed to the staff's proposal as provided in their memorandum to you dated August 13, 1996, are, one, the design certification applicants were required to submit technical specifications for review as per 52.47. The technical specifications have been carefully reviewed and approved by the NRC staff as documented in the final safety evaluation reports.

Point two, the Commission's own policy guidance contained in their February '94 SRM for SECY-93-77 calls for issue finality for all information provided in the application that is reviewed and approved in the design certification. The technical specifications were included as tier two material in the design control documents referenced in the April 4, 1995, notices of proposed rulemaking. There were no comments received that would suggest that the technical specifications not be provided the same finality as any other portion of the design control document. Thus, the staff's proposal runs directly counter to the Commission's standing guidance.

Point three, the NRC staff has erred in attempting

to separate design and operational matters. For the purposes of their proposal on technical specification and treatment of other operational matters, the staff has characterized design features as relating to hardware. The design is not confined to hardware. The design also consists of bases, assumptions and analyses, all of which are very much interrelated to plant -- to the operation of the plant.

The operational matters in the design control document are there because they are design oriented. Where the matters relate to the administrative aspects of operation, the design control documents generally defer the information requirements to the COL application.

The so-called operational items that are in the design control document often bear directly on the safety of the design; they are not separable from other design aspects and cannot be categorically excluded from having finality or from being requirements. They have been reviewed, approved by virtue of the entire design process.

Point four, the technical specifications which comprise over two volumes of material in the System 80 Plus design control document and similarly in the ABWR cost nearly $2 million per design to generate, gain NRC approval and print in the precise format that was required by the staff. And, in fact, for the System 80 Plus design, it was

a second printing to get that precisely as required by the staff. Without finality, this investment is squandered because finality is what the design certification is all about.

Point five, the entire effort would be subject to being redone at the COL application stage as there is no finality for the technical specification as proposed, not even the backfit protection standard of Part 50.109 during the COL application is afforded in the staff's proposal.

Point six, the industry's proposal would answer the staff's concern about two sets of technical specifications and change procedures. The industry proposes that after the COL is issued, the design certification technical specifications would not have further status and the plant would have one set of technical specification with one change process, subject to the 50.109 backfit standard.

Furthermore, the staff's proposal is not necessary for safety because even with issue finality under 52.63, the staff can seek to backfit on the basis of adequate protection or compliance with the regulations applicable at the time of design certification.

In accordance with the standing Commission guidance, we ask that the Commission direct that the System 80 Plus and ABWR standard technical specifications be provided finality under 52.63 for plants referencing these

design certification rules up to the time of COL issue.

Thank you.

CHAIRMAN JACKSON: Thank you.

Commissioner Rogers?

COMMISSIONER ROGERS: No, I have no comment.

CHAIRMAN JACKSON: Commissioner Dicus?

COMMISSIONER DICUS: No questions.

CHAIRMAN JACKSON: Commissioner Diaz?

COMMISSIONER DIAZ: No questions.

CHAIRMAN JACKSON: Dr. Matzie, for my edification, because there is this issue of what's operational and what's design, can you give me or give the Commission an example of an operational requirement in the design control document that you feel is inextricably connected to the design features themselves?

DR. MATZIE: Well, I think that I have a number here and maybe I will start with one that I feel is straightforward. There are many others.

First, the one I would like to start with and hopefully the example you are looking for, is on the containment leak rate. The leak rate test says that the containment leak rate for System 80 Plus containment must be proven lower than .5 volume percent per day, basically an operational requirement.

That number is used throughout the safety analysis

for the PRA, the site boundary dose, it is used in determining some of the design attributes of the design itself in terms of tightness of the containment, et cetera. So I think that it is a good example of how something that is operational is fundamental to the design.

CHAIRMAN JACKSON: Do you have another example?

DR. MATZIE: We could turn to one on the reactor coolant operating limits. There are a set of operating limits which, as an example, have pH conductivity hydrozene, et cetera. Those were all characteristics used to select the materials, to predict the performance of the reactor coolant system and they are also operational limits which the operating staff must adhere to in operating this plant. It is a whole table of those, with footnotes, et cetera.

CHAIRMAN JACKSON: Okay.

MR. COLVIN: Thank you, Regis.

Steve will now address the next issue.

MR. HUCIK: Thank you.

Next slide, please.

[Slide.]

MR. HUCIK: We will introduce the topic of finality at certification renewal and then discus a few relevant points related to this.

The issue before the Commission is the scope and nature of NRC review of the originally certified design at

certification renewal. Industry strongly opposes any requirement for de novo or wholly new review of the originally certified design. Duplicate review of that design is not required by Section 52.59 and it allows no role for issue finality.

As a practical matter, it is highly unlikely that vendors will commit to the enormous cost entailed in a new complete design review and a review of that type would impose needless resource burdens on the NRC staff as well.

Renewal review needs a proper focus and industry proposed such a focus in its July 23 comments. We recognized in those comments that updated information in the renewal application should cover relevant experience between the time of certification and renewal. This burden of information submittal and explanation is properly shouldered by the applicant. That burden does not, however, cede control of the scope of renewal review to the applicant, as the staff contends. NRC will prescribe the scope of updated information to be submitted, evaluate the sufficiency of the submittal and make its own determination as to the need for design modifications based on the adequate protection and compliance requirements as set forth in Section 52.59.

In short, contrary to the staff's concern about our proposal, NRC would not be precluded from considering postcertification information which could have altered its

earlier adequate protection and compliance findings if that information had been known at the time of original certification. If industry's proposed rule language is not sufficiently clear in that regard, we are open to clarifying the rule language.

CHAIRMAN JACKSON: Would you repeat the statement you just made?

MR. HUCIK: In short, contrary to the staff's concern about our proposal, NRC would not be precluded from considering postcertification information which could have altered its earlier adequate protection and compliance findings if that information had been known at the time of original certification. If industry's proposed rule language that we have provided is not sufficiently clear in that regard, we are open to clarifying that rule language.

CHAIRMAN JACKSON: If what information had been known at the time of certification?

MR. HUCIK: Information that had been found after certification that was shown to be not known at the time.

CHAIRMAN JACKSON: I see. If it's found after certification but if it had been known at the time it would have affected the original certification. Is that your point?

COMMISSIONER ROGERS: Well, the language though was adequate protection, right?

MR. HUCIK: Right.

COMMISSIONER ROGERS: So the planned benefit of the design in providing a substantially greater protection than adequate protection, because adequate protection is what we have now, if that disappeared because of operational experience, what would your position be?

Not that the design is inadequate to provide adequate protection but the substantial increased safety margin was proven not to be there through operational experience? Same conditions that you just talked about but not degraded to below adequate protection standard but substantially below what we all thought was to be achieved by the new design?

MR. HUCIK: That would still be within the adequate protection level.

COMMISSIONER ROGERS: Why would it? Why would it?

I don't see it. I mean, the adequate protection could still be manifest but the substantial improvement over that turned out to be illusory. I am just suggesting that. What would your position on that be?

It is not that it's unsafe. It is just that it's no safer than everything we have right now.

MR. COLVIN: Let me clarify. I just want to make sure we clarify it. I think our position is clear that the articulation of the review requirements that is in Part 52

currently, Part 52.59, a criteria for removal, takes on two conditions. One is the applicable regulations that were in effect at the time of the certification and, secondly, new requirements that the Commission might levy -- and if I can find the words quickly, that the -- that may wish to impose after determination that there is substantial increase in overall protection of the public health and safety or common defense and security that the direct and indirect costs of the implementation are justified in view of this increased protection.

So, in answer to your question, if in fact at the time of the renewal one had looked and then found differences between what had been expected at the time of the certification, the Commission under this requirement would have the ability to, in fact, require for renewal a new level of requirement in its renewal process.

CHAIRMAN JACKSON: But subject to a backfit requirement that is referenced to adequate protection as opposed to the enhanced level.

COMMISSIONER ROGERS: Right. That is not the issue as I see it.

MR. COLVIN: No, it's not -- it's not -- it's not referenced to adequate protection, according to the rule. That's not referenced to adequate protection.

At time of certification, you have certified the

design and ensured that you either have to meet the adequate protection standard or the compliance requirements of 52.63 from the time the design certification rulemaking is issued up until the time of renewal.

When you go to renew the design, the Commission, by your own regulations, can then apply a new threshold of standard which is embodied in 52.59 and we are in agreement with that level of standard requirement.

The issue on the table is whether or not everything that had been reviewed as part of the initial review was set aside and the review started anew, the wholly new issue. I think that is really the issue.

MR. HUCIK: That's the real issue.

MR. COLVIN: That's the issue, whether or not we can rely on the work that had been done before except for the new questions and changes. That's the issue that is on the table if I am -- unless I --

COMMISSIONER ROGERS: Well, I mean that is an issue. I frankly don't think that is a very realistic possibility that at license -- at certification renewal time that the whole process would be started all over again with everything we have done so far.

However, I do think this matter of a -- at certification renewal time it becomes apparent that some features of one of these designs in fact don't deliver this

very much improved margin of safety, although it is perfectly safe. So there is no adequate protection standard.

Now, what is the basis on which the staff could then say, well, wait a minute, in certifying renewal here, we thought this thing was going to do much better? It isn't and we think you ought to go back and do something to fix that up to get that margin back up again.

Now, I wonder if Mr. Malsch could comment on what he thinks the rule says on the proposed certification rule --

MR. COLVIN: Commissioner Rogers, let me say that we agree with your statement.

CHAIRMAN JACKSON: Let's let Mr. Malsch answer the question.

MR. MALSCH: There are two findings -- well, one finding made at renewal stage, which is that the design complies with adequate protection and the regulations in effect at the time of the original certification. In addition, though, there is a provision built into the rules in Part 52 which say that, at renewal time, the staff may impose backfits to design based upon what is essentially a standard 51.09 backfit protection standard.

So we could, at renewal stage, based upon new information under Part 52 add a design feature if it would

provide substantial additional protection and be cost justified. So Mr. Colvin is essentially correct.

CHAIRMAN JACKSON: What is the reference? What is the reference standard?

MR. MALSCH: Well, I think -- for the purposes of the backfit rule?

CHAIRMAN JACKSON: Yes.

MR. MALSCH: You would operate -- you would be asking yourself whether there is substantial additional protection provided above a base line with the base line defined as adequate protection plus regulations in effect at the time of the original design certification.

But you could add this incremental protection at that stage.

COMMISSIONER ROGERS: Under the ordinary backfit rule?

MR. MALSCH: Right.

CHAIRMAN JACKSON: But again, it is referenced to whatever applications are in effect at the time of the original certification?

MR. MALSCH: That's right. In a sense, that goes back to the applicable regulations question because that then contributes to the base line from which you're applying the backfit standard under 51.09.

But, regardless of how you come out on applicable

regulations, there is still the opportunity in theory, at the certification renewal stage, to add safety increments above whatever applicable regulations would otherwise require.

CHAIRMAN JACKSON: But it is a question of what the floor is from where you're starting?

MR. MALSCH: That's correct.

MR. COLVIN: The issue, Chairman Jackson, as you indicated, is whether or not the information that has been afforded finality in the original review is, in fact, afforded finality in a renewal process. That is the question and that is the concern that we tried to articulate.

We are in agreement with the change process of the requirements at the renewal stage.

CHAIRMAN JACKSON: Okay, Mr. Rehn?

MR. REHN: Yes. I'd like to now briefly cover the last two issues, first starting with the status of operation or operational related requirements. This is very analogous to the tech spec discussions that we had.

We appreciate that the staff clarified in their August 13 paper that all design changes, including those that would result from operational requirements would be restricted by 52.63. But we are concerned the staff is now proposing a significant change in position and that is that

there is a distinction in finality accorded to design versus operational related requirements, DCD.

We are concerned that this is not an easy or straightforward concept, particularly when it comes to implementation. Let me elaborate.

We agree with the staff that total facility operational definition is beyond the scope of design certification. But I think as we have already said, when we and the staff were going through the design we found that, in many cases, there was a need to define operational related requirements to establish the overall safety reviews of the particular designs.

These requirements are related to some of which Regis has already touched on, such as periodic testing or inspections, operational constraints, actions to minimize shutdown risk, startup testing or other considerations name but a few. Many other discrete requirements integral to the staff's safety determinations were also included in the DCDs.

Obviously, the intent was not to resolve all operational issues in the DCDs. We fully agree. Issues like training or security or other site-specific issues have purposely been left out of the certification and are not included in the DCDs. But we believe where the staff needed to understand the discrete aspects of how a system would

operate or be maintained, that aspect should become part of the overall design review and an appropriate requirement be included in the DCD.

These requirements then, like other aspects of DCD, since they were reviewed and approved, public hearings and comments have been obtained as a part of the certification rulemaking, we believe then that they should be accorded an element of finality. And, indeed, going back to the '91 Commission guidance suggesting that issue finality for all information provided in the application that is reviewed and approved should become part of the certification rulemaking.

In light of this guidance and because the DCD requirements that go beyond the bare design of the plant were reviewed and approved and are now a part of the design certification, we believe that these operational related requirements should be treated as final and as final as any other aspects of the material review for the DCD.

So I think, in summary, consistent with earlier policy and guidance as well as the goals for earlier issue resolution and standardization, we are simply asking the Commission provide finality to all that information that is contained in the DCD, that has been reviewed and approved as part of the overall design certification rulemaking.

COMMISSIONER ROGERS: Well, it seems to me -- I

haven't heard what you really mean by finality. In other words, are you talking about completeness as well as finality? You're talking about operational related requirements in the DCD. There would be other -- there could be other operational requirements.

MR. REHN: Absolutely.

MR. COLVIN: Absolutely.

COMMISSIONER ROGERS: Outside of that that could be imposed separately and presumably without limitation, provided they can be demonstrated as necessary for adequate protection. Is that correct?

MR. REHN: Yes, we agree.

COMMISSIONER ROGERS: So your position is that what relates to operational -- what there is in the way of operational related requirements in the DCD should be finalized as part of the design certification rulemaking and that -- and not change, and those particular requirements not changed without some adequate protection standard failing to be met; is that a fair statement?

MR. REHN: Yes.

CHAIRMAN JACKSON: Commissioner Dicus, Commissioner Diaz, questions?

Okay.

MR. REHN: The last issue I wished to address was in the area of applicable regulations. Lots has been said,

I think, on both sides of this. I think the arguments both parties have made definitely have merit.

Since 1993, the industry has been opposed to the concept of applicable regulations and we would like to take just a moment to summarize a few of our points.

I think we need to view this in the overall context of what we believe were the four main objectives that Joe has already addressed in implementing these new designs under Part 52. Clearly, enhanced safety and reliability, we believe, have been achieved in these designs. I think there is no disagreement relative to that.

Likewise, standardization and early resolution of safety issues have also been a part of this process and I think have been satisfactorily addressed.

Our concerns go to the heart of the fourth issue which is the overall finality and stability and predictability of our licensing process and it is within that context I would like to raise a few issues.

First we fully agree that it may sound reasonable to propose regulations that kind of lock in the level of design embodied in design certifications. After all, requirements are already in the DCDs. But, is it necessary to do so and at what cost? Is this the right thing to do?

This is the key question I think that we have because it attaches a suite of untested, potentially

untested new regulations to these certifications as proposed by the NR staff and we believe that would add an element of uncertainty and instability to the process that we had hoped would be more predictable and stable. This is essentially so, considering the proposed applicable regulations differ in nearly every way from other existing NRC regulations and attempt for the first time to address regulatory matters that are far beyond the existing regulatory envelope.

We believe that the enhanced level of design is locked in by the very nature that the design certification rule themselves including Section 8 talk about these design features in tier one and that there are necessary provisions associated with changing tier one to ensure that these enhanced safety features will, indeed, be there and be effective.

Even if new information later indicates that these new features do not provide all the additional safety margins currently envisioned, it is beyond dispute that the Commission can be assured that these features will provide substantial margins of safety over the current generation of safe plants consistent with expectations and policies. So our belief is the answer is, no, applicable regulations are not necessary to lock in these enhanced design features.

It would also seem like the industry concerns regarding uncertainty and stability are adequately addressed

by the backfit protections included in the draft rules. The staff clearly believes so. But do the proposed backfit protections really help in this regard?

Proposed backfit protections are subjective and untested in our view. They rely on interpretations by future parties which could constitute a substantial reduction in protection and a compensating increase in not exceeding the original level of protection. Clearly, words that can be interpreted in many different ways.

In addition to the backfit protections that are subjective and untested, the wording of the applicable regulations is problematic in certain areas. In the base line level of protection achieved and intended to be preserved was not initially defined, it is more a derived standard as we have completed the designs.

Because of the practical implementation of the staff's proposal, it depends on elements that are both subjective and programmatic and undefined in some cases, we can come to no other conclusion than this proposal itself would lead to the uncertainty and instability I think that we have already had a chance to talk about some today.

So perhaps more to the point, we can't envision an already skeptical financial community providing support when we have, indeed, introduced this increased level of instability.

Last point. We note in the staff's own determination or own decision in their August 13 paper that only procedural changes are expected. They are likely to meet the specific backfit standards for applicable regulations. It is not likely that new information would result in design changes.

If, indeed, this is correct, then the small likelihood is judged by the staff that a proposed applicable regulation would lead to significant procedural changes or changes in the design we believe does not justify the introduction of substantial uncertainty and instability into what is, I think, already a complicated process.

So, accordingly, we would urge you to not use these applicable regulations in the certifications.

CHAIRMAN JACKSON: That's it?

MR. COLVIN: Chairman Jackson, at the end of any questions, I would just like to make a few closing comments. I would try to keep them briefs.

CHAIRMAN JACKSON: Commissioner Rogers, do you have any additional questions?

COMMISSIONER ROGERS: No. No, I don't.

CHAIRMAN JACKSON: Commissioner Dicus, Commissioner Diaz?

COMMISSIONER DIAZ: Just a comment.

I believe I am trying to understand this and if

you will pardon me for being so slow but, you know, when we are talking about these applicable regulations and how they go beyond Part 50 and the design certification rule, I am not sure I have seen the question clearly answered as far as I am concerned from the staff's side. The change control processes in Section 8 of the rule, are they sufficient to ensure that the designs will continue to provide an enhanced level of safety over current designs without the need to codify the applicable requirements?

And that, to me, seems to be an issue and I would like to maybe hear an answer maybe not here but at some time.

CHAIRMAN JACKSON: Well, the staff is coming up in about two minutes, so you will have the chance to pose that question to them, in fact.

COMMISSIONER DIAZ: All right.

MR. COLVIN: Chairman Jackson, now that I am at a minute and 50 seconds, I will proceed quickly.

CHAIRMAN JACKSON: All right.

MR. COLVIN: I'd just like to make a few brief closing comments and thank the Commission for the time you have given us and maybe take a step back for just a moment.

If you go back over ten years ago, we set on a path and set on a path as a matter of public policy to put in place an advanced reactor design that can meet our future

needs as energy suppliers within our country.

The Commission, in the issuance of Part 52, really took a bold step in the face of a lot of comments and adversity and pressures from many people, including the industry, to put in place a policy that would lead to safer plants, to standardized designs, to stability in the process, to plants where the design was essentially complete prior to any commencement of construction. And the processes that would approve the processing and licensing of these plants and involve the public at the earliest opportunity and also involve the resolution of safety issues at the earliest opportunity.

We have really made significant progress in those areas. I think there are few things in life that are certain and probably less certain when we are talking about regulation and licensing than others, but I think there are a lot of things that are certain about this process.

You know, it is certain that we have achieved higher levels of safety in these plants. It is certain that the Commission will ensure the public health and safety in these designs. It is certain that we have established procedures and processes and principles for these standardized designs. It is certain that we have expended tremendous resources, thousands and thousands of man hours of Commission, staff, industry, vendor time and millions of

dollars at stake, including a considerable contribution of public monies into this process.

I think it is certain that we have a process that was so essential to the future of this industry that Congress felt it necessary in 1992 through overlaying federal legislation to add another degree of certainty to the financial community and assurance to the investment community and to us as customers that there would be a stability and predictability in this process.

It is certain that the issues that we have been discussing are issues of process details and not really the protection of public health and safety and that we are trying to finalize those processes today to cover all possible solutions in the future when, perhaps, we don't really have all the information that we need to do that in the way that would make -- would be the most efficient and effective process.

I guess it is certain that future commissioners, staffs and hopefully other members from the industry, but it is certain that they will be sitting here discussing these interpretations and these regulations at points in the future, inasmuch as we may think we have resolved these issues and sorted them out, that we will not have achieved the detail and finality that we've got and if we're not careful, I think we're going to undermine the fundamental

principles that we sought and that Congress sought in the achievement of the standardized designs for the future.

So it is in this context that we really encourage the Commission to go back and look at the fundamental principles that were embodied in Part 52, the difficulty of those decisions that were made through the public process previously and ensure that those fundamental principles aren't eroded as we move forward.

As Dave Rehn said, we have achieved, I think, satisfaction on the first three issues. The issue that we are really talking about is the issue of regulatory stability and finality in these designs so that they can be a viable design that we can purchase for the future. So we thank you for your consideration.

CHAIRMAN JACKSON: Thank you very much. I thank each of you. You have clearly put a lot of thought and effort into what you have presented to us as well as with working with the senior review group and we will be taking and weighing very carefully what you've had to say.

So now I would like to call the NRC staff to come forward and make its presentation.

Mr. Taylor?

MR. TAYLOR: Good morning.

With me at the table from the Office of Nuclear Reactor Regulation are Bill Russell, Jerry Wilson and Ted

Quay.

These design certification rules are the most extensive design approvals that the NRC has ever considered and we certainly have taken the whole thing very seriously. I think that one aspect of that just to mention is the fact that, based upon the publication of the proposed final rules in April and the ensuing comments, public and industry, I set up a special senior review group to weigh through these and I am pleased that in numbers of cases we have been able to reconcile those comments.

Today, based upon what has already been presented, the staff will give just a few key points, again, as it analyzes these comments on the major issues and Jerry Wilson will start.

MR. RUSSELL: In order to conduct a more efficient meeting, what I thought we would do is focus on the areas where there is disagreement. So what I would like to do is, instead of going through the staff presentation as it is laid out, we will start with slide 9, applicable regulations. Jerry will cover some background.

Then we will take on tech specs and operational matters together and then the last one will be the issue associated with renewal because that does tie back to applicable regulations and then other issues that the Commission may wish to address.

CHAIRMAN JACKSON: May I suggest that you do something because of the fact that you have a new Commission, relatively new Commission, and I note that you had some backup slides on the various issues. I think the way we should structure this is that you go through each of the areas that you would like to discuss and that you use the backup slides as appropriate to further edify your discussion given that.

MR. RUSSELL: Particularly as it relates to applicable regulations.

CHAIRMAN JACKSON: Well, we were not all here from the beginning.

MR. RUSSELL: Correct.

CHAIRMAN JACKSON: And what we will then do is to stop after each subject and have questions from the Commission and then proceed. So rather than going through all of the subjects we will do them one at a time.

MR. RUSSELL: Good. So we will do applicable regulations, then cover the backup slides with applicable regulations and then take questions on that and then go on to tech specs and operational matters.

CHAIRMAN JACKSON: Right.

MR. RUSSELL: Jerry.

MR. WILSON: Thank you. I am Jerry Wilson of NRR.

CHAIRMAN JACKSON: You have to speak up. We can't

hear you.

MR. WILSON: On the issue of applicable regulations, the staff has been developing these regulations that are applicable to the specific design since 1988. The staff set forth a discussion of the history of applicable regulations in Attachment 9 to our SECY paper 96-077 and at that point -- hold that thought and I will get to the backup slide.

What we did in 96-077 is set forth the regulatory framework that was used to review these designs and would constitute the regulations that are applicable and in effect at the time the design is certified as has been discussed earlier. So in Section 5 of the rule, that designates those regulations and in particular it is in three areas.

Section 5(a) goes through the existing regulations that apply to the specific designs; Section 5(b) identifies the exemptions to existing regulations for these particular designs; and, finally, Section 5(c) identifies the additional applicable regulations that have been the subject of the controversy.

Now, in addition, we have also provided a Section 8 which provides a special compliance backfit standard that the Chairman proposed last spring and this standard is there to mitigate the concern that the industry has raised about the stability associated with these new applicable

regulations. Now the issue initially was raised with regard to the severe accident issues but the special compliance backfit standard applies to all of the new applicable regulations and is in Section 5(c)..

Finally, there were some requirements that were also part of the design review that were put in Section 4 because they applied to applicants or licensees who referenced these roles and those were Sections 4(a) and (b).

Now, could I have backup slide one?

[Slide.]

MR. WILSON: To go back for a moment and help review the history here, I have identified some of the Commission papers that are covered in the history of applicable regulations that was in SECY-96-077 and that points out that we began this process in 1988. Initially, we were considering generic rulemaking but it was decided, because of concerns over the schedules, impacts it may have on design certification and also concerns that these actual requirements would be design specific, it would be better to proceed on a design-specific rulemaking basis.

That decision was made in the '89 time period. Then at that point the staff started to develop the design standards that would be used for these reviews and those were proposed in SECY-90-16 and 93-87. The Commission approved certain of those requirements to apply to these

designs.

The staff reviewed the designs against those standards. Our safety evaluation report gives the evaluation of the designs against these standards. Those were the basis upon which the safety evaluation report said these designs were acceptable and those final safety evaluation reports are the basis for the approval on this design certification process.

Now, in 1991, this issue of design-specific versus generic rulemaking came up again and the Commission reaffirmed that we were to go through design-specific rulemaking for these designs. And so these applicable regulations were recommended in the remaining SECY papers here that have the proposed rules and final rules.

Now, the position the Commission finds itself in is, in effect, a result of those earlier decisions in 1989. That decision to go to design-specific rulemaking meant that the final approval of these requirements comes down to the Commission at this final stage.

[Slide.]

MR. WILSON: Returning back to slide nine, after a review of the additional comments by the industry, the senior review group recommended that the additional applicable regulations in Section 5(c) be retained and the staff believes that these regulations are necessary to

ensure the level of safety that is expected by the Commission will be preserved for the life of a plant that references these design certification rules.

MR. RUSSELL: I would like to add just a little bit of additional background, having been involved with the technical review of this for the last six years.

In each case, where the staff went beyond existing regulations during the course of the review, the Commission directed that those matters come to the Commission as a policy issue such that the staff would not be creating new policy in the course of the review but, in fact, would identify those issues, seek Commission guidance on them and then after receipt of that guidance implement that in the review process.

There were in the series of SECY papers particular positions which we underlined which were the early versions of the applicable regulations along with a lot of background discussion about why this should be provided.

In most cases, these underlying portions were deterministic design features or capabilities, such as going to alternate AC under the station blackout rule rather than having a coping capability without an additional on-site AC source. The current regulations allow either coping or alternate AC. We said, for new plants, we only want alternate AC.

Now, it is true that the tier one design descriptions for both the ABWR and the System 80 Plus very explicitly, at the level of a rule, now, in tier one, have a requirement that you have an alternate AC source and it identifies how it gets hooked up to provide power to the emergency buses. But it is true that we did not use the option under the current regulation for station blackout to allow either coping or alternate AC. Sot r was a case we came on a policy issue and that does not have as much uncertainty associated with it because it is clear that that was the requirement at the time and it is also clear that that is in the design and it is captured in tier one.

There are some applicable regulations which have some uncertainty associated with them, particularly those associated with severe accidents. Typically, the severe accident issues and the containment performance issues, where you are doing analysis, you are making judgments, you are looking at the total design and how the result comes out from that analysis, that's the case where we said if there is new information that comes up during the period of the design certification that would raise a question about the capability to perform, to meet that overall performance standard, whether it is a performance standard or it is spreading cooling and keeping corium away from structural members such that the containment function is preserved,

those types of new information would be reviewed and the issue would be a compliance backfit standard because that was, in fact, intended at the time of the review, with a requirement to show that the modifications are cost-justified.

I could illustrate with a specific example for the ABWR. During the course of the review, we looked at the design of features to keep a core melt out of the sump area of the ABWR containment substructure. A doghouse type arrangement that had drilled holes in it such that the material, when it went through, would quench and it would not proceed into the sump so that you would not have potential for either loss of coolable geometry or other conditions.

And we believed, based upon whatever information we had at the time, that the design was appropriate and it was captured and there is a requirement to have this protection for the sump. If it turns out later that that won't work, there is some new information, we would propose to look at that in the context of both the applicable regulation, that is spread the material, ensure its ability to be cooled and if becomes confined in the sump there becomes a question about the ability to cool that material. That could create a question if that function is called into question.

Based upon everything we know today, we believe it will work and that it can be designed and engineered and we have appropriate requirements to keep molten material out of the sump area. But we can't preclude that there is going to be some new information. But we have proposed that there be an enhanced standard and that that new information be looked at and show that there is a cost beneficial aspect associated with it. This would be a relatively small change in an area of the facility. We would obviously not be looking at proposing a larger containment or a larger area. You would have to justify -- the costs associated with that would essentially be rebuilding the plant and that is not envisioned.

So those types of issues are the issues that we were talking about and I think the two areas of uncertainty are in the conditional containment performance area and in the severe accident area.

COMMISSIONER ROGERS: But with your example that, again, the concern the industry has expressed here on this final example, you said, of course, we wouldn't do such-and-such but there isn't anything in the applicable regulation that you are proposing or would propose that would say that, would it?

MR. RUSSELL: If it's required for adequate protection, it could be backfit. Or you could conclude that

the plant is no longer safe and would have to shut down.

I don't see that --

COMMISSIONER ROGERS: But we are back to the example of the superior feature of the design not being met, not necessarily the adequate protection.

MR. RUSSELL: That's correct, but if that could result in early containment failure or the loss of a coolable geometry because of the corium progressing to the sump and not being able to be cooled because you have not been able to spread it, those are severe accident issues which the intent of the Commission was to resolve severe accident issues in the course of this design certification.

And so the issue that we have is whether that objective was achieved or not, not necessarily whether it is an adequate protection issue. Adequate protection issues can be backfit. The issue is, how does one address a compliance backfit against rules that were in effect at the time, even though the decision was deferred with respect to codifying those rules where the staff went beyond current regulations in the course of the design review.

COMMISSIONER ROGERS: Well, I think there is an issue and we can't debate it here really but I think there is an issue that you are absolutely right that the Commission wanted the staff to come forward and put on a policy basis and get a rendition of Commission approval on

each of these issues that you have discussed on a policy basis with the expectation, and I am adding this, that the -- we were -- we would ultimately be in a rulemaking process which involved the certification of the design, not necessarily of an auxiliary set of rules that codified those policy statements individually one by one as they developed, as they were ultimately developed.

I think that is really kind of the problem that we are dealing with here. That, yes, the Commission was very clear on wanting to see certain things such as to avoid the coping option, for example. I can remember that very distinctly. But I don't think we said -- ever explicitly said go and write a rule to do this, now, make sure it is in the certified design, which you did do and which the vendors have done.

MR. RUSSELL: And that can be done, I think, fairly straightforwardly for features where the -- for example, the other one is electric power system with the alternate AC and the access to be able to provide power to maintain condenser vacuum. Both of those were areas where we went beyond current requirements. They are very deterministic and it is very easy to see that those have, in fact, been codified in the design.

The two that are more difficult are where you are into analysis based upon your understanding of severe

accidents or your understanding of containment performance, conditional containment failure probabilities. That's where I believe the uncertainty is.

CHAIRMAN JACKSON: So are you saying there is, in fact, then, in this listing of what you would call new applicable regulations, that there in fact is a bifurcation where there are some that are, as you would call it, strictly in the deterministic regime? There are others, particularly those relating to severe accidents that really have to do with more analysis and probabilistic treatments?

MR. RUSSELL: That's correct.

CHAIRMAN JACKSON: And that in fact those that have the more deterministic base are -- you have a high degree of comfort that in certifying the designs that, in fact, they would then be included?

MR. RUSSELL: Yes, I think that they are less susceptible to new information coming in that would say the applicable regulation has not been met and by virtue of saying it has to be alternate AC, they put a gas turbine on site, the gas turbine's required in tier one of the regulation that we are proposing to certify, so the need to have an applicable regulation that says, you can only be an alternate AC site under the station blackout rule, they would have that in the design.

There does become an issue, though, at the time of

design certification renewal as to what were the regulations; i.e., the policies that were in effect at the time of the original design certification and how that carries forward or whether that could be proposed to be removed at the time of a design certification renewal and what would be the staff position at that time? Could they go back to coping or would they have to remain on alternate AC? I don't think it's likely that they would propose to change it but there would be nothing that would preclude that. It gets back to the issue of what are -- what is the base line that was reviewed against where you specify additional requirements beyond the current Part 50 requirements in the course of that review.

CHAIRMAN JACKSON: So, in effect, there are two issues, are there not? I mean, it strikes me that one issue is are we getting what we think we are sort of buying and if there is new information that suggests that we're not, you know, what do we have to hold things to this enhanced safety level that, presumably, the Commission wanted designed into these new plants?

The other issue is one of if there ever is a proposed change, perhaps at the renewal stage or at some other point, what is the reference? What are the reference set of regulatory requirements that that -- that that proposed change is with respect to? Do I have that right?

MR. RUSSELL: That's correct.

CHAIRMAN JACKSON: Okay.

COMMISSIONER ROGERS: Well, if I could just ask a question on this?

CHAIRMAN JACKSON: Sure.

COMMISSIONER ROGERS: Because I think it seems to me one of the questions is what is the regulatory status of the FSAR that was developed? Can -- does that provide essentially that documentation of what the -- what the standards were that were applied to the analysis of these designs? Why is it necessary to add to that a new rule? Isn't the -- if you've certified the design by rulemaking and it's based on the -- on a very extensive FSAR which has documentation to support it, why do you gain anything by adding an additional rule to state that that is what we expected when we reviewed the design?

In other words, if there is an issue at some later time of what really was the standard that was used by the staff in reviewing the design and certifying it, doesn't the FSAR and the documentation that goes along with that provide the basis for answering that question?

MR. WILSON: Well, the FSAR or what we refer to as the design control document has the design description. It is no different than any other regulation.

If the design description could function as a

regulation, one could argue that you wouldn't need any of our regulations and I am sure no one is arguing that. These regulations function the same as any other regulation and a design --

COMMISSIONER ROGERS: Excuse me, that's not -- I don't think that's the issue. I think the issue is what documentation provides the standard that establishes what the basis of the staff decision was in approving the certified design and in a detailed way?

MR. RUSSELL: The answer to that is the combination of the safety analysis report submitted by the applicant and the staff's safety evaluation report which documents all of the SECY decisions and the staff requirements memorandums. The legislative history, so to speak, is well documented. The issue that was raised earlier, for example, on the point one conditional containment failure probability that was raised by Dr. Matzie, that issue we actually have an analysis that shows a .11 conditional containment failure probably as well as a .03 under a different set of assessments and we concluded that that was adequate and met the guidance of .1. We didn't take it out to two or three significant figures because of the uncertainty associated with doing those analyses. That's well documented, that's in the safety evaluation report.

So we are not talking about issues out to three significant figures. What we are really talking about is whether the existing history of how the review was conducted is sufficient or whether it also needs to be codified with applicable regulations and I believe that's a policy issue that the Commission needs to decide.

CHAIRMAN JACKSON: Commissioner Dicus?

Commissioner Diaz?

COMMISSIONER DIAZ: No, thank you.

MR. RUSSELL: Okay, we would like to go now to the technical specifications and I would characterize that this is a subset but the most important subset of operational requirements. That is, the Commission in the recent rulemaking associated with 50.36 identified certain things which are more important operationally that be controlled by facility technical specifications. So we are going to talk both operational requirements and tech specs but tech specs are the more important set of those operational requirements.

MR. WILSON: Can I have slide six?

[Slide.]

MR. WILSON: We have two slides on this issue. Both slides six and slide seven, but I will speak from slide six.

Basically, industry is requesting that the special

backfit protection in 52.63 be applied to operational requirements and staff's problem in this regard is that operational matters were not finalized in the design certification review.

We agree in certain instances that we have addressed operational requirements but in many instances we have not and there may be cases where a particular design feature would have some operational restrictions defined and others not yet defined.

Now, we can't complete our review at the combined license stage of these operational requirements if we are constrained by backfit restrictions. And, therefore, the rule provided a Section 4(c) that provides the ability to complete these operational requirements without being restricted by the backfit restriction.

And that general statement also applies to our situation in technical specifications. Our review of the technical specifications has not been completed and therefore the final rules in 96-077 do not provide finality for those partial technical specifications so that we could complete them at the combined license stage.

It also allows a single change process and we retained them in the design control document but did not make them either tier one or tier two.

Now, as a result of the comments, the senior

review group recommended treating the partial technical specifications as a special category of information. They would have the finality associated with other matters that are revealed under rulemaking in Section 2.758, which means they couldn't be changed except for special circumstances. And then after the combined license is issued, we would say that the partial technical specifications have no further effect as to that license consistent with the proposal made by NEI.

CHAIRMAN JACKSON: Commissioner Rogers?

COMMISSIONER ROGERS: I just wanted --

I just want to make sure I understand what was said here.

Go ahead, Bill.

MR. RUSSELL: I want to cover a couple of additional points.

First, the regulations require even for a classic construction permit operating license review that at the time of an application for a construction permit, the proposed technical specifications be submitted. So it is not possible to conduct a review without having an understanding of what are the important parameters to be controlled at the level of technical specifications and that's been for every facility that had a construction permit application filed since January 16, '69.

So the fact that we needed to review tech specs as a part of this review is not different from what we would do under the normal Part 50 process with a tech spec review.

The second point is that the bulk of the review, and I will show an example from the combustion standard tech specs, for combustion engineering plants, the bulk of the review was against the industry-developed standard technical specification which was an activity that went back and forth between the staff and the industry for close to some ten years before it was finalized.

So the formatting, the other information that was described earlier, was to be consistent with the standard technical specification format that was developed by the industry both for the ABWR, which was based upon the BWR 6 standard tech specs and CE's System 80 Plus which was based upon the CE standard.

There are some areas where there was operational relief provided based upon additional design features, particularly as it relates to allowed outage times for important safety-related equipment. In the case of the ABWR after the extensive review of the PRA, there were identified on the order of 12 areas of relief where there was substantial increases in allowed outage times for equipment during the operation for which they could take corrective action or conduct online maintenance.

In the case of the CE 80 Plus, there was one case associated with the emergency diesel allowed outage times where they got the same relief. That was because they did not submit the information to justify changes and they adopted the then standards CE standard tech specs.

The other thing that is important is that the staff has developed a process with industry and this is one that we believe is working quite well, as it relates to changes to the generic standards. There are owners groups that interact with each of the standards through NEI and there is a process by which we look at changes to the standard based upon proposed changes either by the staff or by the industry such that it is used uniformly unless there is a designed reason for the tech spec to be different for those elements which meet the definitions in 50.36 to be controlled by tech specs.

So we have a process that is working quite well and it was that process that was used with the comparison to the standards. There were some reliefs and we feel it is appropriate to provide some degree of protection and by handling these as matters resolved in rulemaking, those matters become obligations on the staff as well as intervenors to raise new issues up until the time of issuance of a combined operating license. From that point on, the staff and the industry are in agreement. From

issuance of a combined operating license when you have a licensee, from that point forward, it would be the same process for all facilities in the U.S. so it would be the standard 50.90 amendment process and there would not be a difference in position. The only difference is what is its status prior to that point in time and is it a part of the rule, tier two, or is it a matter which is given finality through rulemaking as was proposed by the review group.

I would like to illustrate with an example out of a page so that you can see what's been done and what's not been done to get a feel for how much is left to be done in standard tech specs.

So what I have is Jerry is handing out pages and these are from the CE 80 Plus. If I could have backup slide 3.3-10?

[Slide.]

MR. RUSSELL: This is the standard technical specification format and I realize it's small but what it does is it identifies surveillance requirements which relate back to another page and that page has bracketed information on it. But the information in brackets are numbers which are best estimates from the design at this point in time but they are not based upon as-builts.

So you must build the plant, conduct the preoperational testing, determine what the appropriate

flows, pressures are to achieve the functions consistent with the safety analysis and then those actual values are substituted. So in each case where you see brackets, that information is not within the material that has been accepted and reviewed by the staff. That is information which we would expect to change as a result of completion of construction, preoperational testing.

Next one is 3.4-22. This is similar. This is a table which would be typical for a system. This is a pressurizer. It identifies if you are not able to maintain pressurized your water level within certain ranges, you have to be in hot shutdown within six hours; you've got a leak going on. So this is essentially the vehicle that gets you into shutdown.

These time frames are consistent with the current standard technical specifications for all CE designed plants that are on standard technical specifications. So there are not differences. We would propose to do them the same way.

The reason I chose to use CE is because, as the Commission is aware, we have a pilot program ongoing with the use of risk insights to develop improvements to the standard technical specifications, particularly as it relates to allowed outage times. And there is a major interactivity underway with the CE owners group to justify, based upon risk insights and other information, relaxations

in some of these time frames.

To the extent that that activity is successful, we would expect that the allowed outage times for a number of items contained in this standard would be relaxed. That could go the other way. There may be some equipment which is identified as being important where you may impose a shorter allowed outage time.

These are issues which don't affect the design. It affects availability of the equipment to meet safety finalities on an acute basis, how long can you have a piece of equipment out. Those are the types of issues that we are dealing with in tech specs, much of which has not been done, some of which has been done.

The difficult issue that we have is drawing a line as to what's been reviewed and approved uniquely such that you could apply finality, what has not. It is not possible to just rely on one document. You would have to go to the legislative history; that is, what was submitted, what was the review, the give and take back and forth.

And let me shift now from tech specs to an example as it relates to an operational matter for surveillance testing under the ASME code, pump and valve testing.

The regulations require that a plan be submitted each ten years to identify how you will do pump and valve testing. We wanted to do a review to ensure that we would

not be needing exemptions from regulatory requirements, that we had confidence that the current required pump and valve testing could be performed, that is, you could conduct the flow tests, you could do the testing of valves, you could perform the in-service inspections that are needed if you are doing ultrasonic or other types of examinations.

So we looked at it in the context of can they be performed today? We have also said, to the extent there are changes in those requirements in the future, we would apply the enhanced standard of protection to not modify the design in order to be able to do a future inspection or a future examination. So if some new examination technique is developed that would require a design modification, let's say it's a pump or valve testing going to require installation of a test tape in order to do that test, we've said we would not require that.

On the other hand, if it is a nondestructive examination and the regulation changes in the future, we would expect that at the time of the application for a COL, that applicant needs to meet the rules and regulations as it relates to operational matters at that time, including the code, if there is a revised technique for doing a nondestructive examination or a frequency of examination that has been justified through rulemaking we would expect that to be done.

So we are having a difficult time separating what's been reviewed operationally from the design and it is that gray area that we believe is being questioned. Some matters have been reviewed. We see applying an adequate protection standard to those matters as one which is a higher standard than is being done for operational matters under tech specs or under our rules today. We do agree that we should not be modifying the hardware; that's where the major costs are that are sunk. So that is basically where we are with the operational matters.

COMMISSIONER ROGERS: How do you define partial tech specs? I mean, what is your --

MR. RUSSELL: Where we have this bracketed information, all the information has not been reviewed, that's what we mean by partial.

MR. WILSON: In addition, the tech specs only apply to the scope of the design being certified. There are other design features outside like the ultimate heat sink that aren't covered either.

MR. RUSSELL: That would come in in a COL application when they design the ultimate heat sink and then the tech specs associated with the ultimate heat sink and so we would have that proposed at the time of the COL review. So we are missing the site-specific design features for the ultimate heat sink and we are missing all of the information

that is in the brackets in this set of tech specs.

CHAIRMAN JACKSON: Commissioner Dicus? Commissioner Diaz?

MR. RUSSELL: Again, the issue in dispute is not what happens after issuance of a COL. The industry and the staff have agreed with that. The issue is, how do you provide some degree of finality to that information through the issuance of a COL and a potential COL proceeding. Rules are just as binding on the staff as they are on others who wish to intervene in a proceeding. There was some confusion in that in some of the written comments that came in.

The last matter is the broad issue of what needs to be done for renewal.

MR. WILSON: Can I have slide number five?

[Slide.]

MR. WILSON: Now, the industry has pointed out that they want to extend this finality matter and, by that, I mean the special backfit protection provision in 52.63 beyond the expiration of the design certification role. Now, in the final rules in 96-077, that is not done and that is consistent with Part 52. There are two fundamental problems with the industry's proposals.

One, the extension of finality beyond the expiration of design certification will have the effect of extending the duration of the certification itself and,

second of all, their proposal seeks to limit the scope of what the staff can review. And that shouldn't be the case either.

There was a lot of mention of this issue of de novo which really is a term that was raised by the industry in an earlier public meeting and then complained about by the industry. The staff isn't proposing that at all. But the important part is that once the design expires that new information that may come up during that 15-year period that has been collected should be able to be examined by the staff without restriction and if they determine on the basis of examining that information that there is new requirements that should be applied to design, then we would check those requirements against the standard in 52.59 that Mr. Malsch mentioned earlier and only if they met that special backfit standard for renewal would they be applied to the design.

It is important to remember that there is information that may be collected that the staff cannot apply during the duration of the design certification that they would need to look at and determine if it should be applied after the certification is expired and a renewal is sought and that is the important point here and that's why the senior review group recommended no finality for after the design certification has expired.

CHAIRMAN JACKSON: Commissioner Rogers, you have

any comments or questions?

COMMISSIONER ROGERS: No.

CHAIRMAN JACKSON: Commissioner Dicus --

MR. RUSSELL: I would like to add one point on this, an important one?

CHAIRMAN JACKSON: Excuse me.

COMMISSIONER DICUS: No.

CHAIRMAN JACKSON: Commissioner Diaz?

COMMISSIONER DIAZ: No.

CHAIRMAN JACKSON: Okay.

MR. RUSSELL: It relates to the finality issue and that is we don't have the equivalent of a standard review plan and we have not engaged in a process as to what information should be reviewed. Is it just the operating experience that has accrued over the 15 years? Is it just new information that may raise issues about the adequacy of the design? There has not been a dialogue technically as to what should or should not be reviewed or what is within scope and we felt that that was premature since we have not finished the first stage of the design certification. So we believe that this is an area where there does need to be a dialogue.

We don't believe it is a review from scratch, obviously. It would be a review from an experience base with whatever new information has been developed but we

think that that work needs to be done and so we believe it is premature to address this issue at this time in a rulemaking that is intended to certify two designs and that this is really something that relates to guidance as it relates to Part 52 itself.

Whether it is something that would be done through a regulatory guide, standard review plan or some other approach, that work just hasn't been done yet so it is not ripe at this point in time to say what should be or should not be the scope of the review beyond what is already in the regulation.

CHAIRMAN JACKSON: Let me ask you this question. If the Commission were to defer consideration of the design certification renewal procedures to following approval of the actual rulemaking, you had these alternatives two and three that you laid out in your August 13 memo. Could you elaborate a little bit? I know you have, in a sense, spoken to them.

MR. WILSON: The difference is, and I think it is the point I was trying to make, is that I believe the Commission needs to speak to this point of the industry's request to extend the special backfit provision beyond the expiration of design certification. If the Commission doesn't speak to that and just defers it, then we will be back with the same argument and that is a fundamental point.

I believe that the Part 52 has already spoken to that point, made that decision and the Commission should reaffirm that point along with deferring the remainder of the determination and review procedures, as Mr. Russell has outlined and that is why the senior review group recommended alternative three.

CHAIRMAN JACKSON: Let me ask one other question. This actually goes back to applicable regulations.

How would the staff perform a review of a licensee-initiated proposed change or departures from the design features, you know, in a way that would address the criteria in the additional applicable regulations?

Well, I guess what I am really asking is what base line requirement would a reviewer reference to determine the acceptability of any proposed change?

MR. WILSON: That was one of the fundamental purposes of Section 5 of the rule is to set forth the regulatory framework. All of the decisions about future changes, as people referred to, it is stated in 52.63 but it applies to all of the change process as they are evaluated in the context of the regulations that are applicable and in effect. And that is the purpose of Section 5, to say what were those design standards that we used to approve this design so that when questions happen 10, 15 years from now, we will be able to go back and see what they are and make

the decisions in that context.

CHAIRMAN JACKSON: But what Commissioner Rogers raised relative to what's documented in the DCD is not enough?

MR. WILSON: Well, what's in there is a design description. If you are changing from the design description, all you know is that you are doing something different; the evaluation of the acceptability has traditionally been made in the context of the underlying regulation.

MR. MALSCH: Chairman Jackson, an illustration of the difficulty would be let us suppose that an applicant were to request that in a particular case it be allowed to have coping as opposed to an alternate AC source. If such an exemption request were made in a context of a CPOL application, the staff would, without the applicable regulations, be forced to evaluate that as against the existing regulations which allow coping. So presumably the exemption would be granted.

CHAIRMAN JACKSON: Even if it's -- okay.

MR. RUSSELL: Yes. There were other issues that were brought forward with respect to what level of protection should be achieved as relates to core damage frequency, et cetera. The expectation was that they would be significantly safer but we did not put a number on that.

I would also point out that the bulk of the safety improvement that has been achieved has been in the prevention area; that is, improving the reliability of operation. You see that when you get to conditional containment failure probabilities and some of the mitigating features.

The bulk of the safety enhancements have come from additional margin in the design of the facility and additional reliability associated with systems, additional redundancies, et cetera. So the area of mitigation, which is why I selected the two examples, severe accident, which is essentially in mitigation space, and the containment performance are the areas which are uncertain which do raise, I think, some issues. But they would be very difficult to deal with in the context of exemption requests and in the context of the base line associated with renewal from the standpoint of what were the regulations in effect at the time.

It is not regulations and policy statements, or regulations and policy, even though they are well documented. It is essentially regulations in effect at the time of the design certification. That is the issue that we have.

CHAIRMAN JACKSON: Commissioner Rogers?

COMMISSIONER ROGERS: No, nothing.

CHAIRMAN JACKSON: Commissioner Dicus?

COMMISSIONER DICUS: No, thank you.

CHAIRMAN JACKSON: Commissioner Diaz?

COMMISSIONER DIAZ: No, I just want to underscore the fact that I come at a time that I think is very appropriate for me to get involved in this. For years I tried to believe that I understood the issues related to advanced certification and now I am finding that I am at a real loss and I intend to tax your capabilities on this area.

CHAIRMAN JACKSON: Well, we've had a fairly exhaustive discussion here this morning and so I would like to thank the representatives of the nuclear industry as well as the NRC staff for a very informative and thoughtful briefing. It is clear that all involved have put a lot of thought and effort into this and the information we have heard today provides a lot of perspective on the issues and what has to be addressed to resolve them.

And I agree, Mr. Russell, with a comment you made in a course of your remarks that in the end a couple of them will just come down to fundamental policy decisions that the Commission will have to make. But what has been presented will be useful to the Commission in our consideration of these rules before the Commission.

And, unless my fellow commissioners have any

additional comments, we're adjourned.

[Whereupon, at 11:47 a.m., the briefing was concluded.]

CERTIFICATE

This is to certify that the attached description of a meeting of the U.S. Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON DESIGN CERTIFICATION ISSUES - PUBLIC MEETING

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Tuesday, August 27, 1996

was held as herein appears, is a true and accurate record of the meeting, and that this is the original transcript thereof taken stenographically by me, thereafter reduced to typewriting by me or under the direction of the court reporting company

Transcriber: Christopher Cutchall

Reporter: Mark Mahoney

DESIGN CERTIFICATION RULEMAKING

August 27, 1996

Jerry N. Wilson
Office of Nuclear Reactor Regulation

BACKGROUND

- SECY-92-287 and 92-287A, "Form and Content"
- Advanced Notice of Proposed Rulemaking - November 3, 1993
- Proposed Design Certification Rules - April 7, 1995
- Extensive comments but no requests for a hearing
- SECY-96-077, "Final Rules" - April 15, 1996
- Supplementary Comment Period
- Analysis of Additional Comments - August 13, 1996

GOALS

- Standardization
- Enhanced safety
- Early resolution of licensing issues
- Stable & predictable licensing process

SUPPLEMENTARY COMMENTS ON FINAL RULES

- Extension of Finality
- Finality for Technical Specifications
- Operational Requirements
- Post-Design Certification Change Process
- Applicable Regulations
- Other Comments

Extension of Finality

- Industry requests extension of the special backfit protection of § 52.63 (adequate protection) to:
  - changes to the DCD that are approved by the NRC
  - changes made in conformance with "50.59-like" process
  - design certification renewal proceedings

- SECY-96-077:
  - does not address finality for approved changes
  - provides finality for "50.59-like" changes
  - does not provide finality for renewal proceedings

- SRG recommends:
  - finality for changes accomplished by rulemaking
  - finality for departures made in conformance with Section 8(b)(5)
  - no finality for renewal proceedings
  - providing certain clarifications of finality

Finality for Technical Specifications

- Industry requests finality for Technical Specifications in DCD

- SECY-96-077:
  - provides no finality for partial Technical Specifications
  - allows single change process for final Technical Specifications
  - partial Technical Specifications in DCD but not Tier 1 or Tier 2

- SRG recommends:
  - treating partial Technical Specifications as special category
  - finality for partial Technical Specifications under § 2.758
  - after COL issued, partial Technical Specifications "have no further effect as to that licensee"

Operational Requirements

- Industry requests:
  - extension of § 52.63 backfit protection to operational requirements
  - deletion of additional operational requirements in Sections 4(a) & (b)
  - modification of Section 4(d) of final rules

- SECY-96-077 provides:
  - Section 4(c), which reserves the right to impose future operational requirements
  - Sections 4(a) & (b), which requires certain operational requirements
  - Section 4(d), which reserves to right to determine future referencing under 10 CFR Part 50

- SRG recommends:
  - providing right to impose operational requirements in Section 6
  - "provisional" deletion of additional operational requirements
  - deletion of "whether" from Section 4(d)

Post-Design Certification Change Process

- Industry requests NRC openness to discuss a "50.59-like" provision that would allow plant designers to make generic changes to Tier 2 information after design certification but prior to first COL application

- SECY-96-077:
  - provides a process for making generic changes to Tier 2 information
  - discusses three alternatives for post-design certification changes
  - declines to adopt NEI proposal

- SRG recommends that plant designers <u>not</u> be allowed to make changes under a "50.59-like" generic change process

Applicable Regulations

- Industry opposes inclusion of additional applicable regulations

- SECY-96-077 provides:
  - Section 5, which designates the regulations that are applicable and in effect at the time the specific design is certified
  - Section 5(a), which identifies the existing regulations that apply to the specific design being certified
  - Section 5(b), which identifies exemptions from the existing regulations for the specific design being certified
  - Section 5(c), which identifies additional regulations applicable to the specific design being certified
  - Section 8(c), which sets forth a special compliance backfit standard for the additional applicable regulations
  - Sections 4(a & b), which identifies additional operational regulations

- SRG recommends that the additional applicable regulations in 5(c) be retained

BACKUP SLIDES

HISTORY OF APPLICABLE REGULATIONS

- SECY-88-147 provided plan for regulations for future reactor designs
- SECY-88-248 proposed generic rulemaking for severe accidents; withdrawn due to concern with design certification schedules
- SECY-89-311 recommended design-specific over generic rulemaking
- SECY-90-016 and 93-087 recommended new requirements to achieve a higher level of safety for future reactor designs
- SECY-91-262 discussed advantages and disadvantages of generic vs. design-specific rulemaking
- SRM on SECY-91-262 directed staff to proceed with design-specific rulemakings through individual design certifications
- SECY-95-023, 96-028, and 96-077 recommended applicable regulations

Application of 8(b)(5)(iii) to Chapter 19

- Industry requests extension of Section 8(b)(5)(iii) to all information in Chapter 19 of the DCD
- SECY-96-077 provides a special "50.59-like" change process for Tier 2 design features that resolve a postulated severe accident
- SRG recommends that references to specific locations in the DCD be deleted from Section 8(b)(5)(iii) and a definition of severe accidents be added to the SOC

Incorporation of Provisions in DCD Introduction

- Industry requests the incorporation of substantive provisions from the DCD Introduction into the design certification rules
- SECY-96-077 includes substantive and other procedural and administrative provisions from the DCD Introduction in the final rules
- SRG recommends that the six additional provisions recommended by NEI also be included in the final rules with the appropriate modifications

Expiration of Tier 2* Restrictions

- Industry requests that all Tier 2* restrictions expire at first full power

- SECY-96-077 provides:
  - Section 8(b)(6), which requires NRC approval prior to departures from specified Tier 2 information
  - greater flexibility for referencing applicants or licensees by minimizing the amount of information in Tier 1
  - expiration for selected Tier 2* information with sufficient controls

- SRG recommends:
  - a provisional expiration of Tier 2* information for the ABWR
  - no expiration for human factors engineering for System 80+
  - provisional expiration of other Tier 2* information for System 80+

ITAAC Verification

- Industry requests deletion of significant portions of the NRC's response to industry concerns regarding matters to be considered in verifying ITAAC determinations

- SECY-96-077 addresses:
  - industry's concern regarding matters to be considered in verifying ITAAC determinations
  - Licensee Documentation of ITAAC Verification
  - NRC Inspection of ITAAC
  - Facility ITAAC Verification

- SRG recommends that the first section be retained and the other three sections be deleted

Additional Change Process Issues

- Industry requests modification of:
  - Section 8(b)(4) of the final rules
  - NRC response to question 2.B.3
  - Section 8(b)(6)(ii) of the final rules
  - SOC for Section 8(b)(6) of the final rules

- SECY-96-077 provides:
  - Section 8(b)(4) for exemptions from Tier 2 information
  - response to question 2.B.3 on change process for COL information
  - Section 8(b)(6) for departures from Tier 2* information
  - explanation of Tier 2* change process in SOC

- SRG recommends:
  - modification of Section 8(b)(4) to clarify hearing opportunity
  - no change to paragraph 2.B.3 of SOC
  - no change to Section 8(b)(6)(ii)
  - modification of SOC for Section 8(b)(6)

EVOLUTIONARY PLANT DESIGN CERTIFICATION ISSUES

THE NUCLEAR INDUSTRY PERSPECTIVE

U.S. Nuclear Regulatory Commission

August 27, 1996

INDUSTRY PARTICIPANTS

Joe F. Colvin, President and CEO, Nuclear Energy Institute

Ralph E. Beedle, Senior Vice President and Chief Nuclear Officer, Nuclear Generation, Nuclear Energy Institute

David L. Rehn, President, DE&S - Hanford, Duke Power

Steve A. Hucik, Manager, Advanced Reactor Programs, GE Nuclear Power

Regis Matzie, Vice President, Nuclear Systems Engineering, ABB Combustion Engineering Nuclear Power

Objectives of the 10 CFR Part 52 Regulatory Framework

- enhanced safety and reliability
- standardization
- the early resolution of safety issues
- a more stable and predictable licensing process

STATUS OF REMAINING DCR ISSUES

- 11 areas of apparent industry-NRC staff convergence
- 3 additional areas of potential convergence where further work is needed on implementing rule language
- 6 areas of divergence

REMAINING DESIGN CERTIFICATION POLICY ISSUES

- Finality for standardized technical specifications
- The nature of the NRC staff review at design certification renewal
- The status of operational requirements in the DCD
- The creation of additional "applicable regulations" within these design certifications
- Deferring a decision on a post-certification vendor process for generic Tier 2 changes
- Requiring license amendments for Tier 2* changes that are not Unreviewed Safety Questions

FINALITY OF TECHNICAL SPECIFICATIONS

- required, reviewed and approved by NRC
- Commission guidance calls for finality
- design/operational information not clearly separable
- vendors and NRC have invested substantial resources
- re-review at each COL is wasteful
- industry proposal meets NRC needs, provides appropriate finality

FINALITY AT CERTIFICATION RENEWAL

- focus on relevant post-certification experience
- applicant submittal per NRC requirements
- NRC determination on adequate protection and compliance
- industry proposal is practical, offers appropriate scope of issue finality
- Commission deferral should not prejudice future consideration of scope of finality

STATUS OF OPERATIONAL-RELATED REQUIREMENTS IN THE DCD

- interwoven throughout the Design Control Document and integral to NRC safety reviews
- reviewed and approved by the staff and subject to the rulemaking process
- should be accorded finality

ADDITIONAL APPLICABLE REGULATIONS

- introduce uncertainty and instability
- not needed to ensure enhanced safety
- broadly-worded "regulations"
- subjective, untested backfit criteria
- not likely to lead to significant changes
- not justified

Prepared Remarks of Dr. Regis Matzie to U.S. Nuclear Regulatory Commission
Design Certification Rulemaking for System 80+ Standard Plant Design
OWFN Rockville, MD
August 27, 1996

Good morning. My name is Regis Matzie. I am ABB Combustion Engineering's Vice President of Nuclear Systems Engineering and I have overall responsibility for the design and licensing of the System 80+ Standard Plant Design.

First, I want to express appreciation to the Commission for appointing the Senior Review Group. Their involvement has helped move the process along to where there now remain a manageable number of policy issues for Commission resolution.

As you know, the System 80+ design was granted a Final Design Approval over two years ago. It incorporates many new safety features that comply with the Commission's Severe Accident Policy. These new or improved features provide substantial additional margin against core damage accidents and a wider range of mitigation capacity in the highly unlikely event that core damage does occur. The System 80+ Standard Plant thus achieves functions and performance levels that exceed current regulatory requirements. In fact, the NRC-approved probabilistic risk assessment for System 80+ shows that it is approximately two orders of magnitude safer than today's currently operating plants.

What we are here today to discuss is not the safety of the two advanced designs, but the process by which these designs will be implemented in the United States.

ABB-CE and the nuclear industry are, therefore, greatly troubled that the NRC's proposed design certification rules create additional "applicable" regulations to capture the extensive effort and accomplishment that I have mentioned. We have provided, in accordance with the NRC's own policy for future reactors, a design that is much safer than present plants. It is unreasonable to consequently saddle these safer designs with additional regulations. Furthermore, since these new regulations are not needed for adequate protection of the public, adding them to this rulemaking runs counter to the clear guidance of both the Administration and the Congress to avoid unnecessary regulatory burdens.

The practical result of these increased regulatory standards means more surveillance, more operational expenses, more enforcement activity, and thus a less attractive nuclear option despite the fact that we have produced a much safer plant.

Beyond additional applicable regulations, there remain a few other matters of disagreement with staff positions that are also very important to us. Two of these, namely the finality of technical specifications and the status of operational requirements in the Design Control Document, are especially troubling. In these, the staff has proposed adverse changes in the finality status of extensive portions of the Design Control

Document long after these issues were reviewed and approved, and indeed, very late in the rulemaking proceedings. ABB-CE has expended substantial resources to achieve design finality and these proposed staff actions would undermine finality and licensing predictability to an unacceptable degree.

Regarding the renewal of the design certification, the design should have the legal benefit of the doubt that it complies with the rules and regulations in effect at the time it was originally certified. It has that benefit right up to the time its term expires, and there is no reason -- beyond the additional relevant experience and new information to be considered under 52.59 -- to conclude that it does not continue to comply. A de novo review would be a major waste of both industry and NRC resources.

We trust that all of the remaining topics documented in the extensive comments submitted in July and last week will receive your serious consideration even though we only have time to address a few this morning.

It is ABB-CE's strongly held position this rulemaking is an essential element to the future of nuclear power in the United States. It will provide the definitive statement of the U.S. regulatory regime that will be awaiting investors when favorable market conditions return in this country.

In conclusion, I would observe that the Commission should take considerable satisfaction that they have approved advanced designs that provide substantially increased safety. However, from the industry's perspective, it is imperative that the Commission now provide rules that minimize perceived investment risks associated with licensing.

Statement by Steven A. Hucik, General Manager of Nuclear Plant Projects, GE Nuclear Energy
at the
Briefing for the Nuclear Regulatory Commission on the Supplementary Notices of Proposed Rulemaking for the U.S. ABWR and System 80+ Designs

August 27, 1996

Good Morning. I am Steven A. Hucik, General Manager of Nuclear Plant Projects for GE Nuclear Energy. I have responsibility for all of GE Nuclear's advanced designs, including the U.S. ABWR design which is the subject of this Part 52 certification rulemaking, and the ABWR nuclear power plant projects in Japan and Taiwan.

Although this morning's briefing focuses on resolving remaining certification process issues, I believe it important to acknowledge at the outset what NRC's Part 52 design approval and certification program has already accomplished through the sustained and interacting efforts of industry participants, the NRC staff and the Commission itself. From GE's standpoint, the Final Design Approval (FDA) issued by the NRC in July of 1994 was a landmark achievement, on which built upon a decade-long developmental effort and which followed exhaustive safety reviews by the NRC staff. The FDA gave staff approval to a design of substantially enhanced safety and economy of construction and operation, a design which holds enormous promise for contributing to our country's energy future. That promise, I would note, is already being realized in Japan where the first of two ABWR units is now in full power operation and completion and commencement of start-up testing for the second unit is scheduled for later this year. The ABWR, I am pleased to add, has also been accepted by Taiwan Power Company for a two-unit project at its Lungman site.

Certification rulemaking is the final step in the design approval phase of Part 52. What we seek from this step is a certification rule that will be hospitable to future use of this advanced design by U.S. utilities. This requires design stability and licensing predictability -- two of the primary objectives of Part 52 and of the 1992 Energy Policy Act.

We welcome today's opportunity to express our views on the process provisions in the certification rules where there is industry-staff disagreement. While today's briefing necessarily centers on disagreements to be resolved, I want to state GE's appreciation for the work done by the Senior Review Group. The public dialogue with the Group on July 15 was highly constructive and many of the concerns expressed in prior industry comments would be resolved through adoption of the recommendations in the Group's options paper of August 13, 1996. There remain, however, significant process issues where disagreement persists. Our position on those issues is set forth in the comments submitted by the Nuclear Energy Institute, and will be discussed further by the speakers this morning. I would only underscore at this point the concerns GE has in three major areas.

- "Applicable Regulations". The inclusion in the certification rule of a group of additional "applicable regulations" remains a strongly disputed matter. While the proposed deletion from Section 4 of "applicable regulations" covering operational requirements is an improvement, our basic concerns persist as to the remaining array of design-related "applicable regulations" in Section 5. There is no safety or other need for these added regulations, uncertainties are inherent in their deliberately broad formulation, and they introduce a design instability which is a deterrent to future utility use.

- Technical Specifications. We continue to believe that the technical specifications in the DCD should be accorded finality -- a position supported by standardization considerations, by the Part 52 objective of early issue resolution, and by the substantial effort expended in their preparation and the thorough staff review leading to their FDA approval.

- De Novo Review for Design Certification Renewal. We categorically reject the proposition that design certification renewal requires a de novo review of the originally certified design. As a practical matter, it is very unlikely that a vendor is going to finance the cost of a de novo review for a renewal. Moreover, we believe that appropriate issue finality is compatible with Part 52 certification objectives and with the requirements for renewal contained in Section 52.57 and 52.59

- Conclusion

It has been nine years since GE filed its pioneering design approval application for the U.S. ABWR. In Olympic terms, this has been a marathon process of GE-NRC interaction. Much has been accomplished as we reach the closure stage on remaining process issues. What is needed now is a rule worthy of the enormous time, resources and effort expended to bring us to this point, a rule which is faithful to the design stability and licensing predictability objectives of Part 52 and of the Energy Policy Act, a rule that will enable this advanced design of demonstrated safety and economic value to make its contribution to our own country's energy future.

Prepared Remarks of Joe F. Colvin
President and CEO, Nuclear Energy Institute
at the
Briefing on Nuclear Regulatory Commission
Evolutionary Plant Design Certification Issues

August 27, 1996

Chairman Jackson, Commissioner Rogers, Commissioner Dicus, Commissioner Diaz - good morning. I am Joe Colvin from the Nuclear Energy Institute. With me today is Ralph Beedle, our chief nuclear officer; Dave Rehn of Duke Power, who chairs the industry's ALWR Regulation Working Group; Regis Matzie who heads up Nuclear Systems Engineering for ABB/Combustion Engineering; and Steve Hucik who is responsible for Nuclear Plant Projects at General Electric.

We appreciate the opportunity that the Commission has given us by making public the draft final rule language, and the NRC staff paper that summarizes the remaining policy issues associated with certification of the evolutionary plant designs. And we appreciate the invitation to discuss the nuclear industry concerns with the potential impact of these policy issues on future licensees who will reference these certifications.

These certifications are a key part of the improved regulatory framework that is essential to maintaining the viability of nuclear energy in our country's energy mix, and that is one of the enabling conditions in *The U.S. Nuclear Energy Industry's Strategic Plan for Building New Nuclear Power Plants.* We share the Commission's objectives, namely:

- enhanced safety and reliability
- standardization of designs
- the early resolution of key safety issues, and
- a stable and predictable licensing process

As we emphasized in our comments on the proposed rules, the comprehensive NRC safety reviews have clearly demonstrated the successful achievement of the first objective. The designs and operational commitments embedded in the Design Control Documents offer us the chance to achieve and maintain a remarkable degree of standardization.

However, the process deficiencies that we continue to see in these rules concern us because they have the potential to lessen that degree of standardization, to leave unresolved many of the issues that were reviewed and approved by NRC in the course

of this rulemaking and, most importantly, to fail to achieve the stability of the licensing process that the NRC and industry set as a goal when we began this effort.

Today, we would like to discuss four of the issues that remain unresolved - four issues that have a significant impact on the finality of issue resolution achieved by these certifications, and on the stability these certifications bring to the Part 52 licensing process.

Before we get into a detailed discussion of these issues, I would like to ask Steve Hucik and Regis Matzie to add their perspectives, as the design certification applicants, on the progress made to date toward the objectives of Part 52.

Closing Remarks

Thank you, Dave. Chairman Jackson, Commissioner Rogers, Commissioner Dicus, Commissioner Diaz, as you have heard, the nuclear industry views the policy issues before you as directly affecting the workability of the design certifications in the Part 52 process, and whether the goals of Part 52 and the 1992 Energy Policy Act will be achieved -- specifically, the early resolution of safety issues and creation of a stable, predictable licensing process. As we have emphasized throughout these rulemakings, the safety of these outstanding designs, which received formal NRC approval two years ago, is not in question. What remains in question is whether these outstanding designs will be matched by process provisions in the design certification rules that make these advanced standard plants and the Part 52 licensing process viable options for the future.

In the 1989 Statements of Consideration for Part 52, the Commission recognized that many factors will determine whether new nuclear power plants are ever built in this country. The intent of Part 52 was "to have a sensible and stable procedural framework in place for the consideration of future designs." We note that the Commission reiterated the importance of ensuring that the design certification rules and the Part 52 process are perceived as workable by prospective licensees in their Staff Requirements Memorandum of March 17, 1995. We urge the Commission to consider the industry concerns with these rules, along with our proposed alternative rule language, in this light.

Thank you again for this opportunity. We would be pleased to answer any questions you may have.