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Title: BRIEFING ON SAFETY EVALUATIONS, FSAR UPDATES AND INCORPORATION OF RISK INSIGHTS -- PUBLIC MEETING

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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BRIEFING ON

SAFETY EVALUATIONS, FSAR UPDATES AND

INCORPORATION OF RISK INSIGHTS

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PUBLIC MEETING

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Nuclear Regulatory Commission

One White Flint North

Rockville, Maryland

Thursday, June 4, 1998

The Commission met in open session, pursuant to notice, at 2:05 p.m., the Honorable Shirley A. Jackson, Chairman, presiding.

COMMISSIONERS PRESENT:

SHIRLEY A. JACKSON, Chairman of the Commission

GRETA J. DICUS, Member of the Commission

NILS J. DIAZ, Member of the Commission

EDWARD McGAFFIGAN, JR., Member of the Commission

STAFF AND PRESENTERS SEATED AT THE COMMISSION TABLE:

ANNETTE VIETTI-COOK, Assistant Secretary of the Commission

STEPHEN G. BURNS, Acting General Counsel

RALPH BEEDLE, NEI

HAROLD RAY, NEI

TONY PIETRANGELO, NEI

HUGH THOMPSON, NRC

DAVID MATTHEWS, NRC

SAMUEL COLLINS, NRC

MARK SATORIUS, NRC

P R O C E E D I N G S

[2:08 p.m.]

CHAIRMAN JACKSON: Good afternoon, ladies and gentlemen. The purpose of this meeting is for the Commission to be briefed by the Nuclear Energy Institute and the NRC staff on proposed regulatory guidance related to the implementation of 10 CFR 50.71(e), which addresses updates to final safety analysis reports, and proposed changes to 10 CFR 50.59 entitled Changes, Tests and Experiments.

The Commission recently approved making publicly available a draft generic letter providing interim guidance on the implementation of 10 CFR 50.71(e). The Commission is considering approving the staff's request to seek public comment on this paper.

Concurrently, the staff is working to address Commission direction on a revision to 10 CFR 50.59 detailed in a staff requirements memorandum resulting from SECY-97-205.

As a result of Commission activity in this area, NEI has requested an opportunity to brief the Commission on its own activities in these areas and to offer ideas and comment for Commission consideration.

Consistent with our stated commitment to involve stakeholders in the regulatory process, the Commission is interested in obtaining and considering the views of NEI on

these matters in an effort to develop the most fully informed decisions possible.

We also look forward to hearing from the staff on the status of their efforts, their opinions on the NEI proposals made here, and the basis for their recent reply to the Commission on 10 CFR 50.59 changes documented in a staff memorandum dated May 27, 1998, which is publicly available.

It is our hope there will be frank, open exchange of the issues before us. Toward that end, I would encourage both NEI and the NRC staff to provide real world examples of the policy issues they discuss, but not just trivial or anecdotal. Too often briefings on these and similar issues become so philosophical and programmatic in nature that connections between policy and field implementation is lost.

Unless any of my colleagues have any opening comments they wish to make, Mr. Beedle or Mr. Ray, whoever is leading the discussion.

MR. BEEDLE: Chairman Jackson, thank you very much. Commissioner Diaz, Commissioner Dicus, Commissioner McGaffigan. We appreciate the opportunity to talk with you today. The matter of 10 CFR 50.59 and the FSAR update rule are both very significant to the industry as well as the Commission staff. A considerable amount of time and energy is devoted to these two topics. As you well know, the 50.59 is probably the most exercised rule in the arsenal of

regulations that we deal with.

This afternoon we have Mr. Harold Ray, the executive vice president, Southern California Edison. He's also chairman of the NEI Regulatory Process Working Group that was formed about a year ago to help us address and focus on the issues of 50.59 and FSAR design basis, and so forth.

We also have Tony Pietrangelo, director of licensing with NEI, here with us today.

We are prepared to discuss the 50.59. We have over the course of the last year had quite a bit of interaction with both the Commissioners and the staff on this topic.

We appreciate the publication of the draft document on FSAR. That has certainly helped us put our comments in perspective today. We think that sets a good tone on how to deal with those issues rather than waiting for a public comment period, at least to get them out and make them available to digest and understand.

With that, I would like to turn to Harold for some comments from his perspective as an executive in the utility to discuss the 50.59 FSAR issues.

Harold.

MR. RAY: Thank you, Ralph.

Chairman Jackson, in the interest of saving time

and in the spirit of the dialogue that you invited, I'm going to skip over three things on my talking points here, namely, the introduction, the history of this sordid affair, and the rationale for the industry initiative.

CHAIRMAN JACKSON: Is that s-o-r-t-e-d or s-o-r-d-i-d?

[Laughter.]

MR. RAY: The latter.

CHAIRMAN JACKSON: Just wanted to be sure.

MR. RAY: And also the rationale for the industry initiative that exists. If any of the Commissioners have questions about that, I'll be glad to comment on them, but I think that we need to cut to the essence of what this is all about as quickly as we can, and I would like to do that.

I don't want to skip over, however, recognizing and, I hope you will accept, commending the Commission for taking up this issue as you have.

I had the opportunity to make some comments at the information conference not so long ago. Commissioner McGaffigan was there, I believe. I tried to underscore the fact that I thought that the Commission vote sheets on SECY-97-205 were very thoughtfully reflecting on the issues that we all faced. Like us, I don't think any of you had the magic solution, and so we are engaged now in a process of trying to find what the best outcome is that we can

cobble together here.

It was very instructive for us to see your deliberations on this. I commented at the time that the Commission secretary doesn't often come in for comment, but I thought a terrific job was done in trying to gather all that together into some summary of where this all stood among the Commissioners.

Having said that, let me now dive into the essence of this. Tony will be making the presentation that we have prepared. We participated in its development and are prepared to answer questions as we go or at the end.

I think the thing that would be most useful for me to comment to you on before Tony speaks is the issue of scope. In the May 27th memo that you referred to that is something which is proposed to be deferred by the staff for attention later. In a letter that Ralph had sent the Commission we suggested that it was timely to take that issue up now. Tony will indicate we are certainly prepared to address it as a second step in the process that we face here in the interest of addressing the other issues that are on the table and ripe for decision.

But I do want to comment on it briefly in terms of the importance of it, and particularly because it connects to the generic letter that you mentioned, the 50.71(e) issue.

Perhaps the easiest way for me to illustrate the point that I want to leave with you is that in talking about 50.71(e) -- and I think I've made this comment to each of you separately -- the role of the SAR in defining what the scope of 50.59 is naturally arises. As you know, we are interested in not having the SAR constitute the scope of 50.59 and believe that it has traditionally not been the case that it did. But we find ourselves now at a point at which that is in fact the case.

I want to just extract one sentence from the forwarding letter to you of the generic letter that you referred to to illustrate the point. The staff is commenting in the context of the SAR that drawings might be simplified in the SAR of the future. That is one of the changes that might be made. They comment that the effect of this guidance is to reduce the scope of 50.59 changes to some minor components would no longer be required to be evaluated pursuant to 50.59 as they would no longer be "as described in the safety analysis report."

So speaking to a detail on a drawing, you see, the notions persist that by changing what 50.71(e) requires to be in the SAR we are defining or eliminating, adding to, taking away from what is required to be addressed in 50.59, and we just see that as a very significant problem and one that I know you all recognize as well. We do need to be

committed, I think, to address that.

I can tell you as somebody who in past roles has done a lot of writing of what is in a SAR that the intention never was, I think even up to the present day, but surely over most of the time when SARs were being developed, that they serve as the definition of what was subject to the control of 50.59.

They were in fact a convenient place to put information. An excellent place as a matter of fact, rather than have it distributed in many, many locations that were hard to access, particularly when you are facing hearings and other proceedings associated with issuance of a license. We would just put it in the SAR. So a lot of things wound up there.

I don't think that the regulatory guide that defines what needs to be in a SAR was written with that intent either. Yet we find ourselves in that place.

You asked for a real world, not a trivial or anecdotal example. This may be anecdotal. I hope it's not trivial, but it's certainly real world.

I have found myself in the position of spending an enormous amount of time, by my standard anyway, dealing with noncompliance having to do with one of these details that I think the staff is suggesting don't need to be on the P&ID in the SAR. I was dealing with it because it was a

violation of 50.59.

I won't go into the details unless you want me to, but we had made a change that in our judgment did not require Commission approval, did not involve an unreviewed safety question, and so on, and that became a matter of debate. It had to do with an orifice in a vent line and whether it was removable entirely or whether it was removable by use of a gate valve. And that's all it had to do with.

Anyway, that is a tiny example, yet one that I have personally been involved in, of why we are concerned that the enormous amount of information that is in the SAR can become a source of distraction to the Commission and to us as licensees as we try and go about getting our job done of assuring the safe operation of the plant.

I think that's all I need to say on that point. I just wanted to underscore to you that it is a piece of this overall picture that is equally important to the one of increase in consequences, and so on, that we are also dealing with here today and that I'm not going to speak to; I'll let Tony do that. But I wanted to underscore to you the importance in our judgment that if we defer giving attention to that to a later time that it not be a too much later time, because this issue is an area of uncertainty and also one where I think improvement in the process can be

made.

CHAIRMAN JACKSON: Thank you.

Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: I would like to ask a question about the change. At the reg info conference you were very strongly arguing for doing it in the first phase. Is it that you now have seen these documents, particularly the FSAR update guidance, the generic letter?

I know you are going to testify that you think that it doesn't have to go out for formal public comment because you are willing to change 98-03 and to accommodate, and you think that the better use of resources, you're going to testify, is that we use our resources to endorse your guidance.

Has the May 27th meeting with the staff and having this document on the table and having some discussions allayed some concerns and so now you are more comfortable with the two-step process that was in the original Commission SRM?

MR. RAY: Commissioner McGaffigan, I would put it this way. At the margin we are persuaded that we are all committed to take this second step and therefore, since it is the desire, I believe, of the Commission and certainly of the staff to take the first step, that we don't want to appear as objecting to doing that unless it were to be

perceived that somehow that was going to be the only chance we had to address 50.59.

On the other hand, I would say my concerns aren't allayed by this generic letter for the very reason that I said. It seems to underscore the notion that we find troubling, that is, that the SAR, and as far as we know everything in the SAR, is subject to 50.59 requirements.

At the limit, as I think Tony will say, we don't know how to keep that from making the SAR de facto just an enlarged version of the tech specs.

MR. PIETRANGELO: That wasn't the reason. Last week's meeting wasn't the reason why we are more amenable to the two-step process. I think there are really two reasons behind it.

One, I think we got a sense through individual visits with you all that you are committed to do this.

Secondly, we think we have some momentum established by the Commission's actions to take some quick action on some things that we think we are fairly close to. In our view, trying to do scope at the same time would probably prolong that, and we don't know for how long. So we don't want to lose that momentum. We want to keep that going. Again, with a commitment to look at that second step in a very serious way, we are satisfied that that is the right way to go.

MR. RAY: Yes. I think if anything the need is more clear as a result of the generic letter statement that I referred to. It was just an indication of where we have a real concern.

MR. PIETRANGELO: We have to do the 50.71(e) anyway. So that was really not the reason at all.

[Slide.]

MR. PIETRANGELO: First, I want to acknowledge we received COM SECY-98-013 yesterday afternoon and got a chance to look at that a little bit and digest it. We'll try to talk a little bit about some of those views and incorporate that during the presentation.

We do want to do a quick overview on the Commission's SRM on SECY-97-205 and talk about the use of acceptance limits.

One issue we added to this presentation that we hadn't planned to talk about was the design basis interpretation, but it does relate, we think, to some of the issues we are going to discuss this afternoon.

Talk about the enforcement discretion provision in the SRM.

Talk about the draft FSAR update guidance, the draft generic letter, as well as Draft 98-03, and then finish with the scope of 50.59.

[Slide.]

MR. PIETRANGELO: The main bullets in the SRM were to expedite this rulemaking, to clarify the threshold criteria as we mentioned before; the enforcement discretion prior to the rule change, and then to reconcile the two FSAR update guidance documents.

We do want to mention one part of COM SECY-98-13 dealing with accidents of a different type as well as malfunctions of a different type. We stand by the proposal we made in our November 14 letter on the language that is appropriate for that criteria.

There is one part of the COM SECY that we started discussing this morning really and we're not sure we agree with the staff on. I think we have to think about it more, but it's really a higher level concern, and that's whether 50.59 is a procedural standard versus a safety standard. In the sense that it's a standard for determining whether prior Commission review or approval is needed, it is procedural in that sense.

On the other hand, we don't think that something that has no safety significance ought to be sent to the Commission for prior review and approval. So there has to be some safety content to that test. I don't think we are prepared today to agree that it's only a procedural standard, that there should be some safety content to the decision. The Commission's direction in the March SRM on

minimal safety impact, we think we understood where you were coming from, and I don't think it's a dichotomy either in terms of those two questions. We just wanted to make that point today.

MR. RAY: This is the context specifically of the subject of malfunction of equipment of a different type. The statement is broader, seemingly. It says, in view of the use of 50.59 as a procedural standard rather than as a safety standard, the staff would not propose language of minimal safety impact. I want to underscore that was in a specific context. Nevertheless, it raises the notion of 50.59 that we are not sure we understand at this point.

[Slide.]

MR. PIETRANGELO: One of the issues where we think we do disagree with the staff is on the use of acceptance limits in determining the increases in consequences and reductions in margin of safety threshold lines. We think both of those kinds of limits can be found in NRC safety evaluation reports as well as other NRC guidance, like the standard review plan in Part 100.

We did discuss this issue at length with the staff on April 23. I think the result of that was we pretty much agreed to disagree.

CHAIRMAN JACKSON: Whether you like the criteria or not, do you believe that the staff has established clear

and objective criteria? You may not like the criteria, but do you believe the staff has established such criteria?

MR. PIETRANGELO: We have not seen what minimal in terms of consequences means yet. So it's hard to answer that. Conceptually, if there is a line out there that is based on the regulatory framework, I think we would prefer that to some construction of what minimal means vis-a-vis where you stand versus the line. I think that would be our preference.

CHAIRMAN JACKSON: Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: Going back to the Chairman's admonition that we talk about this in practical terms, as I understand the NEI Guide 96-07 and Mr. Collins' letter of January of this year on this issue of increases in consequences, what you say in that guide is if you find that the agency said something in accepting it relevant to some other document, a Part 100 limit or another document, saying we are accepting it because it's less than that, then that is the limit. If on the other hand we say we accept it -- you'll have to correct me here -- with reference to those things, then that is the limit.

MR. PIETRANGELO: That's correct. That's what our guidance says.

COMMISSIONER McGAFFIGAN: What is the practical effect of that difference at a nuclear plant?

MR. PIETRANGELO: One would have to come in from the change and the other one wouldn't. What we have been advising licensees to do when they are caught in that dilemma -- there are some that have in the SER -- the SAR value is the only value that you would find. We say, well, you'll have to go in then based on our guidance. The advice we have given is when you get your next SER from the staff, try to get the acceptance limit in the SER so that this is a one-time exercise and you won't have to continue to do that in the future, and then eventually you will have everybody consistent across the industry.

COMMISSIONER McGAFFIGAN: But does the staff understand that that is what you are advising?

Obviously the staff has disagreed with you. If they disagree with you, then one way not to ever provide that flexibility you are looking for is to make sure you don't do what you have just announced you've told your licensees to try to do.

Aside from when you have to come in and declare it a USQ and come in for a license amendment or other approval, what are we talking about specifically in terms of the types of things that we end up having to deal with that you think we shouldn't have to deal with?

MR. PIETRANGELO: I can give you an example, and I think it's a current one. South Texas plant has received a

level 4 violation on a very small increase in consequences, from 22-3/4 rem to 23-1/4. The acceptance limit is 30 per GDC-19, control room habitability. Because it was more than zero, there is the level 4 violation. Yet in a previous one the limit was clearly established as 30. That would be one where we would think that you shouldn't have to go in for something like that.

COMMISSIONER McGAFFIGAN: In that particular case the minimal could cover it.

MR. PIETRANGELO: Right.

COMMISSIONER McGAFFIGAN: I guess the staff's concern, as I've understood it over the years, is they are concerned about going from 22-3/4 to 29-3/4 and being right up against the limit. That's of concern if we haven't routinely approved 29-3/4 in other places; if we have routinely approved 29-3/4, it may not be.

I'm just trying to understand.

MR. PIETRANGELO: My understanding of the staff's is the closer you get to the limit, the more interested they get. It's very similar to the Reg Guide 1.174 discussion.

CHAIRMAN JACKSON: Do you have a comment on this?

MR. RAY: Yes, I do, on point. I don't want to make it sound like we are talking past each other relative to staff, Commissioner. So let me add to what Tony has said.

I think we need to pay attention to the statement staff makes, which I will read one sentence of here.

However, the degree of margin remaining to the limits might be less as viewed by the staff than the licensee. Therefore if a licensee subsequently made changes that would have the effect of increasing the calculated doses up to the limits, it is possible that the staff conclusion would be that the limits were actually exceeded.

So in this case, the example that Tony just gave, we understand that the staff may have a different view about what the increase was, that it wasn't from 23, or whatever it was, that it was something else. That concern that they have does need to be addressed.

Another example. You may be well aware of the Niagara Mohawk case where there was a blowout panel. The thing was set for 80 pounds. The bolts were supposed to be at 45; they were at 53 or something. The argument is made, well, as long it's far away from the limit, then we don't look at it as carefully as if it's closer to the limit, and therefore when you move from being far away to being closer you need to tell us so that then we can weigh in and see if there is something we want to do in terms of our own perception. We understand that.

That's why I made the point I did in passing that, okay, given that, though, if you take that philosophy to the

limit, you basically convert everything that has been said into a tech spec in the sense that we are concerned about it.

So we need to be able to sort through and separate the things that are not in the tech specs but which have this character to them that there is some margin that needs to be maintained against the acceptance limit or the staff wants to re-review the analysis. We need know where those are. We don't know which they are. That's the dilemma. I wanted to add that.

CHAIRMAN JACKSON: Let me ask you a different question. If a SER found a facility to be well below the Part 100 guidelines, would you conclude that Part 100 is the acceptance limit?

MR. RAY: It's the acceptance limit. I would not conclude that you could approach the acceptance limit without prior NRC approval.

CHAIRMAN JACKSON: But you know there is a footnote to Part 100 that specifically states that Part 100 guidelines are not acceptance limits. So are you of a view that rulemaking would be required to have Part 100 guidelines as acceptance limits?

MR. PIETRANGELO: We are very familiar with the footnote, and we are trying to get a context for that. I think how we read that is you don't have it acceptable to

release radiation to the environment. That's not what that means, and I think that's what the footnote was directed at. If you go back through the standard review plan and all the sections where you do have accident analyses and look at the criteria, that is what is referred to in all the cases we looked at.

CHAIRMAN JACKSON: This relates actually to the earlier comments by Mr. Ray. Do you agree, though, that the SERs are not part of the scope of 50.59?

MR. PIETRANGELO: Right now they are not mentioned in 50.59. We have some additional proposal language that would get those in play, and I'm going to speak to that in a second.

CHAIRMAN JACKSON: Right. Because how are we having a discussion about acceptance limits that are in SERs for purposes of determining USQs under 50.59 if the SERs are not part of the scope of it? That has always been my problem with this.

MR. RAY: I think your comments acknowledge the industry has accepted that SERs are in fact things that must be included within the scope of 50.59 notwithstanding the fact that they are not mentioned.

I think the next slide that Tony is going to go to lends itself to talking about Commissioner McGaffigan's question, which is, what is the practical application of

this? What does it matter?

[Slide.]

COMMISSIONER McGAFFIGAN: May I ask one more on this?

CHAIRMAN JACKSON: Sure.

COMMISSIONER McGAFFIGAN: By all means go to the slide.

Did I just detect in 96-07, what Mr. Ray just said about as you get close to the acceptance limit, you understand that the staff wants to take a look? Maybe not if it's going from 22-3/4 to 23-1/4, but as it gets close to 30. That isn't in 96-07, that concept, at the current time. So that is something that, trying to work out something, you'd be willing to talk about.

The other way to get at it is this question of minimal. What is minimal? Maybe minimal is something that isn't one percent or something, or 10 percent, or whatever, but maybe it's something that depends on, relative to the acceptance limit, am I making more than an X percent approach to the acceptance limit? Is that what you are going to be suggesting?

MR. RAY: Let me clarify one thing and then answer the question.

I didn't say it quite the way I think you repeated it back to me, Commissioner. I said if the Commission said

that this is acceptable because it is far away from the acceptance limit, which I think was what the Chairman suggested, and you now make it close to the acceptance limit, does that make a difference? And I said yes, I believe it did, because the Commission said this was okay because it was far away from the acceptance limit. Which is a little different than saying if you are getting close to the acceptance limit, that's a problem in and of itself.

MR. PIETRANGELO: And I'm not sure how many SERs say that.

CHAIRMAN JACKSON: The real point is, does minimal have a definition, or should it, in and of itself, or can it only be defined relative to the distance from some boundary? That's really what it boils down to. So I am interested in understanding what you think the boundaries are and what in fact your recommendation is.

Yes, Mr. Ray.

MR. RAY: Can I ask a clarifying question? Is minimal in that context -- I guess I thought about it differently, which is minimal means minimal change.

CHAIRMAN JACKSON: I didn't make a statement. I asked a question.

MR. RAY: Okay. Therefore, I don't want to leave it as if that's agreed. I'm understanding minimal to mean minimal change, not minimal away from some limit.

MR. PIETRANGELO: Your reading of 96-07 was correct.

[Slide.]

MR. RAY: To say it another way, I believe minimal applies to the boundaries of the white square.

CHAIRMAN JACKSON: Let's go back to Part 100 guidelines.

MR. PIETRANGELO: Part 100 is the darker gray square where the tech spec limits are.

MR. RAY: You bet. And minimal we don't apply to that boundary at all.

MR. PIETRANGELO: Right. This is similar to what we said at the reg info conference. If you accept how we view it here, we don't believe there should be any reduction in the margin of safety; we don't think you apply minimal to that line. If the consequence acceptance limits are used, i.e., Part 100 or whatever else was in the SER, then you don't use minimal for that either.

I think when we viewed the Commission's SRM you were talking minimal up from the white box on the inside.

MR. RAY: Yes, that we can make the white box a little bigger, and that would be okay. We're not suggesting we can go a little bit over the line when it comes to the limits that have been set by the Commission in the tech specs, in the regulations, or any other place.

MR. PIETRANGELO: I guess our central point here is and what makes this really germane to not only the design basis discussion but the consequence, margin of safety, and even probability discussion to some extent, is that the FSAR was submitted when a plant went to get its operating license. It had all this information in it, including the technical specification information lifted out of the FSAR and made part of the operating license.

There is a hierarchy established with that information that was selected to be the technical specifications. Then you apply 50-90; you need to get prior review and approval before you change any of those values, but the rest of that you shouldn't have to get prior review and approval unless it's a similar change to one of those limits.

I think the effect of how we have been treating 50.59 is to make all the information in the SAR a tech spec limit, and I think that Niagara Mohawk case is another example of where there was basically a degraded condition or nonconforming condition that changed it from the white box that was requiring a one-hour report like it was a tech spec violation. We think it's very problematic if you are going to treat all the FSAR information like technical specifications. That's in no one's interest.

MR. RAY: The sentences that I read earlier apply

to this light gray area surrounding the white area. They are basically saying that when the license is granted, it's based upon that being a big area, and if you do something to make it smaller, you need our prior approval. That's what the staff is saying here.

Although Tony said that's the way it is, I guess I would change that to say that's the way it has become. It certainly wasn't that way for a long time. I've been in this business a long time, as most everybody else in the room has been, and I can say that many things were put in the SAR without any idea that that in fact was going to become the case.

CHAIRMAN JACKSON: How would the boundaries of your diagram fit with the ASME code?

MR. RAY: The ASME code is in the area lying outside, in the most dark band. In other words, the ASME code, having sat on the committee there too, I can say addresses where the limits should be on stress on other things given that construction is imperfect, that there are defects in the material, that the loadings are going to be uncertain, and many other things. You put in the ASME code a margin against the true breaking strength of the material, let's say, which then allows you to define the next box in, which are the limits of the ASME as they are adopted by the Commission; the Commission established for design. Nobody

can go beyond those.

MR. PIETRANGELO: In fact the source documents for much of the design basis information are from the codes.

MR. RAY: Then we back down further to say, okay, here's how we are going to operate the plant, and for those really important things, we are going to put them in tech specs and make sure that you guys focus on them and don't go outside that box without getting our approval. What we are now doing is talking about other things that aren't in the tech specs but are in the SAR, and thus to the issue of scope that I addressed to you in the beginning.

CHAIRMAN JACKSON: Suppose we had a hypothetical plant that had a containment with an internal design pressure of 50 psia and ultimate failure pressure of 100 psia, but the accident analysis says that you can have 46 psia peak containment pressure. Where do those fit on this box?

MR. PIETRANGELO: The 50 would be the acceptance limit.

MR. RAY: It would be from the inside out, 46, 50 and 80, I think you said.

MR. PIETRANGELO: Right, 46, 50 and 100 from the inside out.

CHAIRMAN JACKSON: So where is 46?

MR. PIETRANGELO: Forty-six is on the perimeter of

the white box.

MR. BEEDLE: If I can take that a step further, you picked one that is very likely to be one that you can't go to 46-1/2 or 47 without getting the Commission's approval even though it's not in the tech specs. Our dilemma is, how do we pick those out from the zillions of other pieces of information in the SAR if we are going to use the SAR?

That's the problem with the SAR. If we change to some other measure or some other definition of what we are concerned about, then it's easy to capture the 46 in that, and say, I don't want you to change the 46; I don't want to make it 46-1/2 or anything else without my prior approval.

As long as we continue to use the SAR, we are in the dilemma that there is so much in there that doesn't have that importance that I think we have a hopeless task.

CHAIRMAN JACKSON: Yes.

COMMISSIONER DIAZ: I was just going to say that I hate to use the word right now, but it appears to me that you are trying to risk rank the design and operating envelope.

MR. RAY: I wouldn't hate to use that word, Commissioner Diaz, but I thought that this was a binary risk ranking here we are talking about.

CHAIRMAN JACKSON: It's a tier.

MR. RAY: One of my committee's responsibilities

is to support from the industry side risk information, risk ranking, application of risk, and I certainly want to endorse the idea.

CHAIRMAN JACKSON: Then you should have endorsed option 5 of the staff's paper.

MR. RAY: You have me at a disadvantage.

[Laughter.]

MR. PIETRANGELO: Can we go to the next slide, please.

[Slide.]

CHAIRMAN JACKSON: We're not through yet.

COMMISSIONER McGAFFIGAN: Following up on that example, if those numbers had been 20, 50 and 100, what you are saying is you understand why we would be concerned if we are already at 46, the operating envelope, but if it's at 20, then going to 21 or 22 or even 25 -- let me just ask you. If the inside envelope is 20, the next one is 50, the next one is 100, where should we get concerned?

MR. RAY: You illustrate the problem we have, which is that there hasn't been, to use Commissioner Diaz' notion, a categorization of these things in terms of risk ranking.

I can imagine a situation in which 20 would be even something that the Commission wouldn't want you to exceed without their prior approval for the reason, as the

staff argues here, they just didn't review the analysis very thoroughly because it was so far away. Well, then you have to make that clear, because we can't guess where that is true without, as I said, converting everything into a tech spec type limit.

We have got to somehow solve this problem. I understand that, and I don't have any silver bullets.

CHAIRMAN JACKSON: I want you to keep in mind your risk categorization.

MR. PIETRANGELO: We did mention that we would try to say how we would incorporate risk insights during this particular briefing. I think in this case, besides the example Harold gave you, we think there is an opportunity, and right now it's on very much an evolutionary path, to change the perimeter of the gray box through risk informed tech specs and applying PRA even to the design basis accident analyses. NEI has a pilot project to do that, and I think there is one pilot that is looking at coincident LOCA and loop and all that kind of thing from a risk perspective.

CHAIRMAN JACKSON: Commissioner Diaz.

COMMISSIONER DIAZ: Even if we back away from risk, and I'm going to go back to Commissioner McGaffigan's 20, there is an engineering judgment that is applicable to these cases. Engineering judgment tells us that there is no

difference in calculation accuracy or in measurement of response of equipment between 20 and 21, and that's minimal.

MR. RAY: Commissioner Diaz, I certainly agree with you. I don't want to prolong this part of the discussion beyond what you all wish to do, but I do want to say that we are in an era that is different than the past, for whatever reason. There is no point in debating why we are here, but we are here. One of the things I was going to say in the history discussion was, I think we have learned, all of us, that we have got to deal with the literal application of these words, like it or not, and we're here to try and figure out how to do that.

I would just suggest to you that the existence of the tech specs was in fact a binary risk ranking. Stuff went in there or it didn't go in there. Now we are into a different world. I won't opine on that further.

CHAIRMAN JACKSON: It was a binary ranking. We could argue all afternoon about to what extent it is risk ranked. One could argue that within the FSAR there is a risk ranking. Then if you were looking at relative risk, you might have things in the FSAR and things in the tech specs that cross each other one way or the other.

My basic point of view is that it's really a new paradigm, but we will continue within the context of trying to tinker at the edges, which is really where we are, in my

opinion.

MR. RAY: Regrettably.

MR. PIETRANGELO: Could we go to the next slide, please? We're running way behind here.

[Slide.]

CHAIRMAN JACKSON: No, you're not behind, because we asked the questions.

MR. PIETRANGELO: Design basis interpretation. There is some history to this one.

CHAIRMAN JACKSON: There is history to all of this.

[Laughter.]

MR. PIETRANGELO: First of all, it is an important issue because it's critical to both operability and reportability determinations. We put together guidance in the late 1980s or early 1990s. We revised it last year. It has been with the staff since November.

Interpretation that was provided to a licensee on a particular issue gave a new interpretation of what the 50.2 definition of design basis entails, and that is any information you used to determine the acceptability of the design. It's very much what we were just talking about.

CHAIRMAN JACKSON: Have you seen guidance documents that say that?

MR. PIETRANGELO: It's in a letter.

CHAIRMAN JACKSON: A letter from?

MR. PIETRANGELO: The agency to a licensee.

MR. RAY: Yes. As a matter of fact, it's September 1997.

MR. PIETRANGELO: September 12, 1997.

MR. RAY: The way it's expressed, it says the guidance in NUREG-1022 and this letter in September --

MR. PIETRANGELO: There is a little bit more history. When we saw that interpretation, we immediately wrote to the agency saying, wait a minute, there is a Commission policy statement from 1992; there are other regulatory guidance documents that we don't think are consistent with this interpretation of what design basis information entails.

There was more interaction with the licensee in a subsequent letter that came out this past March which mentions the consistency of this September 12th letter with the reportability guidance in NUREG-1022. I think that's part of the problem. We don't think those two things are consistent at all.

MR. RAY: It is precisely what I was alluding to in the scope context. Again, it is one sentence. Let me read it:

It would be inappropriate for the NRC staff at this juncture to provide any new or different guidance

regarding the definition of design bases provided in 10 CFR 50.2 beyond that already provided in NUREG-1022, revision 2, and the NRC's letter of September 12, 1997.

The problem is those two things are not consistent.

MR. PIETRANGELO: And if there was a new interpretation, it was made in September.

CHAIRMAN JACKSON: This is one example and it's something obviously, if in fact what you say is true is true, that we need to follow up on. Has this been a broad-based change that you have seen in guidance documents or numerous communications between the NRC and licensees?

MR. PIETRANGELO: There is no NRC guidance on this. The reportability guidance which was just issued, I believe in February of this year, was the NUREG-1022, revision 1. We know the staff asked some activities to look at 50.72 and 50.73 reporting. Our point is that that is kind of trying to get at the symptom versus the root cause of what is the appropriate interpretation of the --

MR. RAY: You asked a question I don't think we have a good answer for: how prevalent is this? I can't answer that.

CHAIRMAN JACKSON: That is what I mean. There are two questions. One is, is it your understanding that the definition of design basis has remained static since the

days of the Atomic Energy Commission, or do you feel there has been some evolution as the industry and we have responded to events such as TMI, Browns Ferry, et cetera? That is one question.

The second is whether there is either specific change in guidance or there is some widespread de facto change in guidance that exists through correspondence.

MR. PIETRANGELO: I think it's the latter, Chairman Jackson.

CHAIRMAN JACKSON: Then you need to bring us that data.

MR. RAY: We understand.

MR. PIETRANGELO: Wait. I got calls this week from a Region IV utility group, and they read everything that comes out of this agency. They're afraid about being in willful noncompliance for not reporting in a similar instance, and this has a destabilizing effect.

CHAIRMAN JACKSON: I'm not here to argue with you, Mr. Pietrangelo. I'm saying to you we are trying to reach some point of where we can and should go on this. If you want to be helpful to NRC, then what you can do is provide us with the information in a constructive way. That's all I'm trying to tell you.

MR. BEEDLE: We will provide the Commission with a letter.

COMMISSIONER McGAFFIGAN: This is an issue that I hadn't been up on, but we have some draft report language that may have been changed since. I assume it reflects this issue.

In order to resolve this design basis uncertainty, NRC needs to reaffirm its interpretation of design basis information consistent with NUMARC 90-12 or the proposed NEI 97-004 revision of NUMARC 90-12.

You said earlier that 97-004 had been submitted to us last year sometime?

MR. PIETRANGELO: Last November.

COMMISSIONER McGAFFIGAN: With a request that we endorse as a guidance document? How is that transmitted to the Commission?

MR. PIETRANGELO: That particular letter, I believe, was sent to Mr. Collins or Mr. Callan. I can't remember which. Previously the NUMARC 90-12 document, we did get a letter of acknowledgement from the director of NRR at that time. Subsequent to that there was a Commission policy statement. I can read you the language that we quoted in the letter from the staff, but we'll provide that later. It basically said, our rationale for the design basis was consistent with the 50.2 definition. Then you see the NUREG-1022 guidance as well.

Our point is we thought we had a fairly good trail

and guidance path, and then this letter came out that seemingly was a new interpretation of that. We tried to bring it to the agency's attention.

MR. RAY: As I think we said at the beginning, this is a bit of a sidetrack from the 50.59 and 50.71(e) subjects that the Chairman indicated we are here to talk about, but it bears on it to some extent. So we bring it to your notice and we'll follow up with a letter.

MR. PIETRANGELO: Let's go to the next slide, please.

[Slide.]

MR. PIETRANGELO: Part of the SRM from March 24 dealt with enforcement discretion for 50.59. We talked about this a little bit. There seemed to be a disagreement following the reg info conference session about what that direction from the Commission meant with regard to enforcement discretion until the rule was changed to incorporate the minimal standard versus the zero increase standard.

Our perspective was that we don't know how long the rulemaking is going to take. We hope it's a going to be a fairly quick one, but that in the interim, to avoid examples like the South Texas one I went over before, there shouldn't be enforcement action taken when the clear intent of the Commission on minimal with regard to probability

increases or consequences or malfunction with a different cause but the same result occurred out there.

The staff was apparently interpreting that as, well, there still has to be enforcement action but instead of a level 3 it's a level 4, or instead of a level 4 it's a non-cited violation.

We thought this is very similar to two-year discretion on the FSAR that ends this October. We wanted to raise this because we think there are some interpretation differences between how we view what was in the SRM versus the staff.

CHAIRMAN JACKSON: How do you propose that we proceed in a way to ensure consistency if there isn't a definition of minimal?

MR. PIETRANGELO: Our guidance, and we have the initiative that the deadline is the end of this month, is really less than minimal; it's negligible; or where there is a discernible trend.

COMMISSIONER DIAZ: We are not going to get into that.

MR. PIETRANGELO: That's the industry guidance. My point is that our standard is already higher in the sense of less than minimal than what the Commission said in the SRM. So we think there will be consistency in that regard.

COMMISSIONER McGAFFIGAN: The increase in

consequence within acceptance limits. You get into that same issue we just spent 20 minutes on.

MR. PIETRANGELO: That's right, subject to whatever the Commission decides, obviously.

CHAIRMAN JACKSON: Are you basically suggesting a blanket exemption to the industry?

MR. PIETRANGELO: If it has the minimal consistent with the intent of the SRM until the rule is changed.

CHAIRMAN JACKSON: I'm just saying there is an issue having to do with what guidance one is operating off of. Otherwise, what you are saying is that you want a blanket exemption until the rule is done. Is that what you are saying?

MR. RAY: I would be perfectly comfortable with the notion that the staff simply needed to assert that something wasn't minimal and thereby say that they had satisfied the Commission's direction if they felt it was necessary to do so.

Very often we see things identically in terms of their significance. It's the compelling need to go ahead nevertheless that is the problem. So I don't think we need to debate as much as we think we do what is minimal and what is not, because I'm comfortable with any of the NRC managers that I know making a judgment about what is minimal. I just would like them to be able to say, well, yeah, I agree it's

minimal, and therefore enforcement action is not required.

MR. PIETRANGELO: Next slide, please.

[Slide.]

MR. PIETRANGELO: Switching gears now to the draft FSAR update guidance. This is an overview slide for the next few. I want to talk about focus of what the update ought to entail, some of the reconciliation issues that we read in the SECY that transmitted the draft generic letter, talk about enforcement discretion on 50.71(e) also, and give our perspective on that.

Before we move to the next slide we want to thank the Commission for issuing the draft generic letter. I think that was very helpful for us to get with the staff. I think we are on a positive track here, and I think you will see as we go through the issues that this one is on a good path to resolution.

Next slide, please.

[Slide.]

CHAIRMAN JACKSON: I detected a degree, shall we call it, of excitedness in the April 16th letter from NEI. You recognize that the guidance is interim.

MR. RAY: Remembering only that the subject of implementation of 50.71(e), if we can separate it from the tide of 50.59, is one that I think has the character that Tony just described to you. It's on a track that is

reasonable.

MR. PIETRANGELO: I think the staff did a good job in the draft generic letter of spelling out what was originally required under 50.34 in terms presentation of the design basis for 50.2, the safety analyses, the operating limits, and then what we call a contextual description of those things.

Our guidance document basically had the same focus. I think our only point we have been discussing lately is the limits on operation we would equate with the tech spec values that were in the original SAR that were lifted out and became the tech specs. So they may or may not be in the SAR, but in any event whatever is in the SAR ought to be consistent with the tech spec values.

Next slide, please.

[Slide.]

MR. PIETRANGELO: In the SECY to the Commission the staff said there were three reasons why without change they would be unable to endorse NEI 98-03. The first had to do with removal of historical information; second, removal of obsolete and less meaningful information; and third, treatment of detailed drawings.

In our presentation material that we discussed with the staff on May 27 we proposed some changes to 98-03 that were very consistent, we think, with the draft generic

letter that would resolve those issues.

In addition, we understand there are going to be some comments made part of the meeting summary from May 27 that will provide additional comments that the staff has on 98-03. We think we will be able to turn our document around by the end of this month to continue the discussion. So it is very positive.

In terms of the three issues that would preclude endorsement, we were very comfortable that we could address those concerns.

CHAIRMAN JACKSON: Could I get you to go to slide 10.

MR. PIETRANGELO: Yes.

CHAIRMAN JACKSON: Based on your interpretation of design basis, would this approach that you are talking about exclude updates for nonsafety-related issues involving station blackout, ATWS, or safe shutdown under Appendix R?

MR. PIETRANGELO: Absolutely not. Those are required under 50.71(e). But I think the types of information about those things you cited would fall into these categories.

CHAIRMAN JACKSON: What about FSAR supplements submitted under the license renewal?

MR. PIETRANGELO: It's required by Part 54.

CHAIRMAN JACKSON: That's right, but is it

captured?

MR. PIETRANGELO: Those are really talking about programmatic descriptions, and I might have to refer to the PM for license renewal, Doug Walters here. But my understanding is that is what the rule calls for, to supplement the SAR with programmatic descriptions made as a result of the license renewal review.

CHAIRMAN JACKSON: Would you like to comment?

MR. WALTERS: The position we have taken is that under license renewal the FSAR supplement would be to the same level and same detail that you have today, and it would be the incorporation of, let's say, programs that you are crediting as aging management programs if they are not already described. So there are really two issues: What do you put in the SAR and then what is the level of detail?

CHAIRMAN JACKSON: Can you give me a contextual description of a hypothetical accident analysis?

MR. PIETRANGELO: Not off the top of my head I can't.

MR. RAY: I think it's a redundancy, isn't it, a hypothetical accident analysis? All of them hopefully are hypothetical.

MR. PIETRANGELO: By contextual, we mean how does it fit into the safety analysis. This is the safety analyses report. By contextual, we mean how does that

information --

CHAIRMAN JACKSON: Can you give me an example? Frame it out for me.

MR. PIETRANGELO: I think in terms of presenting the design basis and the description of the system and how it functions and all that, I would say what were the input assumptions and parameters that were used and the input back to the safety analyses. I would try to keep that description contextual to the safety analyses.

We know, though, that over time it got broader than that. I used to work for a vendor and we had separate documents that were system descriptions that had the nameplate data on the motors and the pumps, and all that was eventually included in the SARs, and the initial hazard summary report, I don't think, had a lot of that kind of information.

CHAIRMAN JACKSON: On slide 11, how would NEI 98-03 change as a result of the draft generic letter's content?

MR. PIETRANGELO: I will do them one by one. I think I can do the first two, and I may need help on the third .

On the treatment of historical information and the revision that the staff has, we suggested removal of historical information that wasn't going to change. I think

the draft generic letter made some points about what was required by 50.34. What we suggested to the staff on the 27th is rather than remove that historical information, it could be reformatted into an appendix or some other part of the document where it would not be subject to change or subject to update. That's our definition of historical.

On the second bullet, with regard to removal of obsolete and less meaningful information, the draft generic letter suggested that the licensee needed to have a process to establish by some criteria what information was obsolete and less meaningful.

I think it would go back to the previous slide on what the focus ought to be. That process along with providing a rationale for the update of why that information came out, a kind of documentation trail that with that process there would be flexibility to remove and less meaningful information.

I think it's basically the same on the detailed drawings. As long as there was a process of paper trail to say why the drawing went from very detailed to a schematic, for example, I think we would tie it back to whether those components listed on the drawings or in that detail were credited in the accident analysis.

MR. RAY: Let me interject here and say I believe a lot of this activity is driven off from the need to

conform the SAR to an acceptable scope for 50.59. If you once break that link, I think the question is, well, why not have detailed drawings in the SAR? It's not that big a deal. You just take reduced size P&IDs and put them in there. That's what people had done, and they thought that was okay.

The reason that we are driven back to take out all of these details and slim it down to something that doesn't have a lot of details in it is really in an effort to make them not subject to 50.59, which is exactly what the staff said it was for.

I just think we need to first break that link and then decide what to do with the SAR, because we might come out with different answers.

CHAIRMAN JACKSON: My position is well known.

MR. PIETRANGELO: Could we go to slide 12, please.

[Slide.]

MR. PIETRANGELO: With regard to the enforcement discretion on 50.71(e), we are still in the middle of a period of enforcement discretion that ends October 18 of this year. That enforcement discretion required the licensee put a program on the docket to describe how they would go back to validate and verify the information that is in the SAR is accurate.

Given that this is the first stab at regulatory

guidance for 50.71(e), there is also an issue with regard to completeness. We've had a lot of discussion on whether completeness and accuracy are mutually exclusive or not. My own opinion is they are not. Sometimes you are not entirely accurate if you don't have all the information there.

The sub-bullets here.

There is no safety urgency for this information. This is information that is already on the docket. It's a location problem per the regulation, and we recognize that under 50.71(e) there will be a need for many licensees to go back. They may not have captured some of the information that was required.

CHAIRMAN JACKSON: Are you talking completeness or accuracy?

MR. PIETRANGELO: I think we are talking both, Chairman Jackson. Again, in my own mind, it's hard to separate the two. But we understand that what is in the document needs to be consistent with what is in the plan and the procedures. There are different shades of this also. I think for a lot of licensee, based on the feedback we have received, they will have identified a lot of the discrepancies in the FSAR, but they may not have closed them out yet; they may be in the corrective action program.

CHAIRMAN JACKSON: Do you support the staff's approach to risk informed enforcement discretion periods?

MR. PIETRANGELO: I think that is a way to do it. We did have a discussion about this in last week's meeting. You don't want to get in a situation where you are off for a couple of years and you don't know at the end of that period whether everybody is going to be finally done with this or not, and it's appropriate to get some feedback at some point or some intermediate milestone that would give the Commission a sense that the licensees are progressing with this, and it makes sense to use risk ranking to focus on those.

Right now, given that the FSAR, as I think Harold has underscored, is not basically a risk-significant document, there are certain systems you could pull out by the maintenance rule guidance to say, yes, we can focus on those first.

CHAIRMAN JACKSON: Wasn't that the original go-forward direction? It's certainly the accuracy issue on the FSARs, that it should have been done on that risk ranked basis. So if in fact it hasn't been done on that risk ranked basis, why should there be two more periods? If the most risk-significant things haven't been done, why should there be two more years?

MR. PIETRANGELO: I think with regard to accuracy it hasn't mattered at this point. I said only a way, because I may want to go back to that focus slide and make

sure all my design basis information is accurate and make sure all my safety analysis inputs are accurate, because there has been a lot of activity on those too, and that is not with regard to risk significance. That's another way to approach the which ones I do first argument.

COMMISSIONER DIAZ: Your recommendation is two years?

MR. PIETRANGELO: That's the normal cycle for an FSA update period.

CHAIRMAN JACKSON: Right. It already will have been two years in October, right?

MR. PIETRANGELO: Yes, and I think there has been extensive effort. I think most people are there with regard to accuracy, but the completeness part and given the new guidance, we think it's appropriate to extend that.

COMMISSIONER McGAFFIGAN: Could I clarify?

CHAIRMAN JACKSON: Sure. Go ahead.

COMMISSIONER McGAFFIGAN: I guess I'm having trouble with the accuracy and completeness as well. Your recommendation, as I understand it, is to not try to make the distinction between accuracy and completeness.

If I were to take the staff's proposal and try to merge it with yours, give you six months for accuracy and completeness with regard to the systems and the maintenance rule or the most risk significance and give you two years

for the rest of it, but don't try to make this distinction between accuracy and completeness on October 18, 1998, where you would have to be accurate -- I don't want to get into semantics over whether it was inaccurate because it was incomplete, and maybe we just need a time period for both. That's what strikes me as I listen to this for the first time.

CHAIRMAN JACKSON: Right, but the real issue is that in the end, whatever the time period is, we're probably guaranteed that you are going to come back and say we should have two more years, right?

COMMISSIONER McGAFFIGAN: Get the Bibles out.

[Laughter.]

MR. RAY: Is that a question requiring an answer?

CHAIRMAN JACKSON: No.

MR. PIETRANGELO: I think it's a question of degrees. As Harold underscored, there is a lot of other information in the SAR. We know there is more important information than others. We may want to use that as the stick to measure progress versus some other.

The final slide on SARs is the outcome slide.

[Slide.]

MR. PIETRANGELO: Our conclusion based on the draft generic letter and the meeting we had with the staff on the 27th. We don't see a need to issue the draft generic

letter, and purely from, we think, an efficiency and speed standpoint, we can save a step in this process.

We are comfortable that we are on converging paths with the staff based on the meeting. It is more efficient to seek public comment on a final draft reg guide endorsing our guidance versus having to get formal public comment on two separate documents.

We have talked about a tentative schedule for closure with the staff.

CHAIRMAN JACKSON: What is that?

MR. PIETRANGELO: I'm about to go through that.

CHAIRMAN JACKSON: Tell me the ultimate drop-dead date.

MR. PIETRANGELO: By the end of the year.

Our other conclusion is we don't think there is a need for rulemaking on 50.71(e). That language is pretty straightforward, and I think we are comfortable with it.

[Slide.]

MR. PIETRANGELO: Finally, the last set of slides is on the scope of 50.59. We have already discussed the industry proposal at some length, about decoupling the scope from the SAR, trying to define in A-1 of the rule what scope is, and our April 16 letter suggested a focus on the safety analyses in the SAR.

[Slide.]

MR. PIETRANGELO: We think there are a number of benefits to doing this. In the interest of time, we won't do this, but we could give you several examples on full safety evaluations that really have little or no safety or regulatory value.

We did a survey last year as part of our commenting on NUREG-1606. The average full safety evaluation time takes about 27 hours, and that does not include review time. We think there could be a substantial benefit in terms of reducing the number of these full evaluations. We think it would improve the consistency between the rule and implementation.

Finally, it gets at trying to define what is important in the SARs from a 50.59 standpoint and would have the effect of leveling this playing field on big SARs versus small SARs, and we know there has been a concern about that.

Last slide, please.

[Slide.]

MR. PIETRANGELO: We continue to believe there is a need per the Commission's SRM to expedite the rulemaking on the threshold criteria, and that's the best way to get long-term regulatory stability in 50.59. I should have said before that part of the rationale for the enforcement discretion until the rulemaking is complete is to get that kind of stability in the short term, but that's no

substitute for the rule language being correct.

We have not changed our mind about the need for a rule change on the scope of 50.59. We are prepared to work in the two-step process. We went over the rationale before, Commissioner McGaffigan. I think the primary reason was after the individual visits we were convinced there was a commitment on the part of the Commission to follow through on this.

We are ready to go on this. We had some preliminary contractor work done on this concept of safety analyses. We are encouraged by the results we are getting thus far.

CHAIRMAN JACKSON: When you talk about safety analysis, do you include shutdown safety, ATWS, station blackout, Appendix R safe shutdown?

MR. PIETRANGELO: Yes. It's all the required analyses as well as some of the requested ones for 50.71(e) that had an effect on the analyses or were new.

CHAIRMAN JACKSON: Does that include human performance and operational safety issues that are currently covered in the programmatic sections of the FSARs?

MR. PIETRANGELO: Our initial work that we have asked the contractor to help us with went back through all the generic letters and bulletins and tried to find where there was a request for a safety analysis to be submitted by

the licensee. That could be with regard to some human performance, but I'm not sure. We did find out of a population of about 300 generic letters about 21 that did in fact request the licensee to submit a safety analysis; in a population of about 100 bulletins there are about 29 that requested a safety analysis.

CHAIRMAN JACKSON: Commissioner McGaffigan.

COMMISSIONER McGAFFIGAN: I want to understand how the 50.59 process works in a real plant. I had an interesting conversation a month or two ago with a young man who I won't name but who had worked in plants. We got into a discussion as to whether we approve changes in plant managers and whether a safety evaluation has to be done to determine whether there is an unreviewed safety question when Joe replaces Tim.

I said to him, Oh my God, they can't be doing that.

But do you? When Joe replaces Tim as head of the operations department, is there a multi-thousand dollar evaluation made as to whether that is an unreviewed safety question?

MR. RAY: No. It's a fair question, but the answer is there is nothing in any set of reference documents that I could think of that would mean that was a change to the facility.

COMMISSIONER McGAFFIGAN: That was the example this person used.

MR. PIETRANGELO: That was a title change.

COMMISSIONER McGAFFIGAN: The title change one I'm well aware of. We have a license amendment in at the moment because it's a tech spec change. This particular utility did not, as the staff recommended a long time ago, get all these titles out of the administrative section of the tech specs. So we have a license amendment in at the moment to change plant manager to vice president, and we are going to have to go through a license amendment process.

I assume, Mr. Ray, that Southern California Edison probably took the staff's advice in the late 1980s and got all of that stuff out of its tech specs. Or maybe you never change titles.

MR. RAY: We were a lead plant for standard tech specs, and I don't believe that the titles are in the standard tech specs.

MR. BEEDLE: The situation you are referring to, though, the plant had in their tech specs and in their FSAR titles. When they changed the title of their senior manager on site, then they ended up doing 50.59s for that change as well as tech spec changes in order to accommodate that. Some plants do 50.59s when they change people; when they change a plant manager, they do a 50.59 on it.

A lot of that is driven by the request or comments by resident inspectors, and in some cases regional-based inspectors, and so the plant reacts to that and says it's a change in the facility, whether it's people or process or equipment, and they effectively come to ALSAP where they do 50.59s.

COMMISSIONER McGAFFIGAN: We aren't supposed to vote in public, but I suspect there is no Commissioner who would ever ask you to do that in the history of the agency. I get a little bit frustrated. I used to work on Pentagon type issues. We would sneeze in the Congress and they would catch pneumonia at the Pentagon. So I understand. Some of this stuff is self-imposed. That's the only point I'm trying to make.

MR. BEEDLE: I would agree with that, and I think that just points out the significance of the work that is ongoing right now on 50.59 and 50.71(e). The complexity of the process is such that you have several thousand people out there trying to utilize this rule and they all look at it a little bit differently, and where there is ambiguity or a vague definition, then they all interpret it a little bit differently. I'm not saying that they are wrong, but I'm telling you that it yields strange results, this being one of them.

MR. RAY: We need to get up and give the staff a

chance to address this issue.

CHAIRMAN JACKSON: Yes.

MR. RAY: I just want to say one thing in conclusion. I'll just say it very briefly. I perceive that we will engage in a continuing quest for the unattainable, and that is an objective definition of minimal, and so on. I think we ought to get beyond that. I believe the managers in the NRC are responsible public officials who, if they are given the latitude to decide that something is okay because it's minimal, will make the right decisions, and we don't need to try and find some ruler to give them all that they can apply to everything out there.

CHAIRMAN JACKSON: Then you will head off the next Tower's parent study.

MR. RAY: Chairman Jackson, if I had the opportunity to head it off, I would make that commitment. I don't believe that's in my purview.

CHAIRMAN JACKSON: Thank you very much. We appreciate it.

Let's hear from the NRC staff.

Good afternoon.

Mr. Thompson.

MR. THOMPSON: Thank you, Chairman Jackson, Commissioners. This is a very important issue both for the NRC and for the industry. I think you've heard today that

we have made a lot of progress working well together, and we certainly intend to continue that.

Before I turn the remarks over to Dave Matthews, who will be making our presentation today, also at the table we have Mark Satorius, who is the deputy for the Office of Enforcement, and then Sam Collins, who is has a few opening remarks.

MR. COLLINS: Madam Chairman, Commissioners, the majority of my opening remarks have been covered in some context. I would just acknowledge that today's meeting is part of the continuing dialogue and interaction with the Commission on these important elements of the regulatory process.

The staff is and has demonstrated in the past it is willing to continue discussions with NEI on guidance documents for implementation. As Hugh so noted, we are here today to provide the Commission progress reports since the last meeting that was held on this topic in December and to respond to the Commission's questions. With that, I will turn the briefing over to David Matthews.

MR. MATTHEWS: Good afternoon

[Slide.]

MR. MATTHEWS: In the interest of time, I do have a slide on background which I will have you look at briefly, and then I am going to discuss the central issues that we

have today on the updated FSAR guidance and 10 CFR 50.59.

Recommendations were provided to the Commission in these areas, among others, in 97-205 in September 1997. We had an immediate action shortly after that to address a problem relative to regulatory stability in terms of the treatment of USQs during periods when a plant might be shut down and needing to restart and their relationship to safety and operability.

The Commission approved and we issued a revision to Generic Letter 91-18 to address that issue. I've heard feedback from many arenas that that was long overdue, well needed, and has resulted in an increased amount of stability in terms of the treatment of USQs and their relationship to operability.

We provided a briefing to the Commission in December, which this is in effect an update to. We have provided the Commission a proposed generic letter which would address interim guidance on updating of FSARs in accordance with 50.71(e).

Prior to that time, because of concerns associated with the enforcement policy and its relationship to treatment of violations under 50.59, we established an enforcement panel. We did that in November of 1997. We did it by the instrument of an enforcement guidance memorandum which is publicly available that we issued at the end of

October. It guides the enforcement discretion the staff exercises under the current policy when dealing with issues of 50.59 and attempts to resolve concerns associated with relative safety significance.

We also have a draft rulemaking proposal on 50.59 that has matured to the point that it is out for office concurrence throughout the NRC and is with the Office of General Counsel. This is with a goal of providing the Commission a draft rulemaking package by the requested date of July 10th. At the present time we are on track to provide you that rulemaking package as requested.

[Slide.]

MR. MATTHEWS: Turning now to the FSAR, I wanted to provide a little context for future discussion and reminding everybody that the FSAR serves several purposes in our regulatory structure.

The requirements are outlined in 50.34(b) relative to its contents, and 50.71(e) relative to its updating.

However, the last four bullets on this slide indicate that it is relied upon in many contexts, one of which is the scope of 50.59 in that 50.59 limits its scope to the facility as described in the safety analysis report. But it is also relied upon as a reference for the vast majority of licensing actions that the NRC undertakes in response to licensee requests for amendment.

It is also used as a document for NRC inspectors in that it describes the facility and is utilized in many different ways to implement our inspections procedures associated with an examination of the conformance of the facility with the agreed upon licensing basis of the plant as reflected in the FSAR.

I mentioned 50.59. It also, as was mentioned earlier today, is a document that forms a basis document as we move into a renewed license arena, and the license renewal rule in Part 54 envisions that it would be supplemented as described in that rule and then continue on as one of the foundations for describing the licensing basis for a renewed license.

CHAIRMAN JACKSON: Let me ask you a question. Does 50.71(e) apply directly to the license renewal supplement?

MR. MATTHEWS: Yes. Not by its word, but the license renewal rule indicates that 50.71(e) applies as well to the supplement. So indirectly I would argue 50.71(e) applies.

CHAIRMAN JACKSON: The scope of 50.59 is described as the "facility -- in the safety analysis report." Does that mean the FSAR, the FSAR and other documents, the updated FSAR?

MR. MATTHEWS: It means the facility's FSAR as

described in 50.34(b) as updated in accordance with 50.71(e).

CHAIRMAN JACKSON: Right.

MR. THOMPSON: That's clear.

MR. MATTHEWS: Let me now turn to slide 5.

[Slide.]

MR. MATTHEWS: In developing guidance on the updating of FSARs to provide additional guidance beyond that which was available with regard to the implementation of 50.71(e) we examined alternative approaches to providing this guidance. The staff concluded that guidance could be provided that would provide enhanced recognition of the requirements of 50.34 and 50.71(e) and at the same time would provide some needed stabilization to the issue surrounding uncertainties as to what should and shouldn't be in a FSAR.

We also concluded that there was benefit to going forward with this guidance at this point in time and there wasn't a need for rulemaking to address the problems that had been identified.

That's a long way of saying that the issues that had been raised associated with information that was contained in the FSAR whose safety significance might not be all that evident or reflected obsolete, outdated or historical information could be dealt with under the current

regulations by treating it in a different category, putting it in a different appendix or a different portion or formatting of the FSAR, and therefore increase the utility of the FSAR for the purposes which I described in a prior slide.

Yes, rulemaking could have been undertaken to eliminate the need for some of that information from even being in the FSAR. The staff didn't feel that it was really a worthwhile use of the Commission's resources to undertake that rulemaking given that we think the purposes could be served by this interim guidance in that regard.

CHAIRMAN JACKSON: Would our consideration of the information required be limited to the information originally required by 50.34(b)?

MR. BURNS: No.

MR. MATTHEWS: I think our consideration of information always ought to be confined by the description of information in 50.34(b). That information may have changed over time and therefore the updating requirements would possibly include more information, but not information of a different type.

CHAIRMAN JACKSON: So that covers ATWS and all these other things that we talked about?

MR. MATTHEWS: Yes.

COMMISSIONER McGAFFIGAN: Are you going back to

that slide you were on?

MR. MATTHEWS: Yes. I did just want to indicate that the guidance would be applicable to plants undergoing decommissioning in terms of updating.

We did propose in connection with that revised guidance to the Commission that enforcement discretion be applied in the following way, and we have discussed this already to some degree.

In light of the fact that we have already had a longstanding involvement in the issue of improving the accuracies of FSARs stemming way back to a policy statement that the Commission issued and an attendant or related enforcement discretion that was granted relative to that accuracy, our view is that with regard to the information that is in an FSAR or should have been there relative to the plant as it stands today that the FSAR should be accurate by the deadline that the Commission imposed by virtue of granting the original discretion.

Although accuracy and completeness we could argue semantically, the staff adopted those terms really for convenience. The concept, I think, is generally accepted that the FSAR should describe the plant as it is built and being operated. That's accuracy. If there is information that should have been included in the FSAR even though it might exist somewhere else, we think it ought to be included

within the FSAR at one location, and that's completeness.

With regard to the issue of completeness, particularly in light of the enhanced guidance we are proposing to be provided, we proposed a two-step process, that the material of the highest safety significance, and we would use as a descriptor of that the description that was utilized in the regulatory guidance we published associated with the maintenance rule, ought to be included within the FSAR within six months of issuance of the final generic letter, and we think that an additional period of time could be provided for the information of less significance.

COMMISSIONER DIAZ: Could you clarify for me this enforcement discretion? Is there a compelling health and safety issue by which the accuracy is demanded by 10/18 and the completion of high safety significance six months later? Is there any reason why we should maintain that?

MR. MATTHEWS: I have a personal view on the significance of accuracy. Given the use of the FSAR and that it is relied upon as a description of the plant, sometimes to the exclusion of actually going out and looking, I think accuracy does have a significance, and I think it probably goes beyond completeness in terms of that significance.

MR. COLLINS: Commissioner, broadly looked at, the staff's main focus would be that if it's being used, it

should be accurate. To what extent we are amenable to enforcement discretion is in fact, I believe, a resource question; at what point do we believe it is necessary to focus the industry's resources on this type of a goal within a defined period. I think that in and of itself is a matter of some discretion by the Commission to determine how exactly do we want to dictate the industry use those limited and vital resources, because this is an important topic.

But day to day, given that this document is utilized, it should be viewed as being accurate when it's used. So I think there is a window in there. What that is is probably a matter of some discretion and Commission guidance.

CHAIRMAN JACKSON: This is what you are proposal is in terms of what you call the risk informed.

MR. THOMPSON: That reflects the staff's current proposal. There are some judgments in that.

MR. MATTHEWS: This does reflect a phased approach, which I think is responsive also to the staff's concern that we not come upon another two-year deadline, then look, find we are not there, and our choice has become very limited, and then you have to ask the safety significance question, and if you can't answer that it's overwhelmingly safety significant, what action do you take at that point?

I think the idea of periodic checking and feedback is important, which this does.

COMMISSIONER McGAFFIGAN: I want to ask a technical question as to how all this relates. Even if we take the accelerated NEI approach, which I think in answer to the chairman they said by the end of year they would hope you would be in a position to endorse 98-03, you get into a situation where the final guidance may not be out, whether it's by the generic letter, which NEI would say is a slower approach, or this convergence that appears to be occurring where you would endorse in a reg guide their language.

Should we pragmatically exercise enforcement discretion at least to the point where a document gets out that everybody agrees on? Does that bear on the accuracy issue?

MR. SATORIUS: One thing that I think is important to point out is that the enforcement policy as written today provides for discretion as long as licensees are finding and fixing these problems in the FSAR. So we have discretion available to us beyond what we would propose here. That would continue to be available for the staff to utilize.

COMMISSIONER McGAFFIGAN: So what you have here is a blanket enforcement discretion which you propose to terminate at some point, and then you have remaining within the policy some discretion to use even after the blanket

discretion terminates.

CHAIRMAN JACKSON: Right, but that would be true even after 10/18/98.

MR. THOMPSON: That's true. If it's self-identified, if they have an aggressive program that they are looking hard and identifying the errors, they get credit for that.

CHAIRMAN JACKSON: But does not the current enforcement policy also have a risk gradation built into it also?

MR. SATORIUS: It utilizes risk-informed information in order to make our determinations.

COMMISSIONER McGAFFIGAN: But then you are expending resources of your own and the licensee, saying it's a 3 that deserves to be a 4 or a non-cited, et cetera.

MR. THOMPSON: That's a process that we would not necessarily have to go through.

CHAIRMAN JACKSON: You could ask this question. Is there enough of a distinction between accuracy and completeness, in your minds, to be able to draw this line at 10/18/98?

MR. SATORIUS: I am a member of the 50.59 review panel, and myself and other members of the staff hear every proposed 50.59 violation, and we do determine that there are some that you can say there is an accuracy issue here or

there is a completeness issue here. I think the answer to your question is, yes, we can determine the difference between the two, and we have been able to do that.

CHAIRMAN JACKSON: But in your opinion, as you have gone through it, are licensees able to consistently draw a distinction between the two so that we aren't just creating problems for them and problems for us?

MR. COLLINS: I think it's probably not appropriate to ask licensees to have a program that is formulated that way such that they would have to focus resources on accuracy versus completeness. I'm not smart enough, for example, to be able to dictate that to happen. I think the goal would be for the documents to be both accurate and complete at a given point in time, which is at the discretion of the Commission, given the licensee's best use of resources, with a caveat that if the document is to be used to make regulatory decisions, then that portion of the document needs to be accurate.

CHAIRMAN JACKSON: That's why you really want to put this 10/18/98 here.

MR. THOMPSON: Yes.

MR. COLLINS: That was the original thought.

MR. THOMPSON: It might be helpful if we take a look at and give you some examples of the types that fall into the two categories so at least you could have available

to you how we bend those.

CHAIRMAN JACKSON: Okay.

COMMISSIONER DIAZ: If I may go a little bit further in time and look at 2/28 and the fact that that is also a deadline date that the Commission has set to get clarification on the scope and how all the things are coming together, and the fact that, as we all understand from the 50.59, the real issue is definition, how do you define things so that people can actually work with them?

Would it be appropriate to be as strict as we want on a date in which we have really defined what the requirements are, be it 10/18 or 2/28 or six months later, whatever it is that is appropriate, but without ambiguity and "Oh, I didn't understand it was accuracy or this was completeness" or we just frame it at one point and say this is it?

MR. THOMPSON: That's certainly one approach that we could do. We gave you our recommendation. For the reasons we said, it's our best recommendation right now, but that doesn't mean that there is not merit in other approaches. We have worked with this issue a fairly long time. There is enough information available, enough guidance available that the dates that are spelled out in our proposal are, I think, doable in most cases.

COMMISSIONER DIAZ: Okay.

MR. THOMPSON: There may be some people that started late and didn't have it, or they may have a bigger problem than we originally anticipated, but as I said earlier, if they are really working at it and they are self-identifying it, we think that the current enforcement policy gives us flexibility and gives them flexibility not to face escalated enforcement.

CHAIRMAN JACKSON: Okay.

[Slide.]

MR. MATTHEWS: On page 6 I wanted to summarize the staff's review to date of NEI 98-03. We shared the substance of these reservations with NEI the last time we met with them, and that is why they indicated they were well aware of what the staff's views were.

In addition, of course, they had the benefit of seeing the draft generic letter, which would have also articulated to them what differences there were between that and 98-03.

We did perform a preliminary review in response to their request for our review and endorsement of 98-03, and we initiated that review in November when we received that document.

The document that we received in draft form as originally proposed the staff would not be able to endorse short of also proposing changes to our rules with regard to

the content of FSARs. We are receptive to the possibility of endorsing a revised 98-03 if it is revised to address those particular shortcomings.

We think there is a path to resolution in terms of coming to an agreed upon NEI document, but to some degree that is very heavily dependent upon their ability to respond to us with a document that reflects those changes, and we don't have an estimate right now of how soon they will be able to do that, although they have committed that they will try to get us back a document very shortly.

We committed to provide them our preliminary comments such as they have been developed to date. We even proposed that since we shared them with them orally in a public meeting, we may attach the description of those concerns to the back of the meeting summary so they would have that, and that we would endeavor to deliver a letter to them very shortly thereafter articulating the concerns with more specificity to give them a basis for making changes that will have the effect of hopefully being as close as possible.

In terms of overall schedule, though, I think you heard from them an estimate of December as a possible schedule for bringing that to closure. Recognize that the staff, if it is to endorse a document like that, would need to endorse it by means of a reg guide, and we have to have

public participation in that process. So we would be faced with coming to resolution with NEI, then issuing a draft regulatory guide proposing to endorse NEI's document, receiving the public comment on same, and then going through the final steps associated with a final reg guide.

That process is one that we can proceed on. We outlined that process, by the way, in the Commission paper and did so in some detail.

The staff believes, however, that issuing the draft generic letter for public comment as it has been proposed to you and then issuing that in final form could take place as soon as four months after your agreement with the contents of that generic letter. This would also have provided public comment during the summer on that document and would have met that need.

At a later date, then, that generic letter could in effect expire as far as its utility is concerned once we endorse a reg guide that would have been developed in parallel with that process.

That's a long way of saying that we think we can move in a parallel process, and would succeed with interim guidance being out there sooner.

COMMISSIONER McGAFFIGAN: I don't totally understand that. I'm looking at the paper. From the date of Commission approval of the generic letter, which hasn't

occurred yet, it's 150 days to issuing the final generic letter. So we are talking close to the end of the year in any case; we are talking November. And we have run a parallel process that could be resource intensive. You are talking about workshops and all that.

We will have a public process if you get to the reg guide, as you said, a reg guide endorsing 98-03, but we don't have two competing documents out there, 98-03 as they try to adjust it to meet the staff's desires, and this generic letter simultaneously out there.

MR. MATTHEWS: I have on the one hand a generic letter that has already been prepared that you've heard from NEI they have no problem with in terms of its content. It's ready for issuance. So it can get out very quickly. I have, on the other hand, the possibility that we are going to be able to reach closure with NEI on a document I haven't seen the nature of yet. So I have a little difficulty in being as certain with one date as I am with the other.

I feel more comfortable with the staff's ability to issue the generic letter and go through that process of public participation and workshops than I do on setting a date for when I'm going to be able to issue a draft reg guide.

COMMISSIONER McGAFFIGAN: What process did we follow in the maintenance rule? There we endorsed an NEI

reg guide, right, 94-01, or something like that?

MR. MATTHEWS: Tom Bergman was intimately involved in that process.

COMMISSIONER McGAFFIGAN: Did we start with a generic letter and have competing documents?

MR. BERGMAN: There was a parallel reg guide very early in the process. NUMARC 93-01 eventually took it over and the staff never issued that original regulatory guide.

Going from one revision to another even of NUMARC 93-01 is a great deal of work. If you look at Reg Guide 1.160, Rev 2, after several years of work we still had about a dozen exceptions or augments to 93-01 that we took in that reg guide.

That process to go from Rev 0 to Rev 2 -- Rev 1 was withdrawn shortly before Rev 2 came out of NUMARC 93-01 -- was a good year of work between the staff and NEI to come up with a workable Rev 2 to 93-01, and we still had to put a lot in the reg guide. The scope of this FSAR thing is at least as comprehensive as 93-01.

MR. MATTHEWS: If there are no more questions on the FSAR updating, I'd like to turn to a discussion of 50.59.

[Slide.]

MR. MATTHEWS: Slide 7 summarizes in bullet form a paraphrasing of the Commission's SRM on 97-205 as it

pertains to 50.59. There were many other issues in that SRM.

[Slide.]

MR. MATTHEWS: I wanted to summarize what the staff has done in response to that SRM in connection with 50.59.

We have prepared a proposed rule package which addresses the following issues:

It adopts an approach for allowing for minimal increases in probability and consequences.

It establishes a definition for acceptance limits for defining margins.

It introduces the possibility that we would allow equipment malfunctions with a different result, which is consistent with an NEI view that that is more important than malfunctions of a different type, and we agree with them.

It also addresses collateral changes to Part 72 because the rules are parallel with regard to ISFSIs and spent fuel storage.

We have before you in a COM SECY of a number I can't recall right now three remaining questions that stemmed from that SRM.

That is, your suggestion that we consider including a provision that would permit accidents of a different type with minimal safety impact; if they were

identified, that the change, if it were to result in that, would still be an acceptable change without NRC approval.

That we reconsider acceptance limits for consequences. Given that the staff had viewed that acceptance limits for consequences ought to be that reflected as the acceptance limit in the FSAR, NEI has proposed that acceptance limits either established by the SRP, the SER or regulatory limits represent the degree of freedom that they would be permitted to have without NRC involvement. The staff has been opposed to that.

I'm going to comment on that because I want to make a summary statement about this issue in a moment after I mention minimal reductions in margin of safety.

The Commission also asked us to consider regulatory language that would permit minimal reductions in margin of safety provided you put some limit on the word "minimal." This was a proposal that the Commission made to the staff in that SRM.

The staff had not proposed minimal decreases in margin of safety to be permitted. We viewed that permitting that in the light of 50.59 was translating 50.59 from essentially a procedural regulation or a process-related regulation into a safety-related regulation in that we were now going to permit changes to margins of safety that had been established through the licensing process.

We went into more detail in our memorandum as to the reasoning behind that, but I wanted to then reflect in terms of that issue and the one on acceptance limits for consequences that also raises that same issue in that we felt that that was proposing a change in philosophy with regard to the role that 50.59 plays in our regulatory framework; that we were moving it into an arena that it was starting to become a safety regulation as opposed to what the staff had traditionally viewed 50.59 as being, and that being one that controlled process and regulatory process in terms of setting thresholds for when the agency needed to become involved and whether to agree with a change or not.

Many changes that might exceed the threshold for needing staff review still ultimately are acceptable, but when we deal with issues that have started to threaten the margin of safety established through the licensing process, we feel the NRC needs to be involved in those decisions before we agree with that change.

CHAIRMAN JACKSON: Thinking outside the box, is there a way to reconcile those two, or should it become a safety regulation in the sense that you are describing it?

I know I am putting you on the spot.

MR. MATTHEWS: You've heard this phrase. It's a matter of degree and how much flexibility and freedom that the Commission chooses to want to give the industry.

COMMISSIONER DIAZ: Minimal.

[Laughter.]

MR. MATTHEWS: If it's minimum, then I would argue the best way to do that would be to confine it to being a procedural regulation, not a safety regulation.

COMMISSIONER DIAZ: That might not be responsive to the Commission's original intention. It might be that we might want you to think outside of the box and see not what is traditional, but what is effective, what is protective, and what can be really done.

MR. MATTHEWS: I understand that. I think the staff took a hard look at it from that perspective. I don't believe our answer that we provided you in May was conditioned on it just being traditional. I think we actually viewed that there was a potential that margins of safety might be reduced in ways that were unintended, and that the staff, upon having the opportunity to review them, might not have agreed with.

Let me go back to the issue of consequences. We've seen charts and boxes, but the essential issue as I understood it, as NEI has described it to us in meetings that predated this one, was that they would like the utilities to have the ability to move from the acceptance limit that they established in their FSAR and that the staff agreed with to another limit if they so chose or as the

result of a facility change that would be an SRP established limit or a regulatory limit without NRC involvement.

Those changes could be significant. They might be so significant as to engender, if they were submitted as a license amendment, our inability to make a no significance hazard claim on that license amendment.

If you were to accept the NEI proposal as I've understood it in the past, there was a great deal of change that could be made on their own volition without NRC involvement, and the staff is concerned that it's a greater change than we would want to approve, and may include changes that we wouldn't approve were they submitted.

COMMISSIONER McGAFFIGAN: I want to stay on this consequence thing. I'm going to bo back to the first one too at some point, accident of a different type.

You heard NEI earlier today say it may be a matter of degree, that they understand if the limit is 50 and they are at 46.5 that you might want to know about it. What they don't understand is if the limit is 50 and you are 21.9 going to 22.3, whether that's a big deal and whether we are wasting our and their resources on that. I heard that there is some middle ground here, that a line in the sand sort of approach may not be the right thing.

What has confused me all along is why what they say in NEI 96-07 with regard to the basis for the tech spec,

where they say the same thing, that they find acceptance limit either in regulations or SERs or standard review plans, and that's okay with you guys; that's what Sam Collins' letter said in January; but when it comes to the consequences where they use almost verbatim verbiage it's not okay.

I think Mr. Ray said occasionally 20 going to 22 might be significant. How do we define that without having everything submitted, without having every change of what may be a trivial nature submitted to us?

I remember Commissioner Rogers when we dealt with tritium and the .2 millirem increase when the acceptance limit was rems, a .2 increase in consequences under some design basis accident scenario at the site boundary. When we get through this process, that can't be, and I know it won't be, because that can't be a 50.59 unreviewed safety question. That is one metric by which we can judge whether we have succeeded.

Is there a middle ground there?

MR. MATTHEWS: I think the staff in the Commission paper, and I'm ready to discuss it here, was going to propose a middle ground.

I have to be honest. The statements of Mr. Ray with regard to that issue on consequences was the first time that we heard that kind of view out of NEI, because previous

to this point in time it has been on consequences, an issue of whether or not they could move from the acceptance limits identified in the FSAR up to those values you just described, SRP, SER, or regulatory limits, without staff review.

Our view is that a minimal change, as the Commission had suggested, is the way to put a limit on that. We have a view that is still undergoing staff review of what would put some limits on minimal increases. What I am giving you is the opposition to a position we've heard to date from NEI that they be allowed to move to the regulatory limit or to the acceptance limit in the SRP irrespective of the licensing review that was conducted on the acceptance limit they offered in the FSAR originally.

We think the FSAR value provides a very sound basis for determining the baseline from which we ought to measure minimal, and we would suggest that is a good baseline for a regulatory process in terms of when the NRC ought to get involved.

COMMISSIONER DIAZ: Would you say that again? I'm sorry.

MR. MATTHEWS: We think the value that the licensee offered in the FSAR with regard to the consequence attendant to a given design basis accident is a good baseline from which to measure a minimal increase which will

attempt to put boundaries around through the rulemaking process, and that will provide the flexibility.

What we are opposed to is a position that would allow increases from that FSAR value up to regulatory limits, SRP limits, or if the staff had done a SER evaluation that came up with a consequence that exceeded the FSAR value. We view that since this is a regulatory threshold that we should only hold them accountable for the analysis that they did themselves, namely, the FSAR value, and the changes about that are what need to be examined.

COMMISSIONER McGAFFIGAN: When I once asked the question, why is 96-07 okay when it discusses acceptance limits for margin of safety as defined in the basis for any tech spec and why it isn't okay for consequences, one of the answers I got was a legal answer: because (2)(i) mentions the words "previously evaluated in the safety analysis report" and (2)(iii), where the margin of safety is defined as the basis for tech spec doesn't talk about "as previously evaluated."

Is it the legality that leads you to the rejection, or is there a substantive reason as to why NEI is okay in looking to acceptance limits as they have defined them in (iii) but they are wrong on (i)?

MR. MATTHEWS: It's a good question. What I have been speaking to is the issue of minimal increases in

consequences attributable to that portion of 50.59 that describes that.

On the other issue, margins of safety, our view is that the margin of safety, which is the difference between the value proposed and accepted by the staff and some ultimate design value or some regulatory limit, that is an established differential that should be maintained. Otherwise we are in effect changing the philosophy of 50.59 and allowing margins of safety to be decreased voluntarily. So we think you need to hold the margin of safety.

However, there are instances where calculations are done associated with consequences related to design basis accidents for which a plant change that would result in a minor change in those accident consequences would be acceptable.

COMMISSIONER McGAFFIGAN: Maybe I misinterpreted Mr. Collins' letter from January. Didn't you endorse NEI 96-07 as it dealt with acceptance limits for margin of safety?

MR. MATTHEWS: Yes. That's not a problem. They didn't propose any flexibility on that point and NEI has never proposed any flexibility.

COMMISSIONER McGAFFIGAN: I thought they did.

MR. MATTHEWS: Not that I'm aware of.

COMMISSIONER McGAFFIGAN: Maybe I'm misreading

96-07.

MR. MATTHEWS: Can you clarify, Tony?

MR. PIETRANGELO: I think what David just described we would disagree with. The example I would cite is what has been in NSAC 125 since 1989 and is still in NEI 96-07. It's a containment heat pressure example that the Chairman went over. Clearly in that we would not call the margin of safety the difference between the calculated value in the acceptance limit.

It's back to our box chart again from the acceptance limit to the failure point. He referred to that as the margin of safety, and we would disagree with that. That has never been the industry position.

COMMISSIONER McGAFFIGAN: They are endorsing you but they are using a different definition.

MR. PIETRANGELO: That's correct.

COMMISSIONER McGAFFIGAN: So you didn't really endorse them on that.

CHAIRMAN JACKSON: You endorsed the words but you have to give definitions.

MR. MATTHEWS: Yes, and I've indicated that here, that we had proposed that we would provide a definition of acceptance limits to be applied to calculations of margin of safety. We may disagree with NEI with regard to what margin we are talking about. They would like it to be a margin

outside of a box that we would choose, but I don't think there is any disagreement with regard to the existence of a terminology of minimal decreases in margin of safety.

COMMISSIONER McGAFFIGAN: One last question. On the accident of different type with minimal safety impact, I read the staff paper as at least being willing to go to "is created" as opposed to "may be created," which is what we say in Part 60; is that correct?

MR. MATTHEWS: Yes. Understand there is an attendant consequence to that.

COMMISSIONER McGAFFIGAN: I understand. But it has the beauty of at least being consistent with what we did and defendable, and we're not asking for speculation on a licensee's part.

MR. MATTHEWS: You are correct in that regard. The possible unattractive consequence is that if they were to fail that test and bring that to us as an amendment, it is not an amendment that we could issue as a no significance hazard amendment. If a hearing were requested and accepted, we would have to hold that hearing before we could issue the amendment because of the nature of 50.92.

CHAIRMAN JACKSON: Why don't we go on.

[Slide.]

MR. MATTHEWS: On the next slide we provided some preliminary views. I put it that way because this is just

that, a proposal on how to deal with issues associated with minimal increases of probability and consequences.

These are conditioned somewhat by our interaction with the industry and the Commission and the public on the development of the reg guides associated with risk-informed licensing decisions.

In there, as you know, there is a terminology of "very small" wherein the staff would entertain license amendment requests that would allow very small increases in probability relative to core damage frequency and large early release fraction. So to some degree we are talking about potential changes being in what I would refer to, as you've heard it before, the negligible category, below those levels when you are dealing with similar parameters.

We have proposed that we permit increases of probability of accidents in the order of one percent without the need for any NRC review.

With regard to reliability or probability of equipment malfunctions, we think that there could be a graduated establishment of threshold based on safety significance.

With regard to consequences, we have attempted to address this issue that consequences, when they are very far below regulatory limits, we are probably more flexible on than consequences that start to approach regulatory limits.

CHAIRMAN JACKSON: How are licensees going to reach these numerical conclusions? Are we saying they have to have at their disposal the way to numerically determine the changes in risk to support compliance?

MR. MATTHEWS: It's going to be a challenge. I think we would expect that they would invoke the same level of precision on this problem as they did with regard to the initial calculation that formed the basis for the value in the FSAR. You only have the tools that you have.

CHAIRMAN JACKSON: How do you go about verifying the adequacy of a licensee's assessment? Is the inspection staff going to do that, and how are they going to do that?

MR. MATTHEWS: That is going to be a daunting task as well, but the inspection staff is going to have to at least recognize that this is going to form a basis for licensee decisions and be able to appreciate the reasonableness with which they have done that. We are going to have to have inspection guidance. That will have to be a companion piece.

CHAIRMAN JACKSON: You're going to have to kind of take selected systems based on risk and have the SRAs take a look at it.

MR. MATTHEWS: Yes.

MR. THOMPSON: It would be that type of approach and probably a sampling basis.

CHAIRMAN JACKSON: Okay.

[Slide.]

MR. MATTHEWS: You've heard from NEI with regard to their view with regard to the concern they have in that they think that the scope of 50.59 ought to be moved away from the FSAR.

We think that the criteria changes that we have proposed ought to go forward now. We haven't examined alternatives for scope beyond those we discussed with you last year with regard to going to some sort of risk informed perspective associated with essential information or less essential information.

NEI has offered us the outline of a proposal in a meeting a month or so ago which we are willing to go further with and examine. Our idea was that during the course of the year, as they flesh that proposal out, we'll be very receptive to hearing that and seeing whether or not it provides a feasible alternative.

[Slide.]

MR. MATTHEWS: With regard to 50.59 enforcement discretion, you asked us to exercise discretion during the period of any rule change associated with 50.59. We would propose to continue the current policy, which does have provisions for discretion.

We have added to that, as you know, the 50.59

enforcement panel, which meets as needed on every 50.59 enforcement action. We would propose as a result of our experience gained in that panel to bring back to you in our July rulemaking package the criteria that have evolved and that we would propose we would embrace in more concrete form for this purpose.

COMMISSIONER McGAFFIGAN: I understand what you are doing is consistent with the reading of the SRM based on what you had originally proposed.

What we did on the FSAR update where we had this blanket time period during which we were trying to solve a problem until October 18th of this year, or whatever other time we decide, and then have discretion after that time clock is over with, why is that approach not what the staff originally proposed in 97-205, and why shouldn't we at least consider the approach that has been suggested at least for minimal increases in probability?

I think for consequences Tony was trying to slip one in there on that one.

There is a lot of procedure that gets into. This enforcement panel is presumably resource intensive. We are spending a lot of time thinking about whether something is 4 or non-cited. Maybe the right thing to do is to sort of say they are all minor until proven otherwise and therefore we are not even going to bother to write them up if they are in

this absolutely minimal category.

MR. MATTHEWS: Let me turn to Mark first.

MR. SATORIUS: The short answer is that, quite frankly, they are not all minor. It does take some staff review to determine there are a lot of them that are minor.

COMMISSIONER McGAFFIGAN: If they fit the category where they are going to be after the rule goes through, they are going to be not only not minor, they are not going to be rules violations at all. That's what the NEI proposal is. For those things that meet a minimal test, or in their view, a negligible test, we shouldn't be spending a lot of resources on them, at least as regard to probability. With consequences there may be some.

CHAIRMAN JACKSON: I think, though, in order for you to do that -- I'm not the lawyer -- you have to exercise discretion with respect to something. It strikes me that you then basically have to consider whether you want to tell the staff to, on an interim basis, adopt NEI guidance vis-a-vis what a minimal increase would be, barring modulo working through what the ultimate situation is going to be with the rule. They have to operate off of something, if I take Mr. Sartorius' point of view that not everything is necessarily trivial. So you have to have some guidance that you operate off of. The Commission in principle could say, okay, on an interim basis use NEI's guidance and then go

forth and do the rule.

COMMISSIONER McGAFFIGAN: We could also amend the enforcement policy in some way.

How many of the level 4 violations that we are now criticized for increasing from 500 to 1,400 over the last two years are in this area?

MR. SATORIUS: Probably about 40 or 50. Since we started the panel process, I think in October or November, we have probably considered 60 or 70 issues total. We average about two or three a week.

CHAIRMAN JACKSON: So that's not where the problem is.

MR. COLLINS: Commissioner, to respond generally, the staff is not opposed, with proper guidance, EGMs, enforcement guidance memorandums, and training to the inspectors, to providing for a period of implementation and stabilization. During that period I think it's a learning process both for the industry and for us as regulators, including the inspectors, to understand how the process is to be implemented, and there is clearly a transition cost with that, and there is a savings in resources over a graded period of time.

I would propose that during that period, though, we still go through at least a phased manner of understanding the industry's implementation and testing our

inspection and our enforcement guidance. That would be probably with a panel very similar to the one that Mark is a member of now. The disposition of those issues, however, would be a matter of discretion.

CHAIRMAN JACKSON: Right.

[Slide.]

MR. MATTHEWS: I just wanted to conclude with what we saw as the next steps. I think they are probably obvious.

We were looking for Commission direction on the proposed generic letter on FSAR updating. Attendant to that, of course, is the acceptance or at least the response to the staff's proposal with regard to enforcement discretion in the area of FSARs.

We were looking for a response back to the issues we raised in our recent May memorandum with regard to clarification or possible modification of the SRM in several areas.

We have, as I mentioned, a rulemaking package embracing those elements that I referred to. That is very far along. We met with the ACRS this morning. We are meeting with the ACRS again, I believe on the 17th of June. We are scheduling CRGR review of that rulemaking package, and we expect that to come to closure quickly.

And we are going to continue interactions with NEI

with regard to all of these topics. They have several guidance documents on our plate that relate to this issue. They've got 97-04 with regard to design basis issues; they've got 96-07 with regard to 50.59 issues; and they've got 98-03 with regard to FSAR issues. So we are actively reviewing and working with them on these documents in the hopes that we can come to agreement on industry guidance that could conform to our current regulations or those that have a likelihood of being imposed.

COMMISSIONER McGAFFIGAN: Can I ask a process question? It came up at the reg info conferences, putting these documents out as they come to us and the generic letter which you got permission to do, and you had the May 27th meeting, the 50.59 memo that you've given to us for resolution. I've noticed over the time I've been here this disconnect between what we allow you all to do and what we allow NMSS to do. NMSS is off doing Part 35 rulemakings and putting straw men out on the Web and coming to us occasionally for a little guidance, and a lot of guidance this month. There are various and sundry other quite open processes they run.

One of the criticisms that we get is we oftentimes aren't as open on the reactor side, and I understand the Commission over the years has kept you on short leashes on the reactor side, like the design reviews on the modern

reactors, et cetera.

MR. COLLINS: I'm not sure I like that analogy, but I understand your point.

MR. MATTHEWS: My image of a short leash is two links.

[Laughter.]

COMMISSIONER McGAFFIGAN: A metaphor came from one of the staff I talked to.

CHAIRMAN JACKSON: Why don't you look into creating a 50.59 chat room?

COMMISSIONER McGAFFIGAN: Would the staff appreciate the greater flexibility in their interactions? Public interactions. Not in closed doors, but public interactions with the regulator on what you all call pre-decisional documents. I don't know what Carl calls them, because he gets away with a lot more flexibility.

CHAIRMAN JACKSON: Let's let him answer it.

MR. THOMPSON: Obviously it is very helpful to have an open and frank dialogue. What you have to be comfortable with is what the stage and level of maturity of these documents is. What I guess I would like to propose is that we would come back and maybe propose some guidelines for you. We have done that in the NMSS area. We have told you when we are going to put things up on the Web. We have told you when we are going hold public workshops.

Maybe just put some guidelines out. I think we can do that and give us some more flexibility as well as give you an understanding of how we would decide that.

CHAIRMAN JACKSON: The only question and probably why it has been on such a short leash, aside from the issues involved, is to ensure that it is not just one channel, that if it is public and you are dealing with the stakeholders, that you deal with all the stakeholders. There are different constituencies, and NEI is a critical one, but it's not the only one.

MR. THOMPSON: We have special arrangements with Agreement States. They are kind of co-regulators, and we have a certain degree of flexibility there.

COMMISSIONER McGAFFIGAN: Another document that some of us, because it's about six inches thick, have been slow to vote on -- the Chairman, give her credit, has --

CHAIRMAN JACKSON: That's because I'm a fast reader.

COMMISSIONER McGAFFIGAN: It's the decommissioning reg guide. Even as we voted on it it was on the Web page. We must have a pretty big Web page, by the way.

MR. COLLINS: Your point is well taken. It's a worthy pursuit.

CHAIRMAN JACKSON: Chat Room 50.59.

[Laughter.]

CHAIRMAN JACKSON: On behalf of the Commission, let me thank NEI and the staff for presenting to the Commission the results of their respective evaluations and recommendations for improvements in the areas of FSAR updates and 10 CFR 50.59.

The staff's Commission papers on these areas and today's presentations are helpful in describing the options available to addressing these two important issues. While obvious differences remain between the staff and NEI on issues related to 10 CFR 50.59, it's encouraging to note that clarity and agreement are being reached in the area of FSAR update requirements.

The conclusions reached in this area appear to be appropriately focused on meeting and properly enforcing the existing regulations, ensuring that information is maintained current and that new information is appropriately and accurately included.

At the same time, these conclusions allow licensees the latitude to reformat to some degree, to slim down and to simplify their FSARs.

With respect to 10 CFR 50.59, things are in a state of flux, but it is clear that the staff is working hard to responsibly implement Commission direction, and the extent to which the staff's conclusions are adopted will be considered obviously by us in the near future. NEI's

comments in this area have been helpful in presenting alternative approaches to the changes we seek to make, particularly with respect to 50.59, including the scope issue.

Unless there are further comments, we are adjourned. Thank you.

[Whereupon at 4:30 p.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 SAFETY EVALUATIONS, FSAR UPDATES AND INCORPORATION OF RISK INSIGHTS

PLACE OF MEETING: Rockville, Maryland

DATE OF MEETING: Thursday, June 4, 1998

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: Mike Paulus

Reporter: Mike Paulus

UPDATED FSAR GUIDANCE, 10 CFR 50.59 RULEMAKING AND RELATED ISSUES

June 4, 1998

Office of Nuclear Reactor Regulation

AGENDA

- Background
- Updated FSAR
  - staff recommended course of action
  - NEI 98-03 (Guidance on FSAR updating)
- 10 CFR 50.59
  - SRM issues on criteria
  - guidance on minimal
  - scope
  - enforcement discretion

BACKGROUND

- SECY-97-205 Recommendations
- Issuance of Generic Letter 91-18 Revision
- Commission briefing and SRM on SECY-97-205
- SECY-98-087 guidance on updated SAR
- Enforcement discretion and 50.59 panel
- Draft rulemaking proposal on 50.59 under review by other offices

PURPOSES OF UPDATED FSAR

- In accordance with 50.34(b), the FSAR "shall include information that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the facility as a whole ..."
- The update rule, 50.71(e) requires licensees "to assure that the information included in the FSAR contains the latest material developed."
- Relied upon reference for most licensing actions
- Used as reference for NRC inspections
- Scope of 50.59 defined as "facility as described ... in the safety analysis report"
- Important basis document to be supplemented for license renewal

PROPOSED GL ON UPDATED FSARs

- Proposed guidance conforms to current requirements and avoids need for rulemaking thus stabilizing updating process
- Provides licensees flexibility to change content and format
- Applicable to plants undergoing decommissioning
- Extends enforcement discretion to result in risk-informed update prioritization
  - Must be accurate by 10/18/98
  - High safety significance material complete within 6 months of issuance of final GL
  - Other information complete within 18 months of issuance of final GL

PRELIMINARY STAFF COMMENTS ON 'NEI 98-03'

- Staff received a draft document on content of updated FSARs in a letter from NEI dated 11/14/97
- Staff has performed preliminary review pending receipt of NEI 98-03 and request for endorsement
- Staff endorsement of draft document as originally proposed would require rulemaking
- Staff receptive to endorsing NEI 98-03 if modified to adopt positions in GL as indicated by NEI during 5/27/98 meeting

50.59 DISCUSSION

- **Commission SRM on SECY-97-205 directed staff to:**
  - **(1) Prepare a proposed rulemaking package for revision to 10 CFR 50.59 by July 10, 1998 that will allow minimal increases in (a) probability, (b) consequences and (c) minimal reductions in margin to be made without prior NRC approval;**
  - **(2) Define "minimal" in a clear and practical manner;**
  - **(3) Continue interactions with NEI to reconcile areas of disagreement;**
  - **(4) Evaluate certain other changes to the rule;**
  - **(5) Consider parallel changes to other regulations (e.g., Part 72) with similar provisions.**

STAFF RESPONSE TO SRM

- Changes included in proposed rule package
  - minimal increases in probability and consequences
  - acceptance limits for margins
  - malfunction with a different result
  - changes to Part 72
- Issues currently before the Commission for resolution
  - accident of different type with minimal safety impact
  - acceptance limits for consequences
  - minimal reductions in margin of safety

PRELIMINARY VIEWS ON 'MINIMAL'

- Probability of accident increase of 1%
- Probability of equipment malfunction increase
  - 1% for equipment of high safety-significance
  - 10% for other equipment
- Consequences increase (two options)
  - fixed value (either percent or dose)
  - graduated approach

SCOPE

- The Safety Analysis Report, when maintained, is a manageable and understandable set of information well-established in the regulatory process
- Staff recommends proceeding with criteria changes:
  - to provide a needed foundation for assessing plant changes
  - for increased stability (and a basis for potential endorsement of NEI 96-07, Guidelines for 50.59 Evaluations)
  - this does not preclude option to revise scope later
- Possible scope changes at this time would delay issuance of proposed revisions to criteria for public comment
- Alternative definitions of scope, drawing on other parts of the licensing basis, would need clear boundaries

10 CFR 50.59 ENFORCEMENT DISCRETION

- March 24, 1998 SRM directs staff to exercise discretion during period prior to rule change for issues clearly not of safety significance or regulatory significance
- Staff is using existing policy and 50.59 panel (EGM 97-019) to exercise discretion to reduce severity levels or refrain from civil penalties for instances of low safety and regulatory significance.
- Commission requested specifics on nature and types of situations for which discretion will be considered.
- Staff is developing factors to examine in deciding on discretion based upon existing policies and experience.

NEXT STEPS

- Commission direction on SECY-98-087
- Commission response to 10 CFR 50.59 rulemaking issues discussed in May 27, 1998 memo
- Proposed 10 CFR 50.59 rule package and enforcement discretion recommendation for Commission review
- Continue interactions with NEI on industry guidance documents

Nuclear Regulatory Commission
June 4, 1998

Industry Perspectives on
10 CFR 50.59, 10 CFR 50.71(e),
and Related Issues

NEI

1

Industry Presenters

- Ralph Beedle, Senior Vice President and Chief Nuclear Officer, Nuclear Generation, Nuclear Energy Institute
- Harold Ray, Executive Vice President, Southern California Edison Company
- Tony Pietrangelo, Licensing Director, Nuclear Energy Institute

NEI

2

Overview

- SRM on SECY-97-205
- Use of acceptance limits
- Design bases interpretation
- 10 CFR 50.59 enforcement discretion
- Draft FSAR update guidance
- Scope of 10 CFR 50.59

NEI

3

SRM on SECY-97-205

March 24 SRM provided important direction

- Expedite rulemaking to clarify USQ criteria
- Exercise enforcement discretion prior to rule change
- Reconcile draft industry and NRC staff guidance on FSAR updates

NEI

4

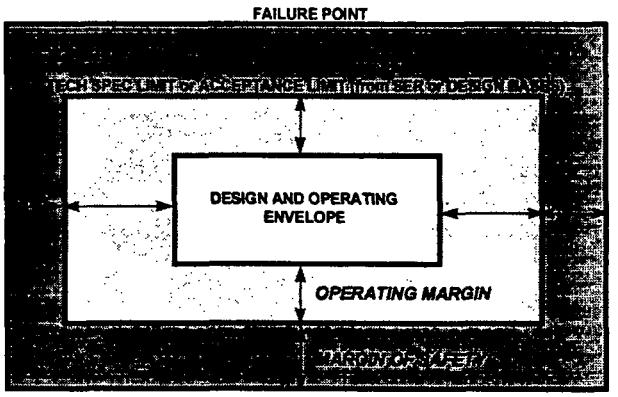
Acceptance Limits

- Provide clear and objective threshold criteria for increases in consequences and reductions in margin of safety
- Can be found in NRC safety evaluation reports
- Discussed with NRC staff on April 23

NEI

5

OPERATING AND SAFETY MARGINS



NEI

6

Design Bases Interpretation

- Critical to operability and reportability determinations
- NRC staff interprets as *any* information used to determine the acceptability of the design
- Inconsistent with past guidance and policy

NEI

7

10 CFR 50.59 Enforcement Discretion

- No enforcement action should be taken pending rule change when …
  - increase in probability is minimal
  - increase in consequences is within acceptance limits
  - malfunction with different cause, same result
- Similar to existing two-year discretion on FSAR updates

NEI

8

Draft FSAR Update Guidance

- Focus of UFSAR updates
- Reconciliation issues
- 10 CFR 50.71(e) enforcement discretion
- Outlook

NEI

Focus of UFSAR Updates

- Design bases per 10 CFR 50.2
- Safety analyses
- Contextual description related to above, including limits on operation

NEI

Reconciliation Issues

SECY-98-087

- Treatment of historical information
- Obsolete and less meaningful information
- Detailed drawings

- Discussed revisions to NEI 98-03 consistent with draft generic letter in May 27 meeting with NRC staff

NEI

10 CFR 50.71(e) Enforcement Discretion

- Longer implementation period appropriate
  - no safety urgency
  - information already on docket

- Nominal two years recommended
  - with allowance for timing of cycles
  - provide feedback at intermediate milestone

NEI

Outlook

- No need to issue draft GL for comment
  - Convergence underway
  - More efficient to seek public comment on draft regulatory guide endorsing NEI 98-03
  - Tentative schedule for closure
- No need for rulemaking on 10 CFR 50.71(e)

NEI

Scope of 10 CFR 50.59

- Industry proposal in April 16 letter
  - Decouple scope from FSAR
  - Define scope directly in rule
  - Focus on safety analyses as the appropriate scope

NEI

Potential Benefits

- Fewer evaluations of little or no safety/regulatory value
- Improved consistency between rule and implementation
- Address concerns about small vs. big FSARs

NEI

Conclusions

- Need to expedite rulemaking on threshold criteria to restore regulatory stability
- Rule change is necessary to better focus the scope of 10 CFR 50.59
- Prepared to work with NRC in two-step process per SRM

NEI

REQUEST REPLY BY 6/12/98

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMSECY-98-013

May 27, 1998

MEMORANDUM TO: Chairman Jackson
Commissioner Dicus
Commissioner Diaz
Commissioner McGaffigan

FROM: L. Joseph Callan
Executive Director for Operations

SUBJECT: EVALUATION OF RULEMAKING LANGUAGE PROPOSALS CONCERNING 10 CFR 50.59 (CHANGES, TESTS AND EXPERIMENTS)

In an SRM dated March 24, 1998, the Commission requested that the staff evaluate, for Commission consideration, the advisability of allowing (without prior NRC approval) licensee changes to a facility that result in the creation of an accident or malfunction of a different type than previously evaluated and that has "minimal" safety impact. As discussed in more detail below, we recommend that the Commission not make such a revision to 10 CFR 50.59. An alternative proposal is offered which we believe is responsive to the Commission's intent. If the Commission agrees, the staff would plan to include this alternative proposal as part of the proposed rulemaking package for 10 CFR 50.59.

The SRM also asked the staff to reassess its position on acceptance limits on consequences and margin of safety, and report to the Commission on this matter. In addition, the SRM directed the staff to allow "minimal" reductions in margin of safety as part of the 10 CFR 50.59 rulemaking. This memorandum also responds to these issues.

Finally, this memorandum provides staff comments on the concept offered by the Nuclear Energy Institute in a letter dated April 16, 1998, for decoupling the scope of 10 CFR 50.59 from the safety analysis report.

ACCIDENT OF A DIFFERENT TYPE

In accordance with 10 CFR 50.59, a change to the facility or procedures as described in the safety analysis report, or conduct of a test or experiment not described requires prior NRC approval (in the form of a license amendment) if, among other reasons, a possibility for an accident of a different type than any evaluated previously in the safety analysis report may be created. In determining whether an amendment to the license may be issued without a prior hearing, the NRC uses the requirements of 10 CFR 50.92. In particular, the NRC may make a

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415-2189

NOTE: TO BE MADE PUBLICLY AVAILABLE WHEN THE FINAL SRM IS MADE AVAILABLE

determination that an amendment involves a "no significant hazard consideration" (and thus may be issued without a prior hearing)[1], if operation of the facility in accordance with the proposed amendment would not, *inter alia,* create the possibility of a new or different kind of accident from any accident previously evaluated.

The staff recognizes that the Commission wishes to adjust the 10 CFR 50.59 process so that minor changes to the facility do not require approval in the form of a license amendment, as reflected in the March 24, 1998, SRM. One of the specific proposals the staff was asked to consider was changing the process to allow changes that create accidents of a different type with *minimal safety impact.* The Commission did not define the extent of what was contemplated as being of *minimal safety impact* or how this was to be determined.

The staff believes that it can be successful in modifying the rule to provide greater flexibility to licensees to make changes without prior NRC review and approval through changes to other criteria in 10 CFR 50.59, as discussed below and in SECY-97-205. However, the staff also believes that creation of a different type of accident is one area in which such latitude should **not** be permitted. The staff believes that any plant change that creates a new accident that was not previously evaluated should be submitted for staff review. Accidents as typically considered by the staff entail challenges to the barriers for fission product release (fuel, pressure boundary, containment) and thus would have an impact on safety. In theory, a new accident will challenge existing plant safety systems or integrity of these barriers and, therefore, it is imperative for the NRC to have a firm understanding of the causes of the new accident and the impact on the plant if this new accident should occur. Only through staff review can the NRC establish what the safety impacts will be and have assurance that existing plant systems will respond and mitigate the event. It would be extremely difficult to develop a meaningful definition of *minimal safety impact* that would be effective in providing these assurances when dealing with new types of accidents. In addition, the staff notes the following concerning the regulatory and legislative history of the regulations about accidents of a different type.

For instance, a standard of *minimal safety impact* is not compatible with the stated intention of past Commissions, when they adopted both the unreviewed safety question (USQ) test and the no significant hazards consideration (NSHC) criteria, that 10 CFR 50.59 and 10 CFR 50.92 establish procedural standards that do not require a determination on the merits of the proposed change[2]. Commenters on the 10 CFR 50.91 and 10 CFR 50.92 rulemaking offered proposals to

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[1]The vast majority of license amendments that are issued involve changes for which there is a no significant hazards determination.

[2] There is also some legislative history that suggests that Congress, when adopting the "Sholly" amendments to the Atomic Energy Act of 1954, as amended (AEA), with respect to NSHC, understood the Commission's intention that the determination whether a prior hearing is required before the NRC can finally determine an amendment request was not intended to be a safety determination, and did not object to this approach.

establish a threshold for creation of accidents of a different type, which were rejected by the Commission in 1986 (see 51 FR 7748). The statement of considerations noted:

> In regard to the second criterion in the proposed rule, a number of commenters recommended that the Commission establish a threshold level for accident consequences (for example, the limits in 10 CFR Part 100) to eliminate prior notice for insignificant types of accidents. This comment was not accepted. The Commission stated that setting a threshold level for accident consequences could eliminate a group of amendments with respect to accidents which have not been previously evaluated or which, if previously evaluated, may turn out after further evaluation to have more severe consequences than previously evaluated (48 FR 14868).

Further, the standards in Sections 50.59 and 50.92 are very similar, and there is no threshold established in 10 CFR 50.92 for significance of the accident, only that it be of a different type from any previously evaluated. If the Commission were to revise the rules such that some changes resulting in accidents of a different type were allowed to be made under 10 CFR 50.59, it would also need to revise 10 CFR 50.92 to limit the accidents of a different type that involve significant hazards considerations to exclude those that can be made under 10 CFR 50.59. Otherwise, there would be a conflict in the rule provisions in which one section would say the change can be done without NRC approval, and the other section saying the same change requires a prior hearing (if one is held) on a required license amendment[3].

Finally, on the basis of information gained from the public comments and from reviews and inspections of licensee 10 CFR 50.59 evaluations, the staff concludes that the criterion related to accidents of a different type is not causing implementation problems. Rather, it is the other parts of the 10 CFR 50.59 criteria that are of concern (which are being addressed through other contemplated rule changes). Therefore, the staff believes that the specific proposal suggested by the Commission should not be implemented.

As an alternative, the staff could revise the language for accident of a different type from *may be created* to *is created*. This has the effect of requiring an affirmative conclusion on the part of a licensee that a new accident has, in fact, been created. With the change to rule language in 10 CFR 50.59 presented above, the criteria in §50.59 would align with the criteria in §50.92. Therefore, for those changes that require a license amendment because an accident of a different type is created, a prior hearing would be required if one is to be held at all.

MALFUNCTION OF EQUIPMENT OF A DIFFERENT TYPE

In accordance with 10 CFR 50.59, a change to the facility or procedures as described in the safety analysis report, or conduct of a test or experiment not described requires prior NRC approval (in the form of a license amendment) if, among other reasons, a possibility for a

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[3] The change in the standard of USQ with respect to accidents of a different type may also be inconsistent with Congress' understanding of the definition of USQ when it amended the hearing requirements in Section 184 of the AEA.

malfunction of equipment of a different type than any evaluated previously in the safety analysis report may be created.

The regulatory concerns expressed above about Sections 50.59 and 50.92 as related to "creating the possibility of an accident of a different type" do not apply to the criterion established by the phrase "creating the possibility of a malfunction of equipment of a different type" because Section 50.92 does not have any criteria on malfunctions. Thus, the staff believes that it could provide rule language responsive to the Commission direction to allow some flexibility for this criterion. In view of the use of 10 CFR 50.59 as a procedural standard, rather than as a safety standard, the staff would not propose language of *minimal safety impact*. Rather, the staff recommends adoption of the NEI proposal for use of the phrase "possibility of a malfunction with a different result is created." The staff concludes that this rule change would accomplish the intended purpose so that creation of a malfunction whose effects were already considered in the safety analysis does not require approval. Such changes would clearly be of minimal safety impact. Those changes that give rise to the possibility of malfunctions with a different result from what has been previously evaluated would require review to determine whether there is a safety impact. The determination as to whether there is a different result would need to be assessed at the same level (i.e., component, train, or system) that the equipment being changed was previously evaluated.

ACCEPTANCE LIMITS ON CONSEQUENCES

Section 50.59 states, in part, that an unreviewed safety question is involved if the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased. In its guidance document, NEI 96-07, NEI stated that increases in consequences can be evaluated by determining whether acceptance limits (which for some accidents would be the regulatory guidelines in Part 100) continue to be met, despite the wording of Section 50.59(a)(2)(i). The staff has stated that the determination as to whether consequences "may be increased" is made against the previous evaluations in the safety analysis report. In the March 24, 1998 SRM, the Commission asked the staff to reassess its position on use of acceptance limits for consequences. The Office of the General Counsel has advised the staff that the interpretation in NEI 96-07 is not consistent with the rule and, therefore, could not be accepted without rulemaking. For the reasons discussed below, the staff does not recommend that such rulemaking be undertaken.

The current industry guidance, NEI 96-07, would permit, in some instances, increases in consequences up to the regulatory thresholds (such as those contained in Part 100) without review. Allowing increases up to the acceptance limit, without review, could be inconsistent with a "minimal" increase standard since increases up to an acceptance limit may be more than minimal. Similarly, if the change results in a significant increase in consequences (still meeting acceptance limits), such an amendment would trip the criteria in 10 CFR 50.92 and require the

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[4] It is interesting to note that the guidance also includes language that "where increases in consequences are so small that it cannot be determined that an increase has actually occurred, this is not an increase in consequences." This guidance appears inconsistent with guidance allowing increases up to acceptance limits.

amendment to be issued as a significant hazards consideration amendment. (Increases beyond the acceptance limits might not be found acceptable even if reviewed, or might require an exemption). Thus, limiting the need for prior approval to changes in which established acceptance limits for consequences are exceeded would also appear to be in conflict with 10 CFR 50.92(c)(1), namely, if operation of the facility in accordance with the proposed amendment would involve a significant increase in the probability or consequences of an accident previously evaluated.

NEI proposed in its November 14, 1997, letter that the rule be revised so that a change would only require approval if the consequences of an accident or malfunction previously evaluated exceed the established acceptance limit. As NEI discussed further in its letter, the established acceptance limit would be the value that was previously reviewed and approved by the NRC. Attempting to use values from the staff's safety evaluation report (SER) as acceptance limits for consequences would be difficult since SERs were not written for the purpose of establishing such limits[5]. It is the staff's view that the reference to the SAR value as the baseline for comparison is the most effective way to implement the regulation consistently for all plants.

The staff typically performs independent evaluations of radiological consequences of accidents, rather than an in-depth review of the licensee's calculations, during the licensing process for the plant. As a result, the degree of conservatism in the licensee calculations may differ from that used in the staff's assessments (typically the staff would conclude that the licensee is already closer to the "acceptance limits" than the licensee did). Although the staff would not be concerned about minimal increases in consequences or in cases that are not near the regulatory guidelines, the staff is concerned about allowing licensee changes without prior review which, when evaluated with licensee assumptions and methods, result in doses at or very close to the regulatory guidelines (e.g., Part 100). In these instances, the staff is concerned that these changes, if reviewed using the staff's assumptions (or starting from the staff's estimation of the accident dose), would result in the regulatory guidelines not being met. The staff would also have a concern about cumulative effects[6], particularly when a licensee changes its analysis assumptions as well as its facility design or operation.

Finally, the staff notes that when considering acceptance limits with respect to margins, these are generally evaluated with respect to one of the three fission barriers for prevention of

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[5] In a literal sense, neither the SAR nor the SER set an "acceptance limit." Rather, the SAR documents an applicant's/licensee's analytically derived conclusion that a given event has a certain consequence that is within the regulatory bounds set by NRC regulations. The SER is intended only to reflect the staff's confirmation or modification of that conclusion. The applicant's/licensee's SAR value, as modified through the staff review and approval of the SAR, then becomes the baseline for future analyses.

[6] The staff believes that the issue of cumulative effects will need to be considered if revised 10 CFR 50.59 criteria are adopted. Under consideration are revised reporting requirements and possible changes to the level and method of NRC oversight. The staff believes such consideration is consistent with RG 1.174, which also discusses tracking of cumulative effects.

radioactive release. When considering increases in radiological consequences, it is important to remember that all the barriers have been breached or degraded and, therefore, the calculations have a direct bearing on establishing or confirming the adequate protection of public health and safety (i.e., limiting release of radiation off site).

In summary, the staff concludes that proposed rule language that would allow "minimal" increases in consequences above those previously evaluated in the safety analysis report is a better standard than one based upon regulatory acceptance limits for consequences.

USE OF ACCEPTANCE LIMITS TO DETERMINE REDUCTIONS IN MARGIN OF SAFETY

Section 50.59 states in part that an unreviewed safety question is involved if the margin of safety as defined in the basis for any technical specification is reduced. Guidance has been provided by both NEI and NRC that licensees evaluate whether the margin of safety (defined by the TS bases) has been reduced by considering whether acceptance limits established during the license review are exceeded. In the staff guidance, acceptance limits are defined as specific values within which the licensee has proposed to operate the facility and which the NRC has accepted during its review of a license application. The acceptance limits in some cases are the calculated values reported in the safety analysis report, and in other cases are the acceptance criteria established by the Standard Review Plan (or other guidance). If the acceptance limits continue to be met, the margin of safety that has been established is not reduced. In contrast to the criteria based upon not increasing the probability or consequences of accidents/malfunctions *previously evaluated in the safety analysis report*, the margin of safety criterion focuses on preserving margins that exist within established assumptions, methodologies and analyses used by the licensee to meet acceptance limits. As long as these limits continue to be satisfied, the "margin of safety" is maintained.

For this reason, the staff does not recommend revision of 10 CFR 50.59(a)(2)(iii) to explicitly refer to "minimal" reduction in margin of safety, but rather plans to continue the current approach with acceptance limits[7]. The staff concludes that this approach will allow at least the degree of flexibility that would be afforded by a "minimal" reduction in margin criterion for changes when the existing acceptance limits are still met, but no reduction if the acceptance limit (which might also be a regulatory limit as established by rule or license) would be exceeded.

NEI CONCEPT FOR REVISION TO SCOPE OF 10 CFR 50.59

In a letter dated April 16, 1998, NEI stated that the industry and the NRC should take the opportunity of the forthcoming rule changes to 10 CFR 50.59 to not only clarify and simplify the criteria for requiring approval, but to also improve 10 CFR 50.59 by clarifying its scope of

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[7] In SECY-97-205, the staff recommended rule changes on increases in probability or consequences (so that negligible increases could be allowed). Further, the staff proposed clarification on "bases for any technical specification" for margin of safety determinations. It was never the staff's intention to modify this criterion with a term such as "minimal" for these reasons noted.

applicability. Specifically, they believe that the determination of the need for an evaluation should be whether the proposed change affects the safety analyses (that NRC approved in a safety evaluation report). NEI met with the staff on April 23, 1998, to discuss this concept (see attached meeting summary).

The concept has not been sufficiently developed for the staff to understand how such a change could be implemented or to comment upon its merits. The staff recognizes the need to make a recommendation to the Commission regarding the scope of 10 CFR 50.59 in February, 1999, as stated in the March 24, 1998, SRM. However, as indicated at the April 23, 1998, meeting, the the staff would not be able to assess such a concept for possible inclusion in the rulemaking package and still meet the schedule established by the Commission (July 1998) for providing a proposed rulemaking package addressing the other changes to 10 CFR 50.59 discussed in the March 24, 1998, SRM. Therefore, the staff does not currently plan to pursue this concept as part of the proposed rulemaking package. However, the staff will continue to interact with NEI to obtain a better understanding of their proposal, and will report to the Commission as to the desirability for adoption of a change to scope once this understanding is reached. Additionally, this subject will be a point of discussion at the June 4, 1998, Commission meeting requested by NEI.

Conclusion

In summary, the staff does not recommend that the Commission revise 10 CFR 50.59 as suggested in the March 24, 1998, SRM concerning accidents of a different type. Further, the staff continues to believe that the criteria relating to consequences should not be revised to allow increases up to the acceptance limits without review (although the staff does plan to revise the rule to allow minimal increases in consequences as directed by the Commission). The staff also does not recommend revising the rule language to refer to "minimal reductions in the margin of safety." Finally, barring a change in direction from the Commission following the upcoming Commission meeting, the staff is not planning rule changes that would revise the scope of 10 CFR 50.59 from the current language at this time.

The Office of the General Counsel has no legal objection to this memorandum.

Unless otherwise directed by the Commission, the staff plans to prepare the proposed rulemaking package consistent with the above staff-proposed alternatives (and the other direction provided in the March 24, 1998, SRM).

SECY, please track.

Attachment: Meeting Summary

cc: SECY
OGC
OCA
OPA
OIG
CFO
CIO

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 4, 1998

MEMORANDUM TO: Thomas H. Essig, Acting Chief
Generic Issues and Environmental Projects Branch
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

FROM: Peter C. Wen, Project Manager Peter C. Wen
Generic Issues and Environmental Projects Branch
Division of Reactor Program Management
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF APRIL 23, 1998, MEETING WITH THE NUCLEAR ENERGY INSTITUTE (NEI) REGARDING 10 CFR 50.59 SCOPE ISSUE

On April 23, 1998, a public meeting was held at the U.S. Nuclear Regulatory Commission's (NRC's) offices in Rockville, Maryland, between representatives of the NRC, NEI and other interested parties. Attachment 1 provides a list of attendees at the meeting. Attachment 2 includes the agenda that was used for the meeting and the presentation material provided by NEI for the meeting. Attachments 3 and 4 are supplemental information provided by NEI for the discussion of "safety analysis."

Before beginning discussion on the main agenda topic (scope of 10 CFR 50.59), NEI first raised three other topics related to the Commission SRM of March 24, 1998. Concerning guidance for updating the final safety analysis report (FSAR), they indicated that they wanted to work with the staff to reconcile their draft guidance document (NEI 98-03) with the staff's draft generic letter guidance as soon as possible. The NRR staff members stated that such discussions would occur once we received Commission response to the Commission paper forwarding the draft GL (sent to the Commission on April 20, 1998).

The second topic was the use of acceptance limits with respect to changes that result in increases in radiological consequences. NEI continues to believe that a change should not be an unreviewed safety question (USQ) if the acceptance limit (such as the Part 100 guidelines), used by the staff to judge acceptability, are still met with the change. The staff responded that it typically performed independent calculations of consequences, rather than specifically reviewing and approving the analyses (methods and assumptions) performed by the licensee. As long as the staff's calculations confirmed that the limits were met, the staff would approve the facility design and operation. However, the degree of margin remaining to the limits might be less as viewed by the staff than by the licensee. Therefore, if a licensee subsequently made changes that would have the effect of increasing calculated doses up to the limits, it is possible that the staff conclusion would be that the limits were actually exceeded. NEI stated that this was an area that they wished to explore further such that increases above the SAR calculated values could be allowed without always requiring NRC review. They noted a specific example

of a recent enforcement action where the change was from 22 Rem to 23 Rem (the limit was 30 Rem), as a case that should not have required prior review (and thus which should not have been a violation because it did not).

The next topic was the issue of enforcement discretion. NEI stated their conclusion that enforcement policy changes should be made immediately such that no enforcement action is taken for circumstances that are clearly not safety significant, in order to achieve stability. The staff indicated its plans to continue to exercise discretion with respect to severity levels or issuance of civil penalties (under existing enforcement policy), pending further interaction with the Commission on enforcement policy changes.

Finally, NEI stated that as part of upcoming rulemaking on 10 CFR 50.59 criteria, the NRC should address the scope of changes that require evaluation directly in the regulation, rather than indirectly through the FSAR. Specifically, they would redefine the changes requiring evaluation against the USQ criteria to be those that affect safety analyses. They would propose to include in the rule a functional definition of "safety analyses" (see preliminary thoughts in Attachment 3), referring to analyses performed pursuant to Commission requirement, or requested to validate conformance with requirements, or other analyses that are approved by NRC (by issuance of safety evaluation reports). They would supplement the definition with lists of such analyses in a guidance document. A draft outline of how such safety analyses and changes affecting them might be characterized was distributed at the meeting (see Attachment 4). The staff stated that it would consider this proposal but noted that this could not be done on the July 1998 schedule for the proposed rule established by the SRM. Further, the staff emphasized that even if such a rule change were pursued, there is still the need for licensees to update their FSARs to be complete and accurate in accordance with 10 CFR 50.71(e). Further meetings with NEI are anticipated to discuss FSAR update guidance and other issues.

Attachments: As stated

cc w/atts: See next page

NRC/NEI MEETING ON 10 CFR 50.59 ISSUE
LIST OF ATTENDEES
April 23, 1998

NAME	ORGANIZATION
David Matthews	NRC/NRR/DRPM
Tom Essig	NRC/NRR/DRPM
Frank Akstulewicz	NRC/NRR/DRPM
Eileen Mckenna	NRC/NRR/DRPM
Peter Wen	NRC/NRR/DRPM
Geary Mizuro	NRC/OGC
Cornelius Holden	NRC/OCM/GID
Brian Holian	NRC/OCM/SAJ
Tony Hsia	NRC/OCM/NJD
Ken Hart	NRC/SECY
Tony Pietrangelo	NEI
Steve Floyd	NEI
Doug Walters	NEI
Russ Bell	NEI
Nancy Chapman	Bechtel
Herb Fontecilla	VAP/APS
Charlie Brinkman	ABB-CE
Jerry Dosier	NUS Info Services
Jenny Weil	McGraw Hill
Robert Vondrasek	PSE&G
Sam Crowley	Winston & Strawn

Attachment 1

NEI Licensing Issues Meeting with NRC

April 23, 1998

NEI

Agenda

- FSAR Update Guidance
- Acceptance Limits on Consequences
- Enforcement Discretion related to USQ Determinations
- Scope of 10 CFR 50.59

NEI

FSAR Update Guidance

Objective: Mutually acceptable guidance for utilities ASAP

- Most effective to interact now to
  - reconcile industry and NRC draft guidance, per SRM
  - then publish result (revised NEI 98-03) for public comment

NEI

Status of NEI 98-03

- Distributed for industry comment last November
- No major comments received
- NEI is ready to work with NRC staff now to reconcile with draft GL

NEI

Acceptance Limits

- NRC position in Jan. 9 letter to NEI
- Example of the problem
- SRM requests staff to reassess position

NEI

Enforcement Discretion

- No enforcement action should be taken during the period prior to the rule change in circumstances that are clearly not safety significant
- Enforcement policy change should be instituted before July 10

NEI

Purpose of 50.59

- Require licensee review of proposed changes
- Determine if change exceeds previously approved design or operational limits
- Require prior NRC approval if any authorized limit is exceeded

NEI

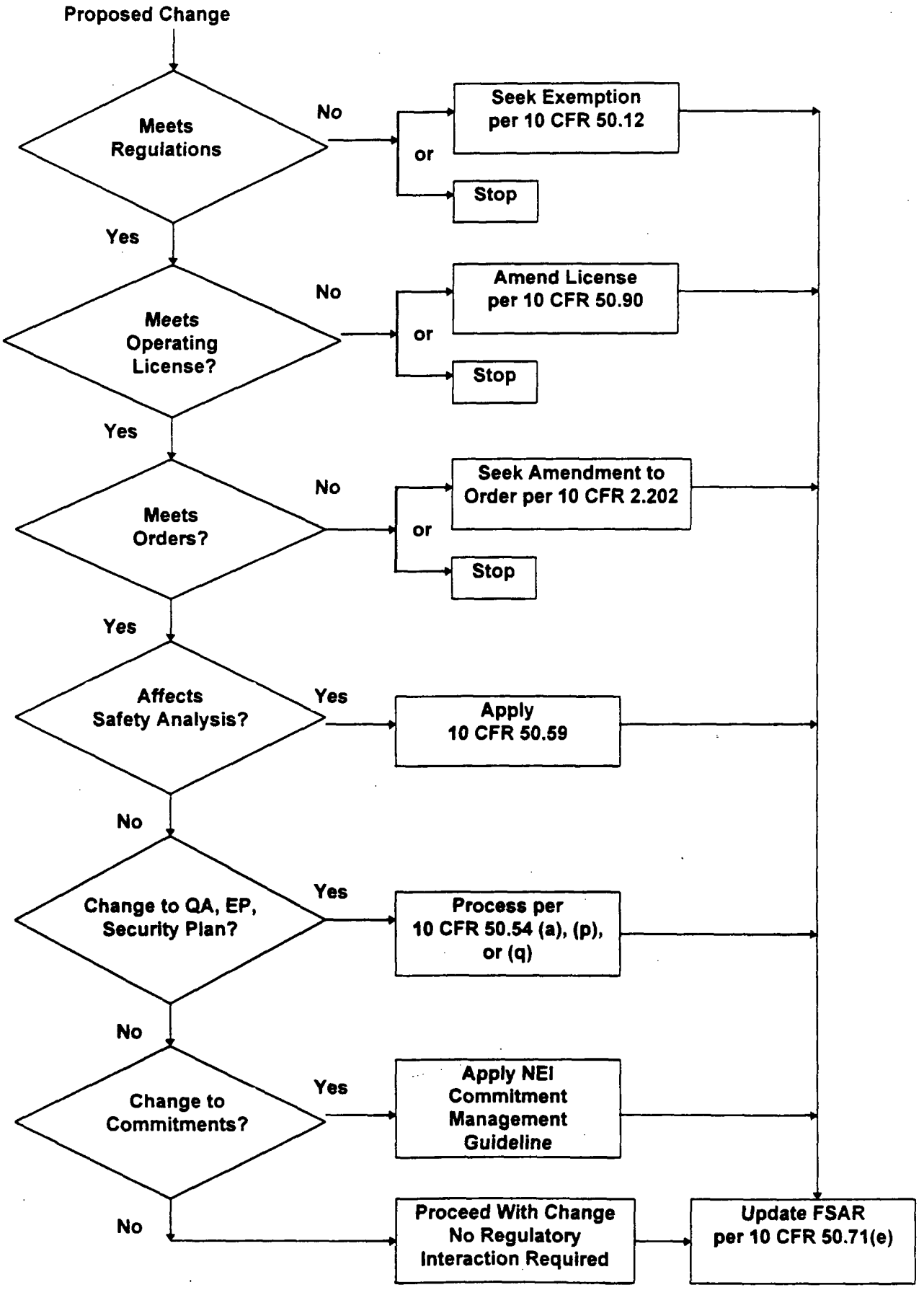
Clarifying the Scope of § 50.59

Principles

- § 50.59 is just one part of a hierarchy of plant change processes
- FSAR is neither appropriate or efficient as the scope of § 50.59

NEI

REGULATORY OVERSIGHT OF PLANT CHANGE CONTROL PROCESS



Why change § 50.59(a)(1)?

- Too many safety evaluations of little or no safety/regulatory value
- Address scope of § 50.59 directly in the regulation, not indirectly via the FSAR
- Improve consistency between rule and implementation

NEI

What are the benefits?

- Clarify the appropriate role and focus of 50.59
- Avoid the need for extensive changes to FSARs, including removal or reformatting of information
- Avoid assigning roles to the FSAR and 50.71(e) for which they are not well suited
- Address concerns about small vs. big FSARs
- Facilitate use of acceptance limits criterion for evaluating the effect of changes on consequences

NEI

Why now?

- Convergence of 50.59 and FSAR update issues
- Scope issue recognized by industry, NRC staff and Commission
- Include with § 50.59 rule changes - - the first in 30 years - - planned for 1998
- More efficient and coherent to address Section a(1) changes in conjunction with other § 50.59 changes and FSAR update guidance

NEI

Why Safety Analyses?

- Final exam of NRC safety review - - principal basis for NRC safety approval
- Provide a nexus to protection of public health and safety
- Encompass design bases
- Only context that makes sense for (a)(2) criteria

NEI

How would it work?

- Identify safety analyses
  - from NRC requirements
  - Other analyses approved by SER
- Identify explicit inputs, assumptions, etc.
- Identify mitigating equipment and operator actions credited
- Changes that do not affect analyses would screen out

NEI

Summary

- § 50.59 enforcement discretion ASAP
- Work with NRC staff on
  - reconciling draft FSAR update guidance
  - § 50.59 scope issue
  - reconciling staff comments on NEI 96-07

NEI

Proposed Changes to NEI 96-07

Include a definition of Safety Analysis

SAFETY ANALYSIS

A safety analysis is an analysis that is

performed pursuant to Commission requirements or requested by NRC to validate compliance with existing requirements, and

is necessary to demonstrate the integrity of the reactor coolant pressure boundary, the capability to shutdown the reactor and maintain it in a safe shutdown condition, and the capability to prevent or mitigate accidents that could result in potential offsite exposures.

Safety analyses include:

analyses included in the FSAR and approved by the Commission as part of initial licensing

analyses performed pursuant to new or amended Commission regulations subsequent to initial licensing

analyses performed in response to a generic or plant-specific issue to validate compliance with existing requirements

analyses specifically approved by the NRC via SER

Note: When a new analysis or change to plant or procedures "affects" one or more safety analyses, the safety analyses should be updated to reflect the change to maintain an accurate baseline for evaluation of future changes.

Safety analyses <u>do not</u> include:

detailed calculations and other non-docketed analyses performed in support of safety analyses

environmental, financial and other analyses unrelated to nuclear safety

docketed information controlled by other regulations (QA, EP, Security)

analyses submitted to the NRC in response to generic communications that do not affect analyses required to support initial licensing or demonstrate compliance with new or amended regulations (Note: required analyses should be updated to reflect the effects of other changes, analyses or issues.)

analyses provided in LER or NOV responses except as required to demonstrate compliance with NRC regulations; the effects of such analyses should be incorporated in the UFSAR in a subsequent update

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Identification of Safety Analyses

	Safety Analysis	Basis for NRC Requirement	Safety Analysis Reference	SER or other NRC Approval
1.	General	GDC		
2.	Decrease in FW Temperature	GDC 10, 15, 26		
3.	Increase in FW Flow	GDC 10, 15, 26		
4.	Increase in Steam Flow	GDC 10, 15, 26		
5.	Inadvertent Steam Generator Safety or Relief Valve Opening (PWR)	GDC 10, 15, 26		
6.	Steam System Piping Failure Inside and Outside of Containment (PWR)	GDC 27, 28, 31, 35, 10 CFR 100		
7.	Loss of External Load	GDC 10, 15, 26		
8.	Turbine Trip	GDC 10, 15, 26		
9.	Loss of Condenser Vacuum	GDC 10, 15, 26		
10.	Loss of Non-emergency AC Power to the Station Auxiliaries	GDC 10, 15, 26		
11.	Loss of Normal FW Flow	GDC 10, 15, 26		
12.	FW System Pipe Breaks Inside and Outside Containment (PWR)	GDC 27, 28, 31, 35, 10 CFR 100		
13.	Loss of Coolant Flow Including Pump Trip	GDC 10, 15, 26		
14.	Reactor Coolant Pump Rotor Seizure	GDC 27, 28, 31, 10 CFR 100		
15.	Reactor Coolant Pump Shaft Break	GDC 27, 28, 31, 10 CFR 100		
16.	Uncontrolled Rod Withdrawal from a Subcritical or Low Power Condition	GDC 10, 20, 25		
17.	Uncontrolled Rod Withdrawal at Power	GDC 10, 20, 25		
18.	Control Rod Misoperation (System Malfunction or Operator Error)	GDC 10, 20, 25		
19.	Startup of an Inactive or Recirculation Loop at an Incorrect Temperature	GDC 10, 15, 20, 26, 28		
20.	CVCS Malfunction that Results in a Decrease in the Boron Concentration in the Reactor Coolant (PWR)	GDC 10, 15, 26		
21.	Inadvertent Loading and Operation of a Fuel Assembly in a Improper Position	GDC 13, 10 CFR 100		
22.	Spectrum of Rod Ejection Accidents (PWR)	GDC 28, 10 CFR 100		
23.	Inadvertent Operation of ECCS	GDC 10, 15, 26		
24.	CVCS Malfunction that Increases Reactor Coolant Inventory (PWR)	GDC 10, 15, 26		
25.	Inadvertent Opening of a PWR Pzr. Relief Valve or a BWR Relief Valve	GDC 10, 15, 26		
26.	Radiological Consequences of the Failure of Small Lines Carrying PWR Primary Coolant Outside Containment	GDC 55, 10 CFR 100		
27.	Radiological Consequences of a Steam Generator Tube Failure (PWR)	10 CFR 100		

28.	LOCAs Resulting from Spectrum of Postulated Piping Breaks within the Reactor Coolant Pressure Boundary	10 CFR 50.46, App. K, GDC 35, 10 CFR 100		
29.	Radioactive Liquid Waste System Leak or Failure (Release to the Atmosphere)			
30.	Radioactive Gas Waste System Leak or Failure			
31.	Postulated Radioactive Release due to Liquid-Containing Tank Failures	GDC 60, 10 CFR 20		
32.	Radiological Consequences of Fuel Handling Accidents	GDC 61, 10 CFR 100		
33.	Spent Fuel Cask Drop Accidents	GDC 61, 10 CFR 100		
34.	Containment Analysis	GDC 50		
35.	Power Uprate Analysis	NA		
36.	Temperature Effects on PWR Level Measurements	IEB 79-21		
37.	Analysis of a PWR MSL break with Continued Feedwater Addition	IEB 80-04		
38.	MOV CMFs during Transients due to Improper Switch Settings	IEB 85-03		
39.	Pressurizer Surge Line Thermal Stratification in PWRs	IEB 88-11		
40.	Seismic Qualification Of Auxiliary Feedwater Systems	GL 81-14		
41.	Resolution of GI A-30, Adequacy of S-R DC Power Supplies, 10 CFR 50.54(f)	GL 91-06		
42.	Reactor Vessel Structural Integrity	GL 92-01		
43.	WEC Rod Control System Failure and Withdrawal of RCCAs, 10 CFR 50.54(f)	GL 93-04		
44.	Equipment Operability/Containment Integrity under DBA Conditions	GL 96-06		
45.	Assurance of Sufficient NPSH for ECC and Containment Heat Removal Pumps	GL 97-04		
46.	Anticipated Transients Without Scram	10 CFR 50.62, GDC 10, 15, 26, 27, 29		
47.	Pressurized Thermal Shock	10 CFR 50.61		
48.	Station Blackout	10 CFR 50.63		
49.	Fire Protection	Appendix R		
50.	Environmental Qualification	10 CFR 50.49		
51.	TMI Items	10CFR 50.34(f)		

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Generic Communications That May Have Led To New Analyses

Bulletins

	Bulletin #	Title	Comment
1.	IEB 96-03	Potential Plugging of Emergency Core Cooling Suction Strainers by Debris in BWRs	BWR
2.	IEB 96-02	Movement of Heavy Loads Over Spent Fuel, Over Fuel in the Reactor Core, or Over Safety-Related Equipment	ALL
3.	IEB 96-01	Control Rod Insertion Problems	WESTINGHOUSE
4.	IEB 93-02	Debris Plugging of ECCS Suction Strainers	ALL
5.	IEB 90-02	Loss Of Thermal Margin Caused By Channel Box Bow	BWR
6.	IEB 89-03	Potential Loss Of Required Shutdown Margin During Refueling Operations	PWR
7.	IEB 88-11	Pressurizer Surge Line Thermal Stratification	PWR
8.	IEB 88-08	Thermal Stresses In Piping Connected To Reactor Coolant Systems	ALL
9.	IEB 88-07	Power Oscillations In Boiling Water Reactors (BWR)	BWR
10.	IEB 88-04	Potential Safety-Related Pump Loss	ALL
11.	IEB 88-02	Rapidly Propagating Fatigue Cracks In Steam Generator Tubes	WESTINGHOUSE
12.	IEB 85-03	Motor-Operated Valve Common Mode Failures During Plant Transients Due To Improper Switch Settings	ALL
13.	IEB 84-03	Refueling Cavity Water Seal	ALL
14.	IEB 83-07	Apparently Fraudulent Products Sold By Ray Miller, Inc.	ALL
15.	IEB 81-02	Failure Of Gate Type Valves To Close Against Differential Pressure	ALL
16.	IEB 80-23	Failures Of Solenoid Valves Manufactured By Valcor Engineering Corporation	ALL
17.	IEB 80-18	Maintenance Of Adequate Minimum Flow Through Centrifugal Charging Pumps Following Secondary Side High Energy Line Rupture	PWR
18.	IEB 80-17	Failure Of Control Rods To Insert During A Scram At A BWR	BWR
19.	IEB 80-16	Potential Misapplication Of Rosemount Inc., Models 1151 And 1152 Pressure Transmitters With Either "A" Or "B" Output Codes	ALL
20.	IEB 80-11	Masonry Wall Design	ALL
21.	IEB 80-07	BWR Jet Pump Assembly Failure	BWR
22.	IEB 80-04	Analysis Of A PWR Main Steam Line Break With Continued Feedwater Addition	PWR
23.	IEB 79-27	Loss Of Non-Class 1E Instrumentation And Control Power Systems Bus During Operation	ALL
24.	IEB 79-21	Temperature Effects On Level Measurements	PWR
25.	IEB 79-14	Seismic Analysis For As-Built Safety-Related Piping Systems	PWR
26.	IEB 79-12	Short Period Scrams At BWR Facilities	BWR
27.	IEB 79-07	Seismic Stress Analysis Of Safety-Related Piping	ALL
28.	IEB 79-02	Pipe Support Base Plate Designs Using Concrete Expansion Anchor Bolts	ALL
29.	IEB 79-01	Environmental Qualification Of Class 1e Equipment	ALL

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Generic Communications That May Have Led To New Analyses

Generic Letters

	Generic Ltr #	Title	Comment
1.	GL 97-04	Assurance Of Sufficient Net Positive Suction Head For Emergency Core Cooling And Containment Heat Removal Pumps	ALL
2.	GL 96-06	Assurance Of Equipment Operability And Containment Integrity During Design-Basis Accident Conditions	ALL
3.	GL 96-04	Boraflex Degradation In Spent Fuel Pool Storage Racks	ALL
4.	GL 95-07	Pressure Locking And Thermal Binding Of Safety- Related Power-Operated Gate Valves	ALL
5.	GL 95-03	Circumferential Cracking Of Steam Generator Tubes	PWR
6.	GL 94-03	Intergranular Stress Corrosion Cracking Of Core Shrouds In Boiling Water Reactors	BWR
7.	GL 93-04	Rod Control System Failure And Withdrawal Of Rod Control Cluster Assemblies, 10 CFR 50.54(F)	WESTINGHOUSE
8.	GL 92-04	Resolution Of The Issues Related To Reactor Vessel Water Level Instrumentation In BWRs Pursuant To 10 CFR 50.54(F)	BWR
9.	GL 92-01	Reactor Vessel Structural Integrity	ALL
10.	GL 91-06	Resolution Of Generic Issue A-30, "Adequacy Of Safety-Related DC Power Supplies," Pursuant To 10 CFR 50.54(F)	ALL (No direct response required)
11.	GL 89-21	Request For Information Concerning Status Of Implementation Of Unresolved Safety Issue (USI) Requirements	ALL
12.	GL 89-10	Safety-Related (1) Motor-Operated Valve Testing And Surveillance	ALL
13.	GL 88-20	Individual Plant Examination Of External Events For Severe Accident Vulnerabilities	ALL
14.	GL 88-14	Instrument Air Supply System Problems Affecting Safety-Related Equipment	ALL
15.	GL 88-01	NRC Position On IGSCC In BWR Austenitic Stainless Steel Piping	BWR
16.	GL 81-32	Nureg-0737, Item Ii.K.3.44, Evaluation Of Anticipated Transients Combined With Single Failure	BWR (Referencing BWROG response to NUREG 0737 ILk.3.44
17.	GL 81-20	Safety Concerns Associated With Pipe Breaks In The BWR Scram System	BWR
18.	GL 81-14	Seismic Qualification Of Auxiliary Feedwater Systems	PWR
19.	GL 81-12	Fire Protection Rule (45 F/R 76602, November 19, 1980)	ALL (Licensed prior to 1/1/79)
20.	GL 81-07	Control Of Heavy Loads	ALL
21.	GL 78-09	Multiple-Subsequent Actuations Of Safety/Relief Valves Following An Isolation Event	BWR

DRAFT

Safety Analyses as the Focus of 10 CFR 50.59

- Core Power
- Pzr Pressure
- Pzr Level
- RCS Temp
- Boron Concentration
- RCS Flow Rate

- Mod Temp Coefficient
- F_H ; F_Q
- Shutdown Margin
- Reactivity Insertion

- Pressure
- Liquid/Vapor Mass
- Tube Plugging

- Pressure
- Temperature
- Dew Point
- UHS Temp
- RWST Temp

- Power Range Flux
- Overpower
- Overtemperature
- Pzr Pressure
- Coolant Flow
- Low S/G Level Trip

- Safety Injection
- Containment Spray
- Aux Feedwater
- Charging and Letdown
- RHR pumps
- Batteries
- Diesel Generators
- RWST
- Boric Acid Storage Tank
- Accumulators
- Condensate Storage Tank

Safety Analyses Inputs and Assumptions

Safety Analyses	RCS Limits	Core Physics	Steam Generator	Containment Conditions	RPS	Mitigating Equipment
1. Decrease in FW Temperature	x	x			x	
2. Increase in FW Flow	x					
. .						
. .						
. .						
28. LOCA Analyses	x	x	x	x	x	x
. .						
. .						
34. Containment Analysis	x			x		x

Design Requirements

- EQ
- Seismic II/I
- Fire. Flood, Missiles
- Separation
- other

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POLICY ISSUE
(Notation Vote)

April 20, 1998 SECY-98-087

FOR: The Commissioners

FROM: L. Joseph Callan
Executive Director for Operations

SUBJECT: PROPOSED GENERIC LETTER 98-XX: INTERIM GUIDANCE FOR UPDATED FINAL SAFETY ANALYSIS REPORTS IN ACCORDANCE WITH 10 CFR 50.71(e)

PURPOSE:

To obtain the Commission's approval to issue the proposed generic letter for public comment.

SUMMARY:

The staff has developed a proposed generic letter that provides interim guidance for complying with 10 CFR 50.71(e), the "update rule." As requested by the Commission, the proposed generic letter (1) allows the removal of certain information from the updated final safety analysis report (updated FSAR), (2) is applicable to plants undergoing decommissioning, and (3) recommends a partial extension of the enforcement discretion period that will result in a risk-informed prioritization of information to be updated to make the updated FSAR complete. The proposed generic letter conforms to existing requirements, an approach that avoids the need to undertake rulemaking pertaining to updated FSARs at this time. Consistent with this approach, the staff considered but did not include in the proposed generic letter guidance on risk-informed content of the updated FSAR.

The staff will ultimately issue a regulatory guide as the long-term guidance for updated FSARs. The staff's preferred approach is for the Nuclear Energy Institute (NEI) to revise its draft guidance document, "Draft Industry Update Guidelines for Final Safety Analysis Reports," dated November 14, 1997 (NEI 98-03), to conform to the guidance in the proposed generic letter. The staff could then endorse NEI 98-03 in the regulatory guide.

Contact: Thomas Bergman, NRR
301-415-1021

NOTE: TO BE MADE PUBLICLY AVAILABLE WHEN THE FINAL SRM IS MADE AVAILABLE

BACKGROUND:

Section 50.34 (10 CFR 50.34), "Contents of Applications; Technical Information," includes requirements for the contents of applications for construction permits and operating licenses for nuclear power reactors. An application for a construction permit must include a preliminary safety analysis report (PSAR) pursuant to §50.34(a). An application for an operating license must include an FSAR in accordance with §50.34(b). For holders of operating licenses, §50.71(e) requires updated FSARs to be developed and periodically updated.

Guidance for the organization and contents of PSARs and FSARs has existed since June 30, 1966, when the "Guide to the Organization and Contents of Safety Analysis Reports" was issued. The most recent guidance document is Regulatory Guide (RG) 1.70, Revision 3, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, LWR Edition," dated November 1978. Guidance for the format and content of updated FSARs was previously provided in Generic Letter 80-110, "Periodic Updating of Final Safety Analysis Reports (FSARs)," dated December 15, 1980, but the guidance in that generic letter was limited.

As a result of lessons learned from the Millstone experience and of other initiatives related to updated FSARs, the NRC determined that additional guidance regarding compliance with §50.71(e) was necessary. The staff recommended specific actions in SECY-97-036, "Millstone Lessons Learned Report, Part 2: Policy Issues," dated February 12, 1997. In a staff requirements memorandum (SRM) dated May 20, 1997, the Commission directed the staff, in part, to issue guidance for complying with §50.71(e) to ensure that updated FSARs are updated to reflect changes to the design bases and to reflect the effects of other analyses performed since original licensing that should have been included under §50.71(e). The Commission suggested that this guidance include a risk-informed approach for prioritization and content of the updated FSAR, allow removal of certain information from the updated FSAR, and consider whether the period of enforcement discretion regarding updated FSARs should be extended. In the SRM of March 24, 1998, for SECY-97-205, "Integration and Evaluation of Results From Recent Lessons-Learned Reviews," dated September 10, 1997, the Commission reemphasized the need for guidance for updated FSARs and further requested that guidance be provided for plants undergoing decommissioning. This current paper responds, in part, to the SRMs of May 20, 1997, and March 24, 1998, by forwarding a proposed generic letter for the Commission's consideration. If the Commission approves, the generic letter will be issued for public comment for a period of 60 days.

DISCUSSION:

The primary purpose of this paper is to request Commission approval to issue the proposed generic letter for public comment. This paper also (1) provides the staff's basis for not recommending an approach that would result in risk-informed content of updated FSARs at this time, (2) includes the proposed schedule to issue and implement the proposed generic letter, and (3) describes the staff's approach that will result in long-term guidance for the updated FSAR in the form of a regulatory guide.

Proposed Generic Letter

Attachment 1 is the proposed generic letter, the purpose of which is to provide interim guidance for licensees pertaining to updating their FSARs in accordance with current requirements. As a result of a lack of prior definitive guidance concerning the requirements of the update rule and the absence of detailed staff reviews of the periodic updates, some staff positions regarding §50.71(e) were neither clearly articulated nor did industry uniformly implement the update rule. Although the staff positions in the proposed generic letter are consistent with the requirements of the update rule, for some plants they could be considered staff positions applicable to those plants, and therefore considered backfits. Because established regulatory requirements exist but are not being satisfied, these backfits are necessary to bring licensees into compliance with 10 CFR 50.71(e). Therefore, on the basis of 10 CFR 50.109(a)(4)(i), a full backfit analysis was not performed. In accordance with NRC procedures, an evaluation was performed, including a statement of the objectives and the reasons for the requested actions and the basis for invoking the compliance exception, which is provided in the proposed generic letter.

The proposed generic letter includes specific guidance on scope, level of detail, format, removal of information not associated with a change, drawings, historical information, frequency of the periodic updates, temporary modifications, treatment of nonconforming conditions between the facility and the updated FSAR, treatment of FSAR information related to removal of or retirement-in-place of systems structures or components (SSC), and exercise of enforcement discretion regarding complete and accurate updated FSARs. Each of the specific guidance sections are summarized below. Attachment 1 should be reviewed for a more detailed description.

Scope: Since the purpose of the updated FSAR was to keep the FSAR current, the staff views the scope of the FSAR as defined by two regulations: §50.71(e) and §50.34(b). Section 50.34(b) provides the requirements for the original FSAR. Section 50.71(e) specifies the current information in the updated FSAR that must be changed and the new information that must be added to the updated FSAR.

To determine what information needs to be incorporated into the updated FSAR, the licensee first establishes which changes and analyses meet the test of 10 CFR 50.71(e) to be considered for inclusion in the updated FSAR. The requirements of §50.34(b) are then used to determine whether and to what extent the changes and analyses include any of the four basic types of information required to be in the FSAR (and thus, the updated FSAR): (1) a description of the facility, (2) a presentation of the design bases, (3) the limits on the facility's

operation, and (4) a presentation of the safety analysis of the SSCs and of the facility as a whole. The effect of this approach is that only those analyses and changes that result in a change to or creation of a new (1) description of the facility, (2) design basis, (3) operating limit, or (4) safety analysis need to be included in the updated FSAR.[1] The staff expects licensees to include new analyses and descriptions required by new Commission requirements or performed in response to Commission request. It is not expected that the updated FSAR summarize or refer to every change and analysis conducted by the licensee. Rather, licensees should only incorporate those analyses and changes that belong in a FSAR and, by extension, the updated FSAR; and only to the extent that the analysis or change modifies the existing or creates a new (1) description of the facility, (2) design basis, (3) operating limit, or (4) safety analysis.

Level of Detail: According to the Supplementary Information for the update rule, "The level of detail to be maintained in the updated FSAR should be at least the same as originally provided." Since the level of detail in the original FSARs varies significantly among plants (primarily as a function of the date of the operating license), the updated FSARs may also address similar issues at different levels of detail. The Supplementary Information provided specific guidance for the amount of information to be included for changes made pursuant to §50.59, which may result in the addition of information by some licensees to the updated FSAR that is more detailed than the information in the original FSAR.

Format: The format of the updated FSAR is at the option of the licensee, and licensees may change the format of the updated FSAR provided that the content of the updated FSAR continues to meet requirements.

Removal of Information Not Associated With a Change: If a licensee wishes to remove information from the UFSAR that is not associated with a change, or to relocate the information to other licensee-controlled documents, the licensee is encouraged to develop a process that (1) controls what and how information is removed or relocated, (2) ensures that the updated FSAR continues to contain the necessary information, (3) develops documentation that describes the information removed and the licensee's basis for removing the information from the updated FSARs, and (4) includes this documentation as part of the periodic updates submitted to the NRC. The staff believes that licensees that implement such a process can remove information from the UFSAR that is excessively detailed, less meaningful or redundant or relocate it to other licensee-controlled documents.

Drawings: In general, simplified drawings can be substituted for the reduced piping and instrumentation diagrams (P&IDs) currently in some updated FSARs. The resultant simplified drawings or text of the updated FSAR must contain all necessary information; however, some of the detail and minor components can be removed from the P&IDs. The effect of this guidance is to reduce the scope of §50.59 as changes to some minor components would no

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[1]The four types of information are a simplification of the requirements of §50.34(b) to aid discussion. As described in the "Discussion" section, §50.34(b) identifies nine specific categories of information. Licensees should ensure that they include all the information required by §50.34(b)

longer be required to be evaluated pursuant to §50.59 as they would no longer be "as described in the safety analysis report." Licensees can also substitute full-size P&IDs for the reduced P&IDs as a type of format change.

Historical Information: Certain historical information, for example, the initial training program and start-up test program, cannot be removed from the updated FSAR as it is required to be part of an FSAR by §50.34(b). Licensees can relocate the information to separate volumes or to appendices to the updated FSAR. The industry's argument for removing this type of historical information from the updated FSAR has been that maintaining this information is unnecessarily burdensome. However, if the information is, in fact, historical and thus not subject to change, there should be little or no burden associated with this information since neither §50.59 nor the update rule have an effect unless there is a change to the information in the updated FSAR.

Frequency of the Periodic Updates: Licensees are required to submit a periodic update annually or within 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months. For multiple-unit sites with common updated FSARs, this measure requires an update after each unit's refueling outage. Some licensees of multiple-unit sites have obtained exemptions to this requirement such that they are permitted to issue an update for both units linked to a specific unit's outage.

The staff may have provided informal guidance to some licensees indicating exemptions were not necessary for multiple-unit sites with common updated FSARs. To ensure that licensees are on an equal compliance level, licensees for sites with multiple units and a common updated FSAR that currently do not have an exemption will not be subject to enforcement action for failure to meet 10 CFR 50.71(e)(4) if an exemption is issued for exemption requests submitted within 90 days of the issue date of the generic letter.

Temporary Modifications: Licensees should include in the periodic update those temporary modifications for which the licensee (1) has no established schedule to remove the temporary modification, (2) intends to keep the temporary modification in place until after the next periodic update, or (3) intends to eventually change the facility as currently described (i.e., when the temporary modification is removed, a design different from the current design will be installed).

Treatment of Nonconforming Conditions Between the Facility and the Updated FSAR: Licensees are reminded that guidance on resolution of nonconforming conditions between the facility and the updated FSAR is provided in Generic Letter 91-18, Revision 1, dated October 9, 1997, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions."

Treatment of FSAR Information Related to Removal of or Retirement-in-Place of SSCs: The guidance in the generic letter is applicable to and can be used by operating plants that remove or retire-in-place SSCs, or change an SSC's functions and by plants undergoing decommissioning. In general, when a system, structure, or component (SSC) is removed from the facility or retired-in-place, the information in the updated FSAR should be revised to remove the information or to clearly note that the SSC no longer performs the functions described in the

updated FSAR. If the functions of the SSC are changed, the updated FSAR should reflect the functions the SSC performs.

Exercise of Enforcement Discretion Regarding Complete and Accurate Updated FSARs: Under certain conditions the enforcement policy currently allows the staff to grant enforcement discretion with respect to updated FSARs that are not complete and accurate. Licensee efforts to date have been focused on accuracy of information in the updated FSAR as licensees were awaiting guidance from the staff on the content of the updated FSAR (the proposed generic letter). This enforcement discretion period ends October 18, 1998. The staff proposes that the current enforcement discretion be modified to account for the proximity of the expected issue date of the proposed generic letter to October 18, 1998. For all licensee efforts related to accuracy of information in the updated FSAR, the staff recommends that the enforcement discretion end as planned on October 18, 1998. Regarding completeness of the updated FSAR, the staff proposes a risk-informed update prioritization as requested by the May 20, 1997, and March 24, 1998, SRMs. To implement this risk-informed prioritization, licensees would use the categorization of SSCs performed as part of their program to comply with the maintenance rule, 10 CFR 50.65, using Regulatory Guide 1.160, Revision 2, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," dated March 1997. For those sections of the updated FSAR containing information that pertains to structures or systems categorized as having high safety significance for purposes of the maintenance rule, licensees must have an updated FSAR that is also complete within six months of the date of issuance of the final generic letter. If only one or more components in a structure or system is considered to be of high safety significance, the licensee must treat the entire structure or system to which the component belongs as having high safety significance and ensure that all information in the updated FSAR pertaining to the system or structure is complete. For other information in the updated FSAR, licensees must have an updated FSAR that is also complete within 18 months of the date of issuance of the final generic letter.

This approach would build on licensees' efforts to categorize SSCs on the basis of safety significance as part of their implementation of the maintenance rule. The staff expects to complete the maintenance rule baseline inspections, including reviews of safety significance categorization, in July 1998. The staff believes that the suggested schedule for extending the enforcement discretion provides sufficient time for licensees to ensure that their updated FSARs are complete. As with the current enforcement discretion, the staff will not exercise discretion if the staff determines that a licensee is not making progress or does not have a program in place to identify and correct deficiencies in their updated FSARs by the end of the enforcement discretion period.

If the Commission approves issuing this proposed generic letter, the staff will propose a revision to the enforcement policy prior to the issue date of the generic letter to implement the enforcement discretion described herein.

Risk-Informed Content and Prioritization

In the SRMs of May 20, 1997, and March 24, 1998, the Commission requested that the staff provide guidance for a risk-informed content and prioritization approach for updated FSARs. As

described above, the staff developed a risk-informed prioritization approach in the proposed generic letter; however, the staff has not incorporated guidance that would make the content of the updated FSAR risk-informed. The content of the updated FSAR is defined by current regulations and, therefore, reflects the deterministic approach of the current regulations. In order to change to a risk-informed content of the updated FSAR, rulemaking would be necessary, consistent with what was described for the risk-informed framework for Option 5 in SECY-97-205. At this time, such an undertaking for updated FSARs is not considered practical.

Schedule for the Interim Guidance

In addition to issuing the proposed generic letter, the staff will also need to revise the enforcement policy, develop inspection guidance for inspectors and other members of the staff, and provide training on the generic letter and inspection guidance. Assuming the Commission approves issuing the proposed generic letter for public comment, the staff proposes the following schedule:

Activity	**Elapsed Time, Days**
Commission approval of generic letter	0
Issue generic letter for public comment	30
Receive public comments	90
Complete draft inspection guidance	90
Make draft inspection guidance publicly available	90
Incorporate public comments	120
Public workshop	120
Incorporate workshop comments	150
Issue final generic letter	150
Issue revised enforcement policy	150
Issue final inspection guidance and begin inspector/staff training	180
Implementation date of generic letter	330
Complete inspector/staff training	330

Long-Term Guidance

The NEI has proposed that the draft NEI 98-03 be used as guidance for the updated FSAR. Although the staff cannot endorse the current NEI 98-03 in all respects without rulemaking, the staff may, in the future, endorse NEI 98-03 if it is modified to conform to the guidance in the proposed generic letter, or if rulemaking occurs such that certain provisions in NEI 98-03 can be endorsed, or some combination thereof. If rulemaking occurs, the staff believes that guidance for complying with existing requirements should be available in the interim (the proposed generic letter). If NEI 98-03 is modified to conform to the guidance in the proposed generic letter such that the staff can endorse NEI 98-03, the regulatory guide that endorses NEI 98-03 will become the guidance and will be consistent with the interim guidance in the proposed generic letter. If NEI 98-03 is not modified and rulemaking does not occur, the staff would reissue the guidance in the proposed generic letter as long-term guidance in the form of a regulatory guide.

The current version of NEI 98-03 cannot be endorsed because it would allow (1) the removal of historical information required to be included in an updated FSAR, (2) the removal of "obsolete" and "less meaningful" information that may not be allowed by the regulations, and (3) the substitution of simplified schematics for P&IDs without ensuring that the updated FSAR continued to contain all required information. Without incorporating the staff positions in the proposed generic letter, the staff believes that rulemaking would be necessary to endorse the approach in NEI 98-03.

The staff does not believe that rulemaking solely to endorse NEI 98-03 is warranted. Although the guidance in the proposed generic letter would result in the retention of more information in the updated FSAR than NEI 98-03 (particularly regarding historical information), the proposed generic letter does provide licensees considerable flexibility regarding the content of the updated FSAR relative to past staff positions.

The staff does see an important role for NEI 98-03 and believes that it could become the long-term guidance for updated FSARs if it is expanded and modified to conform to the guidance in the proposed generic letter. (The guidance in the proposed generic letter on format, frequency of periodic update submittals, temporary modifications, treatment of nonconforming changes between the facility and the updated FSAR, and plants undergoing decommissioning has no comparable counterpart in NEI 98-03). The staff will encourage the NEI to revise NEI 98-03 such that it can become the detailed implementation guidance. The NRC could then endorse NEI 98-03 in a regulatory guide, similar to the approach taken for the maintenance rule, for which RG 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,"

endorses NUMARC 93-01. NUMARC 93-01 provides the detailed guidance for licensees to use when developing their program to comply with the maintenance rule.

As an example, the proposed generic letter provides the attributes of an approach for removing information from the updated FSAR that is not associated with a change to the facility. NEI 98-03 could provide a specific process for utilities to use that has the attributes recommended in the proposed generic letter. Licensees that then implement NEI 98-03 would be in compliance with the applicable requirements.

If public comments on the proposed generic letter indicate that rulemaking to endorse the positions in NEI 98-03 is desirable, the staff would reconsider rulemaking to incorporate the appropriate positions in NEI 98-03. If rulemaking is not undertaken to adopt all the provisions in NEI 98-03, and NEI chooses not to modify NEI 98-03 to conform to the guidance in the proposed generic letter, the staff will reissue the proposed generic letter as a regulatory guide. The regulatory guide would contain the same guidance as the generic letter, except the enforcement discretion section would be deleted as it would no longer be relevant (i.e., the enforcement discretion period would have expired by the time the long-term regulatory guide is issued).

CONCLUSIONS:

The staff has developed guidance for complying with 10 CFR 50.71(e) that is consistent with existing requirements. Although the proposed generic letter does not include guidance for risk-informed content of the updated FSAR as was requested in the SRMs of May 20, 1997, and March 24, 1998, the proposed generic letter does include a risk-informed update prioritization approach that provides sufficient time for licensees to develop complete and accurate updated FSARs, and will allow licensees to focus resources on the most safety-significant SSCs first. The proposed approach also avoids the need to undertake rulemaking pertaining to updated FSARs.

The staff will ultimately issue a regulatory guide as the long-term guidance for updated FSARs. If rulemaking does not occur, the guidance in that regulatory guide would be the same as in the proposed generic letter, with the exception of the discussion pertaining to enforcement discretion. The staff's preferred approach is for industry to revise NEI 98-03 to conform to the guidance in the proposed generic letter, and for the NRC to then endorse NEI 98-03 in the staff's regulatory guide.

RESOURCES:

No additional staff resources are needed beyond those identified in SECY-97-205 (i.e., 1.5-2.0 full time equivalent (FTE) positions) to issue the proposed generic letter, revise the enforcement policy, and develop associated inspection guidance. An estimated 1,000 staff members (Headquarters and Regional offices) will receive training on the proposed generic letter and associated guidance. With an average training of eight hours for each staff member, the training effort will require approximately 4.0 FTE, which will come from existing resources estimated for training.

COORDINATION:

The Office of the General Counsel has no legal objection to this paper and issuance of the proposed generic letter for public comment. The Office of the Chief Financial Officer has reviewed this Commission Paper for resource implications and has no objections.

The staff briefed the Advisory Committee on Reactor Safeguards (ACRS) on December 4, 1997, on an earlier draft of the generic letter. The ACRS requested that the staff provide another briefing after the staff has incorporated public comments on the proposed generic letter. The Committee to Review Generic Requirements (CRGR) has deferred its review until after the expiration of the public comment period on the proposed generic letter.

RECOMMENDATIONS:

The staff recommends that the Commission approve:

1. issuance of the proposed generic letter for public comment.

2. the release to the public of this Commission paper and its attachments within 5 business days of the date of this Commission paper.

L. Joseph Callan
Executive Director
for Operations

Attachments:
1. Proposed generic letter
2. Draft NEI guidance pertaining to updated FSARs dated November 14, 1997 (NEI 98-03)

Commissioners' completed vote sheets/comments should be provided directly to the Office of the Secretary by COB Tuesday, May 5, 1998.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Tuesday, April 28, 1998, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

DISTRIBUTION:

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ATTACHMENT 1: PROPOSED GENERIC LETTER

UNITED STATES

NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

WASHINGTON, D.C. 20555-0001

NRC GENERIC LETTER 98-xx: INTERIM GUIDANCE FOR UPDATED FINAL SAFETY ANALYSIS REPORTS IN ACCORDANCE WITH 10 CFR 50.71(e)

Addressees

All holders of operating licenses for nuclear power reactors.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this generic letter to provide interim guidance on current requirements of Section 50.71(e) of Title 10 of the Code of Federal Regulations (10 CFR 50.71(e), "the update rule") regarding the periodic updating of the plant-specific updated final safety analysis report (the "updated FSAR"). This generic letter supersedes the guidance in Generic Letter 80-110, "Periodic Updating of Final Safety Analysis Reports (FSARs)," dated December 15, 1980.

Background

Section 50.34, "Contents of Applications; Technical Information," includes requirements for the contents of the applications for construction permits and operating licenses for nuclear power reactors. An application for a construction permit must include a preliminary safety analysis report (§50.34(a)). An application for an operating license must include a final safety analysis report (§50.34(b)). For holders of operating licenses, §50.71(e) requires updated FSARs to be developed and periodically updated.

Guidance for the organization and contents of PSARs and FSARs has existed since June 30, 1966, when "Guide to the Organization and Contents of Safety Analysis Reports" was issued. The most recent guidance document is Regulatory Guide (RG) 1.70, Revision 3, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, LWR Edition."[1] Guidance for the format and content of updated FSARs was previously provided in

[1]RG 1.70, Revision 3, and its predecessors are not requirements, and licensees do not have to comply with the guidance therein unless they have committed to do so.

Generic Letter 80-110, but the guidance was limited to questions and answers because the rule was considered "essentially self-explanatory."[2]

As a result of lessons learned from the Millstone experience and of other initiatives related to updated FSARs, the NRC determined that additional guidance regarding compliance with §50.71(e) was necessary. The staff recommended specific actions in SECY-97-036, "Millstone Lessons Learned Report, Part 2: Policy Issues," dated February 12, 1997. In a staff requirements memorandum dated May 20, 1997, the Commission directed the staff, in part, to issue guidance for complying with 10 CFR 50.71(e). This generic letter provides that guidance.

In developing this generic letter the staff conducted three public meetings in the fall of 1997 with the Nuclear Energy Institute (NEI) and attended a public workshop on licensing issues (including updated FSARs) sponsored by NEI in January 1998. One purpose of the staff's participation in these meetings and workshop was to solicit public and industry input on what information needed to be in an updated FSAR. In addition, NEI developed draft guidance regarding compliance with §50.71(e), "Draft Industry Update Guidelines for Final Safety Analysis Reports."[3] In a letter dated November 14, 1997, NEI provided the guidance (NEI 98-03) asking the NRC to consider eventually endorsing it. On the basis of a preliminary review, it was concluded that the staff cannot endorse NEI 98-03 in all respects without rulemaking. Therefore, the staff is issuing this generic letter as interim guidance for complying with §50.71(e).

Discussion

The requirements for the contents of the PSAR are in §50.34(a). The PSAR must include the principal design criteria, derived from Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," and the design bases and describe the relation of the design bases to the principal design criteria. Information is also required to show that the final design will conform to the design bases with adequate margin for safety. The purpose of the PSAR is to "provide early and adequate information ...[,] to expedite the processing of construction permit applications ...[, and to] minimize burdensome design changes at the operating license stage resulting from design deficiencies in relation to technical specification requirements."[4] The PSAR is the principal document upon which the Commission bases a decision to issue a construction permit.

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[2]Generic Letter 80-110 was not originally issued with a generic letter number, the number was later assigned for retrieval purposes. The generic letter is a letter from Darrell G. Eisenhut, Director, Division of Licensing, to All Operating Reactor Licensees, dated December 15, 1980, on the subject of "Periodic Updating of Final Safety Analysis Reports (FSARs)."

[3]At the time of the November 14, 1997, submittal, NEI had not assigned a document number to the draft guidance. NEI subsequently informed the staff that the guidance document would be NEI 98-03, which is how the draft guidance is referred to elsewhere in this generic letter.

[4]33 FR 18610, December 17, 1968, "Technical Specifications for Facility Licenses; Safety Analysis Reports."

The requirements for the contents of the FSAR are in §50.34(b), which states:

> Each application for a license to operate a facility shall include a final safety analysis report. The final safety analysis report shall include information that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole, and shall include the following:
>
> (1) All current information, such as the results of environmental and meteorological monitoring programs, which has been developed since issuance of the construction permit, relating to site evaluation factors identified in part 100 of this chapter.
>
> (2) A description and analysis of the structures, systems, and components of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which such requirements have been established, and the evaluations required to show that safety functions will be accomplished. The description shall be sufficient to permit understanding of the system designs and their relationship to safety evaluations.
>
> > (i) For nuclear reactors, such items as the reactor core, reactor coolant system, instrumentation and control systems, electrical systems, containment system, other engineered safety features, auxiliary and emergency systems, power conversion systems, radioactive waste handling systems, and fuel handling systems shall be discussed insofar as they are pertinent.
> >
> > (ii) For facilities other than nuclear reactors, such items as the chemical, physical, metallurgical, or nuclear process to be performed, instrumentation and control systems, ventilation and filter systems, electrical systems, auxiliary and emergency systems, and radioactive waste handling systems shall be discussed insofar as they are pertinent.
>
> (3) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in part 20 of this chapter.
>
> (4) A final analysis and evaluation of the design and performance of structures, systems, and components with the objective stated in paragraph (a)(4) of this section and taking into account any pertinent information developed since the submittal of the preliminary safety analysis report. Analysis and evaluation of ECCS cooling performance following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of §50.46 for facilities for which a license to operate may be issued after December 28, 1974.

(5) A description and evaluation of the results of the applicant's programs, including research and development, if any, to demonstrate that any safety questions identified at the construction permit stage have been resolved.

(6) The following information concerning facility operation:

(i) The applicant's organizational structure, allocations or responsibilities and authorities, and personnel qualifications requirements.

(ii) Managerial and administrative controls to be used to assure safe operation. Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," sets forth the requirements for such controls for nuclear power plants and fuel reprocessing plants. The information on the controls to be used for a nuclear power plant or a fuel reprocessing plant shall include a discussion of how the applicable requirements of appendix B will be satisfied.

(iii) Plans for preoperational testing and initial operations.

(iv) Plans for conduct of normal operations, including maintenance, surveillance, and periodic testing of structures, systems, and components.

(v) Plans for coping with emergencies, which shall include the items specified in Appendix E.

(vi) Proposed technical specifications prepared in accordance with the requirements of §50.36.

(vii) On or after February 5, 1979, applicants who apply for operating licenses for nuclear power plants to be operated on multiunit sites shall include an evaluation of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multiunit sites.

(7) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter.

(8) A description and plans for implementation of an operator requalification program. The operator requalification program must as a minimum, meet the requirements for those programs contained in §55.59 of part 55 of this chapter.

(9) A description of protection provided against pressurized thermal shock events, including projected values of the reference temperature for reactor vessel beltline materials as defined in §50.61 (b)(1) and (b)(2).

The principal purpose of the FSAR is to inform the Commission of the nature of the facility, the plans for its use, and the evaluations that have been performed to evaluate whether the facility has been constructed and will operate without undue risk to the public health and safety.[5] The FSAR is the principal document upon which the Commission bases a decision to issue an operating license and is, as such, part of the licensing basis of the facility. It is also used by NRC inspectors to determine whether the facility has been constructed in accordance with and is operating within the license.

The requirements for the updated FSAR are in §50.71(e), which states:

> Each person licensed to operate a nuclear power reactor pursuant to the provisions of §50.21 or §50.22 of this part shall update periodically, as provided in paragraphs (e)(3) and (4) of this section, the final safety analysis report (FSAR) originally submitted as part of the application for the operating license, to assure that the information included in the FSAR contains the latest material developed. This submittal shall contain all the changes necessary to reflect information and analyses submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement since the submission of the original FSAR or, as appropriate, the last updated FSAR. The updated FSAR shall be revised to include the effects of: all changes made in the facility or procedures as described in the FSAR; all safety evaluations performed by the licensee either in support of requested license amendments or in support of conclusions that changes did not involve an unreviewed safety question; and all analyses of new safety issues performed by or on behalf of the licensee at Commission request. The updated information shall be appropriately located within the FSAR.
>
> (1) The licensee shall submit revisions containing updated information to the Commission, as specified in §50.4, on a replacement-page basis that is accompanied by a list which identifies the current pages of the FSAR following page replacement.
>
> (2) The submittal shall include (i) a certification by a duly authorized officer of the licensee that either the information accurately presents changes made since the previous submittal, necessary to reflect information and analyses submitted to the Commission or prepared pursuant to Commission requirement, or that no such changes were made; and (ii) an identification of changes made under the provisions of §50.59 but not previously submitted to the Commission.

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[5]RG 1.70, Revision 3, ii-iii.

(3) (i) A revision of the original FSAR containing those original pages that are still applicable plus new replacement pages shall be filed within 24 months of either July 22, 1980, or the date of issuance of the operating license, whichever is later, and shall bring the FSAR up to date as of a maximum of 6 months prior to the date of filing the revision.

(ii) Not less than 15 days before §50.71(e) becomes effective, the Director of the Office of Nuclear Reactor Regulation shall notify by letter the licensees of those nuclear power plants initially subject to the NRC's systematic evaluation program that they need not comply with the provisions of this section while the program is being conducted at their plant. The Director of the Office of Nuclear Reactor Regulation will notify by letter the licensee of each nuclear power plant being evaluated when the systematic evaluation program has been completed. Within 24 months after receipt of this notification, the licensee shall file a complete FSAR which is up to date as of a maximum of 6 months prior to the date of filing the revision.

(4) Subsequent revisions must be filed annually or 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months. The revisions must reflect all changes up to a maximum of 6 months prior to the date of filling. For nuclear power reactor facilities that have submitted the certifications required by §50.82(a)(1), subsequent revisions must be filed every 24 months.

(5) Each replacement page shall include both a change indicator for the area changed, e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed, and a page change identification (date of change or change number or both).

(6) The updated FSAR shall be retained by the licensee until the Commission terminates their license.

The purpose of the updated FSAR is to "provide an updated reference document to be used in recurring safety analyses performed by the licensee, the Commission, and other interested parties."[6] The Supplementary Information for the update rule further states:

> The initial revision to be filed should contain those pages from the originally submitted FSAR that are still applicable plus new replacement pages that appropriately incorporate the effects of supplements, amendments and other changes that have been made. This will result in a single, complete document being filed that can then serve as the baseline for future changes.

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[6]45 FR 30614, May 9, 1980, "Periodic Updating of Final Safety Analysis Reports."

Subsequent periodic updates are to ensure that the updated FSAR remains current and addresses the appropriate licensing issues.

Thus, there is a difference between the PSAR and FSAR, versus the updated FSAR. The content of the PSAR and FSAR are established by §50.34, which sets forth the information and analyses that the applicant must submit in support of its construction permit and license application. Therefore, the PSAR and FSAR are the principal technical bases for issuing the construction permit and operating license, respectively. By contrast, submission of updates to the FSAR under the update rule are not in furtherance of a specific licensing action, nor is the submission intended to be part of a periodic NRC re-review of the adequacy of the facility.[7] The licensee is not required by the update rule to perform any specific analysis.[8] Rather, the updated FSAR is intended to be a complete and accurate reference document describing the facility, its procedures, and the supporting bases thereof, in order to facilitate staff safety evaluations (including safety evaluations for requests for license amendments, reliefs and exemptions), staff inspections of the facility to determine whether the facility has been constructed and is being operated in accordance with Commission requirements, the facility's license, and applicable orders.[9]

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[7]The Supplementary Information states:

> The rule is only a reporting requirement to insure that an updated FSAR will be available. Submittal of updated FSAR pages does not constitute a licensing action but is only intended to provide information. It is not intended for the purpose of re-reviewing plants ... Thus, for example, approvals of license amendments and technical specification changes are independent of the FSAR updating process and once approved would not be subject to further consideration simply because the FSAR is updated ... The material submitted may be reviewed by the NRC staff but will not be formally approved.

[8]This point is emphasized in the Supplementary Information:

> No analyses other than those already prepared or submitted pursuant to NRC requirements (either originally with the application, or as part of the operating license review process, or as required by §50.59 or other NRC requirement, or to support license amendments) are required to be performed by the licensee because of this rule.

Therefore, the updated FSAR is only changed as a result of other activities by the licensee, such as new analyses performed on the licensee's initiative or in response to a Commission requirement or request.

[9]As the Supplementary Information states, keeping the updated FSAR up to date is important because: "The new pages will be accepted as representing the licensee's position at the time of submittal and will be utilized in any subsequent reviews or NRC staff activities concerning that facility."

Guidance

A number of issues addressed in this generic letter were identified during the public meetings with NEI held in the fall of 1997, the January 1998 public workshop, and a review of the draft NEI 98-03. Specific guidance is provided on scope, level of detail, format, removal of information not associated with a change, drawings, historical information, frequency of the periodic update submittals, temporary modifications, treatment of nonconforming conditions between the facility and the updated FSAR, treatment of FSAR information related to removal of or retirement-in-place of systems, structures, or components (SSCs), and exercise of enforcement discretion regarding complete and accurate updated FSARs.

Scope

Section 50.71(e) provides specific requirements for the scope of issues to be addressed in the periodic updates. As described above, §50.71(e) requires that the updated FSAR contain the latest material developed concerning: (1) all the changes necessary to reflect information and analyses submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement; (2) the effects of all changes made in the facility or the procedures as described in the updated FSAR; (3) the effects of all safety evaluations performed by the licensee either in support of requested license amendments or in support of conclusions that changes did not involve unreviewed safety questions; and (4) the effects of all analyses of new safety issues performed by or on behalf of the licensee at the Commission's request. In summary, the periodic updates are to include changes to existing information and add the appropriate information for new issues such that the updated FSAR remains complete and accurate.[10]

Two rules define the content of the updated FSAR: §50.34(b), which provides the requirements for the original FSAR, and §50.71(e), which specifies the current information in the updated FSAR that must be changed and the new information that must be added to the updated FSAR. Section 50.34(b) is used as a screen to establish what portion of the information to be considered for incorporation into the updated FSAR pursuant to §50.71(e) is expected to appear in the updated FSAR (i.e., the updated FSAR should address the same issues that a current original FSAR would address).

To determine what information needs to be incorporated into the updated FSAR, the licensee first establishes which changes and analyses meet the test of 10 CFR 50.71(e) to be considered for inclusion in the updated FSAR. The requirements of §50.34(b) are then used to determine whether and to what extent the changes and analyses include any of the four basic types of information required to be in the FSAR (and thus, in the updated FSAR): (1) a description of the facility, (2) a presentation of the design bases, (3) the limits on the facility's operation, and (4) a presentation of the safety analysis of the SSCs and of the facility as a

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[10]"Complete" means that the updated FSAR includes *all* the issues that should have been included in the updated FSAR as required by the update rule since the original FSAR was issued. "Accurate" means that all the differences between the information in the current version of the updated FSAR and the facility, procedures and experiments have been corrected.

whole. The effect of this approach is that only those analyses and changes that result in a change to or creation of a new (1) description of the facility, (2) design basis, (3) operating limit, or (4) safety analysis need to be included in the updated FSAR.[11] The staff expects licensees to include new analyses and descriptions required by new Commission requirements or performed in response to Commission request. It is not expected that the updated FSAR summarize or refer to every change and analysis conducted by the licensee. Rather, licensees should only incorporate those analyses and changes that belong in a FSAR and, by extension, in the updated FSAR; and only to the extent that the analysis or change modifies the existing or creates a new (1) description of the facility, (2) design basis, (3) operating limit, or (4) safety analysis.

In implementing §50.71(e), licensees should incorporate the latest information (description, design basis, etc.) developed pursuant to each of the specific requirements in the update rule.

1. *All the changes necessary to reflect information and analyses submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement.*

Where the licensee has submitted information and analyses (e.g., the periodic report required by §50.59(b)(2)) such that the information and analyses in the updated FSAR are no longer accurate, the licensee should correct the information and analyses to reflect the current condition. Where information and analyses in the updated FSAR have become inaccurate as a result of licensee actions pursuant to a Commission requirement,[12] the licensee should revise the updated FSAR to reflect the changes that have occurred. In addition, where the underlying Commission requirement has not changed, but the licensee has undertaken actions that has resulted in the information and analyses required to be in the updated FSAR being incomplete and/or inaccurate, the licensee should revise the updated FSAR to ensure that the updated FSAR is complete and accurate. As noted in the Supplementary Information for the update rule, changes should be incorporated into the updated FSAR after the changes have been approved for use (by the licensee, or by the NRC where required) and are in effect.

2. *The effects of all changes made in the facility or procedures as described in the updated FSAR.*

The update rule does not require licensees to review all the information in the updated FSAR for each periodic update; as noted in the "Discussion," above, the update rule is a reporting requirement and does not require licensees to verify the accuracy of the content of the entire updated FSAR. This point is emphasized in the Supplementary Information:

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[11]The four types of information are a simplification of the requirements of §50.34(b) to aid discussion. As described in the "Discussion" section, §50.34(b) identifies nine specific categories of information. Licensees should ensure that they include all the information required by §50.34(b)

[12]"Commission requirement" refers to regulations, license conditions, technical specifications, and orders.

> Analyses existing in the [updated] FSAR which are known to be inaccurate or in error *as a result of new analyses performed by the licensee pursuant to NRC requirements*, would have to be revised. Specialized studies provided in the FSAR, such as on volcanic hazards or quality assurance, should include the latest information developed that has been developed *in response to NRC requirements ... Minor differences* between actual and projected population figures or other such changes in the site environment *need not be reported unless the conclusions of safety analyses relative to public health and safety are affected and the licensee has prepared new analyses as a result of NRC requirements* [emphasis added].

Therefore, the update rule does not require that licensees periodically verify the entire contents of the updated FSAR. Rather, licensees only update those portions that have been affected as the result of licensee activities addressed by Commission regulations.[13] In practice, since the preponderance of information in the FSAR (and therefore the updated FSAR) was necessary to demonstrate compliance with requirements, most information in the updated FSAR will need to be maintained up to date.

3. *The effects of all safety evaluations performed by the licensee either in support of requested license amendments or in support of conclusions that changes did not involve an unreviewed safety question.*

The periodic update should incorporate changes and new information as a result of license amendments, or changes and new information made pursuant to §50.59.[14]

4. *The effects of all analyses of new safety issues performed by or on behalf of the licensee at Commission request.*

The periodic updates must include the effects of analyses of new safety issues performed by or on behalf of the licensee at Commission request. Analyses of new safety issues conducted at

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[13]Pursuant to §50.9(b), licensees are required to "notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security." Information in the updated FSAR that becomes inaccurate as a result of such a discovery is required to be included in the periodic update.

[14]Some licensees may implement §50.59 in a broader context than required (i.e., some licensees evaluate changes other than those "as described in the [updated final] safety analysis report" as required by §50.59(a)). The effects of the safety evaluations conducted for changes that are outside of the required scope of §50.59 are not required to be included in the periodic update unless they make information in the updated FSAR inaccurate.

the request of the Commission can include issues discussed in plant-specific letters, generic letters, and bulletins.[15]

Level of Detail

The update rule does not identify a specific level of detail for the updated FSAR. The level of detail is discussed in the Supplementary Information. The Supplementary Information states that "The level of detail to be maintained in the updated FSAR should be at least the same as originally provided." Since the level of detail in the original FSARs varies among plants (primarily as a function of the date of the operating license), the updated FSARs may also address similar issues at different levels of detail.

Section 50.34(b) provides the minimum level of detail required for the information in the FSAR (and thus the updated FSAR). For the SSCs of the facility, for example, §50.34(b)(2) requires

> "[a] description and analysis of the [SSCs] of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which such requirements have been established, and the evaluations required to show that safety functions will be accomplished. The description shall be sufficient to permit understanding of the system designs and their relationship to safety evaluations."

Licensees must ensure that the updated FSAR contains at least the minimum level of detail required by §50.34(b).

One area where more specific guidance was provided in the Supplementary Information is changes to the updated FSAR as result of changes made in accordance with §50.59. Paragraph 50.59(b)(2) requires licensees to periodically submit a report that contains "a brief description of any changes, tests, and experiments, including a summary of the safety evaluation of each." The Supplementary Information for the update rule states that "The §50.59(b) reporting may not be detailed sufficiently to be considered adequate to fulfill the [updated] FSAR updating requirement. The degree of detail required for updating the [updated] FSAR will be generally greater than a 'brief description' and a 'summary of the safety evaluation.'" Therefore, the level of detail in the periodic updates for changes made pursuant to §50.59 should include a description of each change and, at a minimum, a discussion of the basis for the conclusion that the change does not constitute an unreviewed safety question (i.e., a simple negative restatement of the requirements of §50.59(a)(2) would be insufficient). For some licensees, this may result in adding information to the updated FSAR that is more detailed than the information in the original FSAR.

The most recent staff position on the content of the FSAR (and therefore the updated FSAR) is in RG 1.70, Revision 3. Licensees are not required to comply with the guidance in the

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[15]In some cases generic letters and bulletins are issued under the authority of §50.54(f) or §2.204, or §182 of the Atomic Energy Act. For those cases the licensee's analyses are performed in response to Commission requirement.

regulatory guide; however, the regulatory guide may be used as a reference for an appropriate amount of information to be provided on specific issues.

Format

Section 50.71(e) does not specify a format for the updated FSAR. The Supplementary Information states, "The format to be used for the [updated] FSAR revisions is the option of the licensee, but the Commission expects that the format will probably be the same as the format of the original FSAR." Therefore, licensees have the option of changing the format provided the content of the updated FSAR continues to meet requirements.

Removal of Information Not Associated With a Change

The update rule provides requirements for changing information in the updated FSAR as a result of new analyses or changes to the facility or procedures. Neither the update rule nor its Supplementary Information address the removal of information from the updated FSAR that is not associated with a new analysis, or a change to the facility or procedures.[16] While the removal of information from the updated FSAR that is not associated with a change is not recommended, the staff recognizes that some licensees have removed information from the updated FSAR. Although the regulations do not explicitly prohibit the removal of information not associated with a change, licensees do so at their own risk. If a licensee removes information from the updated FSAR that is not associated with a change, or relocates information to other licensee-controlled documents, the licensee is encouraged to adopt an approach that has the following attributes:

- The licensee has a process that controls what and how information is removed or relocated.

- The licensee is responsible for ensuring that the updated FSAR continues to contain the necessary information. In particular, the licensee must not remove any information required to demonstrate compliance with 50.34(b), or subsequently required to be added or modified in accordance with 50.71(e).

- As part of the periodic updates issued in accordance with 50.71(e), the licensee should submit, in addition to the changed pages and a list of effective pages currently required by 50.71(e), a description of the information removed, and the basis for the licensee's determination that such information may be removed from the updated FSAR.

The licensee removes information from the updated FSAR at its own risk. If, after removing information from the updated FSAR, a licensee makes a change to the facility that would have resulted in a determination that the change was an unreviewed safety question but did not (no

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[16]If a new analysis or a change to the facility or procedures makes the content of the updated FSAR inaccurate, the inaccurate information should be removed. For example, if an SSC has been removed from the facility the updated FSAR should be modified to delete reference to that SSC or clearly indicate that the SSC has been removed.

50.59 evaluation having been performed since the facility was no longer "as described" in the updated FSAR), the licensee would potentially be subject to enforcement. Under the current enforcement policy, such violations would be considered for categorization as a Severity Level III violation.

An example of information that may be removed that is not associated with a change is redundant information. Licensees may remove duplicate information from the updated FSAR provided appropriate references are made to the remaining location where the information is discussed in the updated FSAR. Another kind of information that may be considered for removal without an associated change is described below in "Drawings."

Drawings

Updated FSARs typically contain either simplified schematics or reduced-size piping and instrumentation diagrams (P&IDs). Two issues have arisen concerning drawings: (1) substitution of full-size P&IDs for reduced-size P&IDs, and (2) substitution of simplified schematics for reduced-size P&IDs.

The substitution of full-size P&IDs for reduced P&IDs is an example of a change in format, which as stated above is at the option of the licensee. The licensee could further reformat the updated FSAR by relocating the full-size P&IDs to an appendix or separate volume in the updated FSAR (with appropriate references).

The substitution of simplified schematics for P&IDs is more complicated because under certain circumstances this substitution would constitute a reduction in the level of detail. As noted above, the Supplementary Information states that the level of detail should be at least that of the original FSAR. In many cases, however, licensees may have incorporated P&IDs into the FSAR or updated FSAR as a matter of convenience rather than to provide required information. In general, substitution of simplified schematics would be acceptable under either of the following conditions: (1) the original FSAR contained simplified schematics that the licensee had later replaced with P&IDs as a matter of convenience, or (2) the original FSAR included P&IDs but simplified schematics will be substituted such that they will not result in removal of information required to be in the updated FSAR.

In the first case, the substitution of simplified schematics would be acceptable because the update rule only requires that the level of detail of the updated FSAR be at least the same as that in the original FSAR. If simplified schematics were originally provided, returning simplified schematics to the updated FSAR would be consistent with this requirement.

In the second case, the licensee would need to ensure that no material descriptive information was lost and that the P&IDs do not contain any unique design basis, operating limits, or safety analysis information required to be in an updated FSAR. If the licensee determines that a P&ID does contain such information, the licensee should incorporate the information in the simplified schematic or relocate the information to the text of the updated FSAR so that the updated FSAR continues to contain all necessary information. When substituting simplified schematics for P&IDs as described in this paragraph, licensees should follow the guidance for "Removal of Information Not Associated With a Change."

Historical Information

Some licensees have asked whether information no longer applicable to an operating plant, e.g., the initial training program and start-up test program, can be removed from the updated FSAR. This question was previously addressed in Generic Letter 80-110, which stated, "Information pertaining to programs described in the original FSAR with amendments, such as the initial training program and the preoperational test program, should be submitted as part of the initial updated FSAR for completeness."

As described in "Scope," the updated FSAR is expected to contain the information required by §50.34(b), updated to reflect the current facility. Some programmatic information that would now be considered historical is explicitly required to be in an FSAR (such as the initial test program, which is explicitly required by §§50.34(b)(6)(iii)). Therefore, it is not permissible to remove "historical" information that is explicitly required to be included in an FSAR. Licensees may, however, reformat the updated FSAR to relocate this type of information to separate volumes or appendices to the updated FSAR. The staff believes that the burden associated with the retention of required "historical" information to be minimal.[17]

Frequency of the Periodic Update Submittals

The update rule requires in §50.71(e)(4) that licensees submit periodic updates

> annually or 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months.[[18]] The revisions must reflect all changes up to a maximum of 6 months prior to the date of [filing]. For nuclear power reactor facilities that have submitted the certifications required by §50.82(a)(1), subsequent revisions must be filed every 24 months.

Some licensees of multiple-unit sites with common updated FSARs have asked whether they need to update the updated FSAR after each unit's refueling outage or whether a combined periodic update can be submitted for all units with the common updated FSAR. The rule is clear that a periodic update must be submitted annually or within six months of *each* refueling outage. Therefore, unless the combined periodic update is submitted on an annual basis, or (due to refueling outage schedules) within six months of all the units' outages, additional updates are required by the rule.

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[17]The industry argument for removing historical programs has been that maintaining this information in the updated FSAR is unnecessarily burdensome. If the information is, in fact, historical and thus not subject to change, there should be little or no burden associated with this information since neither §50.59 nor §50.71(e) have an effect unless there is a change to the information.

[18]The original final update rule required the periodic updates to be submitted "no less frequently than annually." The frequency of the periodic updates was amended in 1992. See 57 FR 39353, August 31, 1992, "Reducing the Regulatory Burden on Nuclear Licensees."

On the August 31, 1992, rulemaking to reduce regulatory burden that, in part, reduced the frequency of the periodic updates required by §50.71(e)(4), a public comment was received that requested that the update rule be modified to allow multiple-unit sites with common updated FSARs to submit combined periodic updates. In the Supplementary Information for the August 31, 1992, rulemaking, the NRC did not incorporate the requested change, but noted that "licensees will have maximum flexibility for scheduling updates on a case-by-case basis." In this regard, the staff has granted a number of exemptions to this requirement of the update rule to allow multiple-unit sites with common updated FSARs to submit a combined periodic update at a reduced frequency similar to the frequency for single unit sites (typically by linking the submittal date to a specific unit).[19]

The phrase "after each refueling outage" is not defined. The date is generally assumed to be that consistent with industry practice: the date the licensee closes the main generator output breakers to reconnect the plant to the grid. If a licensee traditionally uses another date to indicate the end of a refueling outage, the license may use the alternative date.

The rule states that the revisions must be filed *six months* after each refueling outage. This statement was not intended to mean *exactly* six months, but rather *within* six months.

Temporary Modifications

Neither the update rule nor its Supplementary Information explicitly address whether temporary modifications need to be included in the periodic updates. Since the update rule does not distinguish between a change and a temporary modification, a conservative approach would be to include all temporary modifications installed at the time the periodic update submittal is developed so as to ensure that the updated FSAR contains the latest information. The staff believes that such an approach would impose an unnecessary burden on licensees to needlessly revise information in the updated FSAR that would shortly revert to its prior condition, and result in an updated FSAR that described temporary modifications that are no longer installed (and the updated FSAR would not reflect their removal until the next periodic update). Therefore, analogous to the guidance in Generic Letter 91-18, Revision 1, dated October 9, 1997, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," temporary modifications that are intended to be installed for only a limited period would not be deemed to be "changes" requiring inclusion in the periodic updates. However, consistent with the intent of the update rule, the licensee should include in the updated FSAR those temporary modifications for which the licensee (1) has no established schedule to remove the temporary modification, or (2) intends to keep the temporary modification until after the next periodic update, or (3) does not intend to restore the facility to its condition as described in the current version of the updated FSAR (i.e., a new design will replace the temporary modification).

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[19]The staff may have provided informal guidance to licensees indicating exemptions were not necessary. To assure that licensees are on an equal compliance level, licensees for sites with multiple units and a common updated FSAR that presently do not have an exemption will not be subject to enforcement action for failure to meet 10 CFR 50.71(e)(4) if an exemption is issued for exemption requests submitted within 90 days of this generic letter.

Treatment of Nonconforming Conditions Between the Facility and the Updated FSAR

If the licensee discovers a nonconforming condition between the facility and the description of the facility in the updated FSAR, the licensee needs to address the nonconforming condition in accordance with the guidance in Generic Letter 91-18, Revision 1.

Treatment of FSAR Information Related to Removal of or Retirement-in-Place of SSCs

This approach is applicable to operating plants that have removed or retired-in-place SSCs, or changed the functions of SSCs and to plants undergoing decommissioning, i.e., those nuclear power reactors whose licensees have submitted certifications pursuant to 10 CFR §50.82(a)(1).

When a plant removes an SSC from the facility, the information concerning that SSC should be removed from the updated FSAR or the information should be clearly marked to note that the SSC has been removed. If an SSC is permanently removed from service or retired-in-place, or no longer performs its original functions (but may now provide new functions), the updated FSAR should be updated to indicate that the SSC has been removed from service or retired in place, and should include the functions that the SSC now performs (i.e., description, design basis, operating limits, and safety analysis) as appropriate. At a minimum, the updated FSAR for an SSC permanently removed from service or retired-in-place should continue to provide a basic description of the physical components and layout of the SSC (including relevant drawings) such that it provides an understanding of the equipment that remains installed in the facility and demonstrates compliance with any applicable NRC requirements for that equipment. Licensees must ensure that the updated FSAR continues to provide all required information notwithstanding the status of SSCs in the facility.

Exercise of Enforcement Discretion Regarding Complete and Accurate Updated FSARs

Under certain conditions, the enforcement policy currently allows the staff to grant enforcement discretion with respect to updated FSARs that are not complete and accurate. As stated in the Policy Statement, dated October 18, 1996,[20]

> Enforcement action would normally not be taken against a licensee if the licensee identifies violations up to and including Severity Level II associated with the [updated] FSAR by a voluntary initiative (including either a formal initiative or informal effort where issues are identified through a questioning attitude of an employee), provided the licensee takes comprehensive corrective action and appropriately expands the scope of the voluntary initiative to identify other failures with similar root causes ... [L]icensees should be designing and implementing their programs with goals to have these discrepancies identified in

[20]See 62 FR 54461. Also see SECY 96-154, "Proposed Revision to NRC Enforcement Policy, NUREG-1600, Enforcement Guidance for Departures From the FSAR in Violation of 10 CFR 50.59 and for Failures to Update FSAR in Violation of 10 CFR 50.71(e)," dated July 5, 1996.

the near term ... The two year period will provide a reasonable time period and incentive for licensees to plan and conduct appropriate reviews to ensure that their facilities meet the descriptions in the [updated] FSAR and take necessary corrective action.

This enforcement discretion currently ends on October 18, 1998. Due to the proximity of October 18, 1998, to the date of this generic letter, however, the Commission will be revising the enforcement policy to modify the enforcement discretion as follows. The NRC does not intend to continue its exercise of discretion for NRC-identified violations associated with the accuracy of the FSAR beyond October 18, 1998. After that time, the NRC expects FSARs to be accurate. Regarding completeness of the updated FSAR, in order to be granted discretion, licensees must use the categorization of SSCs performed as part of a licensee's program to comply with the maintenance rule, 10 CFR 50.65, using Regulatory Guide 1.160, Revision 2, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," dated March 1997. For those sections of the FSAR containing information that pertains to structures or systems[21] categorized as having high safety significance for purposes of the maintenance rule, licensees must ensure that the updated FSAR is also complete within six months of the issue date of this generic letter. For other information in the updated FSAR, licensees must have an updated FSAR that is also complete within 18 months of the issue date of this generic letter.

Backfit Discussion

As previously discussed in the "Background" and "Discussion" sections, as a result of lessons learned from the Millstone experience and other initiatives related to updated FSARs, the NRC determined that additional guidance for complying with §50.71(e) was necessary. As a result of a lack of prior definitive guidance concerning the requirements of the update rule and the absence of detailed staff reviews of the periodic updates, staff positions were not clearly articulated nor did industry uniformly implement the update rule. Although the staff positions in this generic letter are consistent with the requirements of the update rule, for some plants they could be considered to be changes from previous staff positions applicable to those plants, and therefore considered backfits as defined in 10 CFR 50.109(a)(i). Because established regulatory requirements exist but are not being satisfied, these backfits are necessary to bring licensees into compliance with §50.71(e). Therefore, on the basis of 10 CFR 50.109(a)(4)(i), a full backfit analysis was not performed. An evaluation was performed in accordance with NRC procedures, including a statement of the objectives and reasons for the requested actions and the basis for invoking the compliance exception, the results of which follow.

The "Scope" section is derived from a clear reading of the rule, and, in general, is consistent with past staff practice in inspection and enforcement even though a definitive staff position had not been previously explicitly stated. Therefore, the "Scope" section is considered a compliance backfit in accordance with 10 CFR 50.109(a)(4)(i).

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[21]If only one or more components in a system or structure are categorized as being of high safety significance, licensees must treat the entire structure or system to which the component belongs as having high safety signficance and ensure that all information in the updated FSAR pertaining to that system or structure is complete.

The "Level of Detail" section was derived from the Supplementary Information for the update rule, and is generally consistent with past practice by both industry and the staff. However, some licensees may not have been aware of the level of detail expected to be included in the updated FSAR for safety evaluations performed pursuant to §50.59 and, therefore, the guidance in the "Level of Detail" section may represent a changed staff position for some licensees. This changed staff position is a compliance backfit pursuant to 10 CFR 50.109(a)(4)(i).

The "Format" section imposes no new staff position, and simply notes that the format of the updated FSAR is at the option of the licensee. Since licensees need take no action in response to the guidance in this section it is not a backfit.

The "Removal of Information Not Associated With a Change" represents a relaxation of the previous staff position that information could not be removed from the updated FSAR in the absence of an explicitly codified process to do so. The request by the staff that licensees provide documentation for information removed from the updated FSAR or relocated to other licensee-controlled documents does represent a new staff position and could be considered a backfit. However, the staff is not imposing this guidance as a requirement, but merely encourages licensees to provide such documentation to ensure that licensee decisions can be understood. Therefore, the guidance in this section is not a backfit.

The staff has not had a uniform position regarding the type of drawings required to be in an updated FSAR. Therefore, the guidance in the "Drawings" section could represent a changed staff position. The guidance in this section was developed to ensure that the updated FSAR would continue to contain information required to be in the updated FSAR and, therefore, the guidance in this section represents a compliance backfit pursuant to 10 CFR 50.109(a)(4)(i).

The "Historical Information" section is a type of format change which, as previously noted, is at the option of the licensee. However, the staff believes that some licensees may have removed some historical information that is required to be in an updated FSAR. If this information was removed with the knowledge and tacit approval of the NRC, the guidance in this section could represent a changed position. As the information in the "Historical Information" section is clearly required to be in an updated FSAR, the guidance in this section for such licensees represents a compliance backfit in accordance with 10 CFR 50.109(a)(4)(i).

The guidance in the "Frequency of the Periodic Update Submittals" is a restatement of a clear requirement of the update rule. However, the staff may in the past have provided informal guidance that was inconsistent with the requirements of the update rule and therefore, the guidance in this section may represent a changed staff position for some licensees. Since the reporting frequency requirement in §50.71(e)(4) is clear, the guidance in this section represents a compliance backfit pursuant to 10 CFR 50.109(a)(4)(i).

The guidance in the "Temporary Modifications" section represents a new staff position. This staff position is consistent with the requirements of the update rule (and may, in fact, be less inclusive than a literal reading of the rule) and, therefore, the guidance in this section represents a compliance backfit in accordance with 10 CFR 50.109(a)(4)(i).

The "Treatment of Nonconforming Conditions Between the Facility and the Updated FSAR" section provides no new guidance but merely refers licensees to Generic Letter 91-18, Revision 1, and thus this section does not represent a backfit.

The "Treatment of FSAR Information Related to Removal of or Retirement-in-Place of SSCs" section simply notes that the staff position applies to both operating and decommissioning plants. The staff position is not a new staff position, therefore, this section is not a backfit.

The "Exercise of Enforcement Discretion Regarding Complete and Accurate Updated FSARs" section imposes no requirements and, therefore, is not a backfit.

Although the guidance in this generic letter may, in some cases, be compliance backfits in accordance with 10 CFR 50.109(a)(4)(i) and, therefore, not require an evaluation pursuant to 10 CFR 50.109(c)(9), the staff will nevertheless explain here why it has identified the guidance in this generic letter as "interim." As described in the "Background" discussion, NEI has developed a draft guidance document, NEI 98-03, concerning implementation of the update rule. Although the staff cannot endorse the current NEI 98-03 in all respects without rulemaking, the staff may in the future endorse NEI 98-03 if NEI 98-03 is modified to conform to the guidance in this generic letter, or if rulemaking occurs such that certain provisions in NEI 98-03 can be endorsed, or some combination of the preceding. If rulemaking occurs, the staff believes that it is important to have in place guidance for complying with existing requirements in the interim. If NEI 98-03 is modified to conform to the guidance in this generic letter such that the staff can endorse NEI 98-03, then the regulatory guide that endorses NEI 98-03 will become the long-term guidance, and will be consistent with the interim guidance in this generic letter. If NEI 98-03 is not modified and rulemaking does not occur, then the staff intends to reissue the guidance in this generic letter as long-term guidance in the form of a regulatory guide.

Contacts

Questions concerning the information in this generic letter should be directed to one of the technical contacts listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager or Office of Nuclear Materials Safety and Safeguards (NMSS) project manager.

Jack W. Roe, Acting Director
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ATTACHMENT 2: DRAFT NEI GUIDANCE ON UPDATED FSARS (NEI 98-03)

NUCLEAR ENERGY INSTITUTE

Anthony R. Pietrangelo
DIRECTOR, LICENSING
NUCLEAR GENERATION

November 14, 1997

Mr. Jack W. Roe
Acting Director, Division of Reactor Program Management
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Mr. Roe:

The enclosure provides for NRC staff consideration the preliminary industry document, "Draft Industry Update Guidelines for Final Safety Analysis Reports." As discussed at our public meeting on October 9, 1997, we are providing this guidance as input to preparation of staff recommendations to the Commission concerning implementation of 10 CFR 50.71(e), the FSAR update rule.

This draft guidance has been developed with the assistance of an NEI task force and the Regulatory Process Working Group. To ensure the timeliness of this input, we are providing the draft document to the staff in parallel with industrywide distribution for a 30-day period of review and comment. As part of our ongoing interactions on this issue, we will inform you of changes and refinements that may result from this review.

Appropriate FSAR update guidance, endorsed by the NRC, is essential to establishing a stable regulatory process to support ongoing FSAR review activities and ensure consistent future implementation of the FSAR update rule. Our interactions with the NRC staff on this issue have been constructive and beneficial. We look forward to continuing this dialogue at the public meeting scheduled for November 24.

As a logical follow-on to these discussions, we also look forward to future interactions on broader issues concerning management and oversight of the current licensing basis.

If you have any questions in advance of our November 24 meeting, please contact me at (202) 739-8081 or Russ Bell at (202) 739-8087.

Sincerely,

Anthony R. Pietrangelo

ARP/RJB/npg
Enclosure

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Draft Industry Update Guidelines for Final Safety Analysis Reports

Purpose:

The purpose of this document is to provide licensees guidance for meeting the Final Safety Analysis Report (FSAR) update requirements of 10 CFR 50.71(e).

Guidance is also provided for removing or otherwise addressing obsolete and less meaningful information consistent with the intent that updated FSARs focus on information that is useful and relevant to support current and future plant operational and regulatory activities.

Background

FSARs originally served as the principal reference document in support of Part 50 license applications. The FSAR described methods for conforming with applicable NRC regulations and contains the technical information required by 10 CFR 50.34, including description of the facility and its operation, design bases and safety analyses. In 1980, the NRC issued 10 CFR 50.71(e) to require licensees to periodically update their FSARs to assure that the information provided is the latest material developed.

Today, Updated FSARs (UFSARs) are intended to continue to provide an up-to-date description of each plant and, per the Statements of Consideration for the FSAR update rule, serve as a "reference document for recurring safety analyses performed by licensees, the Commission, and other interested parties." In particular, the UFSAR defines the scope of applicability for the 10 CFR 50.59 change process.

As discussed in SECY-92-314, SECY-97-205 and other Commission papers, both the industry and NRC have long recognized that current UFSARs vary widely in their scope and content. While all UFSARs generally contain a similar core of safety and technical information (e.g., design bases, accident analyses, etc.), later licensees, especially those receiving their operating licenses after 1980, were required to address significantly more topics and do so in significantly greater detail than earlier licensees. Some plants were licensed with FSARs consisting of just a few volumes. Later FSARs grew to be 20-30 volumes and, as acknowledged in draft NUREG-1606, "might have more detail in certain respects than was absolutely necessary for the staff's review."

UFSARs have generally not grown much beyond the size of the original FSAR. This is consistent with the FSAR update rule which did not require that updates be of greater detail than the original FSAR.

Recent inspections by the NRC and licensees have identified numerous discrepancies between UFSAR descriptions and the actual plant configuration and operation. These

findings have raised questions about possible noncompliance with 10 CFR 50.71(e). The industry has developed this guidance in recognition of the importance of the UFSAR, the need to comply with 10 CFR 50.71(e) update requirements, and the need for UFSARs to be consistent with the plant configuration and operation. This guidance is intended to assist licensees in conducting ongoing FSAR reviews and provide a basis for consistent future implementation of the FSAR update rule.

Implementation

In conducting ongoing FSAR reviews, the first priority of licensees should be on assuring the accuracy of design bases and other safety significant information. It is expected that NRC inspection and enforcement of UFSAR compliance will be similarly focused on safety significant information.

Scope of UFSAR Updates

This section provides guidance on the scope of required UFSAR updates. Table 1 identifies the six substantive update requirements of 10 CFR 50.71(e) and provides corresponding guidance for meeting each requirement. The full text of 10 CFR 50.71(e) is provided in Appendix A. Examples illustrating the guidance are provided in Appendices B-F.

Appendix B - examples of UFSAR updates to reflect new or amended regulations

Appendix C - examples of UFSAR updates to reflect license amendments or changes under § 50.59

Appendix D -examples of license amendments or changes under § 50.59 did not result in an of update to the UFSAR

Appendix E - examples where new generic or plant specific issues resulted in a change to the UFSAR

Appendix F - examples where new generic or plant specific issues did not result in a change to the UFSAR

Table 1

10 CFR 50.71(e) Requirement	Guidance
1. Licensees shall periodically update FSARs "to assure that the information included in the FSAR contains the latest material developed."	• Through the update process, UFSAR information should be maintained accurate and up to date, including changes, additions or deletions to the descriptions, design bases and safety analyses relied upon by the NRC for initial licensing. Both general and specific descriptions should be consistent with the current plant configuration and operation. • Per 10 CFR 71(e)(4), updates are to bring the UFSAR up to date as of a maximum of six months prior to submittal.

10 CFR 50.71(e) Requirement	Guidance
2. FSAR updates "shall contain all the changes necessary to reflect information and analyses submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement since the last updated FSAR."	UFSARs should be updated to reflect plant changes resulting from new or amended regulations, e.g., Appendix R, Station Blackout and ATWS, or plant-specific orders. In response to such new requirements, it may be appropriate to add certain new information to UFSARs consistent with the purpose of the UFSAR to provide a reference document for use in recurring safety analyses. The following types of information may be of potential significance in evaluating future changes under § 50.59 and should be considered for incorporation in the UFSAR: • new design bases as defined in § 50.2 • description of safety function(s) • summary of relevant safety analyses, including specific operational actions credited Note that certain new regulations of a programmatic nature, e.g., the Maintenance and Fitness for Duty Rules, do not result in information that is significant to § 50.59 evaluations. Accordingly, it is not necessary to address licensee actions responding to regulations of this type in UFSARs. See Appendix B for examples.

Table 1 (continued)

10 CFR 50.71(e) Requirement	Guidance
3. The updated FSAR shall be revised to include the effects of all changes made in the facility or procedures as described in the FSAR.	• If UFSAR information is affected by a change to the plant or its procedures, the UFSAR should be changed to reflect the change to the plant or procedures. • If the UFSAR is unaffected by a change, e.g., because the change involved a level of detail beyond the existing UFSAR level of detail for affected equipment or procedures described, no change to the UFSAR is required See Appendices C&D for examples.

10 CFR 50.71(e) Requirement	Guidance
4. The updated FSAR shall be revised to include the effects of all safety evaluations performed by the licensee either in support of requested license amendments or in support of conclusions that changes did not involve an unreviewed safety question.	• If UFSAR information is affected by safety evaluations performed in support of license amendments or § 50.59 changes, e.g., due to use of new assumptions or analyses, the UFSAR should be updated to reflect the effects of the safety evaluation. • If the UFSAR is unaffected by a safety evaluation, e.g., for a change to a procedure not described in the UFSAR, no change to the UFSAR is required. See Appendices C & D for examples.

Table 1 (continued)

10 CFR 50.71(e) Requirement	Guidance

5. The updated FSAR shall be revised to include the effects of all analyses of new safety issues performed by or on behalf of the licensee at Commission request.	• If licensee analysis or action in response to a new plant-specific or generic issue affects information contained in the UFSAR, the UFSAR should be updated to address the issue and reflect the result of the analysis or action.
	
	• To the extent UFSARs are supplemented to reflect actions taken in response to a new issue, the new information added to the UFSAR should be consistent with the purpose of the UFSAR to provide a reference document for use in recurring safety analyses. The following types of information may be of potential significance in evaluating future changes under § 50.59 and should be considered for incorporation in the UFSAR:
	  • new design bases as defined in § 50.2
	  • description of safety function(s)
	  • summary of relevant safety analyses, including specific operational actions credited
	• If a new issue does not require action by a particular licensee or if the licensee analysis or action does not affect information described in the UFSAR, then no change to the UFSAR is required.
	
	See Appendices E & F for examples.

10 CFR 50.71(e) Requirement	Guidance
6. The updated information shall be appropriately located within the FSAR.	• Whenever possible, UFSAR changes should be incorporated in the existing text, tables or figures to maximize clarity and ensure that all the needed corrections are made. If the subject of the evaluation or analysis has not been previously addressed in the UFSAR, the new information may be appropriately located in a new section or an appendix of the UFSAR. • Information that is appropriate to include in the UFSAR and is part of a separate controlling document may be incorporated in the UFSAR by appropriate reference to that information. Later updates should reference the current revision of the controlling document.

Level of Detail for UFSAR Updates

The Statements of Consideration for the FSAR update rule state, "the level of detail to be maintained in the FSAR should be at least the same as originally provided." The practical interpretation of this has been that the level of detail of the original FSAR dictates the appropriate level of detail for updates. In determining the level of detail for UFSAR updates, licensees may refer to the revision of Regulatory Guide 1.70 or predecessor guidance appropriate for their plant and similarly to NUREG-0800, the Standard Review Plan.

Updated UFSAR information should reflect a level of detail consistent with that which it replaces or modifies. If a change is to an SSC, program or procedure not mentioned in the UFSAR or involves a level of detail beyond that currently described in the UFSAR, then no update to the UFSAR is necessary to reflect the change.

Where new information is being added to the UFSAR, e.g., to include new § 50.2 design bases or safety functions, licensees should provide a level of detail consistent with related or similar information existing in the UFSAR. Licensees may provide additional detail as appropriate based on the technical complexity of the information, the amount of information of potential significance to future § 50.59 safety evaluations, or to address a specific regulatory concern.

Format of UFSAR Updates

NRC regulations do not address the format of the FSAR or the updates required by 10 CFR 50.71(e). However, consistent with the Statements of Consideration for the FSAR update rule, the format for UFSAR updates is expected to be consistent with that of the original FSAR. Licensees may adopt the format of Regulatory Guide 1.70 at their own discretion.

Temporary Changes

The UFSAR is intended to be consistent with the current plant configuration and operation. This notwithstanding, at any given time there may be a number of temporary plant and/or procedure changes in effect to support corrective action, maintenance or other plant activity. Temporary changes in support of plant operations are intended to be restored to the normal plant condition, e.g., consistent with the UFSAR, in a timely manner. For temporary conditions involving safety-related equipment, timely restoration is required by 10 CFR 50, Appendix B. Per Generic Letter 91-18, Revision 1, temporary conditions subject to Appendix B that exist longer that the next refueling outage are to be explicitly justified as part of tracking documentation.

Temporary changes should not be reflected in UFSAR updates. Because UFSAR information lags the current plant status by 18-24 months, the UFSAR is a inefficient

vehicle for documenting conditions of a temporary nature. Moreover, temporary changes, by their nature, do not alter the design bases of the plant. Temporary changes are administratively controlled separately from the UFSAR, and the current status of each is tracked to completion. Tracking documentation ensures that plant staff can determine the current plant status to support ongoing plant operations, including safety evaluations performed under 10 CFR 50.59. For temporary changes subject to 10 CFR 50.59, safety evaluations are performed and submitted to the NRC in accordance with § 50.59(b). For the reasons discussed above, it is unnecessary and inappropriate for UFSARs to duplicate the licensee's tracking and reporting of temporary changes.

If corrective action or other work associated with a temporary modification results in a permanent change to the plant as described in the UFSAR, then the UFSAR should be updated to reflect the change.

Obsolete and Less Meaningful UFSAR Information

In the SRM responding to SECY-97-036 (Millstone Lessons Learned-Part 2), the Commission stated that implementation of 10 CFR 50.71(e) should "allow obsolete and less meaningful information and commitments to be readily removed from the FSAR." Removing such material will improve the focus of UFSARs on significant descriptive, design bases, and analytical information that is useful and relevant to support current and future plant operational and regulatory activities.

Discussed below are three categories of obsolete and less meaningful information:

1. Obsolete and redundant information
2. Historical material
3. Other less meaningful UFSAR information

Removal of UFSAR material must be administratively controlled. Deleted material and the basis for its deletion from the UFSAR must be retained by licensees. Appendix G provides examples of information that may be appropriately deleted from the UFSARs.

1. Obsolete and Redundant Information

Deletion of obsolete or redundant information is consistent with the purpose of the UFSAR to provide a reference document for use in recurring safety analyses (e.g., § 50.59 safety evaluations) and the intent that UFSARs focus on information that has continuing safety or regulatory significance.

The following types of obsolete or redundant information may be deleted from UFSARs:

- Information relevant to SSCs, programs, procedures or organizations that are no longer in use or no longer exist (e.g., Construction Quality Assurance Program).

- Information that is redundant to that found elsewhere in the UFSAR.

  Note: When deleting duplicate information from one or more locations, it may be appropriate to provide a reference to the UFSAR section where the information is retained.

- Information that is duplicative to that contained in a controlling program document or technical report such as the Emergency Plan, Offsite Dose Calculation Manual, Security Plan, Quality Assurance Plan, and Environmental Protection Plan.

  Note: It may be appropriate to replace the deleted material with a brief summary of key information and/or specific reference to the information in the controlling document. Information referenced by UFSAR is considered part of the UFSAR.

2. Historical Material

Historical information is information that was accurate and relevant at the time the plant was originally licensed, but which is no longer useful or relevant to current and future operational or regulatory activities. This includes information concerning initial plant licensing and start-up, as well as information on natural and certain man-made phenomena outside the control of the licensee. Such historical information is not intended or expected to be updated for the life of the plant; is not affected by changes to the plant or its operation, and even if updated, would not affect the plant design bases. Accordingly, it is appropriate to remove historical information from the UFSAR, thus excluding it from the material that is actively maintained by licensees per 10 CFR 50.71(e), is within the scope of 10 CFR 50.59, and is subject to NRC inspection.

The following are examples of information appropriate for historical designation:

- Pre-service inspections
- Preoperational tests
- Start-up tests
- Comparative plant data provided to support original plant licensing
- Lists of references, figures and submittals relevant only to the original licensing proceeding
- Description of original factory testing of plant equipment, e.g., emergency diesel generators
- Site characteristics (typically in UFSAR Chapter 2) such as geography, meteorology, hydrology, geology, and seismology (all natural phenomena of primary relevance to original plant siting)

Licensees may remove historical information as described above by one of the following, or equivalent, methods:

- Historical information may be "retired in place" within the UFSAR by designating it via clear annotation as historical material, retained for information only.
- Historical information may be relocated to a specially designated appendix of the UFSAR or other central location.
- Historical information may be removed from the UFSAR, and the original FSAR may be relied upon for historical reference.

3. Other Less Meaningful UFSAR Information

The principal continuing purposes of the UFSAR are to provide an accurate, up-to-date description the plant and its operation and to provide a reference document for recurring safety analyses, including 10 CFR 50.59 safety evaluations. Detailed information that is of negligible value relative to these purposes is appropriate to remove from UFSARs. Removal of excessively detailed information will improve the focus of UFSARs on significant descriptive, design bases, and analytical information that is relevant and useful to support current and future plant operational and regulatory activities.

The following types of excessively detailed information are appropriate to delete from UFSARs, except as indicated by applicable regulatory guidance or NRC Safety Evaluation Reports:

- Descriptive information that is not important to the UFSAR user's understanding of the plant's configuration and operation from either a general or more specific functional perspective.

- Detailed design information that is not important to the description of the facility, or presentation of its safety analysis and design bases as defined in § 50.2, e.g., component details such as specific motor horsepower ratings that merely implement the stated design basis (such as "sufficient horsepower to open an MOV under differential pressure conditions" determined using a specified methodology).

- Detailed design information that, if changed during the life of the plant, would have no impact on the ability of plant systems, structures and components described in the UFSAR to perform their design bases function(s).

- Drawing details beyond those necessary to support the textual discussion, e.g., instruments not described in UFSAR text, pipe line numbers, vents and drains, etc. (In most cases, P&IDs may be replaced with simplified sketches that complement the text.)

- Detailed analytical information, e.g., detailed calculations, that is not important to the UFSAR user's understanding of the safety analysis methodology, inputs assumptions, and results, and/or compliance with relevant regulatory and industry standards.

Removal of excessive detail from UFSARs does not diminish the effective scope of implementation of the 10 CFR 50.59 change process. The industry's historically broad interpretation of the rule language and industrywide implementation of NEI 96-07, "Guidelines for 10 CFR 50.59 Safety Evaluations," ensures that proposed changes will continue to be thoroughly evaluated and unreviewed safety questions will continue to be consistently and conservatively identified.

Appendix A

10 CFR 50.71(e)

Each person licensed to operate a nuclear power reactor pursuant to the provisions of § 50.21 or § 50.22 of this part shall update periodically, as provided in paragraphs (e)(3) and (4) of this section, the final safety analysis report (FSAR) originally submitted as part of the application for the operating license, to assure that the information included in the FSAR contains the latest material developed. This submittal shall contain all the changes necessary to reflect information and analyses submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement since the submission of the original FSAR or, as appropriate, the last updated FSAR. The updated FSAR shall be revised to include the effects of: all changes made in the facility or procedures as described in the FSAR; all safety evaluations performed by the licensee either in support of requested license amendments or in support of conclusions that changes did not involve an unreviewed safety question; and all analyses of new safety issues performed by or on behalf of the licensee at Commission request. The updated information shall be appropriately located within the FSAR.

(1) The licensee shall submit revisions containing updated information to the Commission, as specified in [section] 50.4, on a replacement-page basis that is accompanied by a list which identifies the current pages of the FSAR following page replacement.

(2) The submittal shall include (i) a certification by a duly authorized officer of the licensee that either the information accurately presents changes made since the previous submittal, necessary to reflect information and analyses submitted to the Commission or prepared pursuant to Commission requirement, or that no such changes were made; and (ii) an identification of changes made under the provisions of § 50.59 but not previously submitted to the Commission.

(3) (i) A revision of the original FSAR containing those original pages that are still applicable plus new replacement pages shall be filed within 24 months of either July 22, 1980, or the date of issuance of the operating license, whichever is later, and shall bring the FSAR up to date as of a maximum of 6 months prior to the date of filing the revision.

(ii) Not less than 15 days before §50.71(e) becomes effective, the Director of the Office of Nuclear Reactor Regulation shall notify by letter the licensees of those nuclear power plants initially subject to the NRC's systematic evaluation program that they need not comply with the provisions of this section while the program is being conducted at their plant. The Director of the Office of Nuclear Reactor Regulation will notify by letter the licensee of each nuclear power plant being evaluated when the systematic evaluation program has been completed. Within 24 months after receipt of this notification, the licensee shall file a complete FSAR which is up to date as of a maximum of 6 months prior to the date of filing the revision.

(4) Subsequent revisions must be filed annually or 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months. The revisions must reflect all changes up to a maximum of 6 months prior to the date of filling. For nuclear power reactor facilities that have submitted the certifications required by §50.82(a)(1), subsequent revisions must be filed every 24 months.

(5) Each replacement page shall include both a change indicator for the area changed, e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed, and a page change identification (date of change or change number or both).

(6) The updated FSAR shall be retained by the licensee until the Commission terminates their license.

Appendix B

Examples of UFSAR updates to reflect new or amended regulations:

1. A UFSAR change occurred as a result of a change to the regulations (10 CFR 50. 63) and regulatory guidance (RG 1.155). In 1988, the NRC amended its regulations to include the requirement that each light-water cooled nuclear power plant be able to withstand and recover from a Station Blackout (SBO) of a specific duration without sustaining reactor damage. In addition, the NRC issued RG 1.155 which describes means acceptable to the NRC staff for meeting the requirements in 10 CFR 50.63. An alternate AC (AAC) diesel generator was installed to provide emergency power in the event of SBO, and the UFSAR was later updated as follows: A new section (9.5.11) was added describing the AAC diesel generator. Existing sections and figures were modified to describe its supporting systems and identify mechanical and electrical connections to the station. Chapter 1 was revised to reflect the SBO building in the general description of the plant.

2. 10 CFR 50.62 (the ATWS rule) required a new mitigation system be installed that was specific to the type of plant (Westinghouse, Combustion Engineering, etc.). The licensee added new information to the UFSAR based on the evaluation provided by the plant designer. The information was added to the UFSAR section on design basis accidents in a level of detail similar to that of other accident analyses.

3. As a result of adopting the new 10 CFR Part 20, numerous changes to the UFSAR were required to create/modify the definitions of terms such as restricted area, controlled area, effluent concentration, derived air concentration, high radiation area, and very high radiation area.

4. The NRC approved a license amendment to follow the performance-based option for containment leakage testing (10 CFR 50, Appendix J, Option B). The UFSAR was revised to replace discussions about the previous test frequency with references to Option B of the revised Appendix J.

Appendix C

Examples of UFSAR updates to reflect license amendments or changes under 10 CFR 50.59:

1. The containment humidity monitoring instrumentation was abandoned in place as part of a design change performed under 10 CFR 50.59. The UFSAR was revised to reflect the plant modification.

2. A proposed technical specifications change taking credit for the Alternate AC diesel generator was sent to the NRC in 1995. That TS change, when approved by the NRC, will result in a change to the UFSAR regarding the use of the AAC diesel generator to reduce the risk associated with performing preventative maintenance on the emergency diesel generators during any mode of operation.

3. A plant procedure was revised under 10 CFR 50.59 to allow use of an alternate reactor coolant system vacuum venting system and process instead of normal fill and vent process previously described in the UFSAR. The procedure change also provides an alternate method of drawing a steam bubble in the pressurizer rather than as described in the UFSAR. The UFSAR update included descriptions of system operation to prevent air inleakage, vent path, location of vacuum connection including approximate vacuum established, and general steps in raising RCS level concluding with establishment of steam bubble. This information was an equivalent level of detail to that previously contained in the UFSAR.

4. A licensee received a license amendment that deleted chlorine instrumentation from the Technical Specifications because chlorine gas intrusion was no longer a credible event. The UFSAR was subsequently changed to delete references to chlorine gas intrusion.

5. The use of ZIRLO clad fuel was approved for a licensee through a license amendment. The description of fuel assemblies in the UFSAR was changed to reflect that the fuel rods could be clad with Zircaloy or ZIRLO to cover any possible combination of the old and new fuel cladding that could be present in the core during subsequent reloads.

6. Reanalysis and safety evaluation under 10 CFR 50.59 was conducted to only credit "one train" of ESF equipment to achieve safe shutdown after a fire in lieu of previous licensing basis crediting "two" trains of the licensee's three train design. The effect of safety evaluation required updating of the combustible loading table in UFSAR.

Appendix D

Examples of license amendments or changes under 10 CFR 50.59 that did not result in an of update to the UFSAR:

1. A licensee proposed a technical specification change involving surveillance requirements and allowed outage times for the emergency diesel generators. Because the licensee's UFSAR only describes EDG surveillance testing as being in accordance with the manufacturer's recommendations, the TS change involved a level of detail beyond that discussed in the UFSAR. Since no explicit time requirements were discussed, no change to the UFSAR was made.

2. A licensee had a new license condition requiring corrosion testing for laser-welded sleeves in the steam generators. The UFSAR does not provide details on the steam generator plugs or sleeves; it states only that the steam generators may be repaired. Since there is no mention of the types of repair devices, installation, or inspections, it was not appropriate to add this detail about one type of test to the UFSAR. Additionally, Applicable regulatory guidance did not indicate that such a detail should be included.

3. The surveillance interval for selected slave relays was extended from quarterly to every 18 months through a license amendment. The UFSAR was not changed because the surveillance interval for the slave relays is not specifically listed in the UFSAR. Also, the change in the surveillance interval did not alter compliance with the testing requirements specified in the IEEE standards to which the licensee is committed in the UFSAR.

4. The procedure that describes diagnostic testing of rising stem motor-operated valves (MOV) was revised under 10 CFR 50.59 to require recording of specific work activities on a checklist. Specifically, recording was required 1) if the springpack was removed and the MOV database was updated to reflect if the springpack was modified, 2) if adjustments were made that affected actuator operation, and 3) that the Local Leak Rate Testing Coordinator was contacted if the MOV's closing characteristics changed as a result of work activities. The UFSAR was not changed because this level of detail does not currently exist in the UFSAR. Also, NUREG-0800 does not specify that such detailed work activities should be described.

5. Non safety-related cooling water pump impellers were changed under 10 CFR 50.59 from carbon steel to stainless steel. The pumps are mentioned in the UFSAR, however, because the impeller material is beyond the level of detail discussed in the UFSAR, the UFSAR was not changed.

Appendix E

Examples where new generic or plant specific issues resulted in a change to the UFSAR:

1. The UFSAR was revised to add more detail on the heavy loads program including the commitments to section 5.1.1 of NUREG-0612. This change to the UFSAR was in advance of the issuance of NRC Bulletin 96-02. NRCB 96-02 requested licensees to conduct a review of plans and capabilities for handling heavy loads. As a result of NRCB 96-02, additional changes to the UFSAR are planned to improve the description of heavy loads and their handling.

2. Because licensee actions related to NRC Bulletin 92-01 (Thermolag issue) affected the Fire Protection Report (Part of the UFSAR by reference), the Fire Protection Report was modified and the UFSAR was changed to reflect the updated reference.

3. NRC Generic Letter 89-009, "ASME Section III Component Replacements," provided guidance for replacing components that were constructed to Section III of the ASME Boiler and Pressure Vessel Code but which are not currently available in full compliance with the stamping and documentation requirements of the code. If licensees choose to use the staff position, they need only indicate such replacements in the UFSAR update and certify their compliance with the guidance of the generic letter. As a result, the UFSAR was updated to add a section to Chapter 3 of the UFSAR that included a brief paragraph regarding the use of NRC Generic Letter 89-009 for ASME component replacements and a Table with a listing of replacement items.

4. For a particular plant, the ultimate heat sink for a design basis seismic event is connected to the safety-related pump bay through a 36" pipe. A non-routine test of this pipe determined that the pipe could not pass the design flow credited in the UFSAR. It was determined that the water in the nonsafety-related intake canal must be relied upon in order to provide adequate time for operator action to manage the cooling water system.

   This represented a change in the plant design bases as defined in 10 CFR 50.2 and discussed in NEI 97-04, Design Basis Program Guidelines. Thus a change was made to the UFSAR to reflect reliance on the nonsafety-related intake canal to support the ultimate heat sink function.

5. NRC Bulletin 88-04, "Potential Safety-Related Pump Loss," requested the evaluation of all safety-related pumps for 1) pump-to-pump interaction during miniflow operation that could result in the dead-heading of one or more of the pumps and 2) the adequacy of the minimum flow bypass lines with respect to damage resulting from operation and testing in the minimum flow mode. An evaluation of the safety injection pump miniflow lines was performed by the safety injection pump supplier in response to NRC Bulletin 88-04. Because this evaluation included hydraulic instability at low flow conditions, not previously addressed, the safety injection pump supplier increased his recommended miniflow rates. In response to the results of this evaluation, the orifices in the safety injection recirculation lines were modified to provide an increased miniflow rate that provided the proper balance between the required safety injection flow rate and the time the pump is expected to be on miniflow. The Bulletin 88-04 concern and the resulting plant change were reflected in the UFSAR.

6. Generic Letter 88-17, "Loss of Decay Heat Removal" requested the identification of Technical Specifications that restrict or limit the safety benefit of actions identified in GL 88-17 and that appropriate TS changes be submitted. The NRC and the industry had recognized the safety benefit in removing the autoclosure interlock circuitry from the Reactor Heat Removal system. The NRC approved TS amendments removing the automatic isolation requirement for the RHR suction valves. Concurrently, a facility change removed the autoclosure feature and the disadvantage of the possibility of an inadvertent valve closure during RHR operation resulting in the loss of decay heat removal capability. The UFSAR was changed to remove the description of the automatic isolation requirements for the RHR suction valves.

7. A licensee has two safety trains of emergency feedwater which are totally independent except for a specific small break LOCA accident condition with a narrow spectrum of break sizes. In order to be able to meet the existing design basis, the licensee has taken an existing valve in the crosstie lines between the two systems, added a motor operator to it, and added a safety function to the valve to open and crosstie the trains. In a future UFSAR update, the licensee will describe this new safety function.

Appendix F

Examples where new generic or plant-specific issues did not result in a change to the UFSAR:

1. The Flow Accelerated Corrosion (FAC) program is an example of a program that was developed in response to a NRC issue but is not discussed in the UFSAR. NRC Bulletin 87-01, "Thinning of Pipe Walls in Nuclear Power Plants," requested information concerning programs for monitoring the thickness of pipe walls in high energy single phase and two phase carbon steel piping systems. NRC Generic Letter 89-09, "Erosion/Corrosion Induced Pipe Wall Thinning," requested assurance that a systematic erosion/corrosion program was implemented for single phase and double phase high energy carbon steel lines. The licensee implemented a piping inspection program which consists of a systemic and formalized erosion/corrosion monitoring program for carbon steel, high energy, secondary piping components. The piping inspection program was developed to provide a standardized method of identifying, inspecting, evaluating, and tracking piping components that are potentially susceptible to erosion/corrosion (single or two phase). This inspection program is implemented procedurally. The UFSAR was not updated to reflect the new piping inspection program.

2. Generic Letter 89-10 provided information on motor-operated valve issues. The licensee developed a new testing program in response to the GL. The program was not described in the UFSAR because the previous MOV testing requirements had not been included. In addition, the applicable regulatory guidance did not indicate that this information should be discussed in UFSARs.

3. NRC Generic Letter 95-07, "Pressure Locking and Thermal Binding of Safety - Related Power-Operated Gate Valves," requested licensees to evaluate valves potentially susceptible to pressure locking or thermal binding and perform analysis or corrective action as necessary to ensure these valves would perform their intended safety functions. This licensee responded by stating the evaluation and analysis were performed using a formal engineering calculation criteria and provided a summary of the conclusions. The generic issue and the results of the evaluation and analysis were not included in a UFSAR update because this level of detail was not previously described in the UFSAR. This licensee typically documents this type of generic issue in engineering documents, reports their completion and considers the results subject to NRC inspection. If the results of the analysis do not impact any analysis conclusions in the UFSAR, the analysis results are not added to the UFSAR.

Appendix G

Examples of information deleted from the UFSAR and the rationale for the deletion.

1. A UFSAR table that describes emergency diesel generator loading requirements includes detailed description of the individual loads on each motor control center that would or could be placed on the bus following a LOCA with a loss of offsite power. This information was taken directly from a design analysis and is too detailed with respect to the purpose of the UFSAR discussion, which is to demonstrate that the EDGs are capable of performing their safety function. The detailed information on individual EDG loads may be deleted the from the UFSAR.

2. A licensee initiated changes to the UFSAR for the second ten-year ISI and IST program plans by making the detail less specific. The UFSAR includes a statement of compliance with the code. The licensee determined that it was not necessary to duplicate the information that was provided in the program plan, which was submitted as part of a Code requirement. This utility notes that the removal from the UFSAR of detailed ISI and IST program information is consistent with the practice whereby many other programs, and therefore, changes to those programs, have never been included in the UFSAR. Also, many programs are not addressed in applicable regulatory guidance.

3. A licensee deleted sections describing an accident that occurs when transitioning from three-loop operation to four loop operation. The Technical Specifications do not allow three-loop operation. The details of the accident were out of date, and, rather than updating the analysis, it was more reasonable to delete the non-credible accident entirely.

4. A licensee is preparing a change package to delete the large list of figures in FSAR Section 1.7 provided to the NRC as part of the original licensing. It is being replaced with a list of current drawings and UFSAR figures. The deleted list is still available in the original FSAR, and a reference to it will also be included in the UFSAR.

5. A licensee deleted a large portion of Section 13.1, Organizational Structure, and 13.3, Emergency Planning, and replaced them with less detailed descriptions and references to the QA Topical Report and Offsite Dose Calculation Manual, respectively. These referenced documents provide the most current information, are generally updated more frequently, and are the controlling documents already submitted to the NRC under different regulations.

6. After determining that deletions were not inconsistent with applicable regulatory guidance, a licensee deleted occasional words or sentences that are irrelevant to the subject of a paragraph, or are duplicated in another section.

7. A licensee is developing a package to delete several paragraphs that address a completed turbine refurbishment program. Completing the program did not affect the design or function of the turbines described in the UFSAR. The historical information is not relevant to current operation, and its deletion is not inconsistent with applicable regulatory guidance.

8. A licensee deleted information under chemical volume and control system regarding reactivity control. The deleted information discussed actions taken in the event of an inoperable boration flowpath. The rationale was that these actions are already described in the Technical Requirements Manual.

9. A licensee deleted information in Chapter 10 of the UFSAR regarding heat balance diagrams. The information was determined to be in excess of that needed to ensure the understanding of the reader or on the basis of the NRC SER, the Standard Review Plan, applicable regulatory guidance, and licensing commitments.

10. The Nuclear Safety Operational Analysis was performed to support the originally submitted technical specifications and was included as an appendix to a UFSAR. The appendix was extensively revised in connection with bringing the plant's technical specifications into alignment with those of other plants of similar vintage. The majority of the current discussion in the appendix concerns how the analysis was performed and is of negligible value to the NRC or plant staff. Therefore it may be deleted from the UFSAR.

11. A licensee replaced the following UFSAR information with reference to the controlling program document:

    - list of instruments required to be operable for fire detection and suppression
    - atmospheric dispersion factors tables
    - summary descriptions of Inservice Inspection requirements