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UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

Title:

BRIEFING ON RESULTS OF LICENSE EXTENSION WORKSHOP AND PROPOSED CHANGES TO LICENSE RENEWAL RULE

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UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

BRIEFING ON RESULTS OF LICENSE EXTENSION WORKSHOP AND PROPOSED CHANGES TO LICENSE RENEWAL RULE

PUBLIC MEETING

Nuclear Regulatory Commission One White Flint North Rockville, Maryland

Wednesday, December 22, 1993

The Commission met in open session, pursuant to notice, at 10:00 a.m., Ivan Selin, Chairman, presiding.

COMMISSIONERS PRESENT:

IVAN SELIN, Chairman of the Commission KENNETH C. ROGERS, Commissioner FORREST J. REMICK, Commissioner E. GAIL de PLANQUE, Commissioner

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COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVENUE, N.W. WASHINGTON, D.C. 20005 STAFF SEATED AT THE COMMISSION TABLE:

SAMUEL J. CHILK, Secretary

WILLIAM C. PARLER, General Counsel

JAMES TAYLOR, Executive Director for Operations

THOMAS MURLEY, Director, NRR

JACK HELTEMES, Deputy Director, RES

WILLIAM TRAVERS, Deputy Associate Director, Advanced Reactors and License Renewal, NRR

SCOTT NEWBERRY, Director, License Renewal and Environmental Review Project

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

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10:00 a.m.

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CHAIRMAN SELIN: Good morning, ladies and

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gentlemen.

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The Commission is very pleased to welcome

As many of you have heard me say, I

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our staff to brief us on the results of the license

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renewal workshop and on the proposals for revision to

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the license renewal rule.

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believe this is among the two or three most important

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issues that have faced the Commission at least in the

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couple of years that I've been here. We believe that

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it is essential that there be a predictable and stable

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regulatory process defining the Commission's

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expectations for license renewal in a clear and

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unequivocal way. I think the importance goes even

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beyond those particular plants that would go in for

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the additional up to 20 years. Just the existence of

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an option for license renewal would change the quality

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of investment and therefore of risk even during the

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basic 40 years of plant operation.

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stable regulatory environment would permit licensees

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to make well-informed decisions about license renewal

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and about capital investments during the basic 40 year

We believe that a clear and unequivocal

period without those decisions being influenced in one direction or another as a result of a regulatory process that might conceivably, although of course this wouldn't happen, but might conceivably be perceived as being uncertain, unstable or not clearly defined.

The final rule adopted by the Commission some two years ago was based on two fundamental principles. The first principle is that with the exception of age-related degradation unique to license renewal, the current and continuing regulatory process is adequate to ensure the licensing basis of a currently operating plant, that this basis, if maintained, will continue to provide an acceptable level of safety. Thus, this focus of any review for license renewal is to be on any modifications that have to be made to the regulatory process to address those specific age-related degradation principles or mechanisms that would arise or that would otherwise undercut the safety margin during the renewal period.

The second principle is that mechanisms must be in place to maintain the plant licensing basis during the renewal term. Based on our experience with currently operating reactors, the Commission believes it is appropriate to allow license renewal applicants

to rely to a considerable extent on existing activities and programs to ensure that a plant will continue to operate safely during the extended period of operation. Not necessarily any more safely, but certainly not below the adequate margins that we require during the basic period.

Consequently, the Commission directed the staff to convene a public workshop in order to evaluate alternative approaches to ensuring that the license renewal process will take maximum credit for regulatory processes and for existing licensee programs. The staff proposed that approaches be designed to help us identify any modifications to the rule which may be necessary to assure that the two principles of license renewal continue to guide our efforts.

This morning the staff will brief the Commission on the results of that workshop and on their proposed changes to the license renewal rule. Copies of the viewgraphs are available at the entrances to the room.

Commissioners, any other --

Mr. Taylor, we look forward to this presentation with great expectations.

MR. TAYLOR: Good morning.

With me at the table are Jack Heltemes from the Office of Research, Tom Murley, Bill Travers and Scott Newberry from the Office of Nuclear Reactor Regulation.

Mr. Chairman, I would underscore the importance that the staff puts to this revised rulemaking with regard to license renewal. Part of what you'll hear later in the presentation will be a discussion of how the staff plans to conduct this rulemaking with a special working group and with a senior steering group overseeing the changes to the rulemaking process within the staff and a projected tight, but I think achievable schedule by which we could complete this revised rulemaking. I mention that because I think it underscores the significance that the staff puts on this job. Details of that will be discussed by Mr. Travers later in the presentation.

I'll now ask Tom Murley to continue.

DOCTOR MURLEY: Yes. Thank you, Jim.

Commissioners, good morning.

The aim of the briefing today is forward looking. That is, where do we go from here? Mr. Chairman, you've given the background. I'd like to just perhaps fill in a few aspects of the backdrop of where we're at and how we got here today.

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about two years ago, the staff began to implement it and began to work with industry groups and potential license renewal applicants. As we did that, several obstacles arose. The obstacles appeared to be so serious that last year at this time we undertook a high-level staff review to see if we could clear away those roadblocks and find a path to make the current rule workable. We came back to the Commission in January of this year and February of this year. I think we were successful in that goal in the sense that we cleared away most of the problems and we did

indeed find a workable path for this rule.

But because of the language of the rule, in particular the definition of age-related degradation unique to license renewal, the staff's proposed path would have unavoidably entailed a large amount of documentation on effective programs that would be drawn into NRC's regulatory system of formal documentation and change control. It was largely for this reason that the potential renewal applicants and the industry in general thought the price of going down the staff's path was just too high. They were generally opposed to the proposal, although I don't think that there was disagreement that it was legally

workable.

But it was with this background that the Commission in June requested the staff to conduct the workshop and to receive comments on how we should proceed with license renewal, with special emphasis on how to best take advantage of existing licensee programs like maintenance programs for managing the effects of aging.

We conducted the workshop. There was a substantial consensus from that workshop that a rule change is needed in order to achieve a clearly defined and a stable regulatory basis for license renewal. The staff is here today to recommend a change to the license renewal rule.

The proposed rule retains the framework of the current rule but it changes the focus away from identification and evaluation of aging mechanisms and instead toward managing the effects of aging. We are aware that this is a substantial rulemaking and it will require a good deal of work on the part of the staff to justify this proposed approach. In particular, we know we'll have to document how the maintenance programs under the maintenance rule will manage the effects of aging and how that in turn will assure compliance with a plant's current licensing

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basis in the renewal term. We propose to return to the Commission in the spring with this work completed and with a proposed rulemaking package.

Bill Travers will talk now about how we propose to do this in detail.

MR. TRAVERS: Good morning. I'd like to follow-on from what Doctor Murley said by indicating in some more detail the summary of the significant results of our workshop and also to discuss, as Tom mentioned, the proposals the staff has recently submitted to the Commission in SECY-93-331.

I should point out that while that SECY paper includes specific rulemaking language that could serve as the starting point for efforts that might be considered by the Commission reasonable to begin a revised rulemaking process. I don't plan to discuss that language, but focus on a discussion of some of the key issues that have been the most significant focus of our license renewal efforts since the rule was first promulgated in 1992.

COM/ISSIONER ROGERS: Does that suggest that you think that language might change as you proceed further?

MR. TRAVERS: I think some of that language could very well change. In the paper, in

addition to discussing some of the key issues, principally the ones Doctor Murley just mentioned, we also pointed out a number of more discreet and specific changes that probably ought to be considered when we get into a rulemaking process, if that is what the Commission directs.

(Slide) I'd like to skip to slide number 3, please, because I had prepared a background slide, but I think it's been largely covered by some previous comments.

September and was attended by more than 180 representatives from the nuclear industry, engineering and consulting firms, federal and state agencies and a few public interest groups. Those who accepted our general invitation to make workshop presentations included representative from the Department of Energy, NUMARC and the Yankee Atomic Electric Company. Written comments were received from these organizations, as well as from the Ohio Citizens for Responsible Energy and from Virginia Power Company. Copies of the workshop transcript and written comments have been provided to the Commission and made publicly available.

As an overview, and as Tom Murley

mentioned, all presenters and commenters indicated the need to change the existing rule. The DOE and industry organizations all indicated the need to simplify the rule, to place more explicit reliance on existing licensee programs, particularly on programs which are required as a result of the maintenance rule. They argue that existing licensee programs and the NRC regulatory process, as enhanced by the requirements of the maintenance rule, are already focused on ensuring functionality of important structures and components, that these programs will continue in any renewal period and that as a result technical evaluations for this equipment should not be required to support an NRC license renewal decision.

(Slide) Slide 4, please.

have recommended retention of both an integrated plant assess and the concept of age-related degradation unique to license renewal, or ARDUTLR. The definition of what ARDUTLR is and is not, however, would be significantly changed. The new definition would be used to establish a license renewal review focus on certain long-lived passive SCs and on other SCs whose importance to license renewal functions would not be assured by existing licensee programs or the

maintenance rule requirements.

Specifically, the proposal would establish, via the Part 54 revised rulemaking, that except for certain long-lived passive structures and components, all SCs subject to the maintenance rule cannot be subject to age-related degradation unique to license renewal.

Since the staff recommendations for proceeding with rulemaking are similar to the NUMARC proposal, I will explain this in a little more detail in a few minutes, including some of the differences that we've identified between NUMARC's proposal and the staff's.

CHAIRMAN SELIN: You know, I think it's just worth noting that this process is a bit unusual, but for a good reason. Generally, the Commission decides that licensees ought to do something and we listen to them so we make sure we know what we're doing and we tell them to do it and they do it. In this case, we have a rule which is designed to encourage licensees to do something which in certain circumstances we believe is desirable. So, it is not sufficient for us to think it's a good rule. If the potential applicants don't find it a good rule, it will not accomplish its objectives. So, in this case,

dealing so closely with the representatives of the industry, so long as we preserve the health and safety aspects, is clearly called for since it's their activity that is to be induced rather than just commanded, as we would normally do.

MR. TRAVERS: I think we've had a lot of good dialogue. Certainly the workshop was the most recent example of it. But even previous to that, we've had a number of opportunities to sit down with those who would be, as you indicate, most impacted by the license renewal review and that has resulted in a lot of thinking since, frankly, the promulgation of the final rule in '92.

In contrast to NUMARC's proposal, Yankee Atomic and Virginia Power would eliminate ARDUTLR altogether. Both believe the term is an obstacle really to establishing a straightforward license renewal process and they view ARDUTLR as a confusing term which does not account for the fact that aging is a continuous process which does not have unique characteristics in the renewal term.

Yankee Atomic's proposal would also eliminate the need for an IPA. Rather, the revised rule would establish a requirement for review of programs applicable to the reactor vessel containment

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and other long-lived equipment to ensure that their functions would be reasonably assured in the renewal term. Yankee's proposal would also include the evaluation of all time limited exemptions and time limited analytical assumptions which are part of the plant-specific current licensing basis.

The only non-government or non-industry comments the staff received were submitted in writing by the Ohio Citizens for Responsible Energy, OCRE, subsequent to the workshop. The OCRE comments urged elimination of ARDUTLR in favor of a broader focus on the management of age-related degradation generally. OCRE also indicated its belief that ARD mechanisms could be different in the renewal term and then accordingly licensee programs that are adequate today might not be adequate in the renewal term. OCRE made a number of other points, but the last one I'll highlight here is a concern that documentation needed to support the license renewal application would not be contained in the application and as a result might not be accessible for public scrutiny.

(Slide) May I have slide 4?

The staff's recommendations for proceeding with renewal to revise Part 54 can be discussed in terms of a number of key issues, as I mentioned

earlier. The first one, which has been addressed previously with the Commission and which has continued to receive some significant attention as recently as the public workshop is the issue of whether or not license renewal should require a detailed evaluation of aging mechanisms. The alternative to this would be a focus on identifying the effects of aging on important plant equipment in terms of degraded performance or condition.

Although a technical understanding of applicable aging mechanisms plays a role in current aging management program, the focus of aging management today is principally on monitoring performance or condition of key plant equipment. Performance and condition monitoring is relied upon to ensure equipment functionality against the effects of aging regardless of the specific mechanisms involved. The existing SOC, however, contains conflicting language on the need for aging mechanisms evaluation versus reliance on monitoring aging effects. This was identified previously in SECYs 93-049 and 113 and we had a chance to discuss this with the Commission. In those papers, the staff, while acknowledging the SOC inconsistencies, pointed out that the rule language does not specify the need for a mechanism evaluation

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and, more importantly, endorsed the technical adequacy of performance and condition monitoring as appropriate to manage aging both today and in the renewal term.

We continue to endorse the appropriateness of programs which focus on performance and condition monitoring and we urge that if the rule is revised that the SOC needs to be clarified to make it clear that what is not required is a specific mechanistic evaluation for all aging mechanisms.

(Slide) Can I have the next slide, please?

The next key issue involves the concept of current licensing basis as it is used in Part 54, and more specifically is focused on what is required to demonstrate that the CLB will be maintained in the renewal term. The CLB concept is fundamental to the current rule and is included in the two principles of license renewal. I had planned to state what those were, but the Chairman included it in his introductory comments. So, I won't restate the principles. But importantly, it is the adequacy of the CLB, ensured by the broad range of regulatory processes that the NRC oversees which has been used by the Commission in Part 54 to conclude that ARDUTLR should be the focus of license renewal and that issues previously considered

when a plant is initially operated need not be evaluated for license renewal.

The specific issue that has been raised is whether or not a license renewal review, with exclusive focus on ensuring equipment function, is a sufficient basis for concluding that the CLB can be maintained or will be maintained. The staff proposal for modifying Part 54 endorses this focus on equipment functionality as sufficient for license renewal.

CHAIRMAN SELIN: Doesn't the concept of age-related degradation automatically say you concentrate only on equipment? The implication is that the you concentrate only on equipment. The implication is that the people don't age, the can be replaced or the procedures --

MR. TRAVERS: That's a very important point. I think once you've settled on aging as the issue for license renewal -- first of all, I should point out we recognize the CLB is broader than functionality. It includes things such as tech spec operability, design requirements, license operator requirements and so forth. But once you focus on aging --

CHAIRMAN SELIN: Set points.

MR. TRAVERS: Many of those kinds of

things. But once you focus and make a decision to focus on aging, I think it's reasonable that functionality should be the focus or equipment functionality can be the focus of the specific license renewal review, particularly when you recognize that the rule endorses the notion that all other requirements of the CLB, the ones I just mentioned, QA and so forth, are as applicable in the renewal term as they were in the initial operating term. In fact, they carry over one for one.

important point. So, I'd like to make sure that I understand the staff position. The argument is that age-related -- by having a rule based on age-related degradation unique to license renewal and the management thereof of the entire CLB, we've said everything else has to continue as it would during the first 40 years, that the only locus of such aging has to be equipment, has to be functionality, first point.

Second point is provided that there are programs to manage this functionality or there are special programs such as you suggest for the passive components or any active components not covered by the maintenance rule that are important to safety, that assuming the rest of the CLB is monitored, as we

always monitor it, and taking as given the aging principle that proving continued functionality is equivalent to proving reasonable assurance that the CLB will continue into the next 20 years.

The third point is that as long as the definition is carefully drawn of what components have to be checked for such aging, that compliance with the maintenance rule would be equivalent to showing such functionality.

MR. TRAVERS: In fact, that's what we've proposed in our recommendations. We think you're right. As I say, once you've focused on aging as the issue for the renewal term, when you combine that with the fact that all of the other aspects of the CLB carry over one for one, we think that those two things in combination can lead you to conclude, number one, that functionality of equipment is the appropriate focus for the actual act of review in license renewal, it has to recognize that we will, in the context of our existing regulatory process, continue to oversee the application and implementation of CLB requirements in the renewal term.

CHAIRMAN SELIN: Now, going a step further, since the staff has to make a positive finding of continued functionality into the period,

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not just say we haven't found anything bad yet, that puts very heavy weight on the applicant being able to demonstrate compliance with the maintenance rule at the time that the application is reviewed, that there will be a lot of inspection, et cetera. Is this correct or not?

MR. TRAVERS: Yes, I think that's right. I was going to point out, and I have another portion on my talk, but let's enter into it now, the fact that we are recognizing the maintenance rule heavily in our proposal. In fact, except for certain passive structures and components, the proposal would have most plant equipment, passive, redundant passive and active equipment which is covered within the scope of the maintenance rule as identified in rulemaking as not subject to age-related degradation unique to license renewal and the requirements associated with that finding.

So, the maintenance rule is relied on heavily, but we recognize that we don't have experience under the rule. However, I think the kinds of arguments that we would have to make in rulemaking in the statement of considerations would recognize our expectations of what will be achieved in the maintenance rule, recognize the maintenance rule as an

enhancement really of current licensing basis
requirements that already in many instances address
aging management issues.

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CHAIRMAN SELIN: Well, the positive part of your argument, if I understand this correctly and it's very important, so I hope you don't mind my taking the point --

MR. TRAVERS: No.

CHAIRMAN SELIN: -- is that given that the current operating programs and our current inspection setter is as likely to assure compliance with the non-equipment functionality parts of the CLB in the next 20 years as in the first 40 years, it is and are plant-sufficient to prove functionality as shown through the maintenance rule for the finding to be made of continued assurance of health and safety.

MR. TRAVERS: Yes.

not just the maintenance rule but the licensee's compliance with the maintenance rule. So, it puts a very heavy burden on the staff to be able to certify compliance with the maintenance rule so the licensee will have had to have some experience with the maintenance rule by the time the application — not necessarily today, but by the time the application

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COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVENUE, N.W. WASHINGTON, D.C. 20005 comes in and the staff will have had to do sufficient inspections, et cetera, to say yes.

MR. TRAVERS: I think that's right.

chairman selin: Not only do we have the maintenance rule which if complied with will give the assurance, but this particular licensee has, in fact, given us the assurance that they are complying with the maintenance rule at that time.

MR. TRAVERS: I think that's right, particularly for the first license renewal applicants that will become an issue because as time goes on, of course, we'll have more experience and have had a chance to carry out the kind of inspection programs that are going to be focused on determining implementation with the maintenance rule requirements. But the key, I think, in first applications will be in combination with paper information that we would expect to receive in an application are the site audits that we would anticipate would in parallel serve as a part of the confirmation process for license renewal.

For example, we would expect to go out to plant sites who have applied for license renewal and make some independent confirmatory evaluations, audits if you will, of things like compliance with the

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maintenance rule, things like the kinds of programs that they would have relied on in their license renewal application. So, I think this is a pivotal ingredient in the justification that the maintenance rule can be relied upon to make this kind of a judgment.

if the concept of a perelated degradation unique to license renewal were thrown out, even though its role there is fairly severely limited, but the theory, if that were thrown out, then we couldn't rely on the maintenance rule. We would basically have to take all parts of the CLB and at least look at that to say, is there any reason to believe that these will change in the next 20 years compared to the first 40? In other words, a much wider range of issues might have to be dealt with at license renewal than is currently conceived.

MR. TRAVERS: Perhaps. I think ARDUTLR can serve as a mechanism.

CHAIRMAN SELIN: No, I'm saying as long as we can ARD. But several of the commenters recommended that we just throw out that concept and define a specific --

MR. TRAVERS: I think there are some

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arguments to be made for a rule which does not include 1 ARDUTLR, which identifies up front a set of plant 2 equipment which is particularly important, which is outside perhaps the scope of the maintenance rule or even if it is within the scope of the maintenance rule 5 has certain characteristics that lead us to a 6 judgment, a technical judgment that some additional evaluation ought to be made for the renewal period. 8 But the current rule does contain this concept and we 9 think a revised definition that more clearly 10 establishes what we believe is the intent of relying 11 on existing programs can be used and effectively used 12 in the context of renewal. 13 14 15

But by that I don't mean that we couldn't make a rule work reasonably efficiently without the ARDUTLR concept. I think perhaps we could.

COMMISSIONER ROGERS: There is another aspect of this that I hope you would touch on and that is the margins, the safety margins question that while one is talking about functionality, just how you're dealing with that, how that is preserved in the post-40 year period and to what extent the implications of safety margins in the current licensing basis are preserved and maintained through a functionality approach here. I think that has to be addressed.

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It's an issue that's been discussed. It's come up before and I would hope that you'd be able to say a little something on that today because I think that is an important issue.

MR. TRAVERS: Yes. As you point out, Commissioner, the current licensing basis includes certain design requirements. Of course, design requirements are either followed or not by in-service inspection requirements or reverification requirements, what have you. Sometimes they're not. Sometimes the design requirements explicitly consider a 40 year plant life. Sometimes they don't. In terms of this proposal, the license renewal applicant would have to establish in instances where a 40 year life was explicitly assumed in the design of the plant and certain key design parameters that those parameters could be extended for another 20 years.

In instances where there is not an explicit tie to 40 years, the current licensing basis which either includes reverification requirements such as ISI IST, would apply to the same extent and in the same manner that they exist today. So, there would be really nothing special other than the current requirements that already exist to reverify or assure that the functionality of key plant equipment will be

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maintained today and that would continue to apply in the same manner through the additional renewal period.

COMMISSIONER ROGERS: Well, I don't want to interrupt too much your presentation because I think it's fairly --

CHAIRMAN SELIN: I've already done that.

commissioner rocers: Because we might start going off too far in another direction. But I think the question, as one moves from a mechanisms identification to a functionality verification frame of reference for ARDUTLR, that there is, it seems to me, a question of preservation of safety margins because if you are looking at mechanisms you have and understand those. Presumably you can anticipate something that might begin to develop if you know enough about the mechanism. That's one of the comforting factors of identifying mechanisms.

The problem with mechanisms is that they may be totally unknown and one certainly shouldn't be putting license renewal on the basis of carrying out a basic scientific investigation of possible mechanisms that may or may not have yet been discovered. So, I personally feel that the move towards functionality is a much more practical approach than a requirement of identification of yet

unknown mechanisms which could potentially arise.

However, I do think that when one does that, that then you have to address this aspect of it, that if you did no mechanisms you would have a predictive capability and could anticipate a failure or a significant degradation in a system that must now be covered by your functionality program. So, that has to be kept in line in evaluating how effective the functionality tests are, that they must be something that provides some anticipation of failure when you have the possibility of multiple failures in different systems.

DOCTOR MURLEY: Bill, could I respond?

question and a central question to this approach. For purposes of today's discussion, I'd have to say we don't have the complete answer. We've recognized it and that's why in my opening remarks I said the staff recognizes this as a substantial rulemaking, because we have to address questions like that in the statement of considerations. Frankly, it's going to take us several months to do the work and explore the ramifications of all this. We've done enough thinking and talking among ourselves to be satisfied we can do it, but we just have not done it today.

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COMMISSIONER ROGERS: Yes. Right. Okay.

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CHAIRMAN SELIN: May I add something?

COMMISSIONER ROGERS: Sure. Sure. By all

means.

CHAIRMAN SELIN: Actually, one of the things that bothers me a little bit about this document is we don't take credit for the years of aging research that we have done. One could write the same words without having done that basic work. But, in fact, by laying off the responsibilities on the maintenance rule, we are saying that the maintenance rule will provide effective information on a lot of very important systems and components. The only way we can be confident if that is the case is that we understand the aging mechanisms behind those systems and components in the maintenance rule, because it would be folly to say we're going to test a whole lot of things to see how often they break down if we don't know where we should become alarmed or what we're looking for.

so, someplace in that discussion, on the one hand it can be buttressed by referring to our aging program and how that aging program is reflected. The second is, if I understand your mechanism, it sort

of shifts -- in most cases, except for these passive systems, it shifts the understanding of aging from a direct evaluation of the systems and components to a justification about why the maintenance rule is adequate to provide continued functionality with the predictions that Commissioner Rogers is talking about.

I guess the Commission has sort of made that finding already in approving the maintenance rule in the past. It's saying that the maintenance rule will suffice to provide continued functionality or tell us by the condition monitoring aspects if the functionality is going to fail that we must have had some confidence in our understanding of these mechanisms because we would never have done something that wasn't justified.

to go back, Bill, recognizing that we don't have experience under the maintenance rule, but before the maintenance rule there was maintenance and we have many years of experience that proper maintenance does maintain the functionality of equipment and it does maintain the current licensing lasis. So, I think we should keep that in perspective. Maintenance is not something new. We have a rule row that describes some of the better formalities that we should follow. We

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have many years of experience that maintenance maintains functionality and current licensing basis. So, let's not get hung-up on the fact we have a rule that's not in effect yet.

MR. TRAVERS: I think that's an important point and it really serves to underscore the argument I think we would use, and that is that the maintenance rule is really an enhancement of the existing regulatory process. We expect it will provide some additional confidence in addition to managing aging effects today, programs that monitor performance or conditions will continue in the renewal term to be effective.

CHAIRMAN SELIN: But Commissioner Rogers' point is very important, that one can't just glide over that point. One has to show that the inspection programs for the passive components of the maintenance rule, we do understand the aging mechanisms well enough to believe that they do maintain functionality even into an extended period. Or if not, we would know from the condition monitoring that trouble was brewing.

This is a long slide, Mr. Travers.

MR. TRAVERS: (Slide) It is. Let's move to slide 6 then.

1	COMMISSIONER ROGERS: We're going very
2	slowly.
3	MR. TRAVERS: I've got a number of key
4	issues and the next one
5	COMMISSIONER REMICK: Excuse me, Bill. On
6	slide 5, why did you drop the S out of SSC, or the one
7	S on your fourth bullet? Are we dropping structures,
8	the functioning structures?
9	MR. TRAVERS: I'm sorry.
10	COMMISSIONER REMICK: On slide 5, the
11	fourth bullet.
12	MR. TRAVERS: Why don't you take it?
13	MR. NEWBERRY: SSC is systems, structures
14	and components, and the SC there is structures and
15	components. We're down to that level.
16	COMMISSIONER REMICK: Okay. I thought you
17	were dropping structures.
18	MR. TRAVERS: No, sir.
19	COMMISSIONER de PLANQUE: Just since
20	you're mentioning that issue, and I realize the
21	wording in all of this is just to give us a flavor for
22	what you're intending to do, I saw that problem
23	through the wording as well and I wasn't sure why the
24	systems part was excluded in some areas and included
25	in others. So, it's something that you may want to

pay attention to in the next version.

MR. TRAVERS: We certainly will. In part -- I'll just point out very quickly. In part it's a remnant of the existing construct of the integrated plant assessment which begins at a higher level and ends at a structure and component level. But it's a good point and we'll certainly look into that as we go forward.

The next key issue that I'd like to discuss is the concept and definition of ARDUTLR. It's really been the most controversial issue in license renewal to date. It was introduced relatively late in the Commission's final rulemaking action and it was intended to better establish a focus, an exclusive focus really, on aging issues uniquely relevant to the renewal period. As an under statement, I think, the current definition however has not been viewed as a successful mechanism for focusing the license renewal review. We've certainly had a lot of discussion at the workshop about that.

The current definition results in a relatively large portion of the plant as at least being subject to the possibility of ARDUTLRs, as Doctor Murley mentioned. Although previous staff proposals have indicated how such equipment could be

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dispositioned with relatively little information based 1 on existing programs, the industry has expressed 2 3 fundamental concern with this approach. While some 4 industry commenters would have eliminated ARDUTIR initially or entirely from the rule, the NUMARC 5 proposal would retain it as a vehicle to focus the 6 7 license renewal review. They would, however, significantly, as we've discussed, modify the 8 9 definition to more directly credit existing programs 10 and thereby greatly reduce the amount of plant 11 equipment identified as subject to or even possibly 12 subject to ARDUTLR. 13

In developing our staff position on license renewal, we took a hard look at both the concept and definition of ARDUTLR. As a concept, ARDUTLR has a number of advantages and a number of disadvantages. On the plus side, it can be useful, we believe, as a mechanism to focus the license renewal review and thus limit the issues to those stipulated by the Commission. On the negative side, the term "unique aging" can be confusing and can be viewed as inconsistent with our technical understanding of aging as a continuous process.

CHAIRMAN SELIN: Before you get -- I'd just like to make two sort of procedural comments.

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The first is when you finish the final definition, I do think you need a generic statement about what ARDUTLR is because a definition by enumeration opens the question that we left something out. If you say we consider this to be aging which might show up in the next 20 years that didn't have an impact on important to safety and we believe that it's limited to these components, that that would be more satisfactory than just enumerating the components.

The second part on the definition, I think it should be clearly understood that the reason for having this principle, as you've said, is that the Commission decided a long time ago and sees no reason to reopen that question, that this is not a new license application for 20 years. There is a desire not just to focus but to keep the analysis in those particular areas that are concerned with us and the whole basis for using this ARDUTLR is that it's broad enough to make sure health and safety issues for the next 20 years are covered and narrow enough to exclude what the Commission found to be not germane to the issue.

MR. TRAVERS: On balance, our proposal recommends retention of the ARDUTLR as a concept, as a vehicle really to focus the license renewal review.

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It's a fairly close call, however, and we do believe 1 that a rule could be developed and effectively 2 3 implemented potentially without ARDUTLR. As Doctor Murley mentioned earlier, our proposal to retain ARDUTLR does recognize that NUMARC representing the 5 industry, particularly those industry organizations 6 which are actively involved in license renewal 7 activities, has endorsed retention of this concept. 8 Another factor in our recommendation is 9 10 11 12

that since ARDUTLR is a principle element in the current rule and is, in fact, linked to the first principle of license renewal, its retention could, I'll underscore could, represent a somewhat more efficient rulemaking change.

Our proposal recommends a significant redefinition, as I mentioned, of the term for the principal purpose of more explicitly recognizing our expectation that existing licensee programs which manage aging effects will continue to be effective in the renewal term.

The staff proposal which is similar but not identical to the one submitted by NUMARC would result in the following. First, a principal focus on certain passive long-lived structures and components would be specified in the rule. The rule would

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require an applicant to carry out a relatively 1 detailed evaluation of plant equipment which is not normally replaced and which performs a passive ITLR 3 function. Important equipment such as the reactor vessel and associated primary system piping in the containment, whose failure would result in a functional system failure, would be specifically evaluated and the evaluation results would be included in the license renewal application. If additional 9 programs are determined to be needed to manage the 10 aging effects, the SC would be identified as subject 11 to ARDUTLR. 12 COMMISSIONER REMICK: I hope we understand 13 the meaning of the words. If you take containment 14 penetration seals, where would that fall? Would it be 15 16 ARDUTLR or not? 17 18

MR. NEWBERRY: Yes, sir, I think any -let me assume there are subcomponents, say, of the containment boundary. They would receive an evaluation according to this process. They would be considered part of the containment, I believe.

COMMISSIONER REMICK: But you do do performance testing of it when you can test a containment under Appendix J, right?

MR. NEWBERRY: Yes, sir.

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COMMISSIONER REMICK: Presumably 1 subject to maintenance rule, but you do performance 3 testing. So, wouldn't it be screened out? MR. TRAVERS: First of all, what's been proposed is for certain equipment, particularly the 5 equipment we've just mentioned, an evaluation, 6 7 including an evaluation of programs that are already in place would be done. We wouldn't exclude those or 8 the licensee or the applicant wouldn't exclude them, 9 but rather they would have to be done versus an 10 11 argument in the rule for a categorical exclusion. So, this establishes a certain set of 12 13 important plant equipment for evaluation, even if it's 14 a reevaluation of the adequacy of existing programs. 15 The previous rule would have required that more 16 generally, of much more plant equipment. COMMISSIONER REMICK: So, they would go 17 into the funnel? 18 MR. TRAVERS: They would come into the 19 funnel, be evaluated and consideration would be given 20 to existing programs. If those existing programs are 21 adequate, they would go out as no ARDUTLR. 22 COMMISSIONER REMICK: Okay. 23 MR. TRAVERS: The second practical effect 24 of the proposed definition would be an explicit 25

allowance that active SCs and redundant passive SCs which are within the scope of the maintenance rule cannot be subject to ARDUTLR. This is a position that provides maximum credit really for licensee programs which are or will be in place to meet the requirements of the maintenance rule. We recognize that it will require considerable justification in the statement of considerations and we've had a chance to discuss that. This is particularly true since it's a prospective determination and we haven't had experience under the maintenance rule.

We believe, however, that --

CHAIRMAN SELIN: Say that again?

MR. TRAVERS: We think that justification will be somewhat -- will need to be detailed and it is a prospective one because we don't have experience with the implementation of the maintenance rule.

too hard on yourself. What we're saying is we believe that the maintenance rule will be implemented in a way. We are prospectively guessing that the maintenance rule, once we have all the reg. guides, can be implemented. But it will have been implemented before the application comes through. We're not going to look at a licensee's maintenance plans and say

they're okay, we're going to look at his maintenance experience and say that it does, in fact, comply with the maintenance rule, aren't we?

MR. TRAVERS: Yes. Yes, we will have had that opportunity, we believe, by that time.

chairman selin: So, we're making a prospective judgment now that a concurrent regulation can be realistic, but we're not judging that a particular licensee will probably comply with the maintenance rule. He's going to have to show compliance before he gets --

MR. TRAVERS: I agree. And there are other arguments, I think, that bear on this. While we don't have experience under the maintenance rule, we have a lot of experience with issuing regulations and their implementation by licensees, our follow-up, our ability to react when we don't think our requirements are met.

doubling our bet. When we passed the maintenance rule we said we believe this rule can be implemented through reg. guidance, inspection guidance to carry out its objectives. And now we're saying, assuming that that can be done, one can make a second rule depend on that. But in the case of an individual

program, we're going to have experience under the maintenance rule before they renew those.

MR. TRAVERS: I may be hard on myself, but I think a lot of people are going to be a lot harder as we --

Chairman. To turn it around, though, let me just mention that, because this is such a fundamental cornerstone of our proposed approach, namely prospective reliance on the maintenance rule, we have to ask the question, suppose during a proceeding or during an application review we find problems in our inspection program where maintenance is not being done well? Then the whole foundation of the rule comes under challenge for that particular application.

CHAIRMAN SELIN: Right.

DOCTOR MURLEY: So, we have to make the detailed technical and procedural argument, which we have not done yet. We just outlined it in this paper. We also have to recognize that it could very well become an issue of contention in any proceeding under this rule. But, nonetheless, we don't think those are insuperable obstacles. We just have to go into it.

CHAIRMAN SELIN: Are you saying that the maintenance rule itself would come under challenge or

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the particular licensees carrying it out would --1 DOCTOR MURLEY: The licensee's execution of it and therefore --CHAIRMAN SELIN: And therefore his application --5 DOCTOR MURLEY: -- the basis on which we 6 went ahead with this rule would come under question. But I think we can, as I said, I think we can deal 8 9 with it. CHAIRMAN SELIN: I don't think that's 10 11 quite right. I think what would come under challenge would be his application relying on his execution of 12 the maintenance rule, in which case his application 13 14 wouldn't go through until he could satisfy us and, if 15 necessary, the courts that we had been thorough in doing that and that's why it's so desirable that there 16 17 be a timely renewal process in the rule. MR. TAYLOR: We agree. 18 MR. TRAVERS: The next effect of our 19 20 proposed definition of ARDUTLR is the specification that equipment which is replaced to preclude a service 21 22 life greater than 40 years would also be identified as not subject to ARDUTLR. This is a position we took in 23 SECYs 93-049 and 113 and we've had a chance to discuss 24 it with you. I think it's pretty straightforward. We 25

don't view it as a substantive change from the position we took earlier.

CHAIRMAN SELIN: Let me try something out on you, Mr. Travers. What you're basically proposing is changing the definition from aging unique to license renewal to aging after maintenance unique to license renewal. In other words, we're not saying there aren't aging processes. We're saying those components which even when maintained still have aging related degradation unique to license renewal, those are the ones that we have to look at.

MR. TRAVERS: Yes. I've never been entirely comfortable with the term "age related degradation unique to license renewal" and I think others share that view even more --

CHAIRMAN SELIN: We're building a castle on sand as far as --

MR. TRAVERS: And that's why when I talk about it I try to point out its usefulness as a mechanism regardless of what the words say. And as a mechanism, I think we can accommodate the position I think the Commission intends in license renewal, and that is to focus on a judgment about important questions that need to be either revisited or rethought or newly thought at the time of license

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So I think the term, even as we are proposing it, has certain potential problems in its plain English.

CHAIRMAN SELIN: So, it is what you enumerate it to be, basically?

MR. TRAVERS: Yes, it's pretty much that thing and it's a technical judgment of what we think really ought to be considered in the license renewal process.

definition would permit SCs which are not subject to the maintenance rule to also be determined not to be subject to ARDUTLR. This is not, however, a categorical exclusion as we have proposed it, but would require some information in the application as a minimum, for example a reference to the existing program being credited. This is one of two areas where we have identified differences between our approach and what NUMARC has proposed. NUMARC would have revised the rule to justify a categorical exclusion for all performance or condition-monitoring programs which, while outside of the maintenance rule scope, are part of the existing CLB.

I should point out that, because of the

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fact that the license renewal and maintenance rule 1 2 3 5 6 7 8 9 10 11 The new definition, in practical terms, would result in a much reduced amount of plant 12 equipment being identified as either subject to or 13 even possibly subject to age related degradation 14 15 unique to license renewal. 16 17

scopes are very similar, the maintenance rule we think being a little bit larger, that the number or the amount of plant equipment that falls into those bins is relatively small. The overall effect of all of these changes to the definition is to explicitly establish credit, more explicitly establish credit within the license renewal process for existing programs and particularly for the requirements and our expectations from the maintenance rule.

COMMISSIONER REMICK: Bill, if I understood what you said, the difference between the proposed approach by NUMARC and the staff approach is that NUMARC would want a categorical exclusion and the staff wants justification before exclusion. Is that basically it?

MR. TRAVERS: That's correct.

COMMISSIONER REMICK: So that, going back to the containment penetration seal, if one could justify that Appendix J testing is adequate as a

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performance monitor, then one would have to go through 1 2 that justification process. Is that right? 3 MR. TRAVERS: Yes. (Slide) Next slide, please. 5 The next key issue that I'd like to talk 6 about involves time limited analyses which are 7 explicit and which are contained in a plant CLB. For example, certain plant-specific safety analyses may 8 have been based on an explicitly assumed 40 year plant 9 10 life. Two examples include reactor vessel fracture 11 toughness and surveillance requirements which are typically evaluated for 40 years, the normally assumed 12 13 life of the facility.

> To support operation beyond 40 years, these evaluations would need to be carried out by the utility and approved by the NRC for the extended period. I should point out here that we've taken a look at how many of these kinds of issues might exist in a particular plant's current licensing basis and we've identified relatively few.

> In its proposal for revised rulemaking, however, NUMARC has indicated that, although they agree that technical resolution and staff approval would be required to support operation beyond the time limited analyses set point, they don't believe that

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these issues ought to be part of the license renewal process. Our proposal, as a policy issue more than a technical one, would include them within our consideration of a license renewal application.

Additionally, we believe that the current rule includes these time limited analyses within the definition of ARDUTLR and, as a result of the construct of our new definition, they don't really fit in there very well. And so, the new or revised rule as we've proposed it would separately identify the need to evaluate and resolve these issues in connection with license renewal.

commissioner Remick: Help me understand why you picked exactly 40 years. I think I can understand if it's less than 40 years it's going to be replaced or something is done if the analysis indicated that it would not survive 40 years. Maybe I understand the 40 years, but suppose something is analyzed okay for 45 years?

MR. TRAVERS: Then I think the justification is straightforward.

COMMISSIONER REMICK: But that would not be subject to ARDUTLR?

MR. TRAVERS: No. Let me make clear. I'm outside of the definition now of ARDUTLR and we're

dealing now with the issue of whether or not these kinds of analytical assumptions which have in some cases been made explicitly for 40 years, whether or not for license renewal, within the process of license renewal, they ought to be captured.

Technically, I think we all agree. The industry and we agree that the regulations require and in the past we have approved technical justifications for up to 40 years in some of these instances and that to operate for one more day beyond that would require them to justify and us to approve the basis for the extended period of operation, whatever it is, they'd like to justify.

COMMISSIONER REMICK: Maybe I didn't make my point clear. Here I come, I'm asking for 20 years and I had previously analyzed something for just 45 years. As I understand this, you would exclude it, that analysis?

MR. TRAVERS: I didn't appreciate your fine point. That may be something we need to look at in the context of rulemaking. Clearly the intent is to assure that wherever these assumptions have been made that they're justified for whatever period of extended operations.

COMMISSIONER REMICK: I think that's the

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important point, rather than the way it's stated, the 1 2 40 years. MR. TRAVERS: It's something we'll look at 3 closely. We don't view this as a substantive 5 change, by the way, I should mention, from the 6 requirements that the existing rule would impose on an applicant. COMMISSIONER REMICK: How many items do 9 you think would fall into that? How many analyses 10 would fall into that category? Do you have an 11 estimate? 12 MR. TRAVERS: We've found on the order of 13 a dozen. 14 COMMISSIONER REMICK: I see. 15 MR. TRAVERS: Our proposal for revised 16 rulemaking would also retain the integrated plant 17 assessment. Most importantly, we believe, the IPA can 18 be used to systematically determine which plant 19 equipment should require additional review for license 20 renewal. As with the existing rule, the IPA would 21 begin with essentially the entire plant. Following 22 that and combined with the revised definition of 23 ARDUTLR, we believe that the IPA can provide an 24 effective and efficient mechanism for focusing the 25

renewal review and that's why we've endorsed its retention in our proposal.

(Slide) May I have the next slide, please?

In addition to the rule changes I've already discussed, we have also proposed or are considering a number of other changes to the rule and the SSC. Other changes identified in SECY-93-331 are focused on obtaining efficiencies in the application and particularly in the amount of information which needs to be included in the FSAR supplement and as a result subject to change processes and reporting requirements.

The proposal would permit much of the IPA information to be submitted in the application but outside of the FSAR supplement. For example, the lists of equipment identified at each IPA step would not be included in the FSAR supplement. The FSAR supplement would contain information related to new or enhanced programs required to mitigate ARDUTLR and it would also contain a description of the methodology used in preparing the application for actually conducting the integrated plant assessment. It is this information which we believe should be subject to stipulated change processes and reporting

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requirements.

In addition, if rulemaking is undertaken, there are a number of other areas in the rule and the SSC which we think need to be addressed. For example, we've included a draft definition in our rule package of passive SCs. We recognize that this is an important definition and will need some additional consideration in our rulemaking, if that's what the Commission directs.

(Slide) Can I have the next slide, please?

Our recommendations as presented in the SECY paper --

COMMISSIONER REMICK: Excuse me, Bill, before you leave that.

MR. TRAVERS: Yes.

current definition, I realize you're saying, that that's subject to continued review. But as I read that, I thought that that did not account for things like the containment penetration seals because it just refers to performance characteristics that can be monitored to reasonably indicate. Now, I don't know if you call Appendix J test monitoring or it's performance testing because you use both words. It

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wasn't clear to me that that definition would capture what I was trying to point out in the penetration --

MR. TRAVERS: One of the most difficult things we had to do in this paper was to decide on what we might put down in this very area. So, I think you're right and you've hit on an issue that is going to require some considerable thought.

conclusions. We've already touched on them. But basically we've endorsed rulemaking in our SECY paper and we recognize that it includes a substantial rewrite of the statement of considerations for the rule and it's fundamentally directed at a more explicit credit for existing programs that we think would continue to be effective in the renewal period.

As previously noted, we would retain the concept of ARDUTLR, even though the definition would be significantly altered and that we would also retain an integrated plant assessment approach to screening important plant equipment.

The last slide recognizes that if the Commission does endorse rulemaking, we've made an estimate that a proposed rule could be forwarded to the Commission within about four months and that a final rule could be published within about 12 months.

Given the nature of the proposed changes, we recognize that this is an ambitious schedule, but we think we've identified an approach to make it happen.

Operation in coordination with OGC and Research,
Doctor Murley has established a dedicated team, led by
NRR with OGC and Research support, to complete all
elements of the rulemaking package. Additionally, to
assure priority management attention, Doctor Murley
viil chair a steering group, including Jim Sniezek and
Jim Milhoan, Jack Heltemes and Marty Malsch.

The last thing I'd like to point out is that in addition to rulemaking, if that's what the Commission decides to do, we are planning to continue efforts to work with the industry organizations to identify where generic technical resolutions can be reached. With rulemaking as our top priority, however, some of that work might be impacted or at least the scope originally envisioned might be impacted to some extent.

That's the end of the prepared remarks that I have.

CHAIRMAN SELIN: Commissioner Rogers?

COMMISSIONER ROGERS: Well, I thank you very much. I think this was a very useful briefing.

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COURT REPORTERS AND TRANSCRIBERS 1323 RHODE ISLAND AVENUE, N.W. WASHINGTON, D.C. 20005 I'd like to make a few comments.

One is somehow I didn't really get a flavor in the SECY or at all today here of the reaction to Mr. Sniezek's proposal for ruleraking on this matter. I found his suggestions very interesting and I would like to know a little bit more about what the specific reactions were to them, to his approach, particularly in view of the desire to make rulemaking here predictable and so on and so forth because I think that his general approach there seemed to be one towards simplicity, towards a simpler approach. I find that very appealing for some strange reason.

I haven't heard what the reaction to his proposal was or I didn't see it in the SECY and I didn't hear anything about it today. I don't know if you want to say anything on that or not, but that is something I'd like to hear a little bit more about.

I'm just going to give you the list of things that I'd like to hear something more about, either here or as a follow-up.

The eleven questions that appeared in the Federal Register notice of the worksho. I understand that you have collected public comments on those. When do you expect to have those together in a form that we might look at and do you expect that they will

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perhaps give us any insights that might be important here in our deliberations on how to proceed at the Commission level with respect to approval of the SECY?

For example, I'd be very interested to know what the written purilic comments were on the ARDUTLR retention question. I can't say all those other letters today, so I've got to abbreviate. To me that's a very important issue. I plead guilty to being one of the people who thought that the introduction of that term into the original rulemaking might provide a useful tool and a useful adjunct. I'm not so sure about that anymore, particularly every time I see some effort to write down what we mean by that. I have the view that the problem with that term is that it's neither fish nor fowl. It talks about age-related degradation, which is a mechanism, a physical mechanism that takes place in materials and systems and so on and so forth, to a regulatory process, license renewal. It's trying to marry two things together that are really quite distinct. Either you're talking about physical mechanisms or you're talking about a regulatory process. But when you try to construct a new term or new collection of words that's supposed to mean something, it fuzzes up because what is the objective here? Is it to

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understand something and deal with it or is it to get through a formal process of license renewal?

I think that what happens when we try to write down what we mean by this, these two conflicting objectives of the term are not well -- are well integrated together. They give very severe problems and I think that in the table, the attachment to the SECY, where there was a new definition of that, I found very, very confusing and very difficult to feel comfortable with. So, I think if ARDUTLR is retained, I think it must be clarified beyond where it is right now in terms of language. That has been precisely the difficulty. Every time somebody sits down and writes a new version of English of this concept that we somehow think we understand, it's got certain aspects to it that give problems. Somehow that seems to me to suggest that maybe there's something fundamentally wrong with it.

But at any rate, I think that the definition of that term has to be very carefully examined because I don't think we've gotten there yet myself in what was supplied in the package that's not going to give us some problems. It still seems pretty confusing.

So, I feel that we're making very good

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progress here. I like the approach that we've taken and I think the briefing was very good, of course, but I still feel that this issue of keeping that term, ARDUTLR, or not, I don't feel I've seen a very good justification for keeping it. I think there are difficulties with it and if it could be somehow or other redefined in a way that makes very good sense in a literal reading by anybody, then that might be okay. But at the moment, I'm still uncomfortable with how we've approached that.

So, I think that's a key issue that I personally feel we need a little more clarification on. I think the basis for what we do should be as technical as possible on everything and this concept of ARDUTLR seems to me that it's got this difficulty of mixing a technical and a legal set of considerations or a regulatory set of considerations and that's partly what's at the heart of the difficulty with it.

So, I had a collection of points that I don't think I'll try to go through right here, but I do think that you've made very good progress. I think we are coming together on something, but this question of the retention of ARDUTLR seems to me to touch on a number of fuzzy issues that we've been trying to

grapple with over the years and I'm not sure we've 1 2 really wrestled them to the ground yet. Thank you. 3 DOCTOR MURLEY: Okay. Could I respond to a couple of your points, Commissioner? 5

> We share, I think, your uneasiness with the definition of ARDUTLR. Well, it has a history that was kind of introduced at the last minute to limit the scope of things that needed to be looked at. Our problem with it, at least mine I guess, is that it assumes that there is some aging that is unique to years 40 to 60 and in a physical world that's not true. Aging starts the day the plant is actually build. So, it's a construct, I quess you could call it a legal construct, that we have maintained in this rule to also limit the scope of what has to be looked at. But I think we ought to recognize that there's a certain artificiality to it.

> That gets to your second point, which is eliminating the definition I think is the real attractiveness of Jim Sniezek's proposal. There were other proposals also. We listed his and one other similar proposal as one of the options that we discussed at the workshop. There was -- and I would say within the staff there's a great deal of sentiment

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toward that kind of proposed simpler rule, but it's going to take more work because we're going to have to go back and virtually scrap everything that's been done on the current rule and getting to where we're at today. It can be done.

But I think the real answer is -- and perhaps the Commission may want to hear from NUMARC and the industry. The real answer is the industry has said at the workshop that they do not want such a radical change, that they think that we should keep the structure of the current rule. Since we're going through this exercise, as the Chairman said, primarily, as long as we're maintaining the health and safety protection, which the staff believes we are, we're largely doing this to produce a stable and usable rule. So, I think that's the reason. It's not totally satisfactory, but I think that's --

commissioner Rogers: Well, it does seem to me that the approach that we're taking seems to be retaining the term but, in fact, defining it by example. You are now defining those systems and once you've gotten to that point, unless you start to add another little thing at the end that says, "And other items of concern," that is open ended and can give you a lot of trouble, I'm not sure that you've gained a

lot unless you just simply say, "Well, this is really what we mean by ARDUTLR." To some extent, that is what you have laid out, I think, in your proposal.

Now, I know the Chairman has suggested that maybe that should be broadened out. I have to express some real reservations about a lack of precision here in this because I think our problem has been that it's just -- this thing has opened up on us when we didn't expect that it would do that and I'm very uncomfortable about it providing any new ways in which it can start to unravel and become much more extensive than we really intend it to be.

CHAIRMAN SELIN: I'd just like -- I'm sorry. Commissioner de Planque?

commissioner de Planque: Just a comment on that. It seems to me that what you really need is a box, a convenient box that you can refer to that captures all these things. Perhaps the exercise that the Chairman is suggesting of looking for a self-contained definition will really help to shed some light on what the problems are versus the list of things that are included. That exercise alone of trying to do a self-contained definition may do it and maybe part of the problem here is that we now have words attached to the acronym that don't exactly

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describe the box we're trying to describe.

I'm not sure where you go from there, but
I sense the discomfort to --

CHAIRMAN SELIN: Let me just follow up.

wasn't part of it, but the unique doesn't modify aging. It modifies degradation. It's not aging unique to license renewal, it's degradation that comes through during the period of license renewal that doesn't lose impact, is not felt in the first course. It's not such an illogical construct as it might at first look.

But my main point is we can't just enumerate a couple things and say, "This is what we mean by aging unique to license renewal," because that would be arbitrary, capricious. It would never withstand a court challenge. We have to say, "This is the concept and we believe it is realized in this list," but we can't just put the list without defining what we mean by the concept if we keep up the idea.

Commissioner Rogers, did you want to add anything?

COMMISSIONER ROGERS: No, that's fine.

CHAIRMAN SELIN: Commissioner Remick?

COMMISSIONER REMICK: I certainly agree

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with many things Commissioner Rogers said and I agree with Tom's characterization. I have felt consistently that aging degradation starts at day one and maintenance is important at day one, not just in the extended period. Maintenance is important throughout to make sure that we maintain the functions of equipment. If we were to start over and knowing what we know now, I would be very sympathetic for the Sniezek and some of the Yankee arguments for a simpler approach. But at the same time, I am sensitive to some of the tactical considerations that I think the staff has in mind and perhaps the industries, but I'm open on it and I wish we had an easy solution, but I think we have to think carefully about the tactical situation and what it might mean on a rule, effective rule.

Has the staff given any consideration if somebody came in for a request less than 20 years, would that in any way change the rule? I can't see that it would, but --

DOCTOR MURLEY: We've talked about it and thought about it. But since this is a process rule and not a technical rule, the processes to go through for five years are just as onerous as for 20.

COMMISSIONER REMICK: Well, that's my own

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personal conclusion, but I didn't know if there were reasons that I could be wrong.

I like your approach to rulemaking if there is rulemaking. I think it's a good concept, Mr. Taylor, that we should keep in mind for our major rulemakings in the future. It looks like a good tight managed process and so forth, but it appeals to me.

I go back again and say I'm a little concerned that we're stressing so much that we don't have experience with the maintenance rule. We do have experience with maintenance. I agree with Tom that there are indications out there that from vime to time there's poor maintenance and some equipment loses its functionality and I hope, however, we're maintaining the current licensing basis today which I think we are. With a maintenance rule, the maintenance rule won't be perfect. Hopefully it might improve some of the maintenance problems, but it won't be perfect and with the maintenance rule some equipment will lose functionality even in good programs.

So, I think we have to be careful we aren't thinking of something magical about a maintenance rule that's going to assure these things in the future. It's going to help, but it's -- and so, I still say that before there was ever something

called a maintenance rule, there was maintenance, some 1 2 good, some bad. I think that has maintained the current licensing basis. It better have or we'd 3 better take action. MR. TAYLOR: Maintenance rule undergirds 5 what's been going on. 6 COMMISSIONER REMICK: Yes. Right. Okay. 7 MR. TAYLOR: And improves it to the degree 8 9 we're --10 COMMISSIONER REMICK: I also agree that the briefing has been very helpful. I really 11 appreciate the effort the staff has undertaken in this 12 13 whole effort. And the workshop, I attended that. I thought that was very constructive, very well 14 conducted and I appreciate your efforts. They've been 15 16 very helpful and I hope the Commission can give you 17 quidance in short order. CHAIRMAN SELIN: Commissioner de Planque? 18 COMMISSIONER de PLANQUE: I would also say 19 I think the way you've handled all this is excellent 20 and the briefing paper is extremely well done. I 21 especially appreciate the chart showing the old and 22 the proposed and then the complete layout of the 23 proposed. It was extremely useful to have it done 24 that way. 25

1 Just going back a minute to the difference 2 between the use of SC and SSC, I do think it's 3 important that you look at that very carefully. I noticed it was used differently in certain parts of 4 5 the NUMARC construction compared to ours and I don't 6 know if what you were suggesting was different 7 deliberately or whether it just needs a little more care in terms of where it's used and where it's not. 8 I think it may sound trivial, but whether a system is 9 10 included or not could have a big impact on the implementation. 11 12 MR. TRAVERS: I think it's important. That's absolutely right now. 13 COMMISSIONER de PLANQUE: Okay. Another 14 15 16 17 18

more simple one. I think you're struggling with the term "passive." I strikes me, if my memory is correct, that this is the kind of term that's defined in international standards documents and IEC, ISO, ANSI standard dictionaries. I don't know if you've looked at any of those definitions, but there may be something there that's helpful to you.

That's all. Thank you.

CHAIRMAN SELIN: Commissioner Rogers? COMMISSIONER ROGERS: Yes. There was just one other observation I wanted to make. It's a very

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general one. That is you've noticed a discrepancy between the statement of considerations and the rule itself and the need to bring those into better conformity with each other. I just want to say that we have had this kind of a problem crop up in the past several occasions where the statement of considerations says one thing and the language is a little bit different from the rule. The little bit different sometimes give us very big problems. I think it shouldn't happen and there's got to be some way in which the folks who write the SOCs and the folks who go over the rule are the same people because there should be no difference between what the SOC says and what the rule says in terms of the significance of words or the use of words as they refer to particular concepts. There should be no difference, in my view. When there is a difference that may be seen to be simply another way of saying the same thing, you get into trouble. There it seems to me a very rigorous control of the use of language is absolutely critical. There should be no terminology in the SOC that cannot be found in the rule and vice versa. There should be no difference between those, because when there is, there's all kinds of room for possible interpretations.

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chairman selin: First of all, I think it was an absolutely first rate job and I am stunned by the amount of progress the staff has made in the last year. This is really getting, in my opinion, to be very close to something that can be implemented and can be followed.

As Yogi Berra would say, at the risk of repeating myself, deja vu all over again, I don't think the concept of age-related degradation unique to license is, in fact, that complicated. I think you've got a good start. I would suggest you might even not use the words "active" and "passive." It seems to me there are four sets of components, things covered by the maintenance rule, things not covered by the maintenance rule which are redundant, things not covered by the maintenance rule which are not redundant, and things that in some sense aren't important to license renewal but have to be looked at. You could use more of the maintenance rule definitions by reference, but that's a fairly low level point. I just want to avoid traps that are not central to the object that's at hand.

As I said, I think you do have to have at least a general concept description of what we mean so that when we enumerate what components and systems and

structures are in and what are out, we have a basis for it.

The third is that I enthusiastically attach myself to Commissioner Remick's remarks about the maintenance rule. A, we've done maintenance for a long time. B, maintenance rule doesn't guarantee functionality. It really does two things and we've only discussed the first one. The first is it tells us that the equipment is remaining functional or it gives us indicators that it's not going to remain functional, in which case if we saw some stuff deteriorating at the year 50 that couldn't economically be repaired, then the plant shuts down at year 50.

So, the key point is not that we can predict with 100 percent confident that there are manageable aging mechanisms and ways to manage them, but that we have reasonable confidence from our research program and our experience and we have very high confidence that if the condition did not maintain in function, we would know it before it became a problem.

So, I personally put as much emphasis on the condition monitoring part of the rule as the maintenance part of the rule. I don't think it's

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necessary to overstate our expectations of the maintenance rule to have such a rule as license renewal and there is a lot of aging research behind that.

earlier and as Doctor Murley echoed, the test for a good rule is not internal elegance or are we proud to be authors. It's, A, does it protect health and safety over the time period and, B, assuming A, which is the question that takes a lot of attention, do the customers accept the product? So, would we have written age-related degradation in the rule or not I think is secondary to can we come up with a rule that protects health and safety and which doesn't put an unreasonable burden on the people who come after us that have to carry it out, which is desired by the people that would have to go through it.

I don't think this is anymore complicated than a lot of other things that we've done, at least not after all this hard work that you've put in to get this clarified. So, I support my colleague's statements. I particularly support Commissioner Remick's statements about the fact that we call something we've done for a long time by a new name doesn't make it new and that there's a lot of

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1	reliance, but there's a lot of maintenance history
2	even if there's not a lot of maintenance rule history.
3	I think you've done a really good job in many ways,
4	but particularly of not relying more on the
5	maintenance rule implementation and experience than is
6	likely to be available at that time. Maintenance rule
7	structures our rule. Maintenance implementation
8	structures our inspection and review process.
9	Maintenance experience structures the finding that the
10	staff would make on a particular application. I think
11	that's responsible. I don't think that's overly
12	concurrent development.
13	In other words, I'm really quite
1.4	enthusiastic about what you've done. I look forward
15	very much to seeing what comes next.
16	Commissioners, any other remarks?
17	Thank you very much.
18	(Whereupon, at 11:26 a.m., the above-
19	entitled matter was concluded.)
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WASHINGTON, D.C. 20005

CERTIFICATE OF TRANSCRIBER

This is to certify that the attached events of a meeting of the United States Nuclear Regulatory Commission entitled:

TITLE OF MEETING: BRIEFING ON RESULTS OF LICENSE EXTENSION WORKSHOP

AND PROPOSED CHANGES TO LICENSE RENEWAL RULE

PLACE OF MEETING: ROCKVILLE, MARYLAND

DATE OF MEETING: DECEMBER 22, 1993

were transcribed by me. I further certify that said transcription is accurate and complete, to the best of my ability, and that the transcript is a true and accurate record of the foregoing events.

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Commission Briefing on License Renewal



December 22, 1993 Rockville, Maryland

PURPOSE

- Summarize the significant results of the September 30, 1993 license renewal workshop.
- Provide staff conclusions and proposals regarding an approach to license renewal that
 - (1) allows greater credit for existing licensee programs, and
 - (2) integrates the provisions and focus of the maintenance rule in the license renewal process.
- Discuss key license renewal issues.

BACKGROUND

- Industry and staff experience with final rule.
- Senior management review.
- SECY-93-049 and SECY-93-113 proposed interpretive implementation without rulemaking.
- Workshop to solicit comments.

WORKSHOP SUMMARY

- Conducted on September 30, 1993, in Bethesda, Maryland.
- Over 180 representatives from utility, organizations, consulting firms, engineer and architect firms, nuclear industry organizations, public interest groups, and state and local governments.
- Written comments received from the Department of Energy, the Nuclear Management and Resources Council, Yankee Atomic Electric Company, Virginia Power Company, and the Ohio Citizens for Responsible Energy.
- Consensus view that the license renewal rule needs to be revised to establish appropriate credit for existing licensee programs.

SECY-93-331

AGING MECHANISMS AND MANAGEMENT OF AGING EFFECTS

- The current SOC emphasizes the need to evaluate specific aging mechanisms and contains conflicting language regarding the acceptability of an "effects" approach.
- SECY-93-049 and -113 endorsed the concept of managing aging effects via performance or condition monitoring.
- SOC should be clarified to remove the inconsistencies.
- Revised rule will establish an "effects" approach.

CURRENT LICENSING BASIS

- CLB is the foundation for the two principles of license renewal.
- Intent of maintaining the CLB is to ensure continuation of an acceptable level of safety.
- The CLB encompasses operational, functional, and design aspects.
- License renewal process should focus on ensuring SC functions in the renewal term.
- Reasonable assurance that function will be maintained, together with other CLB requirements and the regulatory process being brought forward, are sufficient to conclude that the CLB will be maintained.
- Rule, SOC, and associated documents require revisions to reflect this position.

DEFINITION OF ARDUTLR

- Broad range of interpretations: difficult to implement.
- Concept explicitly linked to first principle.
- Proposed definition:
 - (1) principal focus on certain passive, long-lived SCs (e.g., vessel, containment, non-redundant portions of systems);
 - (2) categorical exclusion of active SCs and redundant passive SCs subject to the maintenance rule;
 - (3) categorical exclusion of SCs replaced within 40 years; and
 - (4) SCs not included in provisions of the maintenance rule, but subject to existing performance or condition monitoring programs, could be dispositioned as not subject to ARDUTLR with justification in application.

TIME-LIMITED ANALYSES

- The CLB contains certain explicit time-limited provisions or analyses.
- Time-limited analyses are considered to be within the definition of ARDUTLR in the existing rule.
- Revised rule clarifies time-limited analyses requirements.

INTEGRATED PLANT ASSESSMENT

The IPA, together with the definitions of SSCs ITLR and ARDUTLR, provides a process which begins broadly and then focuses on significant SCs to determine the need for additional aging management programs in the renewal term.

ADDITIONAL AREAS FOR RULE CHANGE

- Proposed changes to the rule:
 - Clarify level of detail in the application
 - Separate the details of the IPA from the FSAR supplement
 - Clarify change processes and reporting requirements
- Other areas the staff is considering for potential rule/SOC change include:
 - Defining the term "passive" as it applies to ITLR SSCs and functions
 - Clarifying ITLR screening requirements for support systems
 - Clarifying licensee evaluation requirements for passive longlived structures and components.

CONCLUSIONS

- Rule and SOC should be changed to:
 - (1) appropriately credit existing programs and the maintenance rule,
 - (2) resolve ambiguities between the SOC and the rule, and
 - (3) establish a more efficient, stable, and predictable license renewal process.
- Approve the general approach discussed in SECY-93-331 for revising the license renewal rule.

RULEMAKING

- Dedicated interoffice rulemaking team with oversight from an interoffice senior management steering group; NRR lead.
- Ambitious schedule which will forward a proposed rule to the Commission within 4 months after Commission directs the staff to proceed with rulemaking.
- Final rule published 12 months after Commission direction.
- Continue, as practicable, to work with industry organizations to identify and resolve license renewal inspection, technical, and implementation issues which are outside the scope of rulemaking.