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# NUCLEAR REGULATORY COMMISSION

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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

In the Matter of:

SUBCOMMITTEE ON IMPROVED

LIGHT WATER REACTORS

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UNITED STATES NUCLEAR REGULATORY COMMISSION'S

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

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UNITED STATES NUCLEAR REGULATORY COMMISSION

ADVISORY COMMMITTEE ON REACTOR SAFEGUARDS

In the Matter of:

SUBCOMMITTEE ON IMPROVED LIGHT WATER REACTORS

Tuesday,
May 31, 1988

Room 1046
1717 H Street, N.W.
Washington, D.C. 20555

The above-entitled matter came on for hearing, pursuant to notice, at 1:00 p.m.

BEFORE: MR. CHARLES J. WYLIE
Retired Chief Engineer
Electrical Division
Duke Power Company
Charlotte, North Carolina

ACRS MEMBERS PRESENT:

MR. CARLYLE MICHELSON
Retired Principal Nuclear Engineer
Tennessee Valley Authority
Knoxville, Tennessee
and Retired Director, Office for Analysis and Evaluation of Operational Data
U.S. Nuclear Regulatory Commission
Washington, D.C.

DR. CHESTER P. SIESS
Professor Emeritus of Civil Engineering
University of Illinois
Urbana, Illinois

ACRS COGNIZANT STAFF MEMBER:

Herman Alderman

NRC STAFF PRESENTERS:

Jerry Wilson
Steve Crockett
Marty Malsch
Dino Scaletti

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

CHAIRMAN WYLIE: The meeting will come to order. This is a meeting of the ACRS Subcommittee on the Improved Light Water Reactors. I am Charlie Wylie, Chairman of the ACRS Subcommittee on the Improved Light Water Reactors. The other ACRS members in attendance are Chester Siess, and Carlyle Michelson will join us shortly.

Herman Alderman is the cognizant ACRS staff member present.

The ACRS has been requested to review and comment on the proposed NRC Commission rule on the standardization of nuclear power plants, and that's the purpose of our Subcommittee meeting is in preparation for a recommendation by the ACRS.

The rules for participation in today's meeting have been announced as part of the notice of this meeting that was published in the Federal Register on May 26th, 1988. This meeting is being conducted in accordance with the provisions of the Federal Advisory Committee Act and the government and the Sunshine Act.

We have received no written or oral statements from members of the public. It is requested that each speaker first identify himself or herself and speak with sufficient clarity and volume so that he or she can be readily heard.

The agenda for today's meeting has been organized

along the lines of the content of the draft proposed rule, and I would like to ask the staff as they address these several items that have been raised before particularly in our letter, the ACRS letter of August 12, 1986, on the proposed standardization policy statement, you may want to, we wish that you may want to comment on those at the appropriate place in the presentation.

These refer to the relation of the proposed rule to the implementation of the future plant policies, the safety goal policy, severe accident policies, and advanced reactor policies, the definition of scope contained in the certified, plant certification of standard designs, and what, where the definition of essentially complete is contained, and how we intend to factor in the resolution of the generic issues and the USIs in the certified standard plant design.

I might ask at this time whether other members of the Subcommittee--Dr. Siess, do you have any comment?

DR. SIESS: Yes. There were two things that caught my attention as I went through that thing, and one of them has to do with the statements made in the proposed rule about advanced reactors, and I notice somebody has provided us with a Commission, pre-decisional Commission paper on standardization of advanced reactor designs, which is just a paper, and some part of this pre-decisional thing are consistent with the rule and some parts aren't.

It was, the differentiation between advanced reactor with and without a containment is not covered by the proposed rule and the prototype testing, and it seems to me there is an inconsistency there, and I will have to admit I was rather surprised to see advanced reactors mentioned at all in connection with this standardization policy, and I don't think--we never talked about it before.

I am not saying it is wrong, but there are two things going on that are tending to come together here but whether they are coming together in the right way or not, a rule is a lot--one of them is not even a policy statement, just a staff document.

The other thing that caught my attention, that naturally is what the rule says about ACRS review, and the thing that bothered me a little bit, and I think may bother the Committee, is the statement in the rule that that the OL stage for combined license, there is only a provisional operating license and then there is a real operating license that comes after they have demonstrated by some means the thing has been completed, designed and built and so forth, and where the ACRS review is called for--I have to, yes, it is in 5253. It is the ACRS shall limit its review to issues on which it has not made findings of recommendations in an earlier proceeding.

I'm not sure the ACRS is going to react very well to

that kind of a restriction. To say that it may limit its review to things that is new, it hasn't looked at before is a big help, but to say it shall limit itself, we are talking about a review that may come under the best of circumstances five years after the the combined license was issued and equally likely ten years after, although if it is ten years after, we haven't succeeded very well, but ACRS changes in five years and although I think it would be sort of morally and ethically bound not to change its mind, there might be new circumstances that it ought to look at, and to limit the ACRS review is an interesting concept. I'm sure the Commission has the authority to do that. I suspect strongly that if the old joint committee of the Congress was still the patron saint of the ACRS, they wouldn't agree to it. The ACRS was supposed to be an independent review without any limits imposed on it as far as publication, openness, or whatever, so that thing sort of caught my eye there.

MR. MICHELSON: Chet, I had some somewhat the same reaction to it, but then I studied it more carefully and it is mentioned several places, and finally I concluded that it pertains only to the certified, certification process.

DR. SIESS: Well, no; 5253--

MR. MICHELSON: I was looking on page 17 where it was the hardest for me to buy, and--

DR. SIESS: I think 17 is under subpart B, which is

certification, and I am looking at at page 26, which I think is subpart C.

MR. MICHELSON: Under the combined license.

DR. SIESS: That's subpart B. Probably under subpart C, too. But again, I don't care where it is and even if the ACRS had reviewed and approved something.

MR. MICHELSON: The agreement I thought for certification, once we buy off, ACRS buys off, that's it on a particular issue, on the certification process only. That was my understanding. Correct me if I am wrong.

DR. SIESS: I will admit that makes sense, but suppose something comes up or ACRS review reveals it?

MR. MICHELSON: Then it is a new issue not already brought up.

DR. SIESS: This says shall limit its review.

CHAIRMAN WYLIE: Maybe the staff can tell us what it meant by that.

DR. SIESS: Under subpart C--that was under B. Now the same thing is under subpart C, which is combined licenses. I don't think it appears under early site review. We haven't done anything earlier. But again, it just struck me it is a shall, not a may, and it is clearly a limit.

I agree with Carl that the rulemaking design certification you are going to get stability, you just reopen it any time, but again I think that, I don't know how well it

sits in law.

MR. MICHELSON: Maybe the staff can clarify it for us, what it is supposed to pertain to.

DR. SIESS: Subpart C, it could be different. That's just an item, and the inclusion of advanced reactors here which is another one. My first thought is you are really jumping the gun. Haven't settle all this stuff in the advanced reactors group. I see a difference between the ones with and without containment. It isn't in the 5052. Maybe it shouldn't be.

CHAIRMAN WYLIE: Carl, have you got anything?

MR. MICHELSON: Main comment I had was the same one that was giving Chet some difficulty. I finally satisfied myself it looked all right I thought, but it would be nice to have the assurance of the staff as to what their intention is.

DR. SIESS: There are two other things I could mention.

In our letter, we have commented on definition of what is essentially complete, and asked the staff somewhere to expand on that, and I don't think it has been done here. The question is would there be another document somewhere that defines that? And the use of language in a letter that may or may not have been as clear as it should have, but I think what people were talking about was that the completeness at say the OL stage or the FDA stage, it was not defined simply by the

contents of the FSAR, but by the contents of the FSAR supplemented by the responses to requests for additional information, so in the past the staff has always asked for a lot more detailed information than was in the FSAR.

Now whether that ended up in an amended FSAR, I don't know, but that thought was in the letter. I'm not saying I agree with it, but that was the level of information that was really needed.

Now I think that the staff has some words in here which cover that. It says what would be in the FSAR plus whatever the staff needs to have the assurance, and I suspect that means that there will be rounds of additional questions, and if that's the intent, again, I would like to know it.

CHAIRMAN WYLIE: Maybe they can help us out there.

DR. SIESS: Yes, but now are we talking about a rule? You know, and the rule gets interpreted by lawyers. This one may be sufficiently flexible.

There was one other minor question if I could go through it quickly. Oh, I guess it was not minor, but the question about emergency planning, and getting commitments from local officials. That sounds real nice on paper, but what kind of commitments can local elected officials make that will be binding on their successors? Typically local officials turn over, you know, local government probably has a half life of five years or something like that.

It sort of seems like more of a gesture to say these guys promised but, you know, period. That's a sticky issue as to what you get on emergency planning. Hopefully the early site review and for the combined license, unless that is settled somewhere else out of court, in another court, it is still going to be a sticky issue.

CHAIRMAN WYLIE: Okay. Any other comment? Well, let's move on then and staff--

DR. STESS: I had some questions about hearings and appropriate subject. It might take a lawyer to explain that for us.

MR. WILSON: Good afternoon. I am Jerry Wilson. Before we get into the details of Part 52, I thought the Committee would like an overview of the staff's plans for implementing that revised policy statement on nuclear power plant standardization, and so I called this presentation the road to certification. And as I go through, I think I am going to touch on some of the questions that the members have brought up.

(Slide)

MR. WILSON: Now--

MR. MICHELSON: I assume everything you are going to tell us today is going to apply immediately ABWR, is that correct?

MR. WILSON: I think I am going to even go beyond

the ABWR.

MR. MICHELSON: I really want to make sure that's the one we happen to have in front of us at the immediate moment.

MR. WILSON: That's a good point, and one of the slides I have later on, I am going to show that what we are doing today is scheduled in a manner so that we can meet the ABWR's needs. What I have done is I have identified here all the plants that I know of who expressed any type of an interest in achieving certification, and in order to answer the question which is what does the NRC staff have to do now so that these plants can be certified, I am going to divide this group into two parts, the LER part and the non-LER part.

DR. SIESS: Under 2 with the SBWR, is that small BWR?

MR. WILSON: You can execute a lot of words for S. Small is fine.

DR. SIESS: Is that something GE is doing very recent, isn't it?

MR. WILSON: Yes.

DR. SIESS: AP600, is that the EPRI?

MR. WILSON: This is Westinghouse's advanced passive 600. These are both passive LERs, and I am not sure if the Committee has gotten presentations on these designs.

DR. SIESS: Are they more than a rumor?

MR. WILSON: Yes. I wouldn't care to characterize how much more than a rumor. I wanted to cover the whole spectrum, everything I know about, and show how I will get us to certification for these plants, and then I believe we will have the field covered then.

MR. SCALETTI: Westinghouse has notified us they are planning to certify the AP600. General Electric has not formally indicated to us what their plans are for the SBWR. Later this year where they have conceptual design, the AP 600--

DR. SIESS: Has the ACRS looked at either of those?

MR. SCALETTI: They have made a presentation to the Commission on AP600.

MR. WILSON: I want to start out by focusing on the LERs, and for the LERs, the existing body of regulations covers our licensing needs with the exception of Part 52 which we are going to be talking about today, and that provides procedures for achieving certification. Steve Crockett will present the details of that regulation, and in addition, we believe that it would help the certification process for the LERs if the Commission had a separate severe accident rulemaking prior to the specific certification rulemakings. And I don't, for this presentation, I don't plan to get into the details of the severe accident rulemaking other than say that staff presently has a meeting scheduled for June 9th

which we are going to be meeting with the public to gather information to help us decide if and how we are going to proceed on this rulemaking.

I will just point out that right now, the staff is considering procedural and performance requirements for future plants. Procedural requirements will be taken--in the severe accident policy statement, it calls for demonstration of TMI requirements, demonstration of technical resolution of the USIs, GSIs, and completion of a PRA and a deterministic review. Now it also calls for higher standard of severe accident safety performance for future plant, and we are also thinking of some possible procedural requirements, but that's nothing firm--performance requirements I mean.

DR. SIESS: Okay. Now does that mean you might for future plants think about having different containments or stronger containments or accident management procedures or what?

MR. WILSON: Yes. We are looking into all of those things.

DR. SIESS: You have got that slide labeled certification, but you have got three things on it. By certification you are, are you limiting it to the early permit, the certification and the combined license? In this rule it covers three things.

MR. WILSON: Right. I am going to be talking about

primarily item 2, design certification.

DR. SIESS: Okay, but the rule covers three things, right?

MR. WILSON: Right.

DR. SIESS: The way the rule is written, could they be three separate rules? Three separate issuances? Put them all in 52? There is very little relation between the subparts, is there? It says for certification of the. It is to your advantage to have an early permit for combined license and would be to your advantage to do that, but really any one of these options is open without regard to the other?

MR. WILSON: That is correct.

MR. MICHELSON: Could be.

DR. SIESS: Just been put in 52 because it is new.

CHAIRMAN WYLIE: Except we permit certification of a major portion thereof, whatever that is.

DR. SIESS: But you could still have certification without an early site permit? You could build a certified plant without a combined license?

CHAIRMAN WYLIE: Yes.

DR. SIESS: Don't know why you would, but you could.

MR. WILSON: The maximum benefit to the--

DR. SIESS: Have a full good PSAR.

MR. MICHELSON: Don't need design certification to build a plant. Final design approval--

DR. SIESS: That's right.

MR. MICHELSON: You go the normal route, but you could have combined final design approved. You can get a combined CP OL on non-certified plant. The whole thing works.

DR. SIESS: Now the combined license, have to be a standard plant? You do combined license on just a plant, have early site permit on a custom plant? These are all separate. Taken together, they are, they have a combined license for certified plant at an early previously selected site or that's obviously the ideal.

MR. WILSON: That would give you the maximum benefit.

DR. SIESS: What is the justification for making a new part? That's all right. He is asked to keep tying it back to 50 some way or another. Go ahead.

MR. WILSON: Anyway, my point of this slide is that when we complete these two rulemakings, we feel we would have the complete regulatory base in order to certify a light water reactor.

DR. SIESS: What is the other rulemaking?

MR. WILSON: Severe accident rulemaking for future plants.

DR. SIESS: Okay: That isn't, is that at all in the works?

MR. WILSON: Yes. Stay with me a minute here.

(Slide)

MR. WILSON: Next slide here I want to show, this is our current schedule for Part 52, and--

DR. SIESS: Excuse me. I--not only is that cockeyed, but you are standing just a little bit too close to it.

MR. WILSON: Sorry. Now this schedule shows what I call optimistic schedule for issuing Part 52 for public comments in July of this year, and if as a result of the public comment period there are significant changes, we would go through the process the second time and hope to issue the final rule by the end of the year.

(Slide)

DR. SIESS: You have already had some comment on this, haven't you?

MR. WILSON: Yes. We had a workshop last fall which was on that schedule, and we got comments at that time, and we are hoping that because of--

DR. SIESS: These are the comments that are referenced in the front part of the document?

MR. WILSON: Yes.

DR. SIESS: That was only policy statement?

MR. WILSON: No. That was on, well, partly on the policy statement and partly on the rule. We had a discussion of the rule at that meeting.

DR. SIESS: Was the rule at the workshop essentially the one we are seeing here with advanced reactors in it?

MR. WILSON: Well, we just had a general discussion of it at the meeting, but it was our intent at that time to incorporate advanced reactors I am going to talk about a little later.

Now this is our schedule for the severe accident rulemaking, and you will see on here this is the meeting I talked about we planned to have very soon, and we also plan to have a number of periodic public meetings during this rulemaking so that the LWR currently under review that uses the ABWR will be aware of what we are developing.

DR. SIESS: This again is severe accidents for future reactors?

MR. WILSON: Right.

MR. MICHELSON: Let me ask a background question, which is, which has been asked a number of times in the past and it is time to ask it again, and that is what are we actually certifying when we certify? Are we certifying a particular document as being the description that is agreed to, or certifying a series of documents or what?

You know, certification usually means a kind of listing of something you are certifying. You agree this is what you will do.

MR. MALSCH: The intention, you have an application

certification process in the application, what you are approving, what you are not approving

MR. MICHELSON: What do you certify in the ABWR?

MR. WILSON: We certify the design.

MR. MICHELSON: What is the design? Where? What design?

DR. SIESS: You have a rulemaking hearing to certify that thing, it is obviously going to be related to a document, a document.

MR. MICHELSON: A whole bunch of documents because the document I have in front of me so far for ABWR is hardly a description of ABWR. There will have to be a lot more documents to go with it.

CHAIRMAN WYLIE: I think obviously your question is one that we want to talk about. We are jumping ahead of our presentation.

MR. MICHELSON: They will be certifying a document or a series of identified documents. They won't be certifying some nebulous description.

MR. MALSCH: You will have to have defined reference of all the documents that were considered, and I think the rule itself, the design itself will have to contain the very precise indications of what precisely is being approved, what is left open.

MR. MICHELSON: That flavor doesn't come through to

me when I look at this.

DR. SIESS: Certifying the design, and Carl is saying certifying a design as described or as defined by--and it isn't going to be defined by just something like an FSAR. It may have to have a thousand drawings to define it.

MR. MICHELSON: I couldn't get that out of this rule.

DR. SIESS: Everything at the staff review agreeing to it as part of what--

MR. SCALETTI: You will not have final design drawings at this stage in the process. We will have procurement specifications. That will be part of the process.

DR. SIESS: Now when you issue an FSAR, you are supposed to have design drawings. The staff asks for them, go out asking for that and get back a stack of drawings. Somebody in the staff sits down and traces out circuits and asks questions about them and you won't have that in a design certification?

MR. SCALETTI: Not for references to content.

MR. MICHELSON: It is, maybe it is getting off the track a little bit, but it is directly related to this rulemaking. I couldn't read the rule and figure out what I was going to be certifying.

MR. MALSCH: We will be certifying by rule. Necessary step in the process would be a proposed rule, so it

will be a proposed certification, all form and details published for comment.

MR. MICHELSON: All by itself; now then let me back up one step. What are we approving when we do the final design approval, which there is no rule written yet? What do I do when I get my FDA?

CHAIRMAN WYLIE: Were you going to go through this separately?

MR. WILSON: Yes.

MR. MICHELSON: Okay. You have got the flavor of the question at least.

MR. WILSON: The only purpose of this slide is to show that relationship between these rulemakings, and the schedules for the LERs. Now don't take these as hard dates. These are a crude projections. I want to show the relationship. We are going to finish the rulemakings before we need them for the certifications.

(Slide)

MR. WILSON: Let me switch to the non-LERs. Mr. Siess brought up the question of the relationship between the--

DR. SIESS: Is not LER synonomous with advanced reactor?

MR. WILSON: Yes, or the DOE reactors. Now the situation for the non-LERs is different than the LERs in that

the existing body of regulations does not necessarily apply to these plants, so for each design, we would have to determine which regulations are applicable, which are not, which ones need to be modified, and which regulations would have to be added.

The details of this approach are covered in our paper called the licensing issue for advanced reactors. That is presently under review by the Committee and the Committee is going to be having another meeting on it in your Thursday meeting. I believe that is June 2nd.

And we will get into that at that meeting if you would like. As to how we would proceed for those plants, for certification, I think there is two ways to go, and I have labeled them reactive and proactive.

(Slide)

MR. WILSON: Now in the reactive process, the staff would wait until we received an actual application and then during the review we would determine which requirements would be applicable, make modifications to others, and develop new requirements as necessary. This new body of regulations would then be formalized during the certification rulemaking and would be applicable to that specific design.

Now this approach would minimize the draw on staff resource because we would only work on the applications that we actually received. We would also develop better regs

because we would be working with detailed design information. However, the public involvement in this, that approach would be delayed until the certification rulemaking.

DR. SIESS: Would there be new regulations, new rules, or just the rules that were embodied in the design certification?

MR. WILSON: Well--

DR. SIESS: I am not sure how you said it there.

MR. WILSON: There would be, probably be some new rules, and those rules would be formalized during the certification process rather than a separate rulemaking.

DR. SIESS: Okay.

MR. WILSON: Now the other way which we term the proactive process, we would initiate formal rulemaking for the non-LER designs after completion of the conceptual design reviews which are going on right now, but before the actual applications are submitted. This approach would lead to the staff spending resources for rules that may not be used or may only be used once. However, the approach would provide for early public involvement, greater influence on the designs, and result in a more predictable licensing process.

DR. SIESS: Well, that's an extremely optimistic view of the process, isn't it? Would you say that what we have now with general design criteria and standard review plan is a proactive approach?

MR. WILSON: Yes. The rules are already in place, and they are available to the designer as he designs his plant.

DR. SIESS: But now as I recall the process, even though a plant met all the general design criteria and all the standard review plan, there were still things the staff wanted changed after they saw how they were implemented, what was acceptable. Now that is reactive.

MR. WILSON: Yes. The staff has the ultimate finding of reasonable assurance, and if we felt there was additional information we needed for that, then we asked for it.

DR. SIESS: So 80 percent proactive and 20 percent reactive or vice-versa? I'm not sure which.

MR. WILSON: I won't quibble over that. I will just show this slide again to show that if we used proactive approach, we would propose to do our rulemaking for the advanced reactors prior to the actual submittals of these applications if and when they come in.

Now this proactive approach is the approach that is recommended in our key issues licensing paper that I discussed earlier.

Now the question was brought up as to how the other Commission paper which is entitled standardization for advanced reactors, how that paper relates to Part 52 which we

are reviewing here today. And that's the purpose of this slide.

Part 52 as you see here is to implement the standardization policy statement and as much of our proposed legislation as we can under our current rules, and from that, you will see we came up in the three different parts.

Now the other paper that you have seen before--in fact, the Committee reviewed this paper in February of '87--relates to our advanced reactor policy statement, which is in more detail in the reg 1226, and also implements the standardization policy statement. From there, we derive four issues--scope and detail, options, module plants, and we wanted to speak to the different options of a number of modules that you might certify, And protoype testing.

These four issues are picked up in this section of the rule. Now see you have a copy of that paper, and I want to remind the members that is pre-decisional. The Commission hasn't reviewed that yet.

Now the in the rule, you have a discussion of the type of information we are looking for in terms of scope and detail, and we have, in the paper we have justification for the amount of scope that should be provided and the amount of detail.

DR. SIESS: Everything that is in the paper should end up in the rule?

MR. WILSON: Yes.

MR. MICHELSON: Which document?

DR. SIESS: I said it doesn't now. Am I right? Prototype, the plants with containment and location of prototypes is in the paper. I didn't see it in the rule.

MR. WILSON: Well, you might be right on that. I'm not sure, but I think the rule--I will refer to Steve on--I think what is in the rule doesn't really cover both situations. What we said in the paper, and this is a revision from what you saw earlier, but it is consistent with the other key licensing paper, is that for plants such as the HTGR, don't propose conventional containment. We would require full scale proptotype testing at an isolated site, and I believe that is consistent with what is in the rule.

DR. SIESS: I don't recall it. I recall that that policy being very similar to what is in the 5052, I mean the Part 52. That said that you should have a prototype unless, and there were a list of things you could take as exceptions, and I didn't see, don't recall having a separate prototype requirement for plants with a containment and without.

What you are saying now is that if a plant is different, and you want to build it without a containment, you should first build one with a containment, for safety, demonstrate that you don't need the containment, and then you might be able to build it without a containment?

MR. WILSON: You are not reading the paper correctly. The paper says--

DR. SIESS: I don't see it in 52.

MR. WILSON: The paper says that if you are proposing a design that doesn't have a conventional containment, that you should build a prototype and either test it in an isolated site, or it has another option there for Commission consideration where you might test it at what I would call a typical standard site, but that--

DR. SIESS: With containment, okay, but that to me, that's the first time I have seen that.

MR. WILSON: That's right. That's a recent change by the staff.

DR. SIESS: I am not arguing with it. I am right that that's the first time I have seen it? It is not in 52.

MR. WILSON: Right. What is in 52 is stating that if we don't meet those criteria, you would have to provide a prototype and then during the FDA review we would work out the details of the prototype test, and what we are saying in the paper is giving an indication of where this staff thinks we would go in that.

DR. SIESS: Maybe it doesn't have to be in the rule, but what you do there I think is going to be very important to whether anybody ever develops one of those advanced reactors.

MR. WILSON: That is correct.

DR. SIESS: Building one at Idaho where there is nobody to use the power is going to make the cost of that prototype tremendous.

MR. WILSON: It is our understanding DOE has had some conversations with the utility that services the Idaho area and there has been some discussions about providing power. It is an option they are considering.

DR. SIESS: I mean are we trying to write a letter on that previous paper on the advanced reactor policy? And there is some stuff in here that wasn't in there.

MR. WILSON: That is correct. In--I shouldn't have taken this down, but in SECY, SECY 86-368, that's where we laid out the plan for this, and with the Commission, we stated we would have two Commission papers on the advanced reactors. One is called the key licensing issues, which the Committee is currently reviewing. The other one is the one you have before you which I stated the Committee reviewed in February of '87. They are both now coming up to the Commission, and so that's where I wanted to give you the latest version of that.

DR. SIESS: They are not separate?

MR. WILSON: They are two separate papers, but they are consistent.

DR. SIESS: Addressing the key licensing issues? Does that business I have talked about on prototype apply only to a standard plant?

MR. WILSON: The discussion on prototype testing overlaps between the two papers, in both papers, and they are consistent.

MR. MICHELSON: Clarification--the paper you gave us pre-decisional, is that SECY 88 triple X?

MR. WILSON: That's my, that's the paper.

MR. MICHELSON: I just wanted to be real sure.

MR. WILSON: That's what we meant to be that paper right there.

That's the end of my overview. I think we should move on to Part 52, and we can get into further discussions on the part at that time unless you have any more questions for me. I will turn this over to Steve.

CHAIRMAN WYLIE: Okay. That would be fine. Go ahead.

MR. MICHELSON: Question while we are waiting for the next speaker--Charlie, the standardization policy which was revised 9/15/87, did we review that after it was revised? Did ACRS review that after it was revised?

CHAIRMAN WYLIE: I don't remember, Carl.

MR. MICHELSON: I don't remember for sure, either, but I was thinking that it was before it was revised.

CHAIRMAN WYLIE: We wrote a letter in August of '86.

MR. MICHELSON: We saw the earlier version. Did we ever look at the revised standard policy?

MR. ALDERMAN: I don't believe so.

MR. MICHELSON: We had a lot of comments on the earlier version. Whatever happened to the comments on the earlier version?

MR. ALDERMAN: We sent a letter on it.

DR. SIESS: We got a copy of it with a status report.

MR. ALDERMAN: Got a letter.

DR. SIESS: We have two letters in here. One was the proposed standardization policy. That was August 12, '86. Is that a SECY or--

MR. ALDERMAN: That was a SECY.

MR. MICHELSON: August '86?

DR. SIESS: Yes. Then October '86 we had a comment on NUREG 1225. Did 1225 ever get issued?

MR. WILSON: It was sent to the publisher last week. Excuse me. No. There was never an intent to do 1225. There was originally intent. We decided not do it because we felt the revised policy statement was sufficiently detailed.

DR. SIESS: You decided not to publish it?

MR. WILSON: Right.

MR. MICHELSON: Wasn't 1225 where we were going to define the scope of a standard design and that sort of thing? That still has not been determined.

MR. SCALETTI: We included your comments on 1225

just before the reorganization and turned it over to Research and the paper, it was decided not to publish the paper after that.

MR. MICHELSON: So we don't really--it is still indeterminate?

MR. SCALETTI: I do think the policy statement on the standardization picks up your comment on the bit about what is needed to issue the scope of the plan in that we need what normally is provided in FSAR plus whatever other information the staff usually requires to issue an operating license to do a review.

MR. MICHELSON: Can you get us a copy of that revised revision of 9/15/87?

MR. ALDERMAN: Yes.

MR. MICHELSON: Was that in the package?

MR. ALDERMAN: No.

MR. MICHELSON: Let's get a copy of it.

DR. SIESS: I'm sorry. What are you getting?

MR. MICHELSON: The policy statement that as it was revised 9/15/87, standardization policy. That's the only place where you touched on this then.

MR. SCALETTI: I believe there is something in there. I didn't publish it.

MR. MICHELSON: Can I keep this one?

MR. SCALETTI: Sure.

MR. MICHELSON: Do you want to take it, make copies of it?

DR. SIESS: I notice something very peculiar in this thing, in a few places the use of a language that says any person which. Is that something standard now in NRC, that a person is a which? You got a new editor?

MR. CROCKETT: I am going to have to edit the response.

MR. MALSCH: Under the Atomic Energy Act the which could actually be the approach, including corporations. You are right. It is not the usual English.

CHAIRMAN WYLIE: Okay. Let's go on.

MR. CROCKETT: I am Steve Crockett from OGC. With me is Marty Malsch from the OGC. Together we will discuss Part 52. At certain points we will need Jerry Wilson's help so feel free to direct questions to him.

We appreciate your willingness to look at this package on somewhat short notice. We recognized I think fairly recently that we were not dealing simply with the procedural rule, but that clearly certain points it crossed over into matters of substance; therefore, was not exactly a garden variety lawyer's product.

The rule is meant to implement the policy statement that was issued last fall. It incorporates comments that were received in response to a public workshop held last October on

policy statement, and the draft which you have before you represents the consensus among OGC, Research, and NRR. We are very close to signature. As soon as I can get out an early proofread copy and a copy also which should incorporate some changes that Marty and I will be making on the final provisions.

The attempt here was to transform the proposed, the legislation proposed to Congress in March of '87 into a rule, transform as much of that proposed legislation as we could under our current statutory authority.

The rule that you have in front of you tracks in outline and in purposes the legislation proposed to Congress, but it differs in certain important details.

The aim of the rulemaking package is the same as the aim of the legislation, that is, to reap the benefits, the safety benefits of standardization, and also to introduce some increased stability into the licensing process.

The chief device for accomplishing both of these aims simultaneously is the design certification, and following on that, is the notion of a combined construction permit and conditional operating license. At that point, the design certification bears fruit both in stability of licensing and we hope in safety.

I will mention just briefly the chief differences with the legislative package and we can go into them in more

detail as may seem appropriate as we move through the program this afternoon, but there are five principal differences.

The first is that we have left room for what are called right now advanced reactors, though we have tried to avoid the term in the rulemaking package.

We have been introduced criteria relating to prototypical testing, scope of design, handling of modular designs, and it is in these areas that this procedural rule comes closest to being a substantive rule, and it is in those areas I think we are, you would probably want to most focus

Second, the rule requires redress of sites which have been granted pre-approval, that is, approval, approval ahead of any construction permit, and the model adopted for the redress regulations here is the model of the Clinch River breeder reactor redress. I can discuss that more when I come to this spot on the program dealing with early site permits.

Third difference with the legislation, we are bound right now by statutes, and the way we handle hearings in dealing with early site permits and with construction permits, the hearings are mandatory. The legislation would have made hearings at those stages optional. There would have been opportunity for hearing, but tney would not have been mandatory.

Also we are now bound to offer opportunity for hearing at the conversion of the combined license into an

unconditioned operating license. Under the legislation there would have been a chance I believe to have such hearing after the conversion of the license to a full operating license, but we have no authority to do that now. We can talk more about that later, each of these points later.

Fourth difference between the legislation and the rule is in the area of amendments applied for by holders of the design certification, and variances from the certification applied for by the utility referencing the design certification.

The legislation required that any amendment at the behest of a holder of--the design certification would be applied to all plants, references the design certification, not just plants that referenced it in the future but those which had already referenced it. Similarly, the legislation took a black and white view of variances requested by utilities. Those variances were only to, apply only to the plant requesting the variance.

In the rule, we have taken what we hope is a more discriminating approach. There will be occasion on which the amendment requested by a holder of a design certification will not be backfitted on plants references certification. However, there will be occasions in which the variance requested by a utility will be backfitted on the plant. We can look at that more closely later if you want.

The fifth and final area I want to mention in the area of difference between the legislation and the rulemaking is in the area of the legislation would have charged the costs of review of applications for certifications to the utilities references the certified design. The rule following on a decision made by the Commission over a year ago, will charge the holders of the design certification the costs of review but will do so on a deferred basis.

That pretty much wraps up what I wanted to say by way of preview. And with your permission, I will go on to point out to you what I think are the highlights of the early site permit provisions of the rule.

CHAIRMAN WYLIE: Any questions?

MR. CROCKETT: I think almost all the questions that you have raised so far we can deal with as we go down the list.

CHAIRMAN WYLIE: Proceed.

MR. CROCKETT: I don't intend to outline the rule at this point, but simply to highlight five or six features and perhaps interpret them to some extent.

We have limited the applicants for early site permits to those persons who or which could apply for a construction permit. We are treating the early site permit as if it were in fact a partial construction permit. We do this largely because we believe that we are limited under the

Atomic Energy Act as it is now written to grant early site permits only to people who would have applied for construction permits. Were there legislation in the works, we might ask for a wider power, power to grant early site permits to all kinds of organizations that would never take it upon themselves to apply for a construction permit.

I have already mentioned that we require redress of the site. That requirement is in there largely because once the permittee--the permit gives the power to conduct limited work authorization activities at the site. That's a power simply in the permit. We, therefore, felt that there should be some provision for redress, and we try to model those provisions on the chief features of the Clinch River redress, and those features were that the redress achieve a self-maintaining and environmentally stable site, aesthetically acceptable if not actually aesthetically pleasing, suitable under whatever zoning laws may exist at the time for that site, and completed as much as possible if some alternative use should be found for the site before redress is complete.

That was the, a possibility which emerged in the Clinch River. That was a possibility, that is, an alternative use was going to be found, and the question came up what happened to the redress plan? The plan, under the circumstances, we simply are requiring that it be completed to

the greatest extent possible.

MR. MICHELSON: Question--I have to declare what kind of reactor I am going to put on the site?

MR. CROCKETT: Yes.

MR. MICHELSON: I can't certify a site and decide later whether it is a PWR or a BWR?

MR. CROCKETT: You have to say the design parameters of the range of designs which can be at that site.

DR. SIESS: Also the type?

MR. CROCKETT: Yes.

MR. MICHELSON: The way I read Section 5217 on page 13, it sounded like I could identify the kind of facilities which, for which the site may be used and I could identify, well, I might use them for PWR or a BWR or HTGR so I will give you all three and I will get the site certified for any one of the three.

MR. CROCKETT: If you can do it, I think the intent was to leave that possibility open.

MR. MICHELSON: I don't have to certify it just for one type of reactor? I can identify several and get this--

MR. CROCKETT: The staff may decide that you are trying for too much, but you can try for it.

MR. MALSCH: We want to do an Environmental Impact Statement for the site. Something about--

MR. MICHELSON: Vary a little bit by the reactor

type, but I was wondering whether is possible to get a multiple reactor permit for one site.

MR. SCALETTI: I don't think you have to specify whether it is going to be PWR or BWR up front.

MR. MICHELSON: Yes, it does. It says type and number, type and thermal power level, but the rest of the sentence--the facilities for which the site may be used, then I said well, gee, maybe that means I can--

CHAIRMAN WYLIE: Where are you, Carl?

MR. MICHELSON: Page 13.

DR. SIESS: If it is modular--

MR. SCALETTI: When I read it, I didn't believe you would have to identify PWR or BWR for the site. You may not know that.

MR. MICHELSON: I thought you did have to for sure.

MR. CROCKETT: May have been we have a drafting difficulty here. Our intent was, as Dino puts it, and by putting type here in the third line of this section, we meant whatever types you think the site is suitable for, so we don't mean to limit it to single type.

MR. MICHELSON: That was my only question. Do you really mean--

MR. CROCKETT: Maybe some type or types, some drafting clarification.

DR. SIESS: By type you did mean PWR, BWR, HTGR,

liquid metal? That is what you meant by type?

MR. MICHELSON: I can get the site certified for several different types apparently.

DR. SIESS: The staff would have to figure out which is the worse one in terms of environmental impact.

MR. MICHELSON: Certified for all those, or you might say certify it for PWR, BWR, but not for HTGR. If you asked for the three, you might get two out of three. I just wasn't sure.

MR. CROCKETT: I think some clarification may be helpful.

DR. SIESS: When you get into design certification, and it talks about modular design, you have to describe the various options for configuration of the plant and site.

Is there anything in the site review about a modular design? Would that be part of type? Number?

MR. WILSON: Well--

DR. SIESS: There is a reference under the design certification to the site.

MR. WILSON: I think it would tie in here, once again, page 13, item 1, we call for number, type, and power level for the facility, and so that would limit the number of modules that you would be able to put there.

DR. SIESS: Okay.

MR. MALSCH: I think the thinking is each module

would itself be utilization facility.

DR. SIESS: The thing is when you, if you say modular, you are thinking of small modular where you would normally have more than one. There is only a difference in scale between that and a Palo Verde, which is modular except there were three big ones, and I think there is sort of a thinking here that isn't quite consistent. I don't know. There is--the modular, you have got to talk about the various combinations that you might put there. It seems to me you almost have to do the same kind of thing if you want to put three big ones.

MR. WILSON: The difference between Palo Verde and modular DOE plants is that Palo Verde, each unit was basically independent except for some intake water.

DR. SIESS: Little ones might be, too. You don't know. You are writing rules.

MR. WILSON: The designs we have seen so far--

DR. SIESS: Are you writing rules for the designs you have seen so far, or are you writing rules for the design certification of nuclear power plants?

MR. WILSON: The latter; but the difference is some of these modular designs we have, for example, two reactors to one turbine generator. That is significantly different than what we have seen so far.

DR. SIESS: The difference in detail; you have got a

lot more faith than I have in how they are going to end up, what we are talking about now. Maybe it is better to wait until you get the application to write the rules! No. I think it was trivial. Go ahead.

MR. CROCKETT: Two other matters I wanted to point out in connection with early site limits, we have hoped throughout the rule to get emergency planning issues settled as early as possible. You are quite right that we cannot bind governments even by a document with so solemnous sounding name as certification to behave themselves five years down the road where no person holding office is the same, but we would hope nonetheless that the permit holder would have made, that this, this requirement would bring to the attention of the permit holder and the local and state governments the situation that objections and concerns would be voiced early on and that the strongest possible commitments in the circumstances could be made.

We certainly have no thought that we were binding any of those governments by requiring this certification. By the way, I notice that you can still apply for an early site permit even though you have no certifications. You can make a good faith effort to get them, but if you don't succeed, the Commission will still consider the application.

CHAIRMAN WYLIE: It actually says that here somewhere.

MR. CROCKETT: Yes. That distinction will become very important at the combined license stage.

MR. MICHELSON: What does the licensee do if he has an approved site now? Do you call--it is not a certified. Is it just approved site?

MR. CROCKETT: It is called a pre-approved site.

MR. MICHELSON: Have a pre-approved site which is pre-approved by the previous local government administration some five years ago, then I decide I want to go ahead.

DR. SIESS: They don't approve it.

CHAIRMAN WYLIE: Certify it.

MR. MICHELSON: Portion of the approval process at the time, now I decide I am going to use the site. What process do I go through to make sure that the local government is still on board as far as the approval before I proceed? Where do I step back into this rule and start working?

MR. CROCKETT: If you intend to use it, if you intend to reference the site permit in an application for a combined license, further stage of certification is required at that point. The certification--not only willingness to take part in planning, but also to take part in the exercises and to execute responsibilities under the plan in the event of an emergency. That is in subpart C under combined licenses.

DR. SIESS: What about the B? Suppose I want to use that site for certified site?

MR. CROCKETT: But you would be, if you wanted to use that site, you would be using it under subpart C. You might also have a design, but the certified, the designer doesn't need to do anything about the site.

DR. SIESS: I have got--I am a utility. I have gone out and got a site, early site review. You, NRC has approved it. It will be an early site approval. Now I decide I am going to buy me a General Electric certified plant X, Y, Z and put it there six years later. I have to go back?

MR. CROCKETT: Go back to governments and seek some further commitments, not just take part in planning. It is under subpart C.

MR. MICHELSON: Combined CP.

DR. SIESS: I didn't ask for combined license. I want to built a certified plant there. Can I built a certified plant without a combined license?

MR. CROCKETT: We may need some--

MR. MALSCH: You need--I think you follow the regular construction permit process at that point at which point you have to show compliance with the ordinary emergency planning rules.

DR. SIESS: Then the site review that is made to give early site approval as far as such things as local cooperation on emergency plans, topography, hazards, so forth, are simply to make, assuring that there is reasonable

assurance that ten years later you can get a site approval?

MR. CROCKETT: No. You have gotten, you have got the approval.

DR. SIESS: Not if I have to go back and have it reviewed again I don't have an approval.

MR. CROCKETT: Reviewed by whom?

DR. SIESS: You just said that if I go in there and want to put a plant there seven years after I got my site approval, I now have to meet the requirements for emergency planning, local cooperation, et cetera, et cetera.

MR. SCALETTI: You have to review all portions of the site and the design that you didn't review before. The site would have undergone a certain environmental review.

DR. SIESS: What I reviewed before, I reviewed the topography. I made a 40-year projection wnich is what we do now with the construction permit stage. Maybe it should be 50 years since the review is good for ten years, but that's crystal ball by then. I have gotten the local officials to come up with some sort of a plan, to agree to something, say they will do it. I have done all of those nice things, and NRC has issued me a preliminary site approval, pre-approved, pre-approval of that site.

Now I come in and want to put a plant there, different local government. Population let's say hasn't changed. Seismic value might have gone up to, USGS has been

out working on it. That I assume we have to take into account, but what don't I have to do now because I have had that pre-approval?

MR. CROCKETT: Any issue that has been settled under the site permit or the design certification is settled.

DR. SIESS: Like--

MR. CROCKETT: In the permit proceedings and the certification proceeding, yes.

MR. MALSCH: Between the staff and the applicant if there is no intervention.

DR. SIESS: Okay. Presumably what--give me an example of something that wouldn't be settled, yet the Commission had given an approval.

MR. CROCKETT: Significant new information leading to discovery that system X was rotten to the core.

MR. MALSCH: Unfortunately, building on your example, let's suppose that the local government changed its mind about emergency planning. That might be something you might have to look at again just because you have before you new circumstance that the local government had changed its mind. You might have to look for the state to fill in on emergency planning, to fill in for local.

DR. SIESS: If I go out, get the other site pre-approved, if I am lucky, it will save me time. If there is an new intervention, I am probably not going to save any

time.

MR. MALSCH: No, because even if there is intervention, you will have adjudicated all the contested issues in connection with getting the site permit. That would be the end of it. The intervenor wouldn't be able to re-raise the same issues over again at the construction permit stage. So could the staff.

MR. MICHELSON: Local government.

DR. SIESS: Even the staff thinks the new one--get new hydrographics and that changes the local precipitation by a factor of two. We just went through that on a lot of sites. We got earthquakes.

MR. CROCKETT: Compared to the situation that you face now in coming in on a construction permit, very little is settled. We are coming in on the operating license, very little is settled.

DR. SIESS: It is not that much different than when the Con Edison came in to the ACRS. I don't know. They went to the staff, and they had three sites up and down the Hudson River, and they asked us whether those sites were unacceptable for a plant. I remember we made the finding they were not unacceptable. We have been kidded for that double negative, but we weren't asked whether they were acceptable. We were asked whether they weren't acceptable, and they just wanted to get, you know, is there something you are likely to buy?

MR. CROCKETT: These are not, not unacceptable findings. They are findings of acceptability. Moreover, they are not staff level findings. They are Commission level findings.

DR. SIESS: They are Commission level findings, and they are, that they are acceptable for ten years except if you come in, you might have to go back and look at emergency plans.

MR. CROCKETT: On emergency planning, yes, because you cannot ask an applicant for a permit to give you a full body of plants. You cannot ask a holder of a design certification to give you a full body of plants, but you can ask the person who is going to put plant X at site Y what are the plans.

DR. SIESS: Suppose in the original hearing there was no contention regarding seismicity. The staff would do the seismicity and accepted the plant at some G level. That has to be decided somewhere.

Now they come in to put the plant there. Somebody raises the contention of seismicity. Can they raise that? It wasn't adjudicated before.

MR. MALSCH: Not have made a difference; the same standard for reopening the old issues would apply, whether contested or not contested.

DR. SEISS: Hasn't been adjudicated.

MR. MALSCH: It wouldn't make any difference. They have gotten the staff review. In the absence of a contest, that would have been sufficient to resolve the issue for purposes of getting site permit.

DR. SIESS: Would you say that was resolved?

MR. MALSCH: Yes.

MR. MICHELSON: What happens if you have new earthquake data? You even had an earthquake in the area and now there is a new G value that clearly pertains. How is that fed into the licensing process?

MR. MALSCH: That's the final question.

DR. SIESS: Actually, Carl, the seismic issue is not a good one because the standard plants are going to be designed for.

MR. MICHELSON: So high anyway; the flood issue or something like that would be more likely.

DR. SIESS: And again the staff would do it. Like the local precipitation BLB issue. No one came out with new data and the staff is asking people to look at it.

MR. MICHELSON: How do you treat the new requirements?

MR. CROCKETT: We are still trying to find the exact wording for that. I can tell you in general that we are adopting part of the backfit rule here, namely, the adequate protection backfit, so as long as a certification is in effect

or permit is in effect, there will be no backfits on it except for the sake of adequate protection.

We have had a long discussion with you about the meaning of adequate protection in the past, and I am sure we will again in the future, but in this case, it is meant to be a decision taken without consideration of cost to determine if minimum standards require that some change be made to the certification or to the permit.

Now that is not consistent with the text which you now have. The text you have refers to 5109 which has two kinds of backfits or three maybe. It has beyond adequate protection backfits where cost is a consideration, or may be, and then the adequate protection backfit that I spoke of. We are, rather than conforming to 5109, conform to the standards out in the proposed legislation which is simply adequate protect or compliance.

MR. MICHELSON: Is that clear from this document?

MR. CROCKETT: It is not clear from that document. That's the last drafting change that has to be made.

MR. MALSCH: In your example, let's say it is new hydrological information. The staff has to ask if this is so serious as to raise a question as to whether the plant built without something in addition would have adequate protection, and the answer was no. At that point then the site permit could be reissued, some of the conditions imposed. Otherwise

there would be no backfit simply to include that. And we have made, to be a comparable provision with regard to certified designs, same concept.

MR. CROCKETT: So the sections in your documents labeled finality of X will be rewritten to reflect that legislative backfit?

MR. MICHELSON: When will we see that redraft, or will we?

MR. CROCKETT: I hope by close of business tomorrow I would have it.

MR. MICHELSON: I think if we are going to write a letter, we ought to either write the letter on what we have in front of us or be aware of the agreed to change. It would be easier if we just were aware of the agreed to change.

MR. CROCKETT: You will receive the new copy just as soon as NRR and Research receive it.

DR. SIESS: I just found another problem here. I am making notes here on what this says about advanced reactors. Of course, on the early site reviews it says nothing. Under design certification it says what is in that pre-decisional document plus the, less the part about containment, what we discussed earlier. Under complying with license, it doesn't say anything. So there is nothing you need for advanced reactors for combined license.

Is there going to be some other document that talks

about this prototype testing for advanced reactors some other place in the rule?

MR. MALSCH: It should be the same.

DR. SIESS: 5245 has got the prototype stuff and it is, subpart C says if it is not certified go back to 5247, but that isn't the part that has it.

MR. CROCKETT: The intention, I guess we have gone to the case that we expected, we expected to encounter most frequently, and that is where the advanced reactor is a standardized--

DR. SIESS: And certified.

MR. CROCKETT: Certified design, in which case there is no, nothing to change in subpart C, but you may be speaking to a situation in which somebody comes in with an uncertified advanced reactor but nonetheless would like to license it with a combined license, and in that case we may need to add a section here.

DR. SIESS: I don't see any objection to being realistic when you write rules but you ought to make it fairly explicit that is the assumption.

MR. MALSCH: The two ought to be consistent. There is nowhere the advanced reactor ought to be subject to different criteria.

DR. SIESS: I may be wrong, but I think--the thing that surprised me here was to find advanced reactors in there

so I have been looking. I am not sure they have to be in here.

MR. MALSCH: In fact that's a change, I mean the legislation the Commission has supported in the past was confined to so-called thermal neutron power generation facilities.

DR. SIESS: The advanced reactor issues are so much broader than this that it is almost jumping the gun to put them in here.

MR. MALSCH: In fact we tried to minimize the amount of such things that entered into here because we wanted to keep the rule as far as possible procedural in nature, but we when we got to, for example, describing the contents of applications, had to say at least a little something about it.

DR. SIESS: This says a lot. When you talk with prototypes, that's really not even the content of an application. A prototype ought to be done long before you get an application. That's a policy statement somewhere about by the Commission and we want prototypes under certain cases that were done. Then when you got an application that would all have been settled, and they wouldn't have to have it in here. I still think--I am not sure it belongs in here.

MR. MALSCH: Well--

MR. WILSON: On the other hand, though, right now we are dealing with rules certification, and these plants,

advanced plants, have indicated the desire for certification, and we have that information.

DR. SIESS: They won't apply for certification until after they build the prototype if the Commission tells them not to. The Commission says we are not going to consider advanced reactor design until a prototype has been built and tested, we will tell you what to build and what to test, and you won't even see an application until--

MR. CROCKETT: Under the scheme here--

DR. SIESS: This shouldn't be the place to tell them what they have to do before they apply.

MR. CROCKETT: Under the scheme here, you may in fact see an application for the prototype is built, and the testing requirements will be set out in the final design approval. There would be no certification before a prototype was tested. That's the way it is drafted currently there.

MR. MICHELSON: May be how it is drafted, but it is certainly not very realistic for an advanced reactor.

DR. SIESS: I wouldn't put my money in a design on that basis. I don't think anybody in their right mind is going to.

MR. CROCKETT: Generally you wouldn't buy a design which has not been certified.

DR. SIESS: NRC has got a tough decision to make. Didn't the Fort St. Vrain demonstrate anything? The German

test demonstrate anything? How much demonstration have we had on the gas cooled? The Germans think they have demonstrated everythin ney need to know. Do we have to build a prototype of Fort St. Vrain gas cooled reactor with a containment around it to demonstrate what it will do when Fort St. Vrain will cool down with the line cooling system? There is real issues there on this prototype, and I don't think this is the best place to put them, but that's, I don't think it hurts. This is going to be settled. This isn't going to help settle anything on the prototype advanced reactors.

MR. CROCKETT: Procedural rule cannot settle anything in the advanced reactors except to say that prototypical testing in most cases is going to be required. I thought at least we could probably try that at this point.

DR. SIESS: It says unless.

MR. CROCKETT: There will be a prototype unless certain criteria develop.

DR. SIESS: There is more stuff in here about it. If it has a containment, that is one way to go. Put it out in Idaho, build it in New York with a ntainment, what are you going to do? Mel. .t down or what kind of test do you make to be satisfied as good as it is? There are a whole lot of real good technical and policy issues involved in that prototype, and if they were settled, they wouldn't be any need to put any of that in here.

MR. WILSON: The point here is that we are talking about rule for certification and you could either have a plant that is what we would call mature technology such as the ABWR where you wouldn't require prototype testing, or you could have someone who is considering certification that staff wouldn't judge that to be a mature technology, and we would require prototype testing.

We are saying in the rule here in advance, what they are going to have to do, so those people who are today thinking about developing a design for certification, they will know what they will have to do.

Now the details of what the prototype test is going to be like and where it is going to be held, that stuff we would work out during the review in their approach to certification, and we certainly have that in the FDA reviews. Necessary tests would have to be done before we consider that a mature design that could be certified.

DR. SIESS: Let me ask you something. NRC will entertain an application for certification of reactor design which differs significantly from the reactor designs which have been built? However, certification of such design will be given only after the design has been shown to be sufficiently mature, such design shall be demonstrated by means of an isolated full-sized prototypetype reactor, except now suppose it is the isolated full sized prototype reactor

you are not going to certify that.

MR. WILSON: That is correct.

DR. SIESS: You will certify the next one after that has been done.

MR. WILSON: Prototype test is part of what has to be done in order for them to receive a certification for that design.

DR. SIESS: I don't see where the rule has to tell people in advance what they need to do not to get a license.

MR. WILSON: That's part of the stabilized process is we are letting them know ahead of time.

DR. SIESS: That is the kind of things that belongs in a policy statement instead of kind of stuff that has been going in the policy statements. I'm--enough said. I think it will haunt you.

CHAIRMAN WYLIE: Back on the earlier site permit, I thought I understood you to say and I thought I read in here somewhere but I can't find it where if the applicant takes all reasonable measures in good faith to obtain certification by the local and state government agencies, and he doesn't get that certification, through the Commission could still go forward. Is that spelled out in here.

MR. CROCKETT: Yes.

CHAIRMAN WYLIE: Where?

MR. CROCKETT: It may not be spelled out in the text

of the rule. It is consistent with the emergency planning rule as it now stands, but we may not have pointed out that.

CHAIRMAN WYLIE: I couldn't find it, chet. I mean on page 10 the top of page 10, it speaks to it, and then back on--

DR. SIESS: I am looking at the rule itself.

CHAIRMAN WYLIE: Page 14 of the rule, the top of the page 14 of the rule talks about it.

MR. CROCKETT: The requirement notice is strictly speaking not a requirement for certification. It is a requirement for a good faith effort.

CHAIRMAN WYLIE: I understand that.

MR. CROCKETT: The logical implication of that, if good faith effort is made, we are still in the position.

CHAIRMAN WYLIE: The rule ought to say something about assurance, either referencing to the emergency planning rule or something.

DR. SIESS: On early site approval.

CHAIRMAN WYLIE: Where?

DR. SIESS: 5217, top of page 14, make good faith efforts.

CHAIRMAN WYLIE: Yes.

DR. SIESS: If you get over to--wouldn't be under design certification, would it?

CHAIRMAN WYLIE: It is under subpart A. It has to

be under A.

DR. SIESS: I know, but then you see that's only, that's only getting an early approval.

CHAIRMAN WYLIE: That is all I am after here.

DR. SIESS: I know.

CHAIRMAN WYLIE: Back to the question you asked, that you get a pre, early site approval. Some years later you come slap a plant on there. Do you have to go back and get approval again?

DR. SIESS: I am looking for that, too.

CHAIRMAN WYLIE: I would assume that the answer is no if you got approval the first time.

MR. MALSCH: No, although there is--what would happen, we have discussed before. You actually got to use the site, there was a change in local government's thinking and government has pulled out of certification or pulled out of the original process.

CHAIRMAN WYLIE: Which it is not binding.

MR. MALSCH: No way we thought we could make it binding upon them. Without new information.

CHAIRMAN WYLIE: What is the difference in that and making a best efforts to get local government certification and then not get it?

MR. MALSCH: I don't think.

CHAIRMAN WYLIE: You went through the best effort

originally even though you changed governments.

DR. SIESS: Combined licenses, then you make an application for combined license, that shall contain emergency plans. This is page 32.

CHAIRMAN WYLIE: I understand that. But that, see, that could have been many years later, though.

DR. SIESS: I know. That still has got good faith effort. This is license.

CHAIRMAN WYLIE: I mean, just these words here don't give me a lot of assurance.

MR. CROCKETT: We could point out we are trying to track along the emergency planning rules as it now stands, that local and state cooperation is, under that rule not a requirement. Certain level of preparation is required.

CHAIRMAN WYLIE: That is where I read it.

MR. CROCKETT: And perhaps it can be pointed out at least in the preamble here.

MR. MICHELSON: Pre-approved site means that as far as the NRC is concerned, it is approved, but it may, approval may or may not pertain to local governments.

DR. SIESS: Local governments do not approve sites.

MR. MICHELSON: They certainly entered into the original process.

MR. CROCKETT: We try to get them in the process as early as possible.

CHAIRMAN WYLIE: The word used here is certification by local governments.

DR. SIESS: Certification--they have emergency plans.

CHAIRMAN WYLIE: No.

MR. MICHELSON: Yes, I think it is.

DR. SIESS: Unless you have got to get a zone law, zoning law against a zoning approval--there are lots of approvals you have got to get for sites. You have got to get Corps of Engineer approval on one, the zoning approval, maybe 15 or 20. We are talking about approval for a nuclear plant and local officials here, it is always-

CHAIRMAN WYLIE: You are right.

MR. CROCKETT: Certification is the state's own certifying. It is going to--

CHAIRMAN WYLIE: Participate.

MR. CROCKETT: Calling it.

MR. MICHELSON: You can't get pre-approved, you can't get a pre-approved, pre-state approval of the emergency planning. You can't get that until you decide to build on a site.

MR. CROCKETT: Until we know that site is going to be the home for such and such a plant, of a particular design, I don't think we can have detailed emergency plans.

MR. MICHELSON: Right.

CHAIRMAN WYLIE: How do you get pre-approval then?

MR. MICHELSON: You don't.

MR. CROCKETT: You have a staged, well, by pre-approval do you mean--

CHAIRMAN WYLIE: Early site approval.

MR. CROCKETT: The Commission's approval, the Commission approves everything it can under the--

MR. MICHELSON: That was my original clarification.

CHAIRMAN WYLIE: This is under early site permit, and you talk about emergency planning.

DR. SIESS: It doesn't ask for approval of a plant. It says--

CHAIRMAN WYLIE: I know it doesn't.

DR. SIESS: Agency, which have responsibility to identify those agencies that have responsibility for coping with emergencies, describe the contacts made and document arrangements made with them. Arrangements may be none.

MR. CROCKETT: That's right.

DR. SIESS: Applicant shall make good faith efforts to obtain certifications for responsible local and state governmental agencies that the area surrounding the site is amenable to adequate emergency planning, and that such agencies will participate in developing emergency plans. It doesn't say that they approve any plans or make any plans.

MR. MICHELSON: What does certification mean?

DR. SIESS: We think that this area can be handled and we are willing to work with you.

CHAIRMAN WYLIE: Okay.

MR. MICHELSON: That may even be rescinded later.

MR. CROCKETT: The reason we want to call it a certification rather than a letter from such and such member of the public safety staff of the mayor's office is that we want them to take, take it as a fairly solemn responsibility at that point.

DR. SIESS: It will help.

MR. CROCKETT: Five years down the road if the City Council decides to go back on that somebody can say, you know, somebody can say it was a certification. This was signed by so and so. We didn't just glance down the road.

MR. MICHELSON: Pre-approved site again means pre-approved by the N.C, not by local government?

MR. CROCKETT: Closest we come to saying local government I suppose is in the first part. That is certification that the site is amenable to emergency planning, but even if the local government decided it was not amenable to emergency planning that would still be the NRC's decision.

DR. SIESS: Let's say you go, are trying to get an approved site, and I get a--Suffolks County changed its mind somewhere. Maybe it didn't. Maybe they had the same idea all along. They say no way, no way we can figure out any way to

evacuate or shelter or whatever a three mile zone, et cetera. We don't want that plant there. We don't think you can do it. We are not going to cooperate.

Does NRC still go ahead and issue--

MR. CROCKETT: It will be faced with the situation apparently it will not have not been facing with Shoreham. It will have to decide--

DR. SIESS: Actually I don't think you will have to decide. I think the utility will withdraw it. It will find somebody who wants a plant.

MR. MALSCH: In theory if utility or applicants, the site permit, didn't withdraw, they would evaluate it on the basis of whether a plant would be sufficient, and that may not be realistic, but in theory the option would be there.

DR. SIESS: No utility would ever do it I hope.

CHAIRMAN WYLIE: I guarantee that no utility will ever build on another site without a pre-approved.

DR. SIESS: At least without some indication they are welcome.

CHAIRMAN WYLIE: Well, I just can't see, well--

MR. CROCKETT: We can't tie those under current law.

DR. SIESS: NRC's not going to pre-approve an emergency plan at the site approval point. It doesn't say anything about pre-approving a plant. Doesn't even ask for a plant. All it asks for is assurances they have talked to the

people, that they see no reason a plant can't be developed, and that they will cooperate in making a plant. That's all the NRC is asking for at that stage. And that may be more than you can expect to get an absolute statement on.

CHAIRMAN WYLIE: Well, okay.

DR. SIESS: The objective is great, but push these issues back as early into the system as possible and get them out of the way, as long as they get them out of the way once and for all.

MR. MICHELSON: But they won't be once and for all.

MR. CROCKETT: There is no way we can lock this down under contract law. We can't bind the local governments.

DR. SIESS: Still go to the courts obviously if somebody has got the money to spend. You know, nothing you can do to make it--

CHAIRMAN WYLIE: Okay.

MR. MICHELSON: I bet you won't even get the certification through some local governments, although they may not object. On the other hand, they may be unwilling to commit administration ten, twenty years down the road. I would myself would be reluctant to commit somebody elected 20 years down the road.

MR. CROCKETT: The governments do that. Governments with some sovereignty, local governments have sovereignty do commit themselves.

MR. MICHELSON: Like issue bonds and that sort of thing.

MR. CROCKETT: Or sign treaties.

CHAIRMAN WYLIE: Well, let's go ahead.

DR. SIESS: Local governments declare nuclear free zone.

CHAIRMAN WYLIE: We have got a break coming up.

DR. SIESS: Let's take a break.

CHAIRMAN WYLIE: Okay. Why don't we take a, we have a 15-minute break. Come back more like ten of.

(A brief recess was taken.)

CHAIRMAN WYLIE: Let's resume our meeting. Where were we?

MR. CROCKETT: About to launch into, a little further into certified standard designs. We have been bouncing back and forth so although it looks like we are moving slowly through the schedule, in fact I think we have discussed a good part of what we would have discussed later on.

DR. SIESS: Was making a different cross-schedule; I crossed up with the advanced reactors to see where it was addressed.

MR. CROCKETT: I think we want to come back to some of the discussion in connection with advanced reactors later. I wanted to point out a few things about design certifications

before we talked about any of it in detail.

First, there has always been a provision, well, there is now a provision in Appendix O of Part 50 for design certification. Section 7 of Appendix O, which is only a paragraph long, does provide for a certification of designs. All we are trying to do in subpart B of the rule is articulate that paragraph into a fairly long subpart in which a number of numbers is being taken up.

It is our intention to leave all the various paths to standardization which exist now open, leave them open, including the plant duplication, final design approvals without certification, and in particular, plant replication, and I have included in the package I gave you what I am told is current Commission policy on the replication. So this package closes nothing off.

One of the issues in connection with certification is what legal forum the certification should take. We have drafted the rule to provide by, certification by rule. I believe that's the way Appendix O of Part 50 now speaks. It is certainly within our power to issue rules and regulations as we see fit to protect public health and safety, and if we see fit to issue a rule which certifies a design, we have the authority to do so.

The other option would be to certify by license, and as I noted in the preamble, the industry has shown some

reasonable interest in certification by license. They haven't really thought this through, but their preliminary thinking is that perhaps they own something in a license which they would not own were it embodied in the rule.

MR. MICHELSON: Where is it provided you can do it by license?

MR. CROCKETT: It is not provided anywhere, and that's one of the reasons that we have taken the route by rulemaking here. We know we have the authority to issue a rule. It is not so clear to us that we have the authority to license a design.

MR. MALSCH: The closest you come, under the Atomic Energy Act the Commission did license an important component part of utilization facility by redefining the utilization facility, so it has included the important component part. How far that would go is not very clear. We have never done that, at least not under the domestic licensing area.

The statute also provides that for important component parts we can issue something called general licenses, but they have always been issued--in the past by Commission rules we end up right back where we started from in terms of past practice.

DR. SIESS: Do you have any idea why the Congress has never acted?

MR. MALSCH: Well, certainly the concepts have been

around at least since 1973, '74, maybe even earlier. The early site permit concept has been around since the mid-to late '60s. I think the sense was that there wasn't enough movement behind it, need behind it, too confidential.

DR. SIESS: What is the controversy about it?

MR. MALSCH: Oh, I think it is not so much a controversy over bare concept of early site reviews as design certifications and combined licenses, but all the details about hearing rights, limiting scopes of hearing rights, and then concern over what people might add on to a bill like this. I don't know. In the early days people were worried about funding. Maybe in these days they were worried about other things. Once you start down the road of actually thinking about how we would license nuclear power plants, everyone has got a lot of ideas about the process, and I think the concern was once we start going, there is no way we know where we would end up. As a kind of example, Congressman Moorehead has interest in a bill for combining licensing reform with single administrator concept.

(There was a brief pause in the proceedings.)

MR. CROCKETT: Congress has given the Commission an enormous amount of discretion and room to do what it thought best. For Congress at any point to step in and write another major statute is an awful lot to expect of it, I thi especially, whenever it touches on matters of controversy as

this does, not only on hearing rights, but well, this rule has no effect on hearing rights. Certainly the legislation we proposed would redistribute those rights, but also on matters of finality or issues, backfitting provisions and the like. That would be difficult.

One other general thing about design certification--the usual rulemaking proceeding in the Commission proceeds by notice and comment entirely on paper. Anybody can take part. The burdens of taking part aren't very great. The staff carries a large burden of responding to comments, but it is not the kind of burden that would be on a party in hearing. We have adopted procedures which are more demanding I think of all concerned, but still fall short of full adjudicatory proceedings.

We have adopted the proceedings which have been the kind of proceedings, the degree of formality which has been used a few times in materials proceedings. There is a hearing. People do have to qualify for party status. They do submit testimony under oath. However, as much as possible, the hearing is conducted on the pleadings. There is no automatic right to cross-examination. Rather questions are asked of the parties by the members of the Board. Parties may submit questions to the Board and the Board decides in its discretion whether they should be asked or not and the Board has an opportunity to request the use of full adjudicatory

proceedings, make that request of the Commission.

DR. SIESS: Sounds like the way the ACRS operates.

MR. MALSCH: That is a fair analogy.

DR. SIESS: The Board could ask for a full adjudicatory--

MR. CROCKET: The Commission, yes.

DR. SIESS: If it decides that was in the public interest?

MR. CROCKETT: It would--I can't remember exactly what the language is that we built in now, but we are trying to track the, is it a final rule that we have on informal procedures?

MR. MALSCH: It is a proposed rule.

MR. CROCKETT: Trying to track the proposed rule on informal hearings, and the standards set out in that rule I have tried to incorporate in a paraphrased form here, that is, you have to make a case this is the way the information which is needed in order to decide the issues must be gotten, and shift to full adjudicatory would mean rights of discovery, and rights of cross-examination. I think that would be the two chief differences.

MR. MALSCH: The Commission has held two or three or four materials licensing, contested materials licensing cases using the format of the proposed rules. In one case, the presiding officer asked for permission to conduct full

adjudicatory proceedings and was turned down.

DR. SIESS: Why did he ask for it?

MR. MALSCH: He thought that, that the issues were such that there needed to be more cross-examination by the parties to develop the issues, and the Commission thought that the presiding officer itself hadn't--

DR. SIESS: Was it a one-man Board or was this a technical Board?

MR. MALSCH: It was a one-man Board, with technical advisors.

MR. CROCKETT: We are thinking of three-man board with two technical people. I think we even used the language in here the Atomic Safety Licensing Board in which the, if you will, the majority vote rests with the technical competent people.

DR. SIESS: People are allowed to ask questions?

MR. CROCKETT: Right, not depending on the lawyers to ask the questions.

MR. MALSCH: I think we have even conducted under the proposed materials licensing rules hearings in which the presiding officer was a technically qualified person with legal advisors. I think it has gone both ways.

DR. SIESS: I guess you could get away with that if it is not adjudicatory.

MR. CROCKETT: The chairman of the Atomic and Safety

Licensing Board could be, strictly speaking, does not have to be a lawyer, but he has to be somebody--it hasn't happened, but he has to be somebody qualified in the conduct of the industry.

MR. MALSCH: Actually I think several licensing Board members could probably qualify if the Commission wished to do that.

MR. CROCKETT: And there have been occasions I know from my own experience where the lawyer has had to be absent for one reason or another, and a quorum has still existed, but the quorum has been entirely of the technical component, so in a way it has already happened. .

DR. SIESS: If you have got two lawyers out there arguing, it helps to be--

MR. CROCKETT: It might be worth pointing out at this point that our intention on ACRS review at all points has been that mandatory duplication of review is not required. If you have looked at the issue before, you don't have to look at it again, and we may not have found the appropriate language here, but the other thing to remember here is that the ACRS' review, there is at least a strong presumption that it will be limited in the same way that the Commission's review is limited at some later stage, by the same finality provisions, for instance.

DR. SIESS: I think that the distinction Carl made

between the certified and the combined license case might be valid, that the ACRS probably ought to be committed not to re-review its approval of a design certification.

On the combined license one, that gets closer to CP OL type reviews where frequently at the OL stage you review something that we have already reviewed before.

I think the ACRS has an obligation not to reopen an issue that it agreed on unless there is new evidence and not just because there is new people on the Committee, although that may constitute new evidence, but the word "shall" in there replaced by "may" would put the burden on the ACRS to discipline itself at least for the combined.

Now for the certification, that's a little more complicated I think. Maybe the shall belongs there.

MR. CROCKETT: It is in dealing with certification that the provision first came to be because we noticed that if we didn't put some limiting clause in there, you were going to be looking at the whole application twice, once for FDA review under Appendix O, and then again for the actual certification proceedings.

DR. SIESS: We wouldn't want to have to do, on the other hand, even if it says it shall limit its to, if the ACRS has a strong opinion, nothing is going to keep it from writing a letter about it.

MR. MICHELSON: At one point, I think for the ABWR,

for instance, it discusses operator training and so forth, at some stage of that documentation, I haven't gone all the way through it all yet, but there must be a chapter where operator training is, so forth. It will be a volume on operator qualification, training, et cetera. Having written off on that, at the design certification stage, it is also written off from the CP, combined CP OL?

MR. SCALETTI: That is correct.

MR. MICHELSON: I would think so, but I bet you don't know much about, I mean you are certifying in one case a design. Maybe it is ABWR, but you don't know who is going to be the operator of that ABWR or anything. That ought to be at the CP OL, and that even though we get, we wrote off on Chapter 17 or whatever it is--

MR. SCALETTI: Chapter 13.

MR. MICHELSON: Wrote off on Chapter 13; when we certify the design, we certainly are going to reopen operating questions.

DR. SIESS: I hate to be legalistic, but the ACRS has never signed off by saying that we believe this plant will be operated safely. We have always said that if its buildings, construction is finished, et cetera, et cetera, it can be operated safely. As far as the ACRS approval, it has always been an approval of the design of the plant.

MR. MICHELSON: And not of the operating

organization?

DR. SIESS: Never; we made comments about it, but bottom line is always that plant, reasonable assurance that this can be, plant can be operated safely without undue risk to the health.

MR. MICHELSON: We had looked at the operating arrangement and had concluded that with that arrangement and with this design that it could be operated safely. I never realized that we were excluding the operational aspect.

DR. SIESS: Only the last few years the ACRS ever looked at the operating arrangements. For the first 90 plants that we wrote letters on, I am sure that we didn't even consider plant organization or the training or anything else.

MR. MICHELSON: It is now a part of the design certification process to include the operating arrangement to some extent.

MR. SCALETTI: I don't know what detail they will be going into. I got a feeling there is going to be some part that the training program is going outside of the scope of the ABWR, going to be utility applicant specific, and clearly those will be open.

MR. MICHELSON: Those within the scope are going to be written off as a part of the design certification?

MR. SCALETTI: Whatever is within the scope.

DR. SIESS: If we go back to the air worthiness

certificate as a comparable thing, I am sure the FAA doesn't certify that a Boeing 737, 757 crew will be trained in such and such a way as a condition for that plane.

MR. MICHELSON: I don't know.

DR. SIESS: I think they have to be satisfied that the plane can be flown, and can be flown and it doesn't have any serious defects in control systems and so forth.

MR. MICHELSON: I don't know what we are going to do on say the ABWR yet. When we get to it we will know, but I would be willing to--

DR. SIESS: How can we certify a plant will be operated safely?

MR. MICHELSON: I don't think--I think those were some of your words.

DR. SIESS: Without spelling out just what we looked at in terms of a management system, the training program; the staff can follow that up and know when it is not being--

MR. MICHELSON: That was the crux of my question. How much are we writing off in a certification process from the operating viewpoint and what are we writing off in the combined CP OL part?

DR. SIESS: Guess it never occurred to me. I thought we were certifying the design.

MR. MICHELSON: There is more than design covered by those documents.

DR. SIESS: Do we have to certify anything more?

MR. SCALETTI: Tech specs will be coming in with the ABWR also.

DR. SIESS: We have never looked at tech specs.

MR. MICHELSON: Well, we are in a new regime now. Maybe we didn't, but it is a part of the package.

DR. SIESS: It has always been a part of the package.

MR. MICHELSON: Well, I think it is part of the design certification, and that's what we are going to attest to, and if it is in that package, we have to look at it or maybe we are going to agree we won't and we will write it out in our letter.

DR. SIESS: That is interesting because is the NRC going to certify the tech specs will be a part of the design certification?

MR. SCALETTI: Certain portion of the tech spec.

DR. SIESS: If you want to change it, there has to be rulemaking?

MR. MALSCH: That's right, if we certify it.

DR. SIESS: A certified plant, a change in the tech specs, that volume, requires rulemaking?

MR. MALSCH: If the tech specs are certified, they want to go to that degree of detail.

DR. SIESS: They want certification. They have the

option of getting a design certification or one that includes tech specs?

MR. MALSCH: I think that is up to the staff.

MR. SCALETTI: The intent now is tech specs will be part of the certified design.

DR. SIESS: Right now it is God awful difficult to change the tech specs, requires a licensing amendment. If it is going to require rulemaking, we will never get the damn thing changed.

MR. CROCKETT: That's the idea.

DR. SIESS: I know, but somebody has got to, somebody has got to have awful good tech specs if it is going to last for the next five years without changing it,

MR. CROCKETT: It is the flip side of the backfit rule. Just as we are bound to try to control the changes that we would introduce, they are also bound to control change. That is they would like to.

DR. SIESS: Sometimes NRC wants to change tech specs.

MR. CROCKETT: We just can't. We have got to decide--the idea here is on both sides to decide what you want, and as soon as possible, and not to [illegible]aking changes later.

DR. SIESS: But you find something is wrong with the tech specs.

MR. CROCKETT: Then you have to--

DR. SIESS: They are unsafe.

MR. CROCKETT: Okay.

DR. SIESS: Still takes a rulemaking to change them?

MR. CROCKETT: The Commission could change, well--

MR. MALSCH: You can have--

DR. SIESS: I agree with you. I agree the tech specs need changing, item 16, X, Y, Z is wrong, ought to be fixed. What do I have to do to do it?

MR. MALSCH: I don't think there is any, necessarily a rulemaking has to take any longer than issuing an order for changing tech specs.

DR. SIESS: Okay.

MR. CROCKETT: We certainly intend to leave room for immediately effective action. To what extent that is inconsistent with the notion of rulemaking, I am not sure.

DR. SIESS: One thing, just talking about a license amendment, which is simply a simple action.

MR. MICHELSON: The thrust of my original request was that really Part B is head design, and I think that if the designer--that means a certain part of that plant, hardware, physical arrangement, but does not mean the operators, the maintenance arrangements, the organization, all of that. And that's--but yet I see this stuff showing up in the documents which are going to be design certified.

DR. SIESS: Who is asking for it?

MR. MICHELSON: I am not going to argue who is asking for it. It is showing up in there, identified the chapter. I haven't gone in and read the chapter yet. It may not even be in yet.

MR. SCALETTI: Licensing review basis, it spells out scope, and the criteria that must be satisfied for, to get agreement from NRR that this design can be certified.

DR. SIESS: You expect General Electric to set up a training program that the licensee buys when he buys the plant?

MR. SCALETTI: I can't--I have to look again. I don't know what--

MR. MICHELSON: At least it will be, General Electric will specify the requirements for the training programs under the certification process. I don't want to debate the issue. I just want to try to get a clarification of what is in that certification process. Maybe there is too much in it. Maybe it should be clearly defined as design only, but right now I get the feeling it is goes way beyond or considerably beyond it, and yet your document seems to be addressing the desig aspects under part B.

MR. CROCKETT: At least at one stage we had been thinking of technical specifications. At this point, I am not sure whether it is a requirement or not.

CHAIRMAN WYLIE: Tech specs pertain to, a large degree to design.

MR. MICHELSON: Yes, but there is a lot of operation in specs.

CHAIRMAN WYLIE: You have in the got tech specs the things the designer has to know in order to provide facilities.

DR. SIESS: Design parameters and things of that that are very important.

MR. MICHELSON: Maybe you need a design tech spec and operating.

CHAIRMAN WYLIE: Batteries for so long, and this kind of thing, you know.

MR. MICHELSON: You can see the source of the confusion. The designer, design and operation are Part B and Part C separately, and yet I think the--

MR. CROCKETT: There will be new questions under C. There will still be questions.

DR. SIESS: I think there are going to be some interesting problems when we try to do this. I just hope we have got this thing loose enough that--

MR. CROCKETT: We have tried.

DR. SIES: It's nice to be very specific, but you know it isn't going to work right the first time.

MR. CROCKETT: We have gotten gradually looser in

succeeding drafts.

MR. MICHELSON: Fuzzier.

MR. CROCKETT: Flexible.

DR. SIESS: There has to be room for judgment somewhere within the framework of the regulations. We hired a lot of expensive engineers that need to use judgment. We could go out and hire clerks or lawyers.

MR. CROCKETT: There are limits and lots of room for judgment here. We expect to hear complaints that there is too much.

MR. MICHELSON: Are you going to talk to this question of essentially complete nuclear power facility pretty soon during this discussion?

MR. CROCKETT: Yes. I was wondering how much we could shortcircuit everything from where we are down to item 10? I am through with item 4.

MR. MICHELSON: What are you looking at?

MR. CROCKETT: The agenda item 5, in fact we have discussed everything that I was going to mention at this point about combined licenses, and I am sure we can return to some of those things.

CHAIRMAN WYLIE: Let's go on down to 10.

DR. SIESS: The Commission questions, they can ask any stupid questions they want. Policy doesn't have anything to do with this anyway.

MR. CROCKETT: Doesn't have anything to do with the rule itself. It is going to be in here for public comment, and I suppose we would, we would appreciate whether, any comment on whether replication is still an option.

DR. SIESS: The single sheet that was folded in the middle here somewhere, is that something new?

MR. CROCKETT: No. That is something old and borrowed.

MR. SCALETTI: You have seen it before.

MR. SCALETTI: The only way it shows up there is here is the history and you can consider it if you want; 1979 the standardization policy statement had included a section on replication. That was the only thing in the Federal Register print on replication. There is nothing in Part 10 CFR about replication, although there is about duplication and FDAs and the like.

DR. SIESS: What is replication?

MR. CROCKETT: Taking a plant already built and operating and replicating it.

DR. SIESS: Zion.

MR. SCALETTI: The duplicate.

MR. CROCKETT: The flavor was duplicate, right.

MR. SCALETTI: And the other one was a replicate of Byron, Marble Hill.

MR. CROCKETT: Okay. When the 1987 policy statement

came out, the 1978 policy statement was swept aside. That is when there was nothing in Federal Register print or in rule or anything about replication anymore. It is the single statement in the 1987 policy statement that replication was still an acceptable path to standardization.

We felt then that we needed to put some kind of guidance back into print in the form of policy or otherwise on replication, and what we have stuck in here, that single spaced page is what we understand to be the latest staff position on replication, or at least the latest thing in print. I am not even sure what its ultimate source is.

MR. SCALETTI: It is part of the initial SECY paper that transmitted the first crack at the, revising the 1978 policy statement.

DR. SIESS: Replication does not require rule? Anybody just apply and say I would like to build another one like it?

MR. CROCKETT: Like to duplicate--except there is a time limit. You must notice about in the middle of this single page there is a--

DR. SIESS: Even if it wasn't, you could say no, you can't do it, start over?

MR. CROCKETT: The question is whether we want to follow up the, be consistent with the 1987 policy statement on standardization, and say that replication is still an option

for standardization.

DR. SIESS: It wasn't in one of the appendices?

MR. CROCKETT: No, it is not, surprisingly. Duplication is, but not replication.

DR. SIESS: Just done without.

MR. SCALETTI: It was in the '78 policy statements, all the details of replication and what you had to do.

DR. SIESS: That is still a policy statement.

MR. SCALETTI: It was replaced with the '87 policy statement.

MR. CROCKETT: We need to put out, either to say replication is no longer an option that the Commission will consider, or replication is in here, we haven't given you guidance since 1978, here is a piece of guidance, policy.

DR. SIESS: Do that separate.

MR. CROCKETT: We could do it separate, but since this is following up, in fact this is superseding the policy statement, we thought this would be an appropriate place to stick it.

DR. SIESS: You are not replacing Appendix O or Appendix M. You have got enough in this thing now. You have got things in it already

MR. CROCKETT: Quite a bit.

MR. MICHELSON: Could I give you one comment that I have? We discussed this much earlier, but I would like to

suggest a word change that would relieve my pain at least. On page 15 where we are dealing with only the site, we talk about referral to ACRS. There is no limit on what the ACRS can look at on the--

DR. SIESS: Only safety-related.

MR. MICHELSON: Well, I mean, okay. At any rate, we go on to page 26 then, and at the bottom of the page we are dealing now with the design review, and I would like to change that word design there in the next to last, earlier proceeding on the site which is subject to; in other words, anything we have done on the site now, we don't do again when we get to the design, but that's the only thing I believe. Page 26, second from the bottom sentence, the word "design" should be changed to "site." If we have done it on the--we don't do it. The reason is I am trying to build a parallel structure to page 34. Look at page 34 because that seems to be the rationale you use that you have got there, and the bottom of Section 5287, it says site or design.

MR. CROCKETT: We are not sure why this second sentence is here on 5253 at the bottom of page 26. Perhaps it could be struck entirely.

MR. MICHELSON: If you put the word site in there, there would be no objection to that.

MR. CROCKETT: Overlap?

MR. MICHELSON: If you already decide on the site,

shouldn't be--

MR. CROCKETT: That's right. Should there be any overlap?

MR. MICHELSON: Cases where there is a new site related issue raised by the design that you are looking at?

DR. SIESS: You are right, though.

MR. MICHELSON: There might be.

DR. SIESS: What earlier findings would we have made on the design?

MR. MALSCH: That is why we are suggesting--

MR. MICHELSON: I would prefer to delete the sentence all together.

MR. CROCKETT: I think we would prefer to delete it all together.

MR. MICHELSON: I was just trying to make it palatable. But deletion is even better.

DR. SIESS: On combined license thing.

(There was a brief pause in the proceedings.)

DR. SIESS: I don't see that. If you go to page 34, the 5287, all we are talking about is license.

MR. CROCKETT: The issue you raised before--

DR. SIESS: Now there is where I object to the shall. I think may would be an improvement. You don't have to do a de novo review. We can limit ourselves to those things that are new and different on review. Otherwise, we

will be doing the, sort of the whole thing over.

CHAIRMAN WYLIE: Talking about the last sentence?

DR. SIESS: ACRS shall limit--5287.

MR. MICHELSON: That one didn't give me any pain. I thought that was the exact intent. If we decided during site review or decided during the design review, we don't open up those issues again during the combined CP OL.

MR. CROCKETT: The question is whether the word shall carries our intention which is that the ACRS be bound by the need not and moreover be bound by the same restrictions on its review that the Commission will be at that point.

MR. MICHELSON: Should I understand, but shall is a little hard, but may doesn't tell me anything. I think we should limit our review to new things.

DR. SIESS: Should is a little less--

MR. CROCKETT: A proviso there may be--

MR. MICHELSON: We can do anything we want.

MR. SCALETTI: Just say the policy statement is, says that certified design must be relied upon by the ACRS and the Commission and the staff.

DR. SIESS: Yes.

MR. CROCKETT: Except, of course, in a situation where an adequate protection backfit may be called for. I mean that must, is conditioned by whatever backfit provision goes into it.

DR. SIESS: The ACRS need not address those things on which it has previously made findings or recommendations. That's what, the point you are making here. Me saying it may limit itself to those things on which it has not made previous findings or recommendations is the same as saying yes, but shall says you guys can't do that, and it isn't true because ACRS can write a letter on anything it wants. The Commission cannot--the Commission may send the letter back and say go to hell, but I, or they can ignore it, but there is nothing I think in the law that gives the Commission the authority to tell the ACRS what they can or cannot do, and wasn't much--that's why the ACRS was set up.

MR. MICHELSON: No gag rule, but should would be a perfectly good word. It gets the connotation across that really we should be limiting ourselves to new issues.

DR. SIESS: We should.

MR. MICHELSON: Why don't we change it to should, which I think carries the same thrust?

DR. SIESS: I am not sure the rules like shoulds, like should and shall.

MR. MICHELSON: May is even worse than should.

MR. MALSCH: The ACRS will ordinarily limit its review to issues.

DR. SIESS: Or ACRS need not review issues of which it has made findings or recommendation in earlier proceedings.

MR. MALSCH: I think I like that the best.

DR. SIESS: I don't care.

CHAIRMAN WYLIE: I like that better.

MR. MICHELSON: That's fine.

MR. MALSCH: I kind of like need not.

DR. SIESS: You have got to change the rest of the sentence.

MR. MALSCH: We can fix that.

DR. SIESS: Sort of like the non-mandatory thing we went through.

MR. MICHELSON: That takes care of my problem on the construction. You are going to delete that sentence?

MR. CROCKETT: We are going to delete it.

DR. SIESS: I don't think it would be a real problem.

MR. CROCKETT: We mentioned replication. We are going to--you have no questions about the backfit analysis or the regulatory analysis, do you?

DR. SIESS: Yes.

MR. CROCKETT: Oh.

DR. SIESS: I have been making notes about it

CHAIRMAN WYLIE: What was our advice, advice on the replication? I don't remember we ever got it. Does anybody out there really want to replicate a plant?

MR. CROCKETT: We would put the question the other

way. Do we want anybody to replicate anything out there?

CHAIRMAN WYLIE: If they came along with another South Texas, I am not sure I would object, if somebody wanted to build one like South Texas.

DR. SIESS: That is fairly recent. If they came along with another Dresden I was going to say 2 which has been a fairly successful plant, works pretty good, couldn't build it for what this one cost, but we clearly wouldn't know how to build another Dresden 2, or Yankee, that's that cut off, you know.

MR. CROCKETT: Take a look at what the cutoff point is. I have slightly different pagination, but I think it is roughly in the middle of your page on replication.

DR. SIESS: Following page 30 in the one we have got.

MR. CROCKETT: Further requirement for qualification is that the application for a replicate plant must be submitted within five years of the date of the issuance of the staff SER for the base plant.

DR. SIESS: SER in the OL stage.

MR. CROCKETT: That is one question. Another question is does the five years start counting from some supplement to the SER? And according to the definition that you choose of SER, you have a different collection of plants.

DR. SIESS: Would that let Palo Verde have an out

probably? We had nine plants out there somewhere that haven't got OLs yet.

MR. WILSON: Previously when we did replications as Marble Hill, we used that criteria, it was applied to the main SER the SER that was used to have the ACRS meeting and that started the clock.

DR. SIESS: Not the supplement?

MR. WILSON: That is correct, and so if we stayed with that definition, I don't think there are any plants out there today that could be replicated. I think even the South Texas, its main SER--

DR. SIESS: What about the ones that haven't got licenses? You have got a few out there that have SERs issued.

MR. WILSON: Main SER was issued that the ACRS reviewed it years ago.

DR. SIESS: For which?

MR. WILSON: For any plant that is--let's say Braidwood. I guess we are about to license Braidwood Unit 2 but that main SER for Braidwood--

DR. SIESS: Is that dead yet?

CHAIRMAN WYLIE: No, it is not dead yet.

DR. SIESS: Have they got an SER out?

CHAIRMAN WYLIE: No, I don't think so.

DR. SIESS: A few out there.

MR. WILSON: Okay.

MR. SCALETTI: There is some question also on arbitrary time limit for limiting replication, until he has not been--

DR. SIESS: You know, I can't see that there is any harm in this kind of a replication policy. Whether I put in or not, I think I wait and see what the industry has to, has to say.

MR. CROCKETT: We are putting this out for comment.

DR. SIESS: I don't think any of them interest me.

MR. MICHELSON: Just for the sake of completeness, wasn't it?

MR. CROCKETT: Yes, simply that.

DR. SIESS: What are we going to do with, with it? Include it in the statement of considerations?

CHAIRMAN WYLIE: In the standard planning.

MR. CROCKETT: As proposal for comment.

DR. SIESS: Not in Part 52?

MR. CROCKETT: That's right.

MR. MICHELSON: It is not mentioned in there.

MR. CROCKETT: It would be published, some final version would be published in the Federal Register I guess as policy on plant replication, not as public rule, but I think it belongs here because we have been saying that Part 52 is and option but not the only option, and I think we are obliged then to clarify, at least clarify the remaining options.

namely replication. It would be better that the whole package be in front of people instead of dribble out in separate Federal Register notices.

CHAIRMAN WYLIE: I would be inclined to send it out to get comments on it.

MR. CROCKETT: I think one of the eleven Commission questions we have raised is on replication. I can't recall.

CHAIRMAN WYLIE: Okay.

MR. CROCKETT: At least we have explicitly somewhere in the preamble invited comment on it. I think it is page 2 or 3 of the preamble actually. What do you want to know about backfit? We did agree to answer questions.

DR. SIESS: Really the two significant backfit issues are in the two sections relating to finality.

MR. CROCKETT: The section label backfit analysis in the preamble, and that is item No. 8 on the agenda, concerns application of the backfit rule to Part 52 itself, not the finality provision that is in the draft of 52.

DR. SIESS: He has indicated a separate question. He was talking about the question as to whether the rulemaking itself, this rulemaking, 452 rulemaking, is a backfit.

MR. CROCKETT: In here we have said no, but we felt obliged to raise and answer the question.

DR. SIESS: I will give you a personal opinion. I don't care. I think it is strictly a legal issue. I don't

know who raised it in the first place. The rulemaking calls it a backfit. It seems to me the Commission ought to make any rules it wants. I read your backfit analysis and this is not imposing any--it is not a backfit. It only applies to future reactors.

MR. CROCKETT: It does change life a little bit for one hypothetical group. We are not sure it exists.

DR. SIESS: Who cares about hypothetical groups? Let them sue. If they are a real group, they will sue. If they are a hypothetical, they will never bother--

MR. CROCKETT: The expectations for FDA holders, but we don't think that requiring a backfit--we thought we would acknowledge that there was a change in expectation.

DR. SIESS: FDA holder, that they want, if they want a design certification, how does it change the--

MR. CROCKETT: They have got to go through FDA review again; not done with design certification in mind.

DR. SIESS: They can still get their FDA?

MR. CROCKETT: It doesn't change what it takes to get the FDA. That's the one point we make in this.

DR. SIESS: If somebody before thought they could go on and just apply for a design certification, why would they have thought that?

MR. CROCKETT: That's the way Appendix O is right now. I didn't really quite accurately represent 52. It does

not simply articulate paragraph 7 of the Appendix O which talks about certification by rule making. It does change one ground rule. It says you don't, you can't just go--

DR. SIESS: More complete.

MR. CROCKETT: Go from the FDA to certification; when you come in for the application, come in applying for an FDA, you better say we also want a certification down the road.

DR. SIESS: This is because of the requirements proffering the interfaces and all of that, that is now incorporated in the FDA. Your FDA must indicate those things you are going to do to show that you have met the requirements? That's the new part?

MR. CROCKETT: Yes. The FDA in this case will represent staff signoff on all the things that the Commission will eventually sign off, except in the case of contesting.

MR. MICHELSON: You are use confusing me a lot. Under the old provisions, we would get an FDA. Now what you are saying is that the old FDA is not the same as a new FDA I would get under this rule which would--wait a minute. Just FDA yet. Don't get me into the design. Under this rule I get FDA also if I wish, but it is a different FDA than I got?

MR. CROCKETT: Not--if you wish, you have to get one.

MR MICHELSON: Excuse me?

DR. SIESS: If you don't want a design certification.

MR. CROCKETT: Hang on a second.

MR. MICHELSON: Just at the FDA stage, so there is a new FDA under this rule and it is a little different than the FDA I would have gotten under the previously established process.

DR. SIESS: I don't understand that.

MR. CROCKETT: Could still be used.

MR. MICHELSON: If I use the old FDA I have got to go back.

MR. CROCKETT: People will still be citing FDAs granted before 52 becomes effective. What would happen after 52 goes into effect is that there would be one less use for an FDA than there had been before, and that one less use--correct me, either of you, anybody, if I have got this wrong--that one less use would be that you could not go straight to a design certification with the FDA in hand.

MR. MICHELSON: Once this comes, out I can't use my old FDA to go straight to the design certification.

MR. CROCKETT: The only kind that goes straight to design certification is one which has been granted when the staff has been looking to the design certification from day one, and its review of the application.

MR. SCALETTI: The intent was that you, your FDA

would be directed toward design certification, and therefore you wouldn't put out an FDA that had too many open issues in it or had unresolved concerns that you didn't want to deal with and try to certify, so it would be just for the purpose of having a clean product when you started your design certification process, that clearly the GSAR, FDAs as they exist now do have outstanding open items, things to be resolved prior to getting a license, and so we don't want to see that in the future. We want a clean product.

MR. MICHELSON: Can I bring in GSAR 2 for certification?

MR. SCALETTI: You could. I don't think GE wants to.

MR. MICHELSON: GSAR 2 can be brought in for certification?

MR. SCALETTI: Not according to--

MR. MICHELSON: What do I do to it to get it to--what do I go through? What rule do I go through or process do I go through to get it ready?

MR. SCALETTI: Probably there is documentation in the GSAR file that indicates that they are planning to certify the design, and so I suppose you could go back and look at that. You would have to clear up all the issues that are remaining in the FDA, and I guess Appendix A to the FDA which lists a bunch of things that have to be done.

MR. MICHELSON: You decide that it is ready for certification? Is that what, the process?

MR. SCALETTI: GE would have to go through and resolve all the issues that remained outstanding.

MR. MICHELSON: You say when it is ready for certification, rulemaking?

MR. SCALETTI: Well, we would have to agree it would be ready.

MR. MICHELSON: Under the new rule, you are going to go through and get an FDA and--

MR. SCALETTI: We would have to agree, issue the FDA. Once the staff has issued the FDA, at that time they would agree that this is ready for rulemaking. Wouldn't issue it until then.

DR. SIESS: Isn't there different content to the application if it is going to go to design certification?

MR. SCALETTI: We could conceivably issue, agree to issue final design approval with issues still to be resolved if it wasn't going to be certified.

DR. SIESS: I am talking about the, there are certain things in here that you have to include in your application on how you are going to prove that the thing has interfaces and so forth. Is that required for an FDA or just for a design certification?

MR. SCALETTI: That would be required for design

certification.

DR. SIESS: That means the scope of the FDA documents have to be different if there is going to be a design?

MR. SCALETTI: Have to identify the tests, inspections, et cetera.

DR. SIESS: Take old an FDA cleaning up the outstanding issues, add some things to it, and it would be acceptable? It is a start. A big start.

MR. SCARLETTI: Has a long way to go.

MR. MICHELSON: Can I start with an old FDA and go to a combined CP OL application?

MR. CROCKETT: Yes.

MR. MICHELSON: And at the time of that application, then I tell the staff how I am going to clean up these leftover items?

MR. SCALETTI: GSAR FDA is good for another couple of years I believe. They come for, for a combined license.

MR. MICHELSON: Now if I have got a new FDA, and I didn't clean up all my open items, I can take that, I don't get a final, you are saying I don't get a final design approval unless you say it is ready for certification under this new rule?

MR. SCARLETTI: YES.

DR. SIESS: When I apply for an FDA, you have to

tell them you want it recertified? They tell you what has to go in it?

MR. MICHELSON: Tell them you don't want it certified; you are allowed to do that, too.

DR. SIESS: You are allowed to do that, but they don't change your mind.

MR. MICHELSON: Then you are allowed more open items because you will clean up for the CP OL. I think I understand.

MR. CROCKETT: You end up with a licensed plant using a design with a final approval, but it would not be, would not be a certified--

MR. MICHELSON: Not a candidate for certification under the rulemaking.

MR. CROCKETT: Standardized to the extent that FDAs are a form of standardization, but not to the extent--

MR. MICHELSON: I think I understand.

DR. SIESS: Vender is out trying to sell plants; probably not going to go for FDAs without getting design certification.

MR. MICHELSON: I thought Westinghouse asked for certification.

CHAIRMAN WYLIE: Westinghouse is going for PDA.

MR. MICHELSON: Then FDA, but not necessarily--

MR. SCARLETTI: Westinghouse has indicated their

intent to, once they get the PDA, to proceed for an FDA design certification.

MR. MICHELSON: Why did they go to PDA? Because they are allowed to I guess.

MR. SCALETTI: I guess the state of the design at the time.

DR. SIESS: Westinghouse is going to sell those in Japan, not here.

MR. CROCKETT: I think whether that hypothetical case comes alive depends on whether the utility thinks it needs the finality given by certification.

MR. MICHELSON: I was thinking of GSAR 2.

MR. CROCKETT: Or ready to barrel ahead without such assurances; then it might want to go the FDA route without certification. Contents of applications--we are already on it.

DR. SIESS: I would think a vender would be the one trying to sell the plant, has got a better chance of selling with an FDA.

MR. CROCKETT: But the case raised was could either utility come in and apply for a CP OL citing an FDA?

MR. MICHELSON: Old FDA.

MR. CROCKETT: The answer is yes, if anybody wants to do that under current or near-term future conditions.

CHAIRMAN WYLIE: Where do you say in here that

limits them to having applied, indicating that you want certification?

MR. CROCKETT: I think in the application section. Let's look at 5245 and 5247.

CHAIRMAN WYLIE: I am looking at 5245 and all it says is anybody holding an FDA can do it.

DR. SIESS: The bottom of page 20, application for final design approval, shall state whether the applicant intends to seek certification of the design.

MR. MICHELSON: You are looking at?

DR. SIESS: 5243B.

CHAIRMAN WYLIE: Page 20 he is talking about.

DR. SIESS: 52--

CHAIRMAN WYLIE: That is sort of hidden down there.

MR. CROCKETT: I was looking under filing of applications.

CHAIRMAN WYLIE: That is what I am looking under. It don't say that. It says anybody who holds an FDA can do it.

DR. SIESS: Found the right place.

MR. CROCKETT: That may be something that needs to be moved.

CHAIRMAN WYLIE: That is relationship to.

DR. SIESS: I don't see anything that says it is in relation to anything. It is a flat-out sentence. I think the

sentence, it ought to apply to whatever paragraph it is in, shouldn't it? I'm speaking like a lawyer.

MR. MICHELSON: Referring back to MN and O.

DR. SIESS: That sentence stands by itself.

MR. MICHELSON: As it applies to Part O.

MR. CROCKETT: We are trying to keep the whole, we are, were trying to keep the whole picture in mind in 5243, but the result is we may have left out a piece of the picture when we got to requirements for filing.

DR. SIESS: Certification, application for final design approval shall state whether--to me that's straightforward English language.

CHAIRMAN WYLIE: It is not in the right place.

DR. SIESS: Not anything in the regulations are in the right place. How many places do you find--I couldn't even find the authority for the ACRS.

CHAIRMAN WYLIE: Whole paragraph that addresses application.

MR. CROCKETT: We will have to--

DR. SIESS: I gave up years ago on expecting to find things in the right place.

MR. MICHELSON: When you standardize a design, you are not certifying it. You are just standardizing. That's the FDA kind of state. Is that what with you mean by standardized design, appendix O?

MR. CROCKETT: Standardization includes FDA certification.

MR. MICHELSON: Does it say so in Appendix O?

MR. CROCKETT: We have said somewhere--let's see.

DR. SIESS: You have to make distinction between standardize a design and licensing a standard design. Anybody can standardize a design. Th question is how does the NRC treat it for licensing? The GE could put out one design ten years ago, say this is, this is it, fellow, take it or leave it. Now it is treated for licensing, it is replicative or whatever, the regulations.

MR. SCARLETTI: GE put out the design reference system design. That's one of the--

DR. SIESS: They built them in Dresden before we even knew what the duplicates were, didn't they?

MR. CROCKETT: Page 13 of the preamble says the Commission's existing rules regarding standard designs have found Appendix M, N, and O to Part 50, so in the preamble we establish that the term standardization covers more than just certification.

MR. MICHELSON: Not with the sentence you just read me, it didn't establish that.

MR. CROCKETT: It cites M, N and O to standardization.

MR. MICHELSON: There isn't much doubt of that, but

it doesn't tie it to certification yet.

MR. CROCKETT: No. That's true.

MR. MICHELSON: That's why I asked the question, the sole difference between the two or what? This Appendix O just doesn't talk about certification. It talks about standardization.

MR. SCALETTI: Also talks about certifying the design in Appendix O.

MR. MICHELSON: It does? What section? Paragraph 7, okay. It just says you can take a, you can accept the design by rulemaking if you wish.

MR. CROCKETT: The Commission approves the design by rulemaking. At that point that is not called certification, but that is certification.

MR. MICHELSON: But that is a certification process.

MR. CROCKETT: That is what 52 proceeds for is Commission level approval of the design by way of rulemaking.

CHAIRMAN WYLIE: Let me ask a question. I believe you said that the reason that you didn't want to certify a final design approval that had already been given that was not stated as intended for certification was that there was probably more open issues and things to be resolved under that FDA that would be under certification. Is that the only reason?

MR. SCALETTI: The intent is to keep it up front,

when we come to the ACRS, that you know exactly what is going on, where we are heading, what the staff is doing, and what the applicant is doing and also for the staff to know what the intent of the vender or the applicant is when he files his application, so that we, again we may look at the application in more detail.

CHAIRMAN WYLIE: Why would you look at it in more detail if somebody is going for FDA?

MR. MICHELSON: I thought FDA was also final.

MR. SCALETTI: It is final, but as you are well aware, the GSAR FDA, we have a number of issues that are still to be resolved.

MR. MICHELSON: Would those--

CHAIRMAN WYLIE: Suppose you, suppose GE took the GSAR and said okay, I would like to use that in a certified design. You said oh, no, you can't do that. You have got to resubmit and go through the whole process again. It seems like to me there ought to be a road by which they can clean up the act and get certification.

MR. SCALETTI: As I mentioned before, there is probably indication in the GSAR record that, the transmittal letters, that GE has so indicated they would go to rulemaking on the design. Clearly a lot of the GSAR FDA would have to be cleaned up to do it.

I am not saying that they couldn't do it. I am

saying that there is a whole bunch of issues. Not a whole bunch--there is probably ten issues, fifteen issues that have to be resolved before you could certify the GSAR design or before we would feel it was sufficient for certification. GE does not plan on doing that, though, as far as my understanding.

CHAIRMAN WYLIE: That may be just academic.

MR. MICHELSON: I guess it is. It is just a question of what we call these things. They are both FDAs, but one is a little more finished FDA than the other, although both of them are final except for open items. The old FDA, you had to clean up the open items before it was really final, final except for those items.

Now you are saying we don't like that many open items when we are doing a certification I think is all you are saying.

MR. SCALETTI: GSAR FDA we have indicated certain things had to be done prior to issuing a CP on this license, on this reference, to an applicant that referenced this final design approval. And you would find that or as much of that or I don't know to what degree you end up with it, but discourage that if FDA was going to certification.

MR. MICHELSON: Wasn't ready for certification.

CHAIRMAN WYLIE: Where are we?

MR. CROCKETT: May not be anybody who wants to go

that route. There isn't right now.

MR. WILSON: That's right.

MR. CROCKETT: We are on 10. We have been on 10 sort of half the time all afternoon.

MR. MICHELSON: However, are we going to now talk about essentially complete?

MR. CROCKETT: And scope of design and things like that, and I will, the lawyers will have to defer to people who really know something about this quite frequently, and of course, in this discussion--just a second. We are really dealing with two sections at this point--5245, which is headed up filing of applications, and 5247 on content of applications, and under the first one, filing, we have at least two important issues here.

First is the willingness to accept what we now call advanced designs but which the rule calls by a more general phrase, designs which differ significantly from those which have been built and operated. We were trying for a phrase that would not be tied to 1988 or early 1989, so that we wouldn't have to go back and revise the rule at some, just to remove terminology at some later point. I am sure we will have to revise it at some later point, but not for the sake of terms.

Here you find on page 22 the requirements in connection with full sized prototype. In fact we have

discussed that already. You may want to come back to it. We have not discussed, however, the criteria relating to scope of design. We have left open the possibility that we would have a design of less than a complete plant and we have tried to state in a single phrase or a single sentence the condition on which we would accept such an amplification, namely, that everything essential to the safe operation of the plant would be part of the design, and that the balance of plant could be left outside of the scope of design, and I think that that puts the issue where it belongs. That is, if you can get all the safety stuff inside the design, then why should we care about what is left out?

The question is whether the designer can get that stuff inside the design. If he can, everything else I think Jerry and I feel is a question of economics.

MR. MICHELSON: There is two kinds of scope, the kind that deals with how many, how many of the things that this plant requires is going to be within this envelope, and the other is in what depth will they be presented so that you can do a reasonable safety analysis PRA? So that essentially is complete two kinds--if I have got all the right components, have I got enough on each of those right components to do the job?

MR. CROCKETT: I understand. Jerry and I have been in the habit of distinguishing between questions of level of

detail, and questions of scope of design, but I agree when you use the phrase essentially complete you may wrap up much.

MR. MICHELSON: Under 5045 that essentially complete nuclear facility, it wasn't clear to me whether you meant it is, it has got all the right components or it has sufficient information in-depth.

MR. WILSON: User terminology, item D on page 22, refers to the components, scope of the design. Now we also go on to say in the, actually it is in the bottom part of that page under contents, that that portion now that is in the scope of certification should have a final detail, the type of detail that you would see in a final design approval.

MR. MICHELSON: Now were you referring to--

MR. WILSON: Contents of application, application shall contain level of design information equivalent to that required for an FDA.

MR. MICHELSON: Who knows what that is? Do you know what that is for this kind of a plant now under this circumstance? We know what it is for plants that have already been built. If you have any doubt about what it is, that you go down and look at it. You can't go look at anything here. Just paper; it is a new problem. That is why I wondered where is it going to be defined, what we mean by whatever scope we are talking about such as final, that of a final design approval?

MR. WILSON: For the purposes of the rule that's a correct definition.

MR. MICHELSON: What does that definition mean to you and to you, for instance, or to even Dino? What does that statement mean?

MR. SCALETTI: Level of detail for the advanced LWRs that we are dealing with now, it would be at least to procurement, performance level and procurement information.

MR. MICHELSON: Why don't we put some words that says that? This doesn't say that. This, this just doesn't say what it is.

CHAIRMAN WYLIE: You had that in that document you never issued.

MR. MICHELSON: We used to have it written down, but the document never got issued. I don't find it in the rule or any guidance in the rule as to how you decide what it takes for final design approval, and I can't use previous precedents in any way because we haven't even gone through one of these. Every time we have gone through--

CHAIRMAN WYLIE: I thought the words were pretty good in that--

MR. MICHELSON: They were getting close at least; 1225 which was never issued. If you go go back and clean up 1225 and issue it and then I wouldn't even maybe reference--do it in here would be nice.

MR. CROCKETT: We used to have references to 1225 in here so questions of level of detail were handled by shutting them off. Now apparently there is a bit of a vacuum.

MR. MICHELSON: No. There is a total vacuum.

MR. WILSON: We felt that all the details that were in 1225 ended up in revised standardization policy statement.

CHAIRMAN WYLIE: It didn't though, really. It didn't.

MR. MICHELSON: I don't know. I haven't read--

CHAIRMAN WYLIE: Wait a minute.

MR. MICHELSON: What are you referring to?

MR. WILSON: Yes.

MR. MICHELSON: I honestly would have to read it. I think that after the meeting I will read it, but then it is too late to have the problem. I would be very surprised if it is in here.

MR. WILSON: Getting back to the detail, I think that the precedent has been staff has done FDA reviews. It is staff level of detail that we are looking at.

MR. MICHELSON: It is not based on plants that he can look at anyway. In GSAR you had an enormous amount of detail on GSAR because the plant was being built. It was, one unit was 40 percent complete. Already the depth of detail was enormous, far more than you needed, but this is non-existent. We don't have a plant anywhere in the country with this

layout. We don't have a plant with any of this kind of stuff engineered down to the detail that GSAR 2 was engineered to. Now how about the other, what other FDA position?

MR. SCALETTI: CSAR; Palo Verde.

MR. MICHELSON: Built three dimensions, so it is different. Then if there is any question about it you can go look at the details, the real details, get it cleared up, but here there is no real details to go to.

CHAIRMAN WYLIE: You are right. It does say that--all good words.

MR. MICHELSON: Were the good words.

CHAIRMAN WYLIE: It is right this page right here, right down here, last two pages.

MR. MICHELSON: I've got you.

CHAIRMAN WYLIE: Does say all the good words, but didn't I read something in here that says this rule now replaces this?

MR. CROCKETT: Yes, you did.

CHAIRMAN WYLIE: If you replace this, you have got to have this.

MR. CROCKETT: I tried to carry across things in the policy statement.

MR. MICHELSON: When you are reading this, this doesn't count.

MR. CROCKETT: It is still in effect. This is

issued.

CHAIRMAN WYLIE: These words got to find--

MR. MICHELSON: You have got to get these words into here.

MR. CROCKETT: What words where? This is in the preamble to the policy statement?

MR. MICHELSON: Yes.

CHAIRMAN WYLIE: This would be in the preamble to the rule.

MR. MICHELSON: Yes.

MR. CROCKETT: Or put something into the rule itself. Well, I think we are in agreement on the level of detail we want. I think even judging from the workshop, the industry is anxious to put in everything short of a name plate. They may get less anxious when they are actually bringing information forward to the staff, but the understanding was they want to get everything settled that we can, and that's going to require a high level of detail. Since then, we are struggling with adequate expression for that.

MR. MICHELSON: We are ahead of the game admittedly, but tomorrow we are going to hear about everything up almost to the name plate I guess. I don't find it in the ABWR document. You are going to tell me how this stuff gets in. It is not in the FSAR. That kind of detail just is not there.

MR. SCALETTI: The license review basis with GE only indicates a design must be at least to procurement level, and so I mean procurement level is quite aways away from nameplate, but it is still--the design is there. Performance, system performance level information should be there, and everything you need to try to--we are concerned to certify the design.

MR. MICHELSON: Are you going to--you are writing off on four modules in the process, and it is, the first one is going to be next spring that you write off, and if by that time are you saying all this information will be in even though it may not be there today?

MR. SCALETTI: Hopefully if it is not there today, it is going to be by everybody by the time we write off.

MR. MICHELSON: Certainly not there by reference in the PSAR. I look at the references that are there, and they don't include such things as equipment specifications and so forth, not at all. I have yet to see the first one that refers to a section or to a document called equipment specification, reactor coolant pump, for instance. They call it now reactor internal pumps or something, and I would expect that that spec is a basic design document that is a part of the certification process.

MR. SCALETTI: There is--certainly we review the design record files on that.

MR. MICHELSON: We will get into it more, but I'm not sure that I am seeing yet anything closely related to what you are saying, namely, everything but the name plate. That's what you think is included. The fact I can only find the crude elements of what I would call a PSAR document. I think I have in front of me about the same level of detail as I have seen in PSARs.

MR. WILSON: It was something the staff is going to have to consider as they do the review, and if they find that level of detail is inadequate, as we discussed earlier, we are going to have to ask questions.

MR. CROCKETT: We have tried to draft a, what I was calling flexibility, what you suggested might be called fuzziness, into the paragraph A on page 23. The staff will advise the prospective applicants for certification on whether the information required is appropriate to the staff's consideration and whether any additional technical information on the design is required. This again doesn't occur in the sentence which actually speaks to final design approval, but at least in this case it comes right after it.

MR. MICHELSON: It says staff the staff will define what it means by essentially complete design. That is what that sentence says.

MR. CROCKETT: Going to happen in that--

MR. MICHELSON: That sentence says it is up to the

staff to decide what they need to consider essentially complete and they will get it.

MR. CROCKETT: This is certainly flexible, but it may mean that we need a bit more specification in the sentence before paragraph.

MR. MICHELSON: This is probably--

MR. CROCKETT: Jerry and I will look at the policy statement again, the language there.

MR. MICHELSON: That one there probably does it. You know, after a while you get to reading all of these and read them right.

MR. CROCKETT: I hope. I don't know. Could we treat the scope of design meaning how many pieces of a plant are in the design now? Could we go to that issue?

CHAIRMAN WYLIE: Sure.

MR. WILSON: That is on page 22.

MR. MICHELSON: Before you do, though, you think now that this sentence you read me on page 23 is the thing that addresses the required depth of presentation and it simply says the staff will be allowed to get whatever it needs and there won't be a backfit to get it or anything? It is a straightforward process. Thank you.

MR. CROCKETT: Yes.

MR. WILSON: On scope, item B on page 22, the standard is essential to the safe operation of the plant.

This has been varying, depending on the design and the staff in its review of FDA will decide what needs to be in. It is going, like I say, is going to vary from design to design. We point out that there are certain things that they would like, intake structures that are going to have to be left out of the design certification because that is going to vary from site to site. I want to get all the safety systems into the certified scope of the plant.

CHAIRMAN WYLIE: That taken with I presume on page 24, paragraph D1, regarding interface requirements, will satisfy that?

MR. WILSON: Let me clarify. Page 24, what that covers is after we have determined what is the scope of certification, we then go to item D on page 24 and this states the information you need to provide for the non-certified portion of the plant. And that's items 1, 2 and 3. We need that information in addition to the full detailed information on the certified portion to do the overall review acceptability of the design. So what you need is the interface requirements and demonstrate that you can comply with the interface requirements, and a representative design to cover that non-certified portion. So I item B on page 24 and item D on page 22 would then encompass the entire scope of the plant. So let's take an example.

CHAIRMAN WYLIE: Take the one you used.

MR. WILSON: Intake structure, it could not be in the certified portion of the plan, in non-certified portion of the plant, and the information you would have to provide for the intake structure is specified items 1, 2 and 3.

MR. MICHELSON: The interface requirements for the intake structure are certified as a part of the--

MR. SCALETTI: That is correct.

MR. MICHELSON: All you have to do is check to see that you, they met the interface requirements?

MR. WILSON: Yes.

MR. MICHELSON: How do we get around the problem of doing a, now a real PRA and so forth when we don't know what the intake structure looks like and so forth? Would you be able to do a PRA when you don't know what kind of valves there are and whether it is air operated, all that sort of thing?

MR. WILSON: You should be able to do one based on the interface requirements.

MR. MICHELSON: No.

CHAIRMAN WYLIE: How complete they are.

MR. MICHELSON: You would almost have to have the design in mind.

CHAIRMAN WYLIE: Only performance related as far as flows and temperatures and stuff like that, and then you can't do it because that won't help you, but you have to know the, you would have to know the design criteria for the structure.

MR. MICHELSON: Either that, or maybe they can write reliability criteria. I guess they could do that, write a reliability interface requirement. Whatever you do out there must be thus and so reliability.

CHAIRMAN WYLIE: Almost have to have a spec.

MR. WILSON: I think we have got that covered by item 1. It says requirement of--the interface requirements must be sufficiently detailed to allow completion of the FSAR and the PRA.

MR. MICHELSON: Okay. What page are you on?

MR. WILSON: Twenty-four

CHAIRMAN WYLIE: I see it there. Now let me ask you about that. I assume that what you said in your opening statement, your road map to certification or whatever you call it, that all of these requirements for severe accident requirements somehow that has got to be resolved to specify say what type of PRA you are going to do?

MR. WILSON: Right.

CHAIRMAN WYLIE: So you are going to, that is going to be done on faith I guess? There is nothing in here that says that.

MR. WILSON: That is one of the reasons we believe we need to proceed with that, also so that we can do a proper certification.

MR. MICHELSON: How do you do a pipe break review

out in the service water system that you have only got interface requirement? I guess interface requirement, pipe breaks, thus a certain size and I guess that's what your testing is.

MR. WILSON: You have the specific type.

MR. SCALETTI: It is difficult. You specify your reliability and your performance information, get whatever else you needed to interface with the PRA.

MR. MICHELSON: External events.

MR. SCALETTI: When an application came in, a utility applicant would have to demonstrate that that PRA performed on that portion of the plant met the reliability requirements of the main PRA.

MR. MICHELSON: What I was really asking is will there be interface requirement relative to the kinds of pipe breaks that postulate out in that black box? I would think you would have to--

MR. WILSON: Things like safety-related equipment, and the pipe failures could cause environmental effect on non-safety related equipment.

MR. MICHELSON: Those would be a part of your interface that--

MR. WILSON: Yes.

CHAIRMAN WYLIE: Let me ask you, in this--

DR. SIESS: Excuse me. He just said something that

doesn't sound right. It says here that compliance with interface requirements dealing with reliability of components or systems--that's what you were talking about, wasn't it? You said something about balance of plant shall be verifiable through previous experience or testing.

MR. MICHELSON: Where are you reading from?

DR. SIESS: Page 24, item 2 on that page; it says, second sentence, the first sentence says compliance with interface requirements is verifiable through some way or another. It says if you specify an interface requirement in terms of reliability. It doesn't say you can do a reliability analysis on that system after it is designed. It says it shall be verifiable through previous experience or testing.

MR. MICHELSON: Means you have to have.

DR. SIESS: For components I can understand, I can understand that, but this says system. Am I right?

CHAIRMAN WYLIE: Yes, you are right.

MR. MICHELSON: Both components and system.

DR. SIESS: You assume a certain reliability for a motor.

MR. MICHELSON: System may be the first time you have ever built it.

CHAIRMAN WYLIE: For example, the interface on page 22, item D, you see, it allows deletion from the certification certain systems such as the, this particular one that is given

is the intake structure, but that could also be electric power systems, and balance of plant auxiliary system.

DR. SIESS: Site specific it says. The power system can be site specific.

CHAIRMAN WYLIE: I mean there are any number of systems that could be outside the certification and you are going to have to have interface requirements on them. Electric power system is one, probably the most--probably would be if they chose to do that, and I think some of them--

MR. MICHELSON: It is getting less than essentially complete. You start leaving too many things for interface requirements.

CHAIRMAN WYLIE: That's what I believe the, that Westinghouse is doing.

MR. MICHELSON: They are certifying. Maybe they won't be ready for certification when they get done if they leave too many items out.

DR. SIESS: Did the Commission tell them they wanted more plant than the standard plant, didn't they? Now what, GE is going to more, isn't it?

MR. WILSON: That's my understanding.

DR. SIESS: Westinghouse also is going to more. The Commission suggested to the industry that they wanted to see more included in the standard design than just the nuclear island.

MR. SCALETTI: The Commission in its meeting with GE, Chairman indicated he would like to see the complete plant.

DR. SIESS: Now they are going closer to that.

MR. SCALETTI: GE is providing what they consider the balance of plant information. There is still site specific stuff which won't be included.

DR. SIESS: Site specific, it can't--is Westinghouse doing the same thing?

MR. SCALETTI: Westinghouse is not committed yet to my understanding.

DR. SIESS: How far does GE's turbo generator--Voice

MR. SCALETTI: Rad waste system and turbine island.

DR. SIESS: Is GE the best person to design rad waste systems? Or go out and get somebody that knows how to do it.

MR. SCALETTI: You have to ask them that.

DR. SIESS: That's what bothers me. You want a good design, and I think that's the most important thing.

MR. WILSON: We are going to encourage standardization and have standardization.

DR. SIESS: Could have a standardized rad waste systematic hang on to any project. I mean somebody else can go--

MR. CROCKETT: The policy statement had left room

not only for balance of plant not to be standardized. I believe there was even language in the policy statement to the effect that you, to standardize a discrete element of the plant. That suggested a piece of the safety machinery, something less than all of it.

DR. SIESS: That didn't make a whole lot of sense.

MR. CROCKETT: We pulled away from that, but still left the notion that our interest in standardization is safety, and that if there is any standardization beyond the stuff that has impact on safety, that we will leave that up to the--we are not going to be interested in that.

DR. SIESS: You just coined a new phrase. Something has an impact on safety. I know what is safety-related, and I know what is important to safety, and now it is--you see, and essential to safety.

MR. CROCKETT: Let's stick with essential to safety.

DR. SIESS: It is hard to find things that aren't important to safety. We are finding the staff saying that an awful lot of things out there triggered by balance of plant upsets.

MR. CROCKETT: It may be applicants are not able to meet this standard. It may well be.

DR. SIESS: We really haven't designed what is essential to safety and so forth.

MR. WILSON: Getting back to what you said, you

wanted flexibility built into this, and the staff will make that judgment along with the ACRS as we do the review, decide what is essential to safety, and to a certain extent, it is going to be design specific.

DR. SIESS: What would be nice--I think it will work. You know, as Carl was bringing out earlier, the operators are pretty important to safety, and we can't standardize them.

MR. CROCKETT: We may be able to standardize their training, quality control, and we raise the question in the question section whether standardization should proceed beyond the design even to those factors.

MR. MICHELSON: Your policy statement had that long sentence about standard training programs, maintenance, whole bunch of things.

MR. CROCKETT: We have retained that as a question here.

DR. SIESS: It is a question now I think that was going a little too far. We have got to standardize the utility next.

MR. MICHELSON: You have convinced me that 5247A allows the staff to ask for anything they want and get it without further fuss.

DR. SIESS: I think that's right.

MR. MICHELSON: And if that is the case, then I am

all for a--

DR. SIESS: I don't know whether anybody out there is going to give it to them.

MR. MICHELSON: If they don't give it to them, I don't think there is any, there is no recourse. It is awfully arbitrary.

DR. SIESS: No. If you can get somebody to--they go through this once, they will sell ten of them, they will be willing to go through the process. It is a lot better than going through a tech, which is what we have been doing.

MR. MICHELSON: After about four years.

DR. SIESS: Same questions asked on three successive plants on the same design, asked over again because it is a different applicant, you know.

CHAIRMAN WYLIE: On the rule, I mean the policy statement that was issued where the--this is the next to the last page, the bottom right.

DR. SIESS: This thing?

CHAIRMAN WYLIE: Yes. Next to the last page down at the bottom right, where it begins the Commission expects to implement the following policies with regard to design certification and review, and it goes on, and in the bottom it says in addition, it must address the following four licensing criteria for new plant design set forth in the Commission severe accident policy statement.

Do you address that in here? I don't remember seeing it.

MR. WILSON: In fact, in my presentation we are going to pick that up in the severe accident rulemaking future plans. That is where we plan to pick that up.

DR. SIESS: Those are the severe accident requirements.

MR. MICHELSON: Isn't that a part of the licensing?

MR. WILSON: Yes. These are lifted right out of the policy statement.

MR. MICHELSON: Why aren't they in the rule that we are dealing with on licensing?

MR. WILSON: The same reason all other requirements aren't in 52. We refer back to Part 50.

MR. MICHELSON: How long before the severe accident?

MR. WILSON: It is in that schedule. Our intent was to have both the rulemakings done before we would start certification rulemaking for any of these plants.

DR. SIESS: Ruling doesn't mention severe accident policy statement, does it, as such?

MR. CROCKETT: No.

MR. MICHELSON: How do we review an ABWR for severe accident before you get your rule out?

MR. SCALETTI: That's a good question. I have that same question.

MR. MICHELSON: You are almost, on day one you start looking at severe accident.

DR. SIESS: Why don't we grab for the ABWR? Why don't we just grab for the ABWR? Nobody is going to build one in this country anyway.

MR. MICHELSON: I am thinking it might be the design for the next 60 years which I think is allowed to be designed for. With re-licensing, could be 60 percent. if I am going to live with it for 60 years, or somebody will, we have got to think about it.

DR. SIESS: I don't think they can sell one.

MR. MICHELSON: Accidents do happen.

MR. CROCKETT: Some of these items, I would say two and a half of them, are in the rule. Let's go down the list--demonstration of compliance with requirements of current Commission regulations, well, that's, we are saying, the rule says we are going to say which ones are applicable, which ones aren't.

CHAIRMAN WYLIE: Does say so.

MR. CROCKETT: The staff will determine which ones are applicable and which ones aren't in the discussion with the applicant because we can't, we cannot simply cite 5034F that says this applies to the following five plants, but a good deal of material which is in 5034F--

DR. SIESS: What is 5034F?

MR. WILSON: It is the requirement that the-- CPML rule.

MR. SCALETTI: Clearly doesn't apply now. If this replaces the policy statements, and if the severe accident regulation doesn't get promulgated in time, we will have to-- that was the point we made the other day.

MR. CROCKETT: The point applies most of all to item No. 2. Item 3 is in there. PRA is required. Item No. 4, I don't even know where that is listed as a requirement. It is going to happen. It doesn't have the same form or substance as the other three items in the list, and it is really included anyway, so we are really talking I think most of all about item No. 2, demonstration of technical resolution of all applicable GSIs and USIs alike.

DR. SIESS: I know what applicable means. And it says all resolved. The unresolved, why don't we, how do you demonstrate the technical resolution of unresolved issue?

MR. WILSON: You have to provide--

DR. SIESS: Once it is resolved, it is going to be implemented or imposed on some basis. Presumably it will be forward fit on to the reactors, right?

MR. SCALETTI: Some of them may have designed specific resolutions that are not the generic resolution. That may be not even thought of yet, and/or that may be in the process. Now a designer may say I get around that problem by

designing it this way and this USI goes away. However, it may not be a resolution for all plants but only that one specific design.

DR. SIESS: Okay. If I looked at the EPRI requirements, I would find some of those in there?

MR. SCALETTI: Yes.

CHAIRMAN WYLIE: Yes.

MR. MICHELSON: There is a real problem with what you find in there and that is that they used a cutoff date of last July. Is that still a cutoff date for USIs, GSIs?

MR. SCALETTI: That is only EPRI. The advanced light water reactor before us now must deal with all medium and high priority generic issues and unresolved safety issues that are prioritized up to the date of their issuance of the final design approval, so the same deal that we had on GSAR. If an issue comes up two days prior to scheduling, issuing the final design approval, you have got to deal with that issue before you can--

MR. MICHELSON: So let's take a specific example. Let's say that A-47, for instance, is resolved by handling a part of the problem, and maybe identifying a new problem for the rest of it. That new problem would still have to be picked up by GE provided it was identified and prioritized, final prior to the issuance of the final design approval, not the preliminary drafts, the module, but the final, so we need

to worry about things slipping away unless they are very close to the end.

DR. SIESS: Now what happens a year after the FDA is approved, we now get a design certification, and what happens to the USIs and GSIs that are resolved now in that interim period, or for that, those matters, those that are resolved after the design certification? Is the resolution going to address their imposition on certified designs or standard designs? Is that going to be a part of the resolution process now?

MR. WILSON: If I understand your question, by achieving technical resolution during the review, they shouldn't significantly be affected by the actual implementation.

DR. SIESS: Only those that have been identified up to a certain point?

MR. MICHELSON: This is a new one.

MR. WILSON: Let's say we have issued design certification and then a new USI comes up.

DR. SIESS: Gets resolved.

MR. SCALETTI: Resolution of that.

DR. SIESS: Resolution of that has to decide on the imposition. Can that be imposed on a standard design?

MR. WILSON: It would depend on the backfit rule applicable to that design certification.

DR. SIESS: Does it depend at all on what the issue was?

MR. MALSCH: How serious the issue was, if it was necessary for adequate protection.

DR. SIESS: Necessary for adequate protection.

MR. MALSCH: Backfit it immediately.

DR. SIESS: Backfit it immediately, and the fact that the certified design was by rule, also have to be achieved in the rule, that is covered somewhere in here?

MR. MALSCH: That's right.

MR. MICHELSON: How was that covered?

MR. MALSCH: I think it is covered probably in the finality provisions. Or well, which are--

MR. MICHELSON: It really needs to be covered in the rule.

MR. MALSCH: If it is not that serious but still would qualify as incremental cost effective increase in the protection and it was resolved by rule, you would pick it up at the renewal stage.

DR. SIESS: I would assume if it was required for adequate protection, we would do it, but now--if we have the mechanism for doing it.

MR. MALSCH: Do it by rule and do it by rulemaking. We would approve that.

DR. SIESS: Won't take you as long as it does now.

MR. MALSCH: Should be a lot shorter than it does now. Rulemaking currently takes a hell of a long time. In principle--

DR. SIESS: Implementation takes even longer.

MR. MICHELSON: Can you help me with what you refer to which I assume--

DR. SIESS: At page 28.

MR. MICHELSON: 5263A, is that right?

MR. MALSCH: Final provisions are going to be--yes, that's the provision.

MR. MICHELSON: The one you say will take care of me.

MR. MALSCH: That's right. We are in the process of changing that.

MR. MICHELSON: It looks like it says, though, that I have to go through a backfitting. I mean I have to go through a rulemaking to do it.

MR. MALSCH: That's right.

DR. SIESS: Because the design.

MR. MICHELSON: I can't--but you are saying orders are rulemaking?

MR. MALSCH: We would go through rulemaking to do this.

MR. MICHELSON: Can you do that real quick?

MR. MALSCH: We're hoping we can do that real quick.

DR. SIESS: It is a rule. There you are changing--

MR. MICHELSON: The rule says you can't change anything unless you go through rulemaking.

DR. SIESS: Can't change a rule without a rulemaking, and the design certification is a rule.

MR. MICHELSON: Why didn't you word in here something a little less stringent? It would require an order by the Commission to make such changes, but not a, I mean not a change in the rule.

DR. SIESS: You have to, Carl. The design certification is itself a rule, and you can't change a rule without a rulemaking.

MR. MALSCH: It shouldn't be any more time-consuming and complicated in principle.

DR. SIESS: By making design certification itself a rule, any change in that certification is a change in the rule, and that's a rulemaking.

MR. MICHELSON: That's where you get that same question with the tech specs. You can get some very minor--there is no provisions that give, avoid minor stuff.

DR. SIESS: Tech specs get in part of that certification. You have got trouble.

MR. MICHELSON: Did you put a provision for minor stuff?

MR. CROCKETT: Provision for minor stuff.

MR. MICHELSON: Where is that?

MR. MALSCH: Variances.

MR. CROCKETT: I can't remember. It is on that same--

MR. MALSCH: It is on Section 5263C.

DR. SIESS: Variance, yes, page 29.

MR. MICHELSON: Variance by your definition is minor stuff?

MR. CROCKETT: D is even more minor.

DR. SIESS: Applicant can request a variance. Now I have already got a license, and I request a variance there? The licensee, in D it says the licensee may make a change only if the change does not involve changes to the design as described in the rule.

MR. CROCKETT: You have to read 15 words into Section C, but C also allows the licensee to be, to ask for a variance. That is an applicant for one of the following three things, or a licensee.

DR. SIESS: I am sorry. I missed it.

MR. CROCKETT: It is hard.

DR. SIESS: I just missed it.

MR. CROCKETT: It is one of the 50 word subjects.

DR. SIESS: Seventy-five word predicate; I think you have got a good approach to this thing. I just wish there were some way of doing it without a rule because you know

damn--

MR. CROCKETT: Certification by some means other than rules? Is that what you mean?

DR. SIESS: The policy by some other, because there are going to be bugs in it and if it doesn't work, you might could change it, but--

MR. MALSCH: That says you have got to be very careful in the rule as to exactly what you are approving and what you are not approving, and the detail involved.

MR. CROCKETT: That is in the certification rule.

MR. MALSCH: In the certification rule.

DR. SIESS: But this rule that sets forth the procedures, I think you probably have got enough flexibility to do the first couple.

MR. MALSCH: We are going to have to learn by experience.

DR. SIESS: I hate to see it as a rule, but I don't know any other way of doing it. Sure, we are.

MR. CROCKETT: But in order to get some stability and some standardization, we have to say on the one hand we are prepared to look at the following kinds of applications, and there is nothing in the rules now which says that.

Second, we impose on ourselves and on the applicants or the holders of the certifications certain, we impose on them certain stability. They can only ask for so much, and

when they ask for it, certain consequences follow. If we grant it, we can only change so much, and only under certain conditions, and people ought to be bound at that point I think by rules. Simple statement of policy is probably--

DR. SIESS: The way the French operate, they build about ten or twelve plants and as they find things they like to improve, they make a little list of them and then when they come to the next set, they make those improvements and build ten or twelve more like that. They don't try to go back and fix it each time. They try to keep it standard even though it isn't the best. And we--that's the hardest thing to accept. It really is. Standard, but day after tomorrow I think of something I could do to make the second one better than the first one.

MR. CROCKETT: We have accepted it apparently in dealing with airplanes.

MR. MICHELSON: I understand there is a lot of variation from one 747 to another or 727 to the rest of them. Each airline also has its little things that it adds to the cockpits.

MR. CROCKETT: Only in certain areas. There is, if it touches something that affects the air worthiness certification--

MR. MICHELSON: Then they are blocked.

MR. CROCKETT: The FAA moreover is blocked except

for equipment.

DR. SIESS: I assume that is covered in the air worthiness thing, but it is a GE or Pratt Whitney engine or whatever.

MR. MICHELSON: They have got engine choice.

MR. CROCKETT: There is a certain mix and match that they can do.

MR. MALSCH: If you looked at the law on what procedures you have to follow to amend a rule and contrast that with the procedure you have to follow to amendment the license, on its face, a license amendment looks a lot more complicated, so in principle there is no reason why the process for amending a design certification needs to be any more complicated procedurally than the process for amending a license. I think we are just accustomed to taking so much time in rulemaking, going through so many internal loops, it appears to be more complicated.

MR. MICHELSON: Four, five years.

DR. SIESS: Used to run a list of rulemaking actions in nuclear safety meeting--here is something I had forgotten about. It was 15 years ago, public comment, nobody has done anything about it.

MR. MALSCH: Our office has managed to go through complete cycles of rulemaking in three or four months. If you have got the desire to do it and you want to do it, devote the

staff to do it, you can do it.

DR. SIESS: An interesting point.

MR. CROCKETT: In the meantime, you can still order shutdown.

MR. MICHELSON: If you find a problem and the utility wants to fix it, changes in design, can they do that without changing the rule of if it is something that is defined in the rule?

MR. CROCKETT: They can ask for a variance, and that is Section C.

MR. MICHELSON: This is big variance. I thought it meant something small.

MR. CROCKETT: Make, make a big change.

MR. MICHELSON: Big and defined in the certification and everybody agrees it has got to be fixed, it is going to take four months to get the rule and they change, can they change it before that by mutual agreement, you know, and then let the rule catch up with it later?

DR. SIESS: We never had anything in the past like this.

MR. CROCKETT: I suppose at their own risk.

DR. SIESS: I can't think of anything in the past that had to be done in four months.

MR. MICHELSON: I am just giving you a hypothetical case, and I am not sure you can get rules in four months.

either. That is also hypothetical maybe.

MR. MALSCH: We have done it on occasion.

MR. MICHELSON: Now you have got to talk about participation.

DR. SIESS: We have had major issues that required plant changes that took five years and nobody shut the plant down in between. Only thing we shut plants down is for management problems. Am I right?

MR. MICHELSON: I think.

MR. MALSCH: We have shut some plants down some years ago for design problems.

DR. SIESS: Not for five years.

MR. MICHELSON: By definition, you don't ever make a change in this plant unless it is something that has caused it to be less than adequately safe.

MR. MALSCH: I think that's the underlying philosophy.

MR. MICHELSON: Do you shut down and wait for the rulemaking before you make the change, or can you change the plant while the rule is in progress even though you don't start up again?

MR. MALSCH: I think what you probably do is issue a rule, an interim rule on that so immediately effective interim rule on that basis.

DR. SIESS: If it is a change that has to be made to

make the plant adequately safe, the plant ought to be shut down until it is fixed.

MR. MICHELSON: Can you start making the change right away while you are going through the rulemaking to identify the--

MR. MALSCH: I think we can work that out with interim effective rule followed by some final rulemaking.

DR. SIESS: In this kind of change first you have got to design it and procure it. You won't do that in five months anyway. Before you start changing anything physically, they could get the rule changed I think.

MR. MICHELSON: What do you do in the case where you have got a particular system that is designed into this plant, and you suddenly realize that the valve that ought to be normally closed in order to--instead is normally open? The design certification holds for normally open valve? Is that a minor change? There is plenty of those, GSAR has lots of identified valves with certain alignments.

DR. SIESS: Wouldn't that be a tech spec change?

MR. MICHELSON: Well, that also requires rulemaking.

DR. SIESS: If the tech specs are in--

MR. CROCKETT: I think that is where Marty's immediately effective interim rule would work rather well, because the policy--

MR. MICHELSON: There ought to be a procedure in

here on how you handle those immediately effective things while you are straightening out the paperwork.

DR. SIESS: Would close the valve.

MR. MICHELSON: The NRC and everybody agrees that it ought to be closed instead of open. How do you change it? Because it is certified to be kept in the open position.

MR. MALSCH: Why don't we give thought to maybe sticking something in there?

DR. SIESS: Just don't tell anybody, Carl.

MR. MICHELSON: Well, you can't do that, either. I don't think it is a problem. It would be nice to have a--

CHAIRMAN WYLIE: What do you stick in?

MR. MICHELSON: They are just going to think. They are not sticking anything in. They are going to think about how you handle those things. You really need to do it immediately once you realize you have a problem.

DR. SIESS: What, what is the alternative to having design certification by rule?

MR. CROCKETT: Having it by license.

MR. MALSCH: License a design.

MR. CROCKETT: We are not sure that the agency is empowered to license designs.

DR. SIESS: What did we do with the old standard plants?

MR. CROCKETT: They were never certified for

license.

DR. SIESS: Approved the design.

MR. MALSCH: Only at the staff level; there was never any agency signoff on that. The closest the agency ever came, the agency ever came was--

DR. SIESS: What was wrong with that? It was done at the staff level.

MR. CROCKETT: Because it did not tie, didn't tie the adjudicatory Boards.

MR. MALSCH: Or the Commission.

MR. CROCKETT: It says explicitly in O on FDAs this does not bind decisions arrived at in adjudication.

DR. SIESS: Somebody came in with a GSAR or one of the, approved as a standard plant or something, it was still adjudicated.

MR. MALSCH: That's right, for purposes of hearing.

DR. SIESS: Ever had one with balance of plant, it would have been adjudicated the same way? I don't think we ever got one that came in with all the balance of plant.

MR. MALSCH: For purposes of the hearing process and final Commission approval an FDA is really no more than a, has no more status than a safety evaluation report.

DR. SIESS: So if we don't have a hearing process, the whole thing could be done rapidly?

MR. MALSCH: No. There is still the question as to

whether the Commission itself wanted to impose an elaborate process on top of the staff approval that it was going to sign off on.

DR. SIESS: If we just wanted to standardize plants and approved standardized designs and so forth, if there were no hearing process, that can be done without a rule, and--

MR. CROCKETT: That really is speaking hypothetically.

DR. SIESS: Well, for example--

MR. MICHELSON: Unrealistically.

DR. SIESS: Well, yes, theoretically, and I'm not sure--idealistically we could probably have a pretty good nuclear power system in this country without any rules.

MR. CROCKETT: Yes, I suppose we could have them without hearings or nothing more than the French have which are limited appearance session, what we call limited appearance sessions.

DR. SIESS: Any worse or any better.

MR. CROCKETT: I don't see that happening in this country. It doesn't matter who is in office or what the Congress is like.

DR. SIESS: Not in this country. The French are not going to be able to get away with it forever.

MR. CROCKETT: We may license airlines without public hearings I guess, adjudicatory hearings. I am sure

they are public hearings of some sort.

DR. SIESS: I don't think they are.

DR. SIESS: A purely technical review.

MR. CROCKETT: Just does not look like--I don't know who is going to ask for that.

DR. SIESS: Nobody is against airplanes.

MR. MICHELSON: A shortcoming of this whole process appears to be that really to do it right you are locking yourself into things that are hard to change. Maybe you can come up with some words and fix it up for changes that then follow through with the process.

DR. SIESS: What you want is stability but not rigidity.

MR. MICHELSON: It is rigid. It is very rigid.

MR. CROCKETT: We are talking about matters of degree here between what we have now and what this may appear to bring it to be.

MR. MICHELSON: Such a simple thing as you know, those internal pumps that GE has shown now, maybe they are going to have to change the design after a certification. They have got to go through another certification amendment or something to change the material or to change the bearing configuration and things of that sort, and I just--

DR. SIESS: The Japanese are testing the hell out of them.

MR. MICHELSON: We thought we would--tested a lot of other things in these plants that turned out later to be sour. I don't buy the idea because we have tested them for a while they will never need to be changed. When they do, every change in rulemaking is defined in the certification process as being a specific configuration, specific term.

DR. SIESS: Every plants that one changes the same way.

MR. MICHELSON: That's another issue.

MR. CROCKETT: If it has a certain level of significance, yes.

MR. WILSON: I think that points out one of the reasons we want to have an applicant declare prior to the review that, FDA stage he is going to seek certification, so we can review it with that in mind.

MR. MICHELSON: I hope the potential buyer of this realizes how hard it is going to be to fix things that everybody agree needs to be fixed and that they were defined in the certification, therefore require revised rulemaking.

DR. SIESS: May not be that hard.

MR. CROCKETT: License amendments.

MR. MICHELSON: Rulemaking is not simple even if it is a four-month rulemaking.

DR. SIESS: It has to be published.

MR. MALSCH: Nor commented, analyzed, and final

rule.

DR. SIESS: Somebody has to analyze it.

MR. MICHELSON: Public intervention.

MR. MALSCH: All that is necessary it opportunity for written comment.

DR. SIESS: No hearing is necessary for rulemaking. We do it all the time. So actually the three or four months you are talking about, that is drafting time.

MR. MALSCH: That's right.

MR. CROCKETT: The problem is there. We agree.

DR. SIESS: You always have published as a proposed rule, don't you?

MR. MALSCH: Well, on emergency basis you might be able to publish effective rulemaking. Normally it is published as the other thing first.

MR. MICHELSON: Let's assume for the moment that the specifications are a part of certification. A particular spec was a part of the certification. Any change in that spec then required later would require a rulemaking?

MR. CROCKETT: The way this is written now, yes.

MR. MICHELSON: I have been through specification. It is not unusual to get 20 or 30 changes to specification before the component is delivered.

MR. MALSCH: That is why you need to think carefully before you get your design certification exactly what you want

certified.

MR. MICHELSON: You have got to think awfully carefully about what you are certifying. Inm that base you don't want anything, you don't want any word, one paragraph for the whole plant.

MR. WILSON: The tech specs you feel are necessary or essential for safety, you want to put those in. and others you wouldn't do it.

MR. MICHELSON: That's an aspect I hadn't appreciated I guess until just now.

MR. MALSCH: In terms of the--

MR. MICHELSON: Level of difficulty of correcting what we know are going to be multitude of small, relatively small errors, but they all might be things defined already in the certification.

CHAIRMAN WYLIE: Take a simple item like electrical penetration on containment. Manufacturers go out of business. Now you have got to get a replacement.

MR. MICHELSON: You have written a spec around a known supplier and he no longer supplies. Now you have got to write a new spec around a new supplier. When you do, specifications are not generic.

DR. SIESS: Suppose you describe performance criteria.

MR. MICHELSON: That is a little easier.

DR. SIESS: That is what you should be doing.

CHAIRMAN WYLIE: You have got structural considerations as well as just performance. In that case--which means a replacement would have to be specified to hit right back in that position.

MR. MICHELSON: Procurement specs are pretty well detailed. If you want to change the configuration, it will be all right to do. If that spec was a part of the certification process, I can't change the detail without getting--

DR. SIESS: I am trying to understand. I have got a standard plant now, have got two standard plants, two copies of the same standard design, and do you consider them not standard if this one has a penetration of 3 eighths inch shell, this one penetration of 5 16ths inch shell, although both of them will meet the requirements?

MR. MICHELSON: I think they are both the standard. However, however, you, if the design, the procurement spec said what, 3 eighths or 5 eighths, I bet you it did. Depending on--most of them I have ever seen for procurement purposes are pretty detailed in that sort of thing.

DR. SIESS: Is t' standard design going to get that detailed down to procurement specs?

MR. MICHELSON: That is one of the questions asked earlier. Is the procurement spec part of it? If it isn't, then you have got other problems.

MR. SCALETTI: That level of detail.

MR. MICHELSON: Procurement spec is written to that level of detail.

MR. SCALETTI: The requirement at least for the ABWR is to be level of detail at which you can develop the procurement specifications. Whether the procurement specifications will be part of the certified design or not, I can't answer that.

MR. MICHELSON: That's a little different answer than I thought I heard earlier today. I thought you said they were in the procurement level.

MR. SCALETTI: Procurement level of detail.

MR. MICHELSON: Developed for certification purposes; I think you are saying a little statement a little different. You said the information available would permit you to write a specification to that detail. That is a different answer.

DR. SIESS: Real standard plant would be a turnkey job. They might all be the same standard design, but you get three different guys building it.

MR. MICHELSON: Not exactly. That's--I am just, all of a sudden realize that we have some real problems if we certify, got to write a rule every time we change it, what I consider the minor details.

DR. SIESS: Without the lawyers.

MR. MICHELSON: Maybe you can avoid this, but you know, a lot of stuff is defined. Even in the ABWR there are cases where there is a fair amount of detail, but I can't imagine that frozen in concrete quite that exactly.

MR. SCALETTI: Well--

MR. MICHELSON: Little nuances have to require a new rule.

DR. SIESS: If the people that are asking for that design certification understand this, then they ought to do it right.

MR. MICHELSON: What is wrong with having a provision that says if the--maybe it is in there. If the licensee wishes to make a change in the design, that the NRC looks at the change and has no problem, you don't have to write a, go back and change a, write a rule. Say there is no problem.

MR. CROCKETT: That is there for licensees.

MR. MICHELSON: Latter part; if a tech component is defined in the FSAR. Let's take a specific example. If the reactor phlange seal detail is in the FSAR, and I suspect it may be, I am not going to say it is. Let's assume it is. If that phlange--I mean it shows there are two O rings and there is a leak off and so forth, if that's in the FSAR, in the process of deciding, you know, buying and starting to build this, it got certified with that configuration there, they

decided they want to put three O rings instead of two, two leak off, the NRC says that's even better than we had before, but it is not what has been certified, can you make the change to three O rings without going back and changing, doing, going through the paperwork of rulemaking?

DR. SIESS: Page 19, item B.

MR. WILSON: Furthermore--I am not sure.

DR. SIESS: Amendment to the design certification by way of rulemaking; what is more, if it is significant to safety, it will be applied to all plants.

MR. WILSON: That's my point, though, that if adding this additional O ring just makes it a little safer, we don't want to make the changes. We are trying to fix these plants. One of the benefits of standardization is that we have the same design and what we learn in operation of double O ring design we want to apply that to other plants, and if we have a double O ring design in triple W, pretty soon we are back to, we have lost that benefits in standardization.

DR. SIESS: You can't deny it. The holder may file a request for amendment by way of rulemaking. The Commission shall grant the amendment requested if it determines it will comply with the Atomic Energy Act and the Commission's regulations. And what would you point to in the Commission's regulations that said they shouldn't add a third O ring?

MR. SCALETTI: If they have to go through

rulemaking, they are really going to have to want it badly.

MR. MICHELSON: We will assume for the moment they want it badly. I am beginning to understand the process a little better.

CHAIRMAN WYLIE: I think it is going to be counterproductive.

MR. MICHELSON: It is.

CHAIRMAN WYLIE: Countersafety if you make it so tough for them to make changes.

DR. SIESS: I said a long time ago that standardization was a state of mind. If you want to, you can get it, and I am not sure that the Commission wants it although they are getting more and more to want it, but I'm not sure people out there want it, either. If they really want it, they will buy the plants. And probably if NRC will let them, and if both parties want it, they can get along with standardization, but it is going to be traumatic for both of them because people haven't been used to the idea of leaving things like they are.

MR. MICHELSON: Small changes have been made rotinely by just writing a 50.59 and filing it and an inspector looks at it once a year and everybody is happy. That's all it takes. But now if I want to change the O ring material I am going to keep sticking with the two rings. I am going to change the material, put chrome plating or something.

If that chrome plating had been defined in the FSAR as being there, I have got to write a rule to take it off and change it.

MR. CROCKETT: The song that is usually sung at this point is that 30 years ago, it would have been a bad idea to block change, but we are now 30 years wiser.

CHAIRMAN WYLIE: We haven't solved all the problems by a long shot.

MR. MICHELSON: I think you are going to get to, HTGR is even going to get more interesting.

DR. SIESS: State of mind; as I recall, Dresden Units2 was in the SEP program. Dresden Unit 3, which is identical more or less, wasn't. It was, 3 had a full-term license and 2 didn't. And there were a number of changes that came out of the SEP program. Commonwealth told us they were going to make all the changes, not just the two but the 3. What is more, we are going to make them in 1 and 2 also, keep these four plants alike. Now that was their attitude toward some standardization. I don't know how wide that is in the industry. How much did Duke do to keep, how close were Oconee 1 and 3 to each other?

CHAIRMAN WYLIE: Well--

DR. SIESS: One and 2 came first and then 3?

CHAIRMAN WYLIE: Yes. One and 2, they were identical except I think they were laid out opposite.

DR. SIESS: Oh, yes.

CHAIRMAN WYLIE: Then Unit 3 was like Unit 2.

DR. SIESS: How much have they done about making fixes and making them uniform through all units?

CHAIRMAN WYLIE: They are pretty much the same.

DR. SIESS: Some interest in doing it.

CHAIRMAN WYLIE: Where they are different is McGuire was going to be the same. It was a condenser plant, but the first thing they did was went out and bought different turbine generators.

DR. SIESS: That's an example of making the same mistake four times. I read a book called standardization of error. It didn't really mean what it said. The standardization of men, really that's one thing that worries me.

MR. CROCKETT: It is possible, but there is counterbalancing; also be more easily changed. You won't have four different areas to contend with. You will have one.

DR. SIESS: We expect to have more thorough review. That's always been one of the thoughts behind it.

MR. CROCKETT: More thorough design up front, more thorough review, greater ease of correction of review because it applies to a whole bunch of plants at once.

DR. SIESS: That doesn't follow exactly because if I have got to shut down 40 plants, I am going to think twice.

People need that juice up there. I want to do it on a hot day in June.

MR. CROCKETT: It is with such a thought in mind that you take greater care while you are reviewing the design.

MR. MICHELSON: Is there a definition or does everybody understand what a variance is? Is there a legal understanding of what variance means? What does variance mean in the case of the, where we are using it on page 29 under section subsection C? We talk about variance is granted without changing.

MR. MALSCH: You have got to show something different about your plant, something special about the situation.

MR. MICHELSON: Variance could mean almost anything as long as I somehow satisfy the NRC that it is all right to have that variance and there is no rulemaking required.

MR. MALSCH: The criteria are limits.

MR. MICHELSON: Where are are the criteria?

MR. MALSCH: 5012A and the principal limiting one I think is 5012A.

MR. MICHELSON: It has got to be minor.

DR. SIESS: If it is generic, it says it will apply to all licenses, but somewhere else it said applies only to essential to safety.

MR. CROCKETT: There are two sections. There is

amendment and variance. Amendment, they are defined by context. Amendment is what a holder of the certification asks for, and that requires a rulemaking. Variance is what a licensee or an applicant who wants to refer to the certification asks us for, and that does not require a rulemaking, though a fairly high threshold is set. Otherwise it is like turning over a stock model car to a bunch of guys who are good with engines and they produce souped-up models.

MR. MICHELSON: Your next Section D says you can't make changes to the plants that are defined in the certification process.

MR. CROCKETT: Within variances, there are two categories--those changes which can be made without prior approval. Section D speaks to those--and those changes which require prior approval. Section C speaks to those.

MR. MICHELSON: You are saying that under Section C if the licensee asked to change something, no matter what it is--

MR. CROCKETT: If it affects, changes something in the design, it needs prior approval. If it does not change something in the design, if it falls somewhere between--

MR. MICHELSON: Let's stick with the one that requires change in design. If that design had been certified, but only if the licensee asked for it.

MR. CROCKETT: He has got to come to the Commission.

Rulemaking is not--

MR. MICHE'SON: Asks for variance and it is granted, then no rulemaking is required, so I can change a, significantly change a design of the, of a sub-system in this plant, and as long as I am the licensee, and request the change, you can grant it without rulemaking.

MR. CROCKETT: If you can clear 5012; I am not sure with that case that you could.

MR. MALSCH: Criteria for granting exemptions and regulations.

MR. MICHELSON: That's considered as exempt from the regulations.

MR. MALSCH: That is how we analogize.

MR. MICHELSON: Exemption from a rule in this case.

MR. CROCKETT: That's right.

DR. SIESS: There is something in there. One of those 50 somethings indicate it is safety-related because you go backfit it to everybody.

You mean you are going to apply it to all the, you can apply it to all licenses?

MR. WILSON: That is one of the means that we restrict these variances. There is a group of them out there. It is going to affect all of them, so fellow licensees may not think too much of this.

DR. SIESS: Somewhere else you said if it is

significant for safety, it would be applied to all of them. And here you say--

MR. CROCKETT: We--our language is not, our language is not parallel on that.

DR. SIESS: B says if it is significant to safety, then it will be applied to all plants references the design. Here on the variance you say if it has generic applications, it would be applied to all licenses references the design. Does that mean one licensee can affect other licencees? And that bothers me.

MR. MALSCH: I think procedurally we have to probably go through rulemaking to apply to all licensees.

MR. MICHELSON: I would think so.

DR. SIESS: Unless there is something in 501292 that--

MR. MALSCH: No.

DR. SIESS: Significant to safety, he asks for a variance, you approve it, then you probably should apply it to all of them.

MR. MALSCH: It is unfair to do that without giving them a say in it, so we probably would go through rulemaking before we did that.

MR. CROCKETT: We probably should do some fiddling there.

MR. MICHELSON: I think the versatility is needed

all right. It is just a question of providing it, correcting it.

MR. CROCKETT: They are going to end up with less versatility than they have now unless there is some decision before.

MR. MICHELSON: Even if they did it, of course they can request--there is nothing in here that requires you to grant a variance.

MR. MALSCH: That's right.

MR. MICHELSON: You have this route available providing you are, you accept it.

MR. CROCKETT: If they meet certain standards, we shall grant it.

MR. MICHELSON: Does it say that?

MR. CROCKETT: If the variance will comply with--

MR. MICHELSON: That's right. It did say that.

MR. MALSCH: The criteria are fairly stringent.

DR. SIESS: Have you guys ever heard of a decision table?

MR. CROCKETT: Yes. You want, you want the rule in the form of a decision table?

DR. SIESS: No. I write codes for buildings, and we don't do it all the time. We find a decision table extremely helpful in writing to be sure that you have covered all the things you want, but given this set of circumstances, you come

out somewhere, every once in a while we find gee, here is a sets of circumstances that is there is no provision for, and there is several of these things that could benefit from looking at in the form of a decision table even--

MR. CROCKETT: There are many crude ones which have since found their way in the waste basket, my waste basket.

DR. SIESS: I have trouble with them myself. I used to make a decision chart rather than a table, one that does a table and the other one is a flow chart type.

MR. CROCKETT: Right.

MR. MICHELSON: That 5012 is a pretty limiting--

MR. CROCKETT: It is hard to clear 5012.

MR. MICHELSON: If you read it as meaning you have got--any one of these can hang you up, which I would read it that way, there are quite a few there to hang you up.

DR. SIESS: You have got three sources for changes. One is the holder of a certification. One is the applicant for license, and one is the NRC.

MR. CROCKETT: I had a rough decision table taking just that form downflow. The NRC is controlled by some backfitting provision harsher than the, more limiting than the one we now have in effect because it is limited to adequate protection cases without consideration of cost, the holder is limited by this amendment process, by the prospects that he is not simply changing things for future plants but

may come up with something that we would backfit on all presently operating plants references that design, and the licensee is limited by having to meet 5012 and the like and also the possibility that his variance also would be backfitted on other plants, or some other way generically apply. So we are all controlled by hurdles which have not existed before.

DR. SIESS: The real advantages to the industry in the standard plant approach is that all of those things that happen up on the time it starts up, expediting, many competitive hearings and so forth. The disadvantage is starting after he is operating and changes have to be made.

MR. CROCKETT: From the industry's point of view, if you put them in order, it is the person who has applied for or is constructing, especially the person constructing that needs stability. Next the person who is operating, and then maybe last the designer himself need some kind of stability at least during the period in which this permit or this certification is in effect.

CHAIRMAN WYLIE: Okay.

DR. SIESS: I haven't lost my enthusiasm for standard plans.

CHAIRMAN WYLIE: You say you have?

DR. SIESS: Have not.

CHAIRMAN WYLIE: Okay. Let's see. Where are we?

MR. CROCKETT: I am trying to think if there is anything else.

CHAIRMAN WYLIE: I think we pretty well covered it.

DR. SIESS: I still have that concern about the advanced reactors relative material in there and whether that's loose enough to do it and the timing, and the reason I say that is that we are in the process of writing a letter to the Commission on those licensing issues on advanced reactors, and some of the things we are doing we have been talking about there you see are settled in this rule.

MR. WILSON: We are just going out for public comment.

DR. SIESS: You need to call attention to that, Charlie.

MR. CROCKETT: We have tried.

DR. SIESS: Not to make that nice distinction between within and without containment, maybe that is a detail, but it is going to be hard for some people to buy what is in here until that is settled, the policy statement and sort of going on at the same time.

MR. WILSON: I think we can fit it in the schedules. That's the reason the commissioners are going to speak to the other items before we get ready to issue a final rule on this.

MR. MALSCH: I suppose you could reserve on that.

MR. CROCKETT: We mean to conform this to--where

ever things come out in the paper on standardization on advanced reactors, there are overlap between the two papers, it is leading because it is the most substantial, most safety substantial part of Part 52, and we would conform Part 52 to however those issues come out.

DR. SIESS: Still have some real concerns about how we are going to use a prototype to demonstrate something. I don't know. I am looking for a LOFT or the kind of tests they have been making, little one over there.

MR. WILSON: As we said before, on these prototypes, we are looking at, for the advanced reactors, tests like ATWS type tests so they can demonstrate tests sufficient to demonstrate the safety features that they claim.

DR. SIESS: They will walk away. How many, what if--for that I don't know. It is not easy.

MR. WILSON: Have to figure that out during the FDA review.

CHAIRMAN WYLIE: Well, for presentation to the Full Committee, we have got an hour.

MR. MICHELSON: An hour, hour and a half?

MR. ALDERMAN: One hour, thursday, ten to eleven.

CHAIRMAN WYLIE: Ten to 11; what is after it?

MR. CROCKETT: One hour.

MR. MICHELSON: You don't get whatever is after.

CHAIRMAN WYLIE: Report on international meetings

regarding nuclear power programs, that's his.

DR. SIESS: If you are boiling it down to the issues.

MR. MICHELSON: You are not going to get any more time!

DR. SIESS: What do you think the issue is on the early site permits? Anything? Develop any questions on early site permits? Except the fineality?

MR. CROCKETT: Except finality--

DR. SIESS: I don't think we have spent much time talking about early site permits.

MR. CROCKETT: We did discuss--

CHAIRMAN WYLIE: We discussed it some.

MR. MALSCH: Suggested emergency planning; I don't think any concrete suggestion came out of it.

DR. SIESS: The only part of the early site permit part that I think needs some explanation and discussion is what it says about the emergency planning, what it means. Okay. That could take care of that, right? Charlie?

MR. CROCKETT: I don't think there is any disagreement about what should be there. It is the question of whether it adequately says it.

DR. SIESS: Now what about the combined license? We had the question about the ACRS review of it.

MR. CROCKETT: We took care of that.

MR. MALSCH: We need to reference the technical criteria as we had in the case of standardized designs for advanced reactors be consistent.

DR. SIESS: The scope of the application essentially, which is if you talked about the certified design first, how much? What is the difference there? It is not that much, is it? It seems to me that most of our issues here in this meeting have been related to the certified design.

MR. CROCKETT: And within that really to the filing and contents requirements of the applications because it is there that such things as scope, level of detail--

DR. SIESS: And the changes.

MR. CROCKETT: And changes, finality, are variances, amendments, all of that.

DR. SIESS: It would seem to me, Charlie, we wouldn't have to cover everything. Just cover the kind of, you know, I hate to say that the Full Committee is not going to come up with different things than the Subcommittee, but they will come up with them whether or not you present it.

CHAIRMAN WYLIE: Yes.

DR. SIESS: And then that's their time.

CHAIRMAN WYLIE: Well, let's see. What about the overview that we looked at as far as the beginning here? Where are we going? Do you think the Committee--

DR. SIESS: That's worthwhile presenting.

CHAIRMAN WYLIE: Lead off with something like that.

DR. SIESS: That sort of sets the stage; a little bit to tie it back to LMO.

MR. WILSON: The problem is if I get started into that, the Full Committee will eat up the whole hour on that one.

MR. MICHELSON: That's all right.

DR. SIESS: Leave out the time schedule and that kind of stuff. Just indicate what it applies to. I think the Committee does need just a little bit of orientation on--

CHAIRMAN WYLIE: Overview.

DR. SIESS: LMOs; the replication thing I don't think is a big issue. Frankly whether the rulemaking comes under the backfit rule, most people would say leave it to the lawyers. Somebody might have an opinion on that.

MR. CROCKETT: I would be glad to have that one left to the lawyers.

DR. SIESS: I think that is so trivial. It is only a hypothetical person that would be affected.

MR. CROCKETT: That is why we tried in this schedule to reduce the--

DR. SIESS: Let him sue.

MR. CROCKETT: Reduce the importance of both that and the regulatory analysis; those are obligations that we have to fulfill under the rulemaking procedures, but we don't

think they present any substantive issues.

DR. SIESS: Especially good advice from the ACRS on it.

MR. CROCKETT: Somebody will say damn the backfit rule, but that's all right!

CHAIRMAN WYLIE: Let's see. You are going to do something on overview, and then what about--you just want to get the early site permit certified design as far as the scope and detail?

DR. SIESS: Early site permit is just that one item. I think that it is likely to rouse some interest and it doesn't solve the problem, but it really is what is expected through the emergency planning at that stage. And on the combined license, it is sort of like the other. It is a question of what is the scope of the FDA, the scope of the thing, and there is a lot of questions about that. All you can do is Carl's question--what are you approving? You know, what is the design?

CHAIRMAN WYLIE: That is on certified design.

DR. SIESS: Might get some interesting questions about--I think we have raised some points here about the amendment variance thing that might need to be looked at. I think that has to be gone into to see what other things people can think of.

MR. WILSON: Fine.

MR. MICHELSON: A little more reflection perhaps and a good explanation of what kind of changes can be made to a certified design without going through a rulemaking, how far can you go in making, correcting all the little trivial stuff and what does require going through the rulemaking?

CHAIRMAN WYLIE: Changes.

DR. SIESS: There is really two questions, Carl. One is what kind of changes can be made to a certified design, and the other is what kind of changes can be made to a plant that is going to be licensed, going to be built according to that design?

Changing the design is one thing. You know, that's what is certified, and changing what you actually build. They call--the variance is something else and--

MR. MICHELSON: The variance provision is under the design part of the rule, not under the construction.

DR. SIESS: Applies to a particular plant licensed by a particular utility.

MR. MICHELSON: No. It is under Part B.

MR. CROCKETT: But--

MR. MICHELSON: Page 23.

MR. CROCKETT: That is true, but it says here is, here again it is a question of where does it best fit? And at least it fits under subpart B, but notice it is a provision which applies to applicants for CP OLs.

MR. MICHELSON: You are saying there has to be now an applicant for a construction permit.

DR. SIESS: The variances in the plant that you build.

MR. MICHELSON: I thought the application referred to there was the application for certification.

MR. MALSCH: No.

MR. CROCKETT: Application for CP OL or combined.

DR. SIESS: Construction program; P refers to holder of design certification. That is GE.

MR. CROCKETT: That we had to take up in subpart G.

MR. MICHELSON: I thought GE was the applicant for design certification.

DR. SIESS: C says applicants for construction permit, operating license or combined license, or a licensee whose license references a standard design. Now you are talking about a utility.

MR. MICHELSON: I am still on Section B, though.

MR. CROCKETT: We wanted to treat in one section of subpart B all possible sources of changes to the certification.

DR. SIESS: He is talking about sub little B.

MR. MICHELSON: Deals with standard design.

MR. CROCKETT: Because it deals with standard designs. It deals with final standard designs. Because it

deals with final standard designs, we have to deal with applicants for CPs.

MR. MICHELSON: I am not as fast as you are. I read subpart B and then it starts, talks about filing of applications. I assume filing for certification. Under file for certification is this--

DR. SIESS: Where are you, Carl?

MR. MICHELSON: Filing for certification is on page 21.

DR. SIESS: I thought we were talking about finality.

MR. MICHELSON: No. I am just trying to go through the process. I am reading the session on filing for certification, filing of applications rather, and an applicant is the guy who files for that certification.

MR. CROCKETT: Right.

MR. MICHELSON: Now content of application, page 22, I thought now this is what the guy who is filing for certification is going to put in his application, and in there is where we are talking about the, these variances and so forth. The staff will advise--this is where the Section 20, page 23--

MR. CROCKETT: Those aren't where we are talking about the variances.

DR. SIESS: I think the language is quite clear.

CHAIRMAN WYLIE: Back in 60 something, 63.

MR. CROCKETT: Sixty-three, right.

CHAIRMAN WYLIE: Sixty-three, Part 63.

MR. MICHELSON: This is all in Part B yet, though.

MR. CROCKETT: Still in part B.

MR. MICHELSON: B is dealing only with I thought design certification.

MR. CROCKETT: It is.

MR. MICHELSON: The variance is the applicant in that page 29, is the guy who applies for a certification.

DR. SIESS: Carl, it deals with the design certification only down to 5263; 5263 now deals with the finality of a design certification. You have got it.

MR. MICHELSON: That is in the wrong damn place then.

DR. SIESS: No, it isn't. You have got the certification.

MR. CROCKETT: I was trying to spell out a slippery slope for you.

DR. SIESS: How final is it? How solid is it? How cast in concrete is it?

MR. CROCKETT: Here we go on the slippery slope.

MR. MICHELSON: The applicant shifted from the applicant for certification to the applicant for construction.

DR. SIESS: Now they use the language of holder of

certification and applicant for a construction permit. The only place applicants is used is in C, and it says applicant for a construction permit, operating license, and combined license. Applicant for construction permit is not the holder of the design certification.

MR. CROCKETT: Sixty-three presumes the certification has been granted. Now the question is how final is it?

MR. MICHELSON: Okay.

MR. CROCKETT: If you use the applicant, use the word--

MR. MICHELSON: Applicant shifts to the CP OL applicant.

MR. CROCKETT: You have to talk about that applicant ahead of Part C because you are still dealing with finality of certifications.

MR. MICHELSON: The holder is the designer.

DR. SIESS: Then you get to D, there is another word used.

MR. MICHELSON: Okay.

DR. SIESS: D is now the licensee of a project.

MR. MICHELSON: He has got one now.

MR. CROCKETT: That's confusing.

CHAIRMAN WYLIE: He is limited.

DR. SIESS: They are all limited, but the point is

it is looking at the finality of this thing at three stages. The guy--that is the General Electric--wants to do it. The guy that is applying wants to do one and the guy that has already got one wants to change something.

MR. MICHELSON: Under C the variance you get there is only while you are building the thing. Once you are operating it, you can't get that.

MR. CROCKETT: That is another case. The subject is about 50 words long, so you have to read into it. It is the application for one of those things and the licensee who refers to the design, reference the design.

DR. SIESS: See, it could either be applicants or could be before you get your license or after you get it.

MR. CROCKETT: It is not easy.

MR. MICHELSON: D is the licensee. Now we talk down to the licensee. The licensee only can't get a variance is that right?

MR. CROCKETT: He can under Section C.

MR. MICHELSON: Somewhere.

DR. SIESS: Applicant or a licensee, just read it, short version.

MR. MICHELSON: I am thinking of once it is built, once it is operating, I want to make a change. I am a licensee now. I can't change it once I am operating it?

DR. SIESS: That's D.

MR. MICHELSON: I can't get a variance once I am operating it.

DR. SIESS: They don't call it change. They call it a change.

MR. CROCKETT: You could get a variance while you are operating.

MR. MICHELSON: You don't call it that in E.

MR. CROCKETT: We call it that in C.

MR. MICHELSON: Only while you are building it.

MR. CROCKETT: It is a long subject joined by an inexclusive cord.

MR. MICHELSON: The first sentence is covered.

MR. MALSCH: Or a licensee whose references a certified design may request.

MR. CROCKETT: First line says C. This applies to an applicant.

MR. MICHELSON: Operating license or combined license or a licensee whose license is a certified--okay. Now why did you need Part D then?

MR. CROCKETT: That deals with, C deals with changes which fall inside the design, whether they are changes sought while the plant is under construction or operating. D deals with changes outside the design.

CHAIRMAN WYLIE: Certified.

MR. CROCKETT: Only during operation.

MR. MICHELSON: That deals only with--

MR. CROCKETT: That's the only time--

MR. MALSCH: D might also apply to construction permit.

MR. MICHELSON: Are you a licensee when you get a construction permit?

MR. CROCKETT: Under the Atomic Energy Act, the word license refers to permit and license.

MR. MICHELSON: You are only an applicant until they give you the license to contruct?

MR. MALSCH: That is theoretically true, that's right.

MR. MICHELSON: The Part C applies only before you start building it?

CHAIRMAN WYLIE: I think we can conclude we ought to talk about changes.

MR. CROCKETT: That was certainly your first point, and I agree.

DR. SIESS: Again, I am not sure of the distinction between the licensee in C and the licensee in D again now.

MR. MALSCH: I think in both cases we might need to include both construction permitees and licensee.

DR. SIESS: It doesn't say CP OL. If that licensee wasn't referenced in C, I guess I would say that he wants to change the design before he builds it. He wants to change B,

wants to change the design after it is built.

MR. MICHELSON: You are--

DR. SIESS: C could be before he does the OL.

MR. MICHELSON: You can't start construction until you get that combined CP OL.

MR. MALSCH: At least a CP.

MR. MICHELSON: You could--the old rule, you are really thinking CP OL. You are a licensee once you get your CP OL. Then you are a licensee, and no longer an applicant.

MR. MALSCH: That's right.

MR. MICHELSON: I think you might want to think about C and D just a wee bit.

DR. SIESS: What is your decision?

MR. MICHELSON: He is going to fix it.

CHAIRMAN WYLIE: Okay. So let me ask you in the overview that you have covered you would cover the part about the severe accident?

MR. WILSON: Right.

CHAIRMAN WYLIE: And so what we have got then is the overview of the early site permits and as it relates to emergency planning, the combined license activity and the discussion of the advanced plants.

DR. SIESS: Do you think whether proactive, reactive discussion in the overview is essential?

MR. CROCKETT: The distinction seems to be

essential.

DR. SIESS: You decided to do the thing in advance. As far as we were concerned, it was always the way you were going.

MR. MALSCH: I don't think that is fixed in concrete, though. I think that is still an open issue.

MR. WILSON: Right.

DR. SIESS: It is not an open issue in this document? This was decided to go this way. This proposed rule is clearly a proactive document. I just tried to save a little time.

MR. CROCKETT: I think--

MR. MALSCH: For example, a new collection of criteria for advanced reactors is not yet the subject of a proposed rule, and in theory you could defer all the big issues until the plant certification rule. This rule is proactive, but if you are talking about such issues as need for emergency planning at all, containment, all big questions about advanced reactors, there is a question as to whether you resolved those in advance or wait for the design certification.

DR. SIESS: This is all headed up certification. It wasn't very clear.

MR. CROCKETT: Part 52 could fit into a proactive scheme or a reactive scheme. Depends on what follows it.

DR. SIESS: I think what needs to be addressed is the ongoing policies on advanced reactors and how that relates to this, but I think it only confuses the issue here to talk an awful lot about what is going on there. I don't know. We are still working on that advanced reactor thing, and the changes being made in it. This document is important, and it may be more important to us.

MR. CROCKETT: I think that's quite possible.

DR. SIESS: We tried to write a letter.

MR. CROCKETT: I think if we had--

DR. SIESS: This document has a lot of bearing on what we are writing. But I don't know.

MR. CROCKETT: The questions of scope, level of detail, they are all treated in that paper on standardization for advanced reactors, and those are half more of the issues that you focused on here today.

DR. SIESS: There was never any question the advanced reactors wouldn't be standardized.

MR. WILSON: That's right. All they stated, they were going to seek certification.

DR. SIESS: It is just a question of what the criteria would be. And if the criteria weren't in this rule, to some extent, then the issues would be completely separate. The fact that they are, some of those criteria are in there, developed more completely in here, and we still are in the

process of discussing them, and we have got to confound the issue to some extent.

MR. WILSON: Well, standardization policy statement spoke to both mature design and advanced designs. We are providing an opportunity to achieve certification by testing, way of referring to it.

DR. SIESS: The point is that in the hour we have got to discuss this rulemaking.

MR. CROCKETT: What part do you want to focus on?

DR. SIESS: Get hung up partly on the advanced reactor part which is--

MR. WILSON: We shouldn't start discussing advanced reactors, especially since it is on the schedule later that day anyway. Discuss those at that time.

DR. SIESS: If there is something something about advanced reactors, we can talk about that later.

MR. CROCKETT: Could we leave out then things like scope of design and modular reactors?

CHAIRMAN WYLIE: I think--

DR. SIESS: What you have got on modular designs--

CHAIRMAN WYLIE: I think we ought to talk about scope and design in the context of certifying the plants.

DR. SIESS: Have we got advanced reactors on tomorrow later?

CHAIRMAN WYLIE: I think so.

MR. WILSON: On Thursday.

DR. SIESS: That's right, Thursday; I know we are discussing our letter. I don't know. Is this--

CHAIRMAN WYLIE: It is on the main Committee meeting for discussion of their letter in the afternoon, yes.

DR. SIESS: We going to hear the latest on that because there is some stuff in the standardization.

CHAIRMAN WYLIE: I don't think, that is not--

DR. SIESS: That is different than what is in the issue.

CHAIRMAN WYLIE: Available to discuss it?

MR. WILSON: As I stated earlier, there is two papers that cover advanced reactors. There is the paper you have right there that was previously presented to the Committee in February of '87, and the key issues paper that we presented in February of '88, and we are still waiting for your letter on the key issues paper. On this one, the one you are looking at, the Committee reviewed that February of '87.

DR. SIESS: Reviewed this in '87?

CHAIRMAN WYLIE: Isn't the appropriate place.

DR. SIESS: The Idaho, all that.

MR. WILSON: The only change from what you said before is that issue of prototype testing that is consistent.

CHAIRMAN WYLIE: I will be glad to give you some time off for B&W.

DR. SIESS: It was the part that as new to me.

MR. WILSON: We will bring that up.

DR. SIESS: This particular paper we have in review? We have reviewed?

MR. WILSON: In substance you have.

DR. SIESS: Except the prototype testing.

CHAIRMAN WYLIE: Looks like to me we ought to talk about this in that Thursday afternoon. Looks like to me the appropriate place to talk about that is Thursday afternoon in the Advanced Reactor Subcommittee meeting.

DR. SIESS: If we can talk about what is in that document.

MR. WILSON: Yes. As I said, the words are the same in that document and the key licensing.

CHAIRMAN WYLIE: Why don't we--

DR. SIESS: There is new words in this document.

MR. WILSON: They are consistent between the two papers.

DR. SIESS: Just can't pass it on.

MR. MICHELSON: Do we have to have a closed session to do that?

MR. WILSON: No. We discussed it before without--

DR. SIESS: Can't give anybody the paper, but we can do anything else.

CHAIRMAN WYLIE: I frankly don't believe--well, we

may need that much time on the B&W.

DR. SIESS: What is in the rule is what we looked at before.

MR. MICHELSON: I don't think--how much time do you have?

CHAIRMAN WYLIE: Two hours here, hour and 45 minutes.

MR. WILSON: Mr. Wylie, I heard the item that is the first item on the agenda Thursday is being cancelled. Is that correct?

DR. SIESS: They moved something else in there.

CHAIRMAN WYLIE: The ECC.

DR. SIESS: Yes. That ECCS goes how long? To ten?

CHAIRMAN WYLIE: Hour; 8:45 to 9:45.

DR. SIESS: After 9:45?

CHAIRMAN WYLIE: Break, break and then this subject. This is on ten to 11.

DR. SIESS: What Ray wanted to put in for that first hour was the important issues discussion in our ongoing thing from the Saturday afternoon, and I told him I would do it, but I wasn't all that enthusiastic about it because I was going to suggest we drop the whole damn thing anyway since we are not getting anywhere. So if you want to talk to Ray, I would be glad to give you that hour. I will give you 45 minutes of it and I take 15 minutes to ask the Committee what they want to

do about these things and reorganize them, and I don't think that's at all urgent and I think this is a lot more interesting.

CHAIRMAN WYLIE: Take this up.

DR. SIESS: I would be happy to give you my time.

MR. MICHELSON: May I ask can you move stuff on up on the agenda when the public--

DR. SIESS: Ray was changing the agenda this morning.

MR. MICHELSON: As long as it is on the published one at the beginning of the day, maybe that is all that is needed.

DR. SIESS: We announce it, and that's it. I would be glad to, you know, we could then have another hour.

CHAIRMAN WYLIE: Why don't we do that then? That's all right with me.

MR. MICHELSON: We will figure out questions to fill the time available.

MR. CROCKETT: There will be no difficulty I'm sure.

CHAIRMAN WYLIE: Basically introduce it as part of the consideration of the standard plant discussion on the advanced plan.

DR. SIESS: We have got to mention that, too. I think you ought to ask Ray for that other hour because I don't want to--

CHAIRMAN WYLIE: I mean that's what you are proposing? Let's discuss that at the same time?

MR. WILSON: I'm sorry. Do what?

CHAIRMAN WYLIE: I assume what he is saying is take another hour. That gives us two hours.

DR. SIESS: Ray wants to reschedule to start at 8:45 on this and go to eleven o'clock with the break in between--

CHAIRMAN WYLIE: Which would give us more time to discuss.

DR. SIESS: I hate to rush this thing.

CHAIRMAN WYLIE: Yes.

MR. MICHELSON: It didn't seem that important when I first looked at it. It is just getting better now. I can realize how slippery some of these things can get.

MR. CROCKETT: The further we have gone with it, the before we realize--

CHAIRMAN WYLIE: Let's see what we have got then. Okay.

MR. MICHELSON: We are on new ground.

CHAIRMAN WYLIE: We will take that, the overview as shown here then, and the early site as related to emergency planning.

DR. SIESS: You can tell the Committee what you think of the only important issues.

MR. MICHELSON: You may not want to record all of

this.

CHAIRMAN WYLIE: I guess we can end the record.

(Whereupon, at 5:40 p.m., the recorded portion of the meeting was adjourned.)

CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name: ACRS--Subcommittee on Improved Light Water Reactors

Docket Number:

Place: Washington, D.C.

Date: May 31, 1988

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken stenographically by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

/S/ Catherine S. Boyd

(Signature typed): Catherine S. Boyd

Official Reporter

Heritage Reporting Corporation

# RES STAFF PRESENTATION TO THE ACRS

SUBJECT: THE ROAD TO CERTIFICATION

DATE: MAY 31, 1988

PRESENTER: JERRY N. WILSON

PRESENTER'S TITLE/BRANCH/DIV: SECTION LEADER,
STANDARDIZATION & ADVANCED REACTORS
DIVISION OF REGULATORY APPLICATIONS

PRESENTER'S NRC TEL. NO.: 492-3729

SUBCOMMITTEE: IMPROVED LWRs

## PLANTS TO BE CERTIFIED

1. Evolutionary LWRs - ABWR, CE80+, SP/90
2. Passive LWRs - SBWR, AP600
3. Modular HTGR
4. Modular LMR - PRISM, SAFR

# LWR CERTIFICATION

NECESSARY - 10CFR52

1. Early Site Permits
2. Standard Design Certification
3. Combined CP/OL

DESIRABLE TO HAVE - Severe Accident Req`ts

1. Modify 10CFR50.34(f)
   TMI Req'ts
   USIs/GSIs
   PRA
   Deterministi
2. Consider Requirements for a higher standard of severe accident safety performance

SCHEDULE - 10CFR52

| TASK | PROPOSED | FINAL |
|---|---|---|
| Workshop | 10-20-87 | |
| CRGR Ltr | 06-16-88 | 11-01-88 |
| ACRS Ltr | 06-06-88 | 11-01-88 |
| Commission | 06-27-88 | 12-01-88 |
| Issue | 07-11-88 | 12-31-88 |

SCHEDULE - Severe Accident Req'ts

| TASK | PROPOSED | FINAL |
|---|---|---|
| Workshop | 06-09-88<br>09-14-88 | Biannual |
| ACRS Ltr | 11-11-88 | 08-11-89 |
| CRGR Ltr | 11-18-88 | 08-18-89 |
| Commission | 04-14-89 | 02-17 90 |
| Issue | 06-16-89 | 03-16-90 |

# NON-LWR CERTIFICATION

NECESSARY - 10CFR52

DESIRABLE OPTIONS

1. Develop needed rules and regulations after receipt of application
2. Develop needed rules and regulations before receipt of application

Advanced Reactor Policy Paper recommends Option 2

REACTIVE vs PROACTIVE process

# NON-LWR CERTIFICATION - REACTIVE

Criteria Formalized During Certification

1. Minimize Resources Expended

2. More Detailed Design Information

3. Delay Public Involvement

# NON-LWR CERTIFICATION - PROACTIVE

Criteria Formalized Before Certification

1. Expend Resources for Rules that may not be used

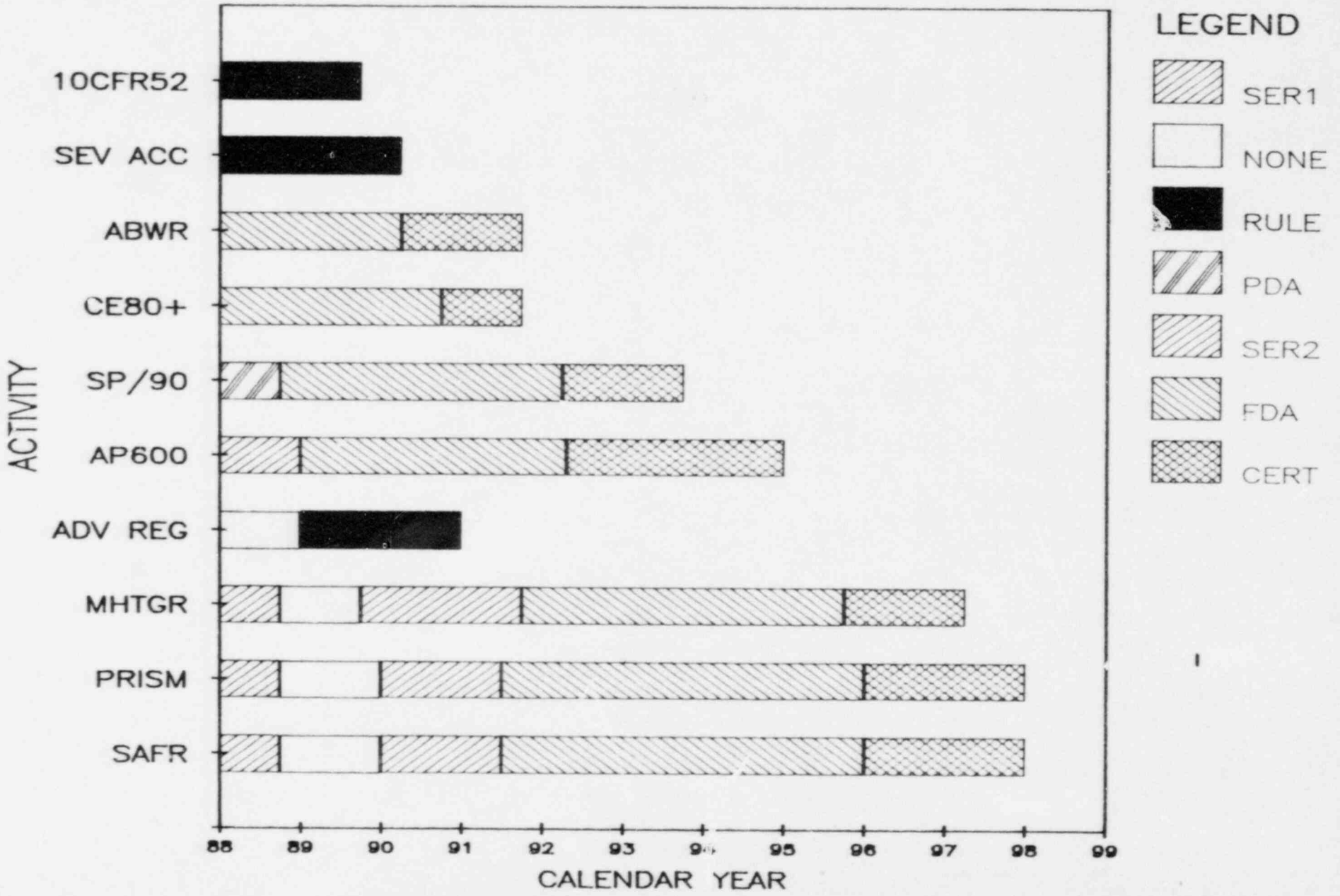
2. Incomplete Conceptual Designs

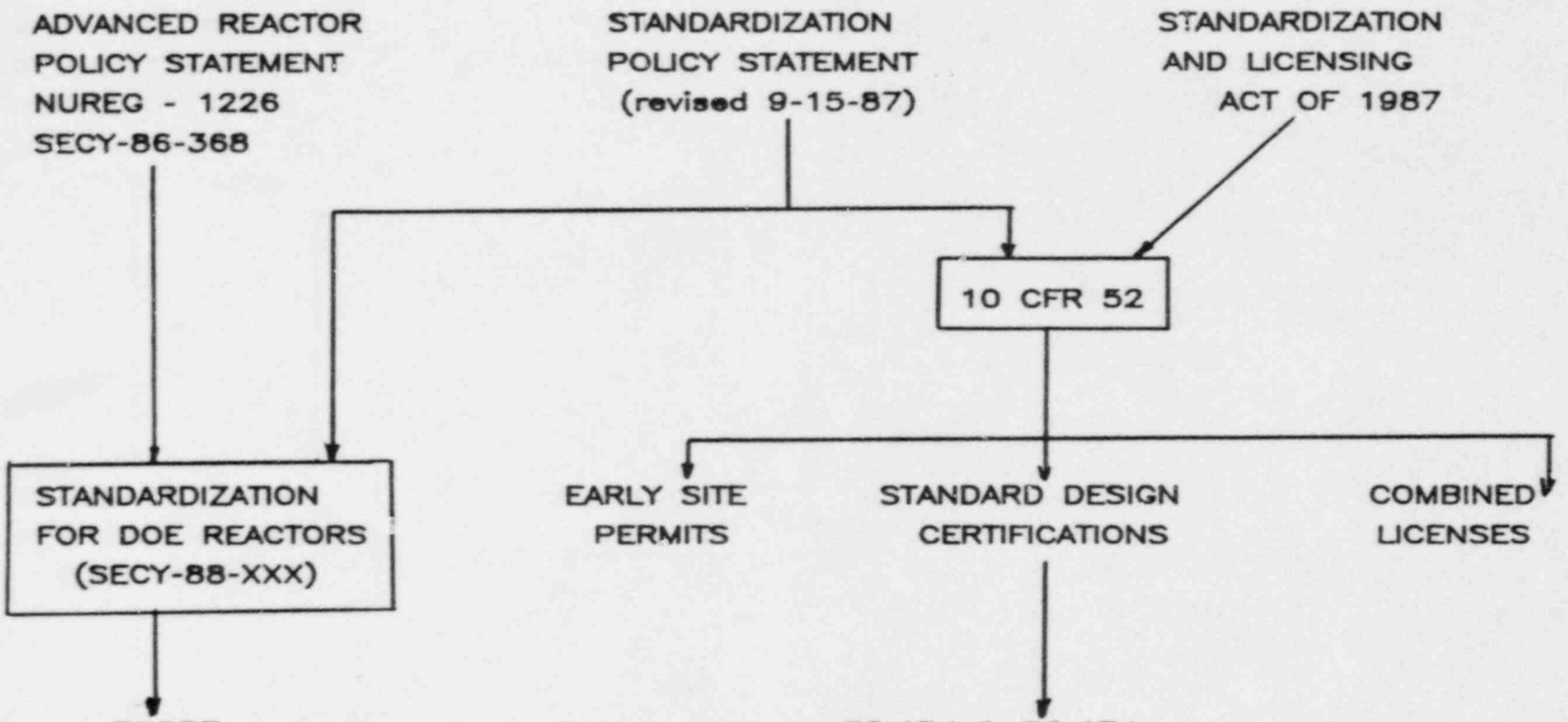
3. Early Public Involvement

4. Greater Influence on Designs

5. Predictable Licensing Process

# CERTIFICATION TIME SEQUENCE






SCOPE ---------- 52.45d & 52.47d
DETAIL ---------- 52.47
OPTIONS ---------- 52.47c
PROTOTYPE TESTING ---------- 52.45C